# Learning Network Management

## An Analysis of the Network Manager's Learning Experiences in Germany's Learning Regions

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## Content – Overview

## Content

## Abstract

Social networks are regarded as powerful resources that have available novel solutions, innovative ideas and can create new pathways. Networks exist as informal webs of affiliation between individuals and also as ties between organisations in the form of professional networks. These different forms of networks have in common that there is a social structure that connects particular agents with each other and enables the flow of information and knowledge between them. Thus, in creating new ties and connecting already existing networks/individuals/organisations, a richer structure is created and with it access options to novel knowledge. The exchange and combination of knowledge is a means for creating innovations.

The national initiative "Learning Regions – Providing Support for Networks" (2001-2008) fostered this macro-structural change process in Germany on a regional level, so that a new learning culture and with it innovative products and ideas could emerge. An underlying concept for this programme is the theory on 'learning organisations' (Senge et al. 2007) which is referred to concerning the interpretation of the data. Moreover, in order also to focus on the associated change processes, the guiding theoretical elaborations of Scharmer's "Theory U" are applied to the findings.

In this thesis the data gathered during the evaluation of this initiative are re-analysed with the research focus on particular social role inhabitants in networks: network managers. Based on a combination of survey and network data as well as expert interviews, the structural position and the resulting perspectives, perceptions and role learning processes are explored. By means of interpreting the findings, the thesis illustrates a developmental role-taking process for network managers with five stages along a U-curve. Thus, it becomes evident that the above described structural changes of interaction and knowledge flows are accompanied by deep change and the acquisition of certain skills. These skills are identified for example as a high tolerance for complexity and uncertainty, a "bridging capacity", an awareness of tie structures, a high level of personal mastery and the capacity to act skilfully in interdependent structures and perceive himself or herself as part of a larger system. Network management is recognized as a service function that needs to be filled in professional educational networks. In the networks of the learning regions, network managers are inclined to act as societal change agents and social entrepreneurs who try to induce a process of conscious co-evolution within a defined region.

# 1. Introduction

The concept of "Learning Regions" has been studied and discussed by a variety of researchers from fairly different disciplines, such as regional development and sciences focusing on the geographical aspect (see for example Schläger-Zirlik 2003, Stahl 2003) from a more economic focus (Scheff 1999, Florida 2000), from a social capital perspective (Cooke 2003, Florida 1995), sometimes combined with a governance aspect (Maloney/Smith/Stocker 2000) or an innovation perspective (Cooke 2001) or from a more visionary or strategic orientation (Longworth 2006). There have been conferences reviewing the concepts from different points of views, such as the Cedefop (European Centre for the Development of Vocational Training) conference in 2001 "AGORA IV: The Learning Region". Moreover, there is an international scientific community[1] concerned with learning cities, regions and communities, their implementation as well as their capacity to help develop "a better world".

Hence, the idea of establishing a community within a certain region that actively engages in lifelong learning to achieve sustainable social, economic and cultural development and well-being for its members is clearly a trend in many disciplines. It also touches the discussion on globalisation vs. localisation in that it tries to arrange a set of regional stakeholders so as to filter globalisation's effects within a regional system that can more easily and flexibly react to external stimuli than a nation state can.

Learning regions are also investigated as a form of regional governance (Tippelt/Reupold/Strobel/Niedlich/Emminghaus 2009, Emminghaus/Tippelt 2009) and are thus subject to a certain kind of leadership that initiates the governance-process in the first place (Fürst 2007). Here, a new body of scientific literature (for example Skidmore 2004, Wöllert/Jutzi 2005, Endres 2008, Prasopoulou/Poulymenakou 2006, Schubert 2008) has emerged in recent years that promotes a certain managerial role in between systems, organisations, structures etc. For this role the authors use different terms, such as network leader, intermediary or interface manager ("Grenzgänger"). The focus of the role is to initiate, mediate, moderate and facilitate business relationships at interfaces between usually more than two organisations. But as Fürst (2007) points out, the precondition for collective action is a common perception of a need for collective action by all of the stakeholders involved and this usually means that the stakeholders learn: "The most effective reason to learn lies oftentimes in being forced into action; whereas this action is the fastest and strongest way to create a common perception of problems[2]." (translated by the author, p. 358).

In general, the concept of learning regions is based on the ideas of learning organisations (Senge et al. 2007) that essentially stresses the importance of learning processes taking place in the organisation as a whole – not just limited to a central group of managers (Room et al. 2005). Here the individual and his or her mental models, personal development as well as his or her ability to see her or himself as a part of a larger entity,

[1] PASCAL European Network of Lifelong Learning Regions (PENR3L)

[2] „Der wirksamste Anlass zum Lernen ist meistens ein Handlungszwang, der am schnellsten und am stärksten gleichgerichtete Problemwahrnehmungen erzeugt." (S. 358).

the team and the organisation are the core analytical levels. The argument is: if the core ideas ("the five disciplines") are learned and continuously enacted, an organisation that constantly learns, is able to react to external changes and thus is successful on the market, will result. These ideas again are closely attached to the development and diffusion of innovation because innovations can be created as effects of combining, applying and commercialising different pieces of knowledge that are taken from vast amounts of mostly useless information around it (Cooke 2003). Moreover, some forms of knowledge that serve as the most important ingredient for innovation are local and bound within individuals and their practices (Lave/Wenger 1991). The transmission of this kind of knowledge is only possible by individuals: Lundvall and Johnson (1994) identified social networks as intermediary structures that enable the flow of knowledge.

Thus, globalisation's effects are such as to necessitate a different distribution and cooperative arrangement of tasks and responsibilities, hence the governance debate in political and social sciences (see for example Schimank 2007, Benz/Lütz/Schimank/Simonis 2007, Altrichter/Brüsemeister/Wissinger 2007). As Castells (2004a) pointed out, macro-structural change processes affect a shift in the distribution of power and wealth and moreover, in this context, he refers to what he calls 'switchers' (p. 224), the mechanisms inherent in programmes and strategies that create new ties or destroy existing ones between social networks. This process of changing the underlying structure of interaction and knowledge exchange is likely to result in shifts of behaviour and thus change some cultural aspects as well: The term learning region refers to a place in which with cooperation of all stakeholders, a new learning oriented culture evolves in order to meet globalisation's challenges and create a novel balance in responsibilities, options and shared meaning (Field 2004). Establishing a new culture goes along with influencing and finally changing the existing core concepts of culture, such as values, norms, rules, behaviour that are expressed in a common vocabulary, a certain way of interaction and a specific way of perceiving and thinking about the world (Gudykunst/Ting-Toomey 1988, Hofstede 1980). It means a paradigm shift[3] (Kuhn 1962). Shifting people's habitual ways of thinking so that they are not repeating patterns of thought and behaviour but engaging in different thoughts, in new interactions and new perspectives for themselves means also to some extent changing their identity. Now this endeavour is ambitious; nonetheless it seems to be necessary.

As Jarvis (2007) points out, human learning always happens within a structural context:

> Human learning is inextricably related to the ideas of agency and structure; it also reflects ideas of autonomy and free will and the more interactionist, or critical, the perspective adopted the easier it is to see the place of the human agent within the social context. (p. 35)

Individuals are always integrated within different communities of practice (Lave/Wenger 1991) which have their own culture in terms of rules, laws, language, values and knowledge bases.

[3] „(…) makes one suspect that something like a paradigm is prerequisite to perception itslef. What a man sees depends both upon what he looks at and also upon what his previous visual-conceptual experience has taught him to see." (Kuhn 1962, p. 112).

Cultures or even sub-cultures thus exist already in small groups of people, but also in certain societal areas, such as "politics", "industry", "civilian society", "labour market", "education sector" etc. These are societal areas that consist of organisations and individuals enacting their societal tasks in recent decades according to an agreed upon distribution of tasks and responsibilities. Within these areas specialised cultures have developed that supported the task, the given structure and communication channels best, and on the next level within the areas certain organisations or institutions have developed their own sub-cultures that again served their specialised tasks best etc. In essence, since learning is always a social and cultural phenomenon, a new culture and a new social world need to be created in order to change existing ways of behaviours. Or as Castells (2004a) has put it:

> Networks matter because they are the underlying structure of our lives. And without understanding their logic we cannot change their programmes to harness their flexibility to our hopes, instead of relentlessly adapting ourselves to the instructions received from their unseen codes. Networks are the Matrix. (p. 224)

In this thesis the perspective is taken that existing social networks represent the status quo of a regional, societal, economic, cultural etc. developmental stage and that for the new knowledge economy a differently and eventually dynamically combined set of actors (i.e. newly created social networks) is needed in order to bring the necessary changes.

*Aim of the study and guiding research questions*

The overall goal of this thesis is to find out how this process described above can be guided and achieved and by whom this could possibly be done. In the programme "Learning Regions – Providing Support for Networks" there were one or two persons called "network managers" responsible per region to create and manage a new network. Thus, in terms of a change management perspective, the network managers were the primary change agents who initiated those change processes. But at the same time they were in no formal position or hierarchy so that they needed to develop other ways of leading and managing. This social role, the involved tasks, mental models, organisational and communicative processes are the core interest of this thesis.

By re-analysing certain parts of the data gathered by the evaluation of the programme "Learning Regions – Providing Support for Networks" the following research questions are answered: "What are the complex tasks and challenges of network managers in educational networks?", "What is the special task of "bridging" relational fields concerned with?", "What does a network manager perceive in his or her particular structural position?", "What is an adequate leadership style for network managers in terms of attitudes and tools?" and "How can network managements' results and performance become transparent?"

*Methodological Approach*

These questions have been empirically researched by re-analysing the data that was collected by the evaluation of the national programme "Learning Regions – Providing Support for Networks". This evaluation was conducted by the Chair for Educational Research at the Ludwig-Maximilians-University, Munich, the ISW Institute, Halle and

Helmut Kuwan, Social Research and Consulting Munich in collaboration with Rambøll Management. The rich databanks contain information from interviews, questionnaires and workshops that were held between the years 2004 till 2008. In applying different methods of analysis and in analysing different questions, I want to focus on what the network managers learnt during their work in the learning regions.

It seems to be appropriate to use the data of this project because "learning regions" are pioneers in learning how to implement lifelong learning. Thus, these regions are also pioneers in learning how to act, think and build sustainable partnerships in a learning society. They are the first to actively unlearn what individuals, organisations and institutions learnt in being part of society's culture so far. And the focus of this thesis is on what they learnt instead, what they re-learnt, so to speak.

In order to gain a differentiated perspective on the regions and their network managers, a set of methods is used: the quantitative data are descriptively analysed with SPSS and Social Network Analysis whereas the expert interviews with the network managers are analysed with the Variable Oriented Content Analysis. These methods were most suitable to not just grasp the underlying variables and structures but also to go a step further and describe a novel managerial role.

*Structure of the Thesis*

In the theoretical part of this thesis a short elaboration on globalisation and its effects on educational systems follow the introduction. This chapter describes the European and national background to educational strategies, thus explains the policy framework for the studied educational programme and illustrates some of the findings of the evaluation board that function like an introduction to this thesis' main focus. In the third chapter, research findings and theories on individual and organisational learning as well as models on knowledge creation are discussed in order to review their adequacy concerning learning in networks as it applies to the network concept of learning regions. The fourth chapter introduces a structural concept of networks, social network analysis and presents research findings on network management. Following this theoretical part, the empirical part begins with the questions for research, the chosen design and the methods applied. The results are then presented subsequently ranging from quantitative findings, results in social network analysis and visualisations as well as qualitative findings. These results are then discussed in the 7th chapter and recommendations for how this process of creating networks and thus enabling knowledge to flow can be guided by network managers are drawn from it in the 8th. In the final chapter I will finish with some overall pedagogical conclusions, research desiderata and future perspectives.

# 2. Globalisation and Society

In this chapter, those societal and global developments are portrayed that caused the Federal German Ministry of Education and Research to initiate a national programme called "Learning Regions – Providing Support for Networks". This programme lasted from 2001 to 2008, aimed at structural changes in the educational system and market in Germany and was continuously evaluated by a team of scientists. The findings of the evaluation as relevant to the Ministry and the participants involved have already been published (Nuissl/Dobischat/Hagen/Tippelt 2006, Tippelt/Reupold/Strobel/Kuwan/Pekince/Fuchs/ Abicht/Schönfeld 2009, Emminghaus/Tippelt 2009). The database that was gathered during these years will be re-analysed from a different perspective in this thesis.
The following chapter starts with a description of the reasons for and the influence of globalisation on society and its institutions. The comprehension of these developments was the starting point for a new European strategy and policy as documented in the European presidency conclusions of Lisbon in 2000. Following this, a short explanation of the governance perspective is given that already presents a first idea on the subsequent chapter on networks and their management (chapters 3 and 4). The last part of this chapter focuses on the above mentioned programme and the results of the scientific evaluation as far as they are relevant to this thesis.

## *2.1. Globalisation and its Effects on Society*

This paragraph will shed some light on the diverse and complex underlying processes that constitute what is called globalisation and its outcomes on societies.
Summing up what globalisation is and what effects it has on society is not an easy task. Among other difficulties, even the definition of globalisation is unclear: the word "globalisation" is used in an inflationary manner, oftentimes in widely differing contexts and is made responsible for a variety of effects. Defining globalisation is becoming easier if it is seen from the perspective of social research. Then it is a social phenomenon of internationalised working processes that affects national educational systems and societies.
From the perspective of social research, there are four developments on a global level (see figure 1) that have been prevalent since the 1980s according to a German educational committee called "Aktionsrat Bildung" (vbw 2008, p. 15f.):

1. Extremely quick progress in the development of new information and communications technologies that triggered a linking up of societal sectors, people, organisations and nations that have widely been separated before. This is seen as a starting point for the expansion of globalisation processes on societal, economic and ecological levels by many (Castells 2000, Schäffter 2004). The Aktionsrat Bildung

even considers these modern technologies to be "the infrastructure of globalisation[4]" (translated by the author, vbw 2008, p. 16).

2. A rising internationalisation of labour, financial and product markets. National borders have lost importance concerning market and exchange actions. This process enables completely new ways for the distribution of labour on a worldwide level.
3. This development (2) results in enhanced local competition among national states. Mainly since Eastern European and Asian countries were integrated in the world market ever-growing competition in wage and production levels exists. And in order to be able to compete at that stage, many countries react by deregulating, liberalising and privatising their markets and policies. This again results in a further strengthening of the market principles as a modern coordinating mechanism.
4. The fourth factor is concerned with the consequences of the ever-increasing global interconnectedness of markets and the cascade effects on national or regional markets. This again results in a growing vulnerability and instability of local markets. Effects and changes at that level have their origins in events that are distant in place and/or delayed in time (Scharmer 2007, p. 60). The emerging complexity that follows from this makes it almost impossible to predict future developments and reduces the controllability of processes and their outcomes dramatically (vbw 2008).

These changes are not new and they have not happened suddenly; they are rather developments that occur continuously and so slowly that the observable signs might even be overlooked. In addition, the complexity of what could be seen and still can be seen is so high-level that it is hard to make sense of what can be perceived by individuals in their daily lives and where that comes from.

Now the world's population is faced with the effects of that process on many levels (i.e. at an economic level, at the level of national and international marketplaces and their interrelatedness, at the level of fierce competition at the labour markets, at the level of production, at products and services levels, but also at the level of information and the access to information and education and of course at the resulting life style individuals can afford or not etc.) (Beck 1999). These developments happen on a global level and affect every nation and all human beings all over the world with varied intensity and focus. Western countries have been experiencing a serious crisis of competitiveness ever since their economies began facing the flexibility and power of growth of the so-called "tiger economies". Economic, financial, industrial, and other gains and losses that have been situated in certain geographical areas for centuries are now being moved by the many activities that are summed up in the term "globalisation": "Globalizing trends mean that industrial and financial capacities are highly mobile, removing many of the established advantages of the western economies (…)" (Field 2004, p. 2).

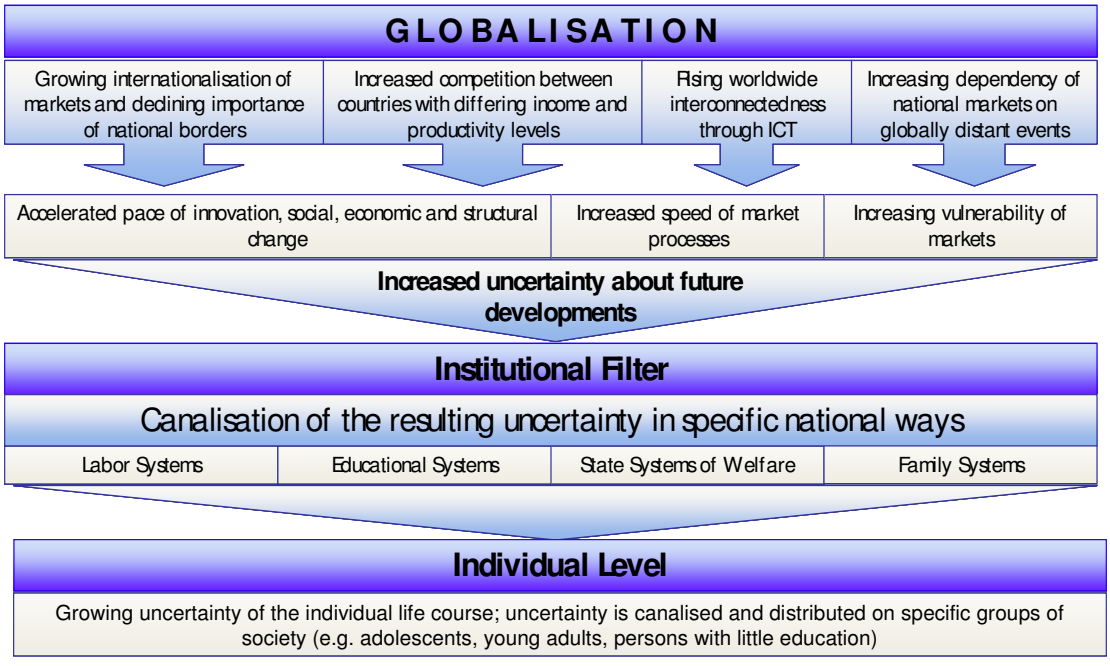
In order to be able to compare the effects globalisation has on different national states worldwide, social and economic research has developed some approaches to measure the

[4] „Sie [die neuen Informations- und Kommunikationstechnologien] sind somit als die „Infrastruktur" der Globalisierung zu betrachten." (vbw – Vereinigung der Bayerischen Wirtschaft 2008, S. 16).

degree of globalisation. There are indices that mainly focus on economic indicators of globalisation (for example Beer/Boswell 2001 or Li/Reuveny 2003 on trade openness, foreign direct investment inflows, portfolio investment inflows and the spread of democratic ideas across countries) but more recently for example Dreher (2006) or Dreher/Gaston/Martens (2008) developed indicators which also include social, cultural and political aspects.

With these indices the scope of globalisation and its changes over time can be illustrated for the different national states (vbw 2008, Dreher 2006). In general, the scope of globalisation is rising worldwide and the highest rates can be seen in the United States of America and in European countries whereas the lowest rates are reported from former socialist countries such as Hungary, the Czech Republic, Poland and Estland (vbw 2008). However, the most intriguing result is that firstly globalisation has different effects on the national states and secondly the general disparities among national states are largely stable over time. This means that the borders of national states and national institutional structures as well as country-specific contexts seem to have a guiding and filtering effect on the processing of globalisation's effects. This insight contradicts the often stated irrelevance of national borders in times of globalisation (for example Beck 1999) and indicates a developmental logic (path dependency) that is specific for individual national states (vbw 2008).

*Figure 1: Globalisation and Growing Uncertainty in Modern Societies (translated by the author according to vbw 2008, p. 17)*




* ICT: Information and Communication Technologies

These institutions as illustrated in Figure 1 are naturally also changing but they do so within a certain national context that includes a historically grown system of social and political structures, institutions, values and meaning etc. These institutions and structures

are vastly interwoven, complementary and the exchange among them is high which negatively affects their general flexibility in adapting to change.
Coming from that wider context the focus of this thesis lies on Germany's educational system and its educational market within the framework of lifelong learning. The following paragraph shortly summarizes their strengths and weaknesses in coping with globalisations effects.

## *2.2. Germany's Educational System and Globalisation's Effects on it*

Germany is a democratic and social federal state that shares the responsibilities for the educational system in terms of educational structures, legislation and administration among the federation, the Federal States and local authorities.
The 16 Federal States are primarily responsible for the educational legislation and administration whereas the Federal Government takes over responsibilities for e.g. the promotion of academic and scientific research, the regulation of in-company vocational training, the basic guidelines of continuing academic education at higher education institutions etc. Within the Federal States, the Ministries for Education, Science and Cultural Affairs are the governing authorities which are in charge of education, science and culture in terms of arts and culture in general, schools, higher education and adult education. In some states these ministries have more responsibilities than these, such as for sport programmes or youth welfare. Apart from that, every state supervises and controls the academic and legal staff within the school system by a school supervisory authority. Moreover there are certain agreements on the standardisation of the states' school systems regarding for example the full-time compulsory education (e.g. duration) or the recognition and accreditation of school leaving certificates.
Educational policy issues that need to be regulated on a supra-regional level are passed on to the Standing Conference of the Ministers of Education and Cultural Affairs (Kultusministerkonferenz) with the aim of finding a common understanding that allows for recommendations. The 16 state parliaments can then decide on whether they enact these recommendations as binding legislation.
Another committee called the Commission for Educational Planning and Research Promotion (Bund-Länder-Kommission) takes responsibility for educational planning and research promotion if the Federal Government and the Federal States decide to cooperate on the basis of agreements in these areas (Reich/Edelmann/Tippelt 2008).
The German educational system was internationally known to be a successful model for a long time but, in taking stock, research results clearly indicate that the whole system has not yet found an adequate way to adapt to globalisation challenges. For a comprehensive illustration and description see Reich/Edelmann/Tippelt (2008).
In the following section one example for this situation is given by taking a closer look at the German approach to professional education, the "dual system": It has attracted attention and seemed to be a pragmatic solution to successfully structuring the transition from school to professional life. This model offers both: broad theoretical knowledge about a certain professional area and a very specific on-the-job-training that supports the practical skills of young people. This way, trainees are confronted with realistic problems

and learn to apply practical problem solution skills and at the same time they are provided with the necessary theoretical background knowledge. Other states tend to focus on one of these aspects by either providing a professional education that is solely based on theoretical schooling (for example France) which hardly prepares students for the realistic challenges of the labour market or by an exclusively practical training-on-the-job approach (for example the US) that limits the trainees skills to one specific job in one specific company (vbw 2008).

The approach includes a standardised certification system and is valid for about 350 professions that follow nationally coordinated training regulations. This presents a high level of orientation and information for potential employers as well as for the two-thirds of young people in Germany who participate in this system for 2 to 3.5 years (Reich/Edelmann/Tippelt 2008). As a consequence, a smooth transition from the educational system to the labour market was provided as well as an adequate fit between the individual's qualification and the job. But according to Euler and Severing (2006) a subtle erosion of the system has been taking place in recent years. This finds its expression in a lowered successful transition rate of school leavers to the dual system: in the early 90s these numbers were at 77% whereas in recent years they fell to 58%. Thus, a transition system was created that absorbs more than 500.000 students and is financed by the public funds. Moreover, the PISA results on competencies of students in international comparison were shocking for Germany and companies tend to dismiss these professional education structures and the culture that was created by it. Plus, in recent years there has been a growing gap between the number of apprenticeship training positions and the number of trainees due to a baby-boom generation (vbw 2008). Thus, the educational system of Germany is experiencing a major crisis, even more so in comparison to some Scandinavian systems (for example Denmark or Finland).

There are a variety of reasons to be found for these tendencies (for example vbw 2008) reaching from the early selection of pupils into different, quite rigid separated school types (Hauptschule, Realschule and Gymnasium) and the resulting limitation of educational and professional options to early retirement programmes in order to 'retire' employees with out-dated qualifications.

As stated above this is an example for one of the difficulties the German educational system is confronted with. In the next section the resulting challenges for the whole system are described in order to provide a deeper understanding for the motivations and goals of the programme "Learning Regions – Providing Support for Networks" (see chapter 2.3.3)

### 2.2.1. Challenges for the Educational System

The worldwide competition for well educated and skilled workers is increasing so that states and companies need to find strategies for making those employees stay and for re-gaining and re-locating those highly qualified and skilled employees who work abroad. Moreover, the national educational systems of Europe are becoming more similar, for example in terms of fitting their national qualifications frameworks (NQF) to a common European qualification framework (EQF). Hence, qualifications need to be transferable so

that skilled workers are able to move globally and take jobs abroad. At the same time these developments put educational systems in transnational competition to each other. In order to make students and employees fit for that competition and able to adapt to the accelerated pace of change and the resulting uncertainty, the educational system needs to provide opportunities that enable students to gain the necessary competencies that help them deal with it, such as tolerance for ambiguity (vbw 2008).

There are three areas within the system that can offer this learning environment: school, professional education and further education. For all three, a selection of central challenges is stated here for Germany.

Schools need to educate students in order to provide them with

- Relevant knowledge, mastery of their own language and foreign languages,
- Individual and social skills (for example a sense of responsibility, stress resistance, a willingness to perform and to take risks),
- Intercultural competencies (like intercultural sensitivity and tolerance for other cultures),

Therefore, some changes in the structure of the system are necessary as well:

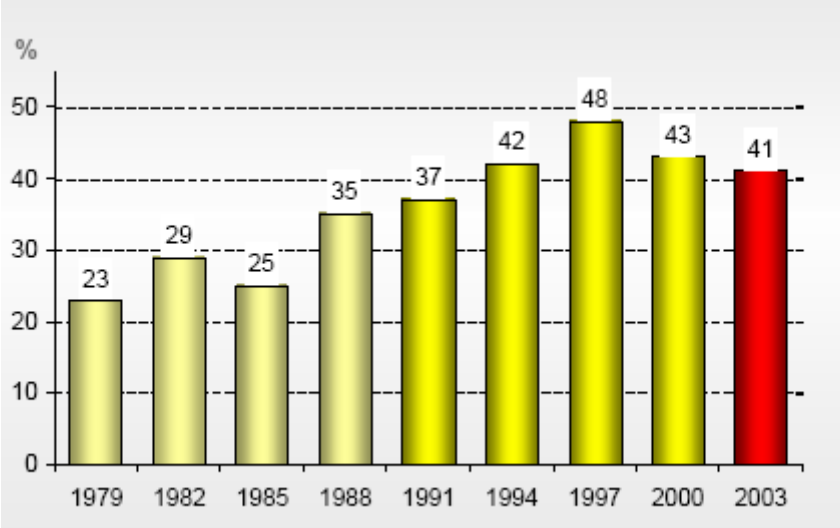
The whole system needs to become more transparent and the elements of the education programme should be made more interchangeable to reduce rigidity and increase permeability. There need to be special support structures for those students who cannot keep up with the pace of the instruction but also for those who are especially gifted. To facilitate that and ensure that this process fits the labour market's and individual needs, cooperation in the state's educational system and players from the schools direct environment, such as parents, companies and youth counselling institutions etc. has to be initiated (Kussau/Brüsemeister 2007).

The general aim of the changes that need to be made within the professional educational system focus on increasing the permeability of the existing system by creating individual modules that can be combined and certified independently from each other. Another important aspect that contributes to the complexity of the system is the extremely high number of specified professional certificates. If it could be reduced, this would be very conducive to the overall transparency and manageability of the whole system. This way the advantages of the dual system (orientation, transition, standardised certification) are retained while at the same time the system becomes more flexible and adaptable to external developments. Besides the transition to higher education needs to be facilitated for the purpose of working against the deflation of professional qualifications (vbw 2008).

Further or continuing education is a necessary pre-condition for actively participating in society and the labour market. More and more, academic qualification proves to be a decisive factor in getting a job and successfully keeping it. In Germany the rate of academic graduates is at 20% whereas the average in all OECD-countries is 36% (OECD 2007a on tertiary type A graduation). In addition, educational decisions in Germany can hardly be reversed or compensated for and the social bias that limits obtaining higher educational qualifications in schools weighs heavily in Germany (Autorengruppe Bildungsberichterstattung 2008). Apart from that there are a variety of other organisations and institutions that offer general or professional continuing education courses. The overall

participation rates in continuing education in Germany are evidence for a startling trend: the rates of adults (aged 18-67) have been increasing since the first measure in 1979 was taken until 1997 and ever since they have been falling (compare fig. 2).

*Figure 2: Development of Participation Rates in Further Education in Germany, 1979-2003 (Bundesministerium für Bildung und Forschung 2006, p. 19)*




For Germany's market for further education services there are several major challenges to be met; here are some of them:

- Abolition of age restrictions to participation in professional education,
- More flexibility concerning the access to higher education,
- Flexible financial support structures for participation in lifelong learning (Expertenkommission Finanzierung Lebenslangen Lernens 2004),
- Transparent further educational structures and markets,
- Transparency concerning the quality of further educational offers.

As shown in chapter 2.2, the accountabilities and responsibilities are widely spread mainly over the states, their state institutions and federal institutions in the German educational system. At the same time the system is very hierarchically organised and the necessary decision-making power to adapt to the changes that can be seen and felt where education takes place, like in schools, Kindergartens etc. is not located at this level.
As lifelong learning and the creation and provision of possibilities to engage in lifelong learning are not only a task of "the state" but of many other players in civil society, in industry and economy, in education and many others, there needs to be closer cooperation among those players.

### 2.2.2. An Educational Governance Perspective

As findings from educational governance research already indicate (Dale 1997) these other participants also influence the educational system besides the Federal Government, the Federal States and local authorities. These players are identified as the market and civil society and it is predicted that their influence is rising. Kussau and Brüsemeister (2007)

state that this new distribution of power, control and influence takes away the hegemonial supremacy of the state and puts the state, the market and civil society in more balanced positions. Hence, the different societal interest groups are finding new ways of designing the states' educational services according to their needs.

These educational needs include aims, such as enhancing the individual's opportunities in life and strengthening the economic vocational advantage. As a result, education is more and more seen as a means to support the individual's resilience to change and as a preventive precaution to the many changes that may occur during the course of life (Kussau/Brüsemeister 2007).

In response to the multitude of changes on different levels, educational policy has been modified, too. It can no longer function as a steering and controlling instrument, it rather adjusts its influence to governing and engages in mutual agreement with the involved players. That ensures that the decisions made and the actions taken now on the basis of a new structure of governing and regulating fit the ever changing environment much better than one centralized decision that can only take a certain limited perspective into account. One of the main problems concerned with centralized decision-making includes a differentiation into an object and a subject of steering activities which includes the notion that the object has no inherent self-directed action and logic to it. But as implementation research has shown (Mayntz 1987, 1996) this is not the case: programmes are not designed on a higher level and put into practice that way down the different levels. This is rather a process of "digesting" the information that is influenced by factors such as a lack of conceptual clarity, the loss of information and sometimes a different meaning is ascribed. Hence, the objects of the states steering and controlling efforts are shown to be resistant, not just passively awaiting to be formed and changed but rather prove to be active players themselves with specific interests that take up impulses of governance and process and assimilate it in their distinctive manner and dynamics (Benz/Lütz/Schimank/Simonis 2007).

This situation is the main focus of the analytic perspective of educational governance. One of the core questions of this research discipline is: how single activities of regulation and governing can be directed toward a common goal without mutual disturbances and unintended outcomes. So, governance is actually a new perspective on the creation of order and structure in society that goes beyond the traditional forms of the state, market and civil society and includes further forms of interaction and mechanisms of interdependency that gained more influence in recent years, such as networks, public-private partnerships, associations, negotiation, common transformation etc.

There is common agreement that public needs can be served only to a limited degree by the market. And as national states cannot provide for all the needs any longer, governance indicates that services, products and other efforts are offered by cooperating autonomous players in mutual exchange relations. The focus of this thesis lies in the management of these networked mutual exchange relations between players of functionally different areas in society.

## *2.3. A European Perspective and Germany's Way of Implementation*

These thoughts on globalisation, informalisation and governance of today's societies and the resulting requirements lead to the question of who takes on responsibility and steering for which changes to happen and also how these changes can be achieved. The first question seems to be an easier one because, at the top level, the global one, no one single person or organisation is yet responsible. And at the next organised level below the global one there are supra-national organisations such as the European Union and at the following level there are nation states. And for nation states, national markets and national society, national governments are in charge whereas at the European level the European Council is responsible. Though as stated above the power and influence of the nation state is changing; there are other ways of influence now and more interest groups are taking their share of the responsibility.

The second question is definitely a more difficult one to be answered and it can certainly only be answered by taking national and regional preconditions into account. These preconditions include laws, the distribution of responsibilities and accountabilities on a state level but also on an institutional level. Traditional and habitual behaviour in societies is mainly guided by the traditions, habits, patterns and processes of their institutions and if one changes the other follows. This is why processes of change in companies, chambers, local administrative bodies, educational, research and social institutions are as important to a society as a whole as they are to the institutions itself. The promotion of change for a society implies a cultural change as well because as culture influences people's values and attitudes, it also influences their learning behaviour. Field (2004) concludes that "(…) if we wish to promote continuous lifelong learning, we should seek to foster cultural values and practices that favour participation and success in such learning." (p. 10). And this is also why "leadership, as the energy that allows such a process to happen at all[5]" (translated by the author, p. 24) is so important according to Peter Senge (2001), a leading scientist for organisational change. As in every other change process there is the need for change agents that are able to build trust, lead and produce highly accepted results.

Since this thesis focuses on a national programme in Germany which is co-financed by the European Union and part of the European strategy, the next paragraph tries to clarify how the second question is answered by the European Union and especially by Germany.

### 2.3.1. Strategies and Policies

The representatives of the European Council met in March 2000 in Lisbon, and defined a new strategy for the European Union because they recognised that the effects of globalisation slowly affect "[…] every aspect of people's lives and require a radical transformation of the European economy." (Lisbon European Council 2000, p. 1).

This Council and its conclusions are crucial to the future potential in societal development because it officially affirms (1) that Europe has entered the Knowledge Age and (2) that policy and action within Europe must make a decisive change (Commission of the

[5] „(…) und warum Leadership, die Energie, die einen solchen Veränderungsprozess überhaupt erst ermöglicht, so wichtig ist." (Senge 2001, S. 24).

European Union 2000). The adjustments of the European overall strategy made in Lisbon aim at "(…) strengthen[ing] employment, economic reform and social cohesion as a part of a knowledge-based economy." (Lisbon European Council 2000, p. 1). So this is the intended outcome, which can be perceived at the end of that process. Additionally, the European Union acknowledged that it needed a strategic goal: It wants "[…] to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion." (Lisbon European Council 2000, p. 2).

The question that is so closely related and must be asked at this point is: And how can this be achieved? How exactly is that done?

The answer to that – on a policy level – was given by the Commission of the European Union in "A Memorandum on Lifelong Learning" in 2000: "The conclusions of the Lisbon European Council confirm that the move towards lifelong learning must accompany a successful transition to a knowledge-based economy and society." (p. 3). And the Commission goes ever further in stating that "Education, in its broadest sense, is the key to learning and understanding how to meet these challenges [resulting from living in a complex social and political knowledge society]." (original emphasis p. 5). Though the Lisbon summit expected a variety of economic, technological, social and employment policies to be need and concerted in a coordinated policy approach, the orientation to a culture of lifelong learning seems to be the underlying condition for this change process to take place.

So in essence, education and learning are the means how these societal changes can be met and must be met in order to keep up with the accelerated pace of economic and informational change. In this sense, the member states of the European Union face the challenge of having to change their national educational systems in order to enable all inhabitants to learn how to continuously obtain the necessary knowledge and skills that allow and motivate them to actively participate in economic life and society.

### 2.3.2. Germany's Adaptation: the Programme "Lifelong Learning for All"

In order to meet that challenge, the Federal German Ministry for Education and Research launched an Action Programme called "Lifelong Learning for All"[6] in 2001. Its design is based on the recommendations of the so-called "Forum Bildung", which is a committee of educational researchers, policy makers and practitioners that focused on quality and sustainability of education.

The Programme's aim is to initiate the process of changing educational structures and sustainably fostering the idea of learning throughout life for all of Germany's population. This programme encompasses a variety of areas and fields of activities and it encompasses all research, development and implementation activities of the German government that promote a learning society. These activities are intended to contribute to one or more of the following five goals: (1) Strengthening individual autonomy and responsibility as well as the learners' ability to control their lifelong learning process

[6] "Lebensbegleitendes Lernen für alle"

themselves, (2) Promoting equal opportunities and motivating educationally disadvantaged groups, (3) Intensifying the relations between all educational sectors (4) Encouraging cooperation among all educational organisations and their customers and (5) Improving user-orientation and quality as well as the amount and the structure of offers.
The core process that provides the basis for the other activities of the action programme is the development of "Learning Regions". In order to create such regions within the framework of the above mentioned programme and its goals, the Federal Ministry focused on a central programme called "Learning Regions – Providing Support for Networks".
The Programme is the result of a scientific and educational policy discussion that started about 25 years ago (Gnahs 2002). During the early 1980s the concept of education as an important means to strategies of endogenous regional development and to economic innovation processes gained attention. These developments resulted in regional developmental concepts for education and mainly for further education that were implemented and evaluated in the early 1990s. According to Gnahs (2002) this concept gained even more power after Germany's reunification because in order to support the transformation of the existing educational structures in eastern Germany, (further) educational alliances were founded and implemented. During the 1990s these conceptual and empirical groundwork was condensed into the concept of "learning regions" which has gained much political, scientific and practical attention as a concept of regional self-governance ever since (Stahl 1994, Koch 1994). The concept of learning regions is now implemented by the national programme "Learning Regions – Providing Support for Networks". Stahl (2003) summarized the guiding principle for learning regions in that he states that the general concept of a "learning region" includes analogous to a learning organisation (see Senge et al. 2007) the mobilisation and use of the resources of all regional stakeholders in order to initiate regional development within the strategic framework of a self-organised and self-responsible bottom-up process.
So the whole programme can and in this thesis will be understood as an initialising activity that aims at developing an organisation, namely Germany's educational system.

### 2.3.3. Learning Regions – Providing Support for Networks

The programme "Learning Regions – Providing Support for Networks" started in 2001 with a budget of approx. 118 Mil. Euro that was jointly provided by the European Social Fund (ESF) and the German Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung). This programme is the centre of focus for a common strategy on lifelong learning that the federal and the state governments agreed on. The members of the programme's steering committee[7] are representatives of the 16 educational state governments, of the federal ministry as well as social partners. This committee also decided on which regional network projects would be promoted after an open call for tenders in 2000/2001.

*The Programme's Vision and Objectives*

[7] Lenkungsausschuss

So far, this is the biggest initiative on lifelong learning in Germany and its overall objective is to establish institutional structures and learning cultures that enable a society to offer guidance, and demand-oriented structures which fit people's individualised educational requirements better. By overcoming institutional borders and creating networked communities among all educational sectors serving the needs of regional communities and their inhabitants, this programme is designed to develop regional foundations for making lifelong learning feasible and creating the structural preconditions for continuing learning opportunities for all. Norman Longworth (2006) has put the overall ideas of a learning community within a certain geographical area in a broader vision:

> A learning city, town or region recognises and understands the key role of learning in the development of basic prosperity, social stability and personal fulfilment, and mobilises all its human, physical and financial resources creatively and sensitively to develop the full human potential of all its citizens. It provides both a structural and mental framework which allows its citizens to understand and react positively to change. (p. 23).

So this programme actually seeks to enhance a region's readiness and ability to learn and adapt to change by using endogenous educational potential inherent in regional (educational) institutions and organisations and the networks between.

On a more practical level the fostering of cooperation and networking among educational organisations is not just a means for designing more customer-oriented educational offers. This interorganisational cooperation is also a necessity if educational institutions want to adequately react to the ever increasing complexity of market requirements (Tippelt/Reupold/Strobel/Kuwan et al. 2009). On a structural level this means a shift from fierce competition between single institutions and organisations to mutual cooperation where common interests can be met (Kahle 1999). Therefore it is important to figure out where these common interests are, who the relevant local stakeholders[8] are, and how already existing experiences and competencies can be integrated – not just limited to a short-term perspective but also in the long run. This is the starting process for a common customized regional strategy in lifelong learning which in turn can be seen as bottom-up approach in developing a knowledge society.

The identified areas in which new educational services could be offered are: facilitation of all transitions during the life course, educational marketing, quality management, consulting and educational career guidance as well as the creation of new learning environments. The topics that were addressed within that broader thematic framework mirror the discussion on an international level (OECD 2008) and focus for example on the recognition of informal learning outcomes (bmbf 2008) or databases that offer transparency and orientation about all regionally available courses, offers and services on education[9].

[8] According to the homepage of the project management agency (DLR) it could be: "General and vocational schools, institutions of higher education, funding agencies and institutions offering out-of school education and off-the-job or inter-firm training, trade unions and industry training organisations, adult education centres, education funding agencies of the churches, commercial providers and other educational institutions, companies, chambers, trade unions, business development organisations, education counselling institutions, youth authorities, employment offices and other administrations, cultural and socio-cultural institutions, teachers and learners" (translated by the author, DLR 2008).

[9] For examples of such educational offers, see www.lernende-regionen.info

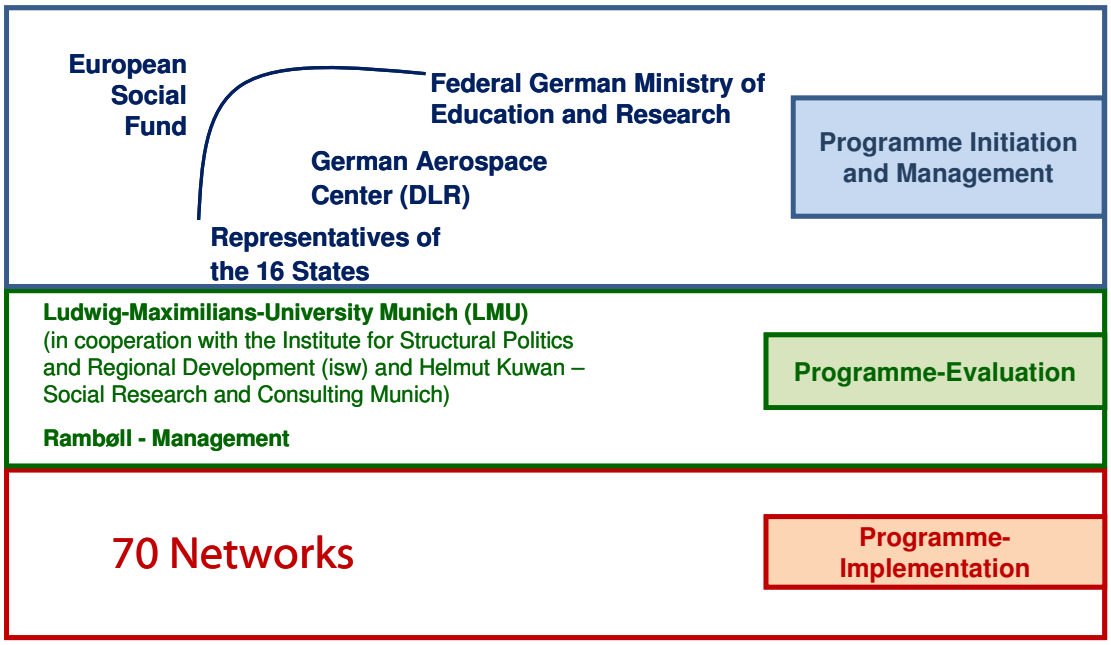
*The Networks*

Supporting a regional network means first of all the financial support of a central network creation, development and coordination project which is often put into practice by a professional agency. In addition, there are some further tasks this agency in many networks takes over as well: marketing activities for the network, development of quality standards and of educational guidance services. Besides that, each network has several sub-projects that focused on other areas to promote lifelong learning (for example facilitating transitions between school and the job market) and are coordinated by the main network. For the implementation of each sub-project on average four to six people from different organisations are involved on a constant basis and further contributors were invited to join for time-limited special tasks (like the evaluation of a certain process).

*Programme Structure and Evaluation*

The programme is coordinated by a professional project management agency, the German Aerospace Centre (DLR) and the evaluation was split in two assignments. The task of evaluating the programme and its impact was given to a consortium of three interdisciplinary research institutes which was led by the Ludwig-Maximilians-University Munich (LMU), and constitutes the Institute for Structural Politics and Regional Development Halle (isw), and Helmut Kuwan, Social Research and Consulting, Munich. The other task of evaluating in particular the output of the programme in the areas of cooperation with economic organisations, employability, and sustainability was given to the Consultancy Rambøll Management (see fig. 3). These two evaluations started in 2005.

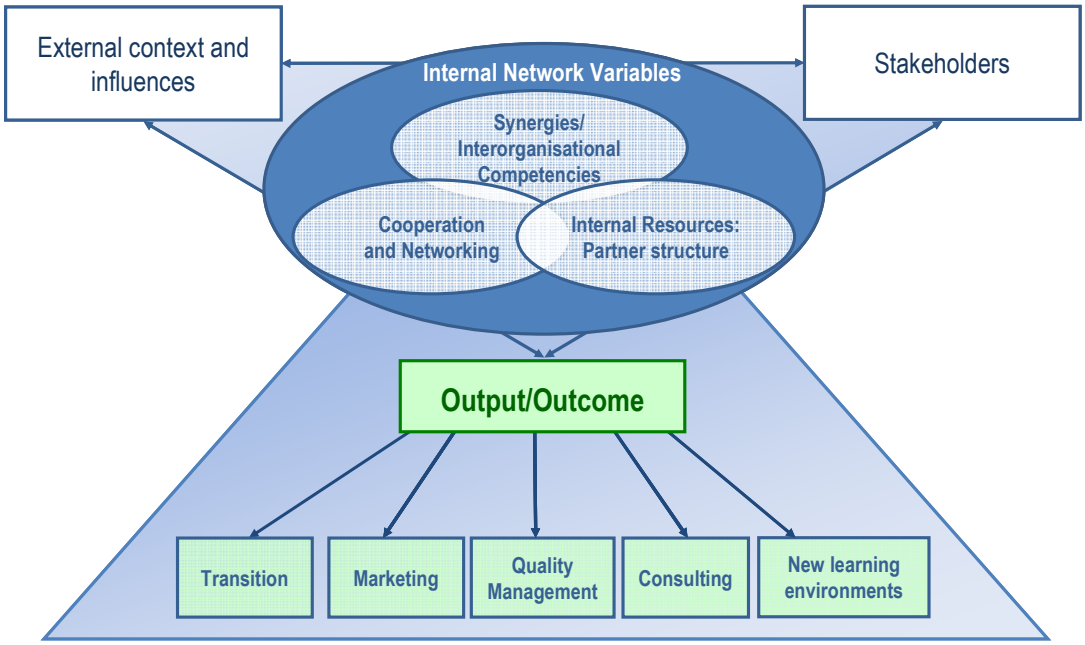
*Figure 3: Programme Structure (as presented by the programme evaluation team of the LMU at the international PENR3L Conference in Limerick, 2008)*




Since the programme lasted almost eight years, the networks ran through different developmental stages, the focus of the programme support was modified according to

other necessities (e.g. different conditions of the educational market etc.) or according to certain findings of the evaluation. This is why the programme and with it the development of the networks were structured in different phases.
In order to grasp the essentials of the resulting complexity (multilevel, multidimensional, multistakeholder approach in different points in time), the team at the LMU developed an analytical framework (inspired by the ideas of Taschereau and Bolger 2007) that allows for an integrated perspective on the network and its environment. With this framework external factors as well as internal network variables and the produced output/outcome can be taken into account (fig. 4).

*Figure 4: Analytical Framework (Tippelt/Reupold/Strobel/Kuwan et al. 2009, p. 27)*




The following chapter summarizes some of the main findings of the evaluation that are relevant to the topic of this thesis, leads to some research questions that were not addressed by that research study and will therefore be the main focus of this thesis.

### 2.3.4. Results of the National Evaluation

*Overall Research Design*

The applied research design consisted of surveys (n=2), case studies (n=20) and expert meetings (n=6) and allows for a cross-examination of the quantitative and qualitative data. The surveys aimed at obtaining an overview of the different activities, the factors that enable or disable network creation and the common projects whereas the case studies provided background information, that help to understand the precondition, the specific realities and the reasons for certain developments. So the case studies help to "embed" the quantitative data and the expert meetings with practitioners from the networks and other scientists in turn help to verify the findings and explore further options.

An overview of Germany's learning regions that are supported by the Programme is offered online[10]. All of these networks (approx. 70) participated in the quantitative surveys; 20 of them were chosen for the case study approach.
There is a detailed description and interpretation of results in two publications (Nuissl/Dobischat/Hagen/Tippelt 2006 and Tippelt/Reupold/Strobel/Kuwan et al. 2009) that focus on different fields of the above shown analytical framework (see fig. 4). There are very interesting results on educational marketing, on new solutions for how to increase transparency on regional educational services, products and their quality, on educational counselling and guidance and how to organise an impartial way of guidance so that the best solution for the customer can be found and organised and many more innovative activities and ideas in different topic areas are documented and analysed there.
For this thesis the attention is first of all on the internal network variables[11] and more exactly on the creation and organisation of cooperation and knowledge exchange in networks. Therefore the findings that are summarized below are chosen by the adequacy to this research focus.

*Overall success factors*

This paragraph highlights some of the factors that were identified by the evaluation of the programme as enablers for a positive network development.
For creating a sustainable regional network that integrates institutions and organisations from all areas of the educational sector the core factor was a common network identity. So the identification of the network partners with the network itself and with its goals predicts much of the networks success. The resulting next question is of course, how a common identity can be achieved. The answers that are given by the evaluation encompass a variety of aspects (Emminghaus/Tippelt 2009):

- An in-depth analysis of the regions needs and characteristics but also of the needs of partners so that common interests can be identified,
- The autonomy of the partners has to be respected and maintained,
- Continuity of key players in the network (a change in personnel can be a disabler because networks are even more based on relationships than are hierarchies and need personal interaction for building trust),
- A good balance between cooperation and competition,
- Creating synergies,
- Mutual trust and cooperation between the partners,
- Trust in the network as a system,
- Authoritative-participative network management,
- A sensitive implementation of leadership.

With a focus on the last few findings of the list above and the details of the reports in mind, the most interesting questions seem to be, how this can be put into practice, how it

[10] http://www.lernende-regionen.info/dlr/download/Inform_01_08_final.pdf, p. 40

[11] "Synergies and Interorganisational Competencies", "Cooperation and Networking", "Internal Resources: Partner Structure"

is organised and who is responsible for it. Concerning the involved persons and/or institutions who were accountable and responsible a solution was found in this programme: for each network, there was one organisation that submitted the tender, got the assignment and either took the responsibility for creating and developing such a network itself or passed it on to a professional agency to do that. The consequence of this process was that in all networks there are one or two persons, called "network managers" whose task it was to create that network and make it successful. The network managers were – if a change management perspective is taken – the change agents. Those individuals that initiate change and help others to cope with the results.
Considering these results and the above given brief introduction into the effects of globalisation on the German educational system the last section summarises these elaborations and draws consequences for the data analysis of this thesis.

## *2.4. Summary and Consequences*

As shown above, globalisation affects national systems such as the labour market, the financial system and also the educational system. These developments require a different cooperative arrangement between all involved stakeholders and their tasks and responsibilities. This goes along with the establishment of a different learning and cooperative culture. To help initiate this kind of structural change in the educational system, the programme "Learning Regions – Providing Support for Networks" was started in Germany in 2001.
For the thesis the above mentioned social role of a network manager, the involved tasks and the persons who took these roles and tasks are the main point of interest. These questions were not part of the programme's evaluation. The resulting research questions are: "What are the complex tasks and challenges of network managers in educational networks?", "What is the special task of "bridging" relational fields concerned with?", "What does a network manager perceive in his or her particular structural position?", "What is an adequate leadership style for network managers in terms of attitudes and tools?" and "How can network managements' results and performance become transparent?".
In the following chapter, the concept of a knowledge society is analysed by taking a closer look at what knowledge is, how it can be transferred and what value it might create. These clarifications lead then to theories on learning and knowledge creation. And in order to understand the basic concept of "learning organisations" by Senge et al. (2007) that underlies the programmes conception the following chapter gives an introduction to that, too. The final section of this next chapter introduces a theory that focuses on changemanagement, "Theory U" by Scharmer (2007). These theoretical developments concerning, learning, knowledge creation, innovation and changemanagement are the underlying concepts for the interpretation of this thesis' data analysis.

# 3. Learning Organisations and Knowledge Management

In order to give a closer and more detailed insight into the context in which network managers are situated, what their challenges are concerning the changes that they initiate in order to facilitate the management of knowledge flows, the next chapter focuses on these aspects. The theoretical frameworks that help to understand the complexity of this situation as well as the resulting tasks include a short introduction to the current concepts of society as informational, knowledge, network, or learning societies. By stating essential aspects of learning, brain research and organisational learning theories as well as by clarifying different concepts of knowledge the task of managing knowledge flows within social networks and initiating learning effects concerning the network members' "network competence" (Roß 2004) becomes clearer. Finally, this chapter concludes with the hypothesis that network management includes some essentially pedagogical tasks.

## *3.1. Perspectives on Society: Information, Knowledge and Network Societies*

Since knowledge creation and its professional application play an ever-growing role in this globalised economy, it is seen as the central source of sustainable competitive advantage. Many authors (such as Drucker 1993, Nonaka/Takeuchi 1995, Prahalad/Hamel 1990) argue that knowledge is the most meaningful resource today and conclude that gaining control over knowledge and its communication channels is the core area for competition for a future society and its organisational and individual members. This implies that organisations need to be able to deal with knowledge effectively which means that they need to create, update, utilize and distribute it within the organisation. Moreover they have to identify and compensate for gaps in knowledge, be aware of their not-knowing and keep up with the rising complexity of knowledge.
As an effect of this debate on globalisation and its far-reaching effects on our societies, these developments are now closely connected to the catchwords "informational society", "network society" and "knowledge society" or "learning society".
In the following paragraph I will shed some light on what is meant by these catchwords and clarify the differences among them.

*The difference between data, information and knowledge*

The specifics can be elucidated by looking at a definition of knowledge. According to Willke (2004) knowledge consists of three components that interact with each other in a transformational process: first, data are the raw material for knowledge, the facts: "the actual state of the world" according to the OECD (2000, p. 12), second, information is contextualised data that is relevant to a specific system: "indicators that are accessible to the agents representing the state of the world" (OECD 2000, p. 13), and third knowledge is what results if information is put into practice "through […] processing the information in analytical models by agents" (OECD 2000, p. 12). So, in order to transform information

into knowledge, people need to undertake the effort of reflecting upon it first. Thus, information is the basic resource for generating knowledge.

So, the development of an informational society is only one step that was made possible by the new technology revolution towards an even more sophisticated form of society, the knowledge society. This concept exceeds mere technological innovation, by adding social, cultural, economical, political and institutional dimensions and with it their transformation. In a knowledge society, a pluralistic and evolutionary perspective is taken where data and information are closely bound to the context where they come from or are applied (more on that in chapter 4). Also according to the UNESCO (2005), knowledge societies are more than informational societies: Knowledge is bound to an individual's mind and information is a piece of data that does not necessarily make sense to an individual in any given situation:

> As long as vast swathes of the global population lack equal opportunity in terms of access to education – in order to master the available information with critical judgement and thinking, and to analyse, sort and incorporate the items they consider most interesting in a knowledge base – information will never be anything but a mass of indistinct data. And instead of controlling it, many people will realise that it is controlling them. (UNESCO 2005, p. 19).

So, in short, few in this world – the well-informed, well-educated networking individuals – are already living in knowledge societies. But in order to achieve these circumstances for all of the world's population there is much work left for politicians, educators and many others who try to implement the idea of knowledge as a competitive resource being a shared good. At the same time this cited paragraph by the UNESCO world report gives some hints that there is no such thing as a clear envisioned model of what a "knowledge society" looks like in practice. Or more exactly: that there is no such thing as one single, clearly defined knowledge society because the model contains a multitude of dimensions and takes cultural and linguistic diversity into account: "It would be inadmissible to envisage the information and communication revolution leading – through a narrow, fatalistic technological determinism – to a single possible form of society." (UNESCO 2005, p. 17). This indicates that – as in most initiatives for change – the process is open-ended. The point where this development leads to is not yet obvious but still, what is clear is that these macro-structural changes are affecting existing patterns of social interaction. These patterns are changed in order to better serve the accelerated pace and the enhanced quality of knowledge exchange.

In other words, these patterns of social interaction or webs of affiliation can be described as networks. The attractiveness of the concept "network" originates from connecting all areas of society with IT technologies (Schäffter 2004). But only by applying it to social relations has the idea of networks gained importance in recent years and now turns out to be a main element in societies' modernisation (v. Küchler 2007).

Starting with the idea of our society undergoing a transition from an industrial society to an informational society, Manuel Castells (2004b) has tried to make the reader of his trilogy understand the complex and sometimes complicated development of an informational society which is based on technological breakthroughs. The essence of all of his elaborations is the idea of networks. He applies networks to that big system our

modern world has become and suggests that the concept of a network is the key to an analysis of our globalised society. He puts it this way:

> Globalisation and informalisation, enacted by networks of wealth, technology, and power, are transforming our world. They are enhancing our productive capacity, cultural creativity, and communication potential. At the same time, they are disfranchising societies. As institutions of state and organisation of civil society are based on culture, history, and geography, the sudden acceleration of the historical tempo, and the abstraction of power in a web of computers, are disintegrating existing mechanisms of social control and political representation. (Castells 2004b, p. 72).

But networks cannot just be a tool for analysing relations in society; they can also be regarded as a form of governance. Compared to other organisational forms, social networks seem to be able to generate a special capacity for problem solving (Taschereau/Bolger 2007). This generic ability of networks could be an answer to the ever increasing emerging complexity that results from the transformation of the societal system we live in (Schäffter 2004).

In short, informational and knowledge societies are concepts for thinking about information and knowledge in terms of a resource. That is, in asking questions such as: "where is it located?" or "how can it be created and then transferred?" In contrast, the idea of a network society refers to a systemic way of thinking about social relations between individuals and/or institutions. The network society is so to say the social infrastructure which allows for the exchange of the resource knowledge. Social networks are recognised by an increasing number of researchers, policymakers and practitioners as the streets on which knowledge travels (see Brown/Duguid 2001).

*Learning Societies*

In order to become a knowledge society, a society needs to learn continually and re-organise and develop its existing knowledge base. Already in 1995 the European Round Table of Industrialists and the European Council of University Rectors agreed that while many companies are already on their way to becoming learning organisations, society as a whole needs to join that development and become a learning society: "The Information Society so highly praised by the EU Delors White Paper must be completed and matched by a Learning Society, if we do not want to fall into an over-informed world and a valueless culture based on 'zapping' and 'patchwork' superficiality'." (Cochinaux/de Woot 1995, p. 52). So, a learning society means actually that all individuals who live in this society continually learn to adapt to new environments and moreover that the groups, organisations and institutions learn and engage in knowledge exchange (Room et al. 2005). Creating a learning society can be regarded as fostering each individual's motivation to learn, the willingness to pass on knowledge and experience and the common understanding that learning provides a solution for many problems in life like unemployment, increasing ones income, creating more life options etc. The OECD thus defines learning as

> (…) a process, the core of which is the acquisition of competence and skills that allow the learning individual to be more successful in reaching individual goals or those of his/her organisation. It will also involve a change in context of meaning

> and purpose for the individual and affect his/her existing knowledge. (OECD 2000, p. 29).

So learning is, as in any psychological or pedagogical definition, not an innate reactive tendency but a change in thinking, understanding and ultimately in behaviour (Jarvis 2007).

Thus, a unique new capacity in learning societies has to be developed, so that the continuous development of knowledge-based intangibles, such as 'personal creativity', 'understanding customer needs' and 'innovative capacity' etc. are fostered. Learning in this sense is understood as the process of adapting to the ongoing change that is inherent in current reality. But as defined by the OECD, learning in a Learning Society is more than that, it also refers to the individual's situational capacity to reflect upon and decide which pieces of information are relevant, reliable, worth of being paid attention to etc. This process is the precondition for converting information into knowledge. The UNESCO describes this process and the involved capacities as follows:

> It implies a mastery of certain cognitive, critical and theoretical skills that are precisely what knowledge societies will seek to develop. While we may drown in a flood of information, knowledge is precisely what enables us to 'orient ourselves in thought'. (2005, p. 47).

Jarvis (2007) goes even further in concluding that societies which are based on the application of knowledge must be learning societies and moreover societies that put learning at the heart of their cultures are human process-orientied societies and thus should be humanistic societies.

The questions that arise at this point are basically: What are characteristics of knowledge that can make it flow? and How can knowledge be produced and allocated? The following section tries to answer the first question, in defining and explaining different forms of knowledge and how it is acquired. The second question is addressed when different learning theories, models of knowledge management and knowledge creation are presented in the following part in this chapter. By then, it is made clear that "Knowledge, in short, runs on rails laid by practice." (Brown/Duguid 2001, p. 204) but moreover knowledge needs communication channels between individuals. These channels develop by creating relationships that are based on trust and openness. Knowledge will not flow if people do not openly communicate it. Thus, the fear of losing one's competitive advantage when knowledge is given away needs to be outweighed by the positive consequences it has for the individual when she or he openly shares knowledge (Aderhold/Wetzel 2005).

## *3.2. Concepts of Knowledge and Learning*

In general, there is no commonly accepted system for describing and defining knowledge (OECD 2000) that would allow for understanding the relation of knowledge, learning and the developments in economic and social life. Following Willke's (2004) argument, knowledge means in the first place the integration of information in systemically relevant practice. So, knowledge is made use of only where it is applied and where an individual decides that it makes sense to be applied. Applying knowledge to where it is useful and creates value in a learning society means to bring it to economic and social life.

According to the OECD (2000) economic models focus on gathering and processing information in order to make decisions and they refer to knowledge and information in two different ways: Firstly, the decisive postulation in standard microeconomics is "that the economic system is based on rational choices made by individual agents." (original emphasis, p. 12). Thus, agents are crucial in that their knowledge (how much and what kind) about the world in which they act and their ability to process relevant information provide the foundation for decision making. Whereas through the second perspective knowledge is regarded as an asset that is in the production process, an input in terms of competence and output in terms of innovation. Thus, knowledge can be owned, bought and sold and theories that focus on innovation or competence development in and of organisations focus on knowledge creation, transfer and exploitation of knowledge (OECD 2000). The next section focuses on the differentiation between explicit and implicit or tacit knowledge so as to illustrate the potential but also the limits of knowledge transfer or trade.

### 3.2.1. Explicit and Implicit/Tacit Knowledge

On a more analytical level, knowledge can be classified in different ways. The above described perspectives on knowledge imply initially a threefold nature of knowledge: first, there is knowledge that can easily be articulated, transferred to other people for example on paper, the internet, by spoken word or in knowledge management tools and is thus tradable ("explicit knowledge"). Second, there is an "implicit dimension" of knowledge which refers to knowledge that comes from experience, allows an agent to make relevant decisions and is not easily expressed in words. This knowledge, was first called "implicit" by Polanyi (1967) who referred to it as that part of our knowing that we cannot make explicit: "we can know more than we can tell" (p. 4). Polanyi argued that implicit knowledge covers a variety of sensual and conceptual information and images that are activated when individuals try to make sense of something new. This is where the third nature of knowledge can be made out: According to Nonaka and Takeuchi (1995) this tacit dimension is divided in two categories: the first one as mentioned above deals with that kind of informal knowledge that was coined 'know-how' (Ryle 1949) and means the more technical dimension behind practical experiences that can hardly be expressed. Whereas, the second category deals with a dimension that creates the filter of how we perceive reality and what we are able to envision for our future.

> It consists of schemata, mental models, beliefs, and perceptions so ingrained that we take them for granted. The cognitive dimension of tacit knowledge reflects our image of reality (what is) and our vision for the future (what ought to be). Though they cannot be articulated very easily, these implicit models shape the way we perceive the world around us. (Nonaka/Takeuchi 1995, p. 8).

Thus, the third aspect can be called that kind of implicit knowledge that determines the way agents perceive the world and interpret their perceptions. The last aspect of the three is often termed as "mental model"[12], mind-set, schemata, beliefs etc. that individuals are

[12] „Mental models are the images, assumptions, and stories which we carry in our minds of ourselves, other people, institutions, and every aspect of the world. Like a pane of glass framing and subtly distorting our vision, mental models determine what we see." (Senge et al. 2007, p. 235).

not aware of. For this thesis the term "mental model" is used as defined by Senge et al. (2007). These mental models that guide people's perception and determine their belief and value system help them to make sense of the world and reduce complexity. At the same time mental models limit the possibilities in taking certain (life) options because the options cannot be perceived by the individual (by reducing complexity some options are blended out). Another reason is that even if the options are perceived they might be declined because their realization would contradict the existing value and belief system inherent in an individual's mind (Senge et al. 2007). Mental models direct the individual's attention and cause the individual to see, feel and act according to those underlying ideas of how the world is operating (Nonaka/Takeuchi 1995). This idea is very important to the kind of change management that needs to be undertaken in learning societies and thus in the networks that are examined in this thesis. This is because here, in peoples' mental models the potential new opions are defined, i.e. what is thinkable and what is not. That means that without a change in existing mental models, hardly any new options can be perceived or realised.

For organisations and institutions the implicit part of knowledge is oftentimes especially valuable and interesting because this is an important element of an employee's experience and expertise that allows for a deep understanding of complex systems and enables the individual to solve context-specific problems (Winkler 2004). Moreover, individuals can only pass on this kind of knowledge in showing and explaining somebody else "how to do" these practices. This again makes the individual important and allows for recognizing and valuing her or his agency. This aspect is highlighted also by the following concept of "sticky" and "leaky" knowledge.

### 3.2.2. Sticky and Leaky Knowledge

The creation of knowledge is closely connected to the creation of innovation and thus to competitive advantage as Nonaka and Takeuchi (1995) pointed out. Transferring knowledge from one individual or context to another is known to be difficult oftentimes, especially so when the intangible assets connected to knowledge are heavily tacit and hard to put into words (see for example Hargreaves 2004). Moreover, sharing knowledge, creating places for "ba" (see chapter 3.3.2) and continuous innovation is usually restricted to a certain space (Nonaka/Takeuchi 1995). Since the created knowledge and its productive use mean a competitive advantage, the interest of an organisation to keep this knowledge within its organisational borders is substantial. So the knowledge flow should be high within an organisation, across different departments (horizontally) and hierarchical levels (vertically) but sensitive knowledge should not leave the organisation (Aderholt/Wetzel 2005). Brown and Duguid (2001) discuss this question in depth and analysed the relationship between "sticky" knowledge (knowledge that does not flow where it should, for example between a research & development department and a production or sales department) and "leaky" knowledge (knowledge that does flow where it should not, for example between specified researchers who work for different companies). They conclude their analysis with the statement that knowledge is both, sticky and leaky at the same time.

The authors state that "stickiness" and "leakiness" are rather features of knowledge instead of categories or special kinds of knowledge. Thus, knowledge can be sticky at one time in a certain situation and leaky at another point of time in a different situation. Whether knowledge turns out to be sticky or leaky depends on the existence or non-existence of shared practice: "If knowledge leaks in the direction of shared practice, it sticks where practice is not shared." (Brown/Duguid 2001, p. 207). In following the above stated examples of sensitive knowledge flowing between two research departments of different companies, this means that the involved individuals, the researchers share practices. They think, work and elaborate on the same problems and since they chose similar jobs and work environments, they have many aspects of their daily lives in common (see chapter 4.3.2, paragraph on homophily theory). Communication between those two people is very likely to be effective, joyful and guided by mutual respect because they perceive each other as similar. However, communication between individuals who do not directly share so many criteria of their daily lives and follow a different set of goals and rules is not as naturally flowing and takes more effort. For this thesis this is an important aspect because creating new connections between persons that hardly perceive each other as similar is one of the core tasks within learning regions. Here, people communicate with each other who have not had reason to do so until then, even if they live in the same region. Creating practice between them is hence a vital part of creating knowledge flows.

This result is based on the idea that tacit knowledge is non-tradable and needs to be converted into explicit form in order to flow. Accordingly, first a certain practice has to be spread in order to provide the implicit knowledge ground that enables an embedding and sense-making process of the transferred explicit knowledge. When practice is not shared knowledge is unlikely to be transferred and vice versa.

> Simply by being human, we all engage in a great deal of similar practice, and hence share a great deal of tacit understanding. People do share knowledge and insight by virtue of their membership in those overarching sociocultural "slabs." Nonetheless, much of the practice that forms identity and gets work done is more local and more dynamic. (Brown/Duguid 2001, p. 204).

After presenting core concepts of knowledge and learning, in the subsequent paragraph, individual and organisational learning theories as well as concepts of knowledge management and knowledge creation are depicted.

## *3.3. Learning Theories and Knowledge Management*

The next sections centre on knowledge management, organisational learning and learning organisations. All of these topics basically focus on collective forms of learning within organisations which all share the essential dilemma of individual learning being a necessary but insufficient condition for organisational learning. This means that there is no collective or organisational learning without individual learning but, just because individuals learn, it does not follow that the organisation or the collective learns automatically as well (Argyris/Schön 1978, Senge et al. 2007). Thus, all potential forms of knowledge management within and between individuals and organisations can only become reality if both agree to create and use knowledge in a mutual exchange relation.

This agreement and the learning orientation that goes along with it are the guiding topic of present theories of knowledge creation (Nonaka/Takeuchi 1995), theories of learning organisations (Senge et al. 2007) or approaches to knowledge management in learning societies (OECD 2000, Room et al. 2005). In the following section Nonaka and Takeuchi's (1995) model of knowledge management and creation is presented briefly. From all possible knowledge management models this one was chosen because firstly, it deals with implicit and explicit knowledge, secondly, it refers to a certain culture or atmosphere, the authors call "ba" and thirdly, in its practical application it also refers to knowledge bases outside an organisation. Next to this knowledge management theory, some core organisational learning theories are described briefly. These theories are presented here because they provided the way for a new social technology for profound change management called Theory U (Scharmer 2007) that is relevant for network managers to apply in their daily work and is illustrated at the very end of this chapter.

Though pedagogy and educational research in Germany do not pick out the brain and its processes as a central topic, the findings of cognitive neuroscience are insightful for educators as well as for change agents. Understanding the fundamentals of the nervous system and the basic change processes in neuron networks while an individual learns helps to understand that "(…) the ability to learn is dependent on modification of the brain's chemistry and architecture, in a process called 'neural plasticity'." (Cozolino/Sprokay 2006, p. 11). Without understanding this basic underlying change processes, resistance to change and the emotional reactions that go along with it cannot be taken into account and answered adequately. According to Doppler and Lauterburg (2002) the reasons for resistance of normally intelligent and not mentally disturbed persons to sensible change initiatives are worries, fear and anxiety. Senge et al. (1999) even write a whole chapter on "Fear and Anxiety" in change processes. And while psychological learning theories focus on how information is processed, how experience is created through learning and how this is stored, neurology concentrates on how experience changes the nervous system (Cozolino/Sprokay 2006). Changes in the nervous system also result in changes in the emotional states of humans, so teaching or helping others to learn is, at its very essence, also a process of commonly balancing the learners emotional state.

So, in this first section, the findings of brain research are used in order firstly to enhance the basic understanding of the brain as a learning organ and secondly, draw conclusions that are essential for taking action and making change happen.

### 3.3.1. Basic Processes within the Brain during Learning Experiences

The findings in brain research that I am going to refer to, essentially state that a few basic conditions[13] need to be met in order to enable innovative new ways of thinking. In fulfilling these conditions, a certain emotional state is created within the human body that is the foundation of certain brain processes that enable learning. The establishment of such

[13] "A safe and trusting relationship with an attuned other, Maintenance of a moderate level of arousal, Activation of both thinking and feeling, A language of self-reflection, Coconstruction of narrative that reflects a positive and optimistic self." (Cozolino/Sprokay 2006, p. 12) and a stimulating learning environment.

learning and working environments corresponds strongly with Nonaka and Takeuchi's (1995) conceptions of 'places for ba' (see chapter 3.3.3), Senge et al.'s (2007) conception of team learning (see chapter 3.4.2) and Scharmer's (2007) idea on engaging in deep dialogue (see chapter 3.5).

The questions that arise here are "what are the brains basic processes that enable learning and innovative ideas?" and "what does this have to do with emotions?" and "why is this important for the thesis?" I am going to answer these questions subsequently:

The brain's core task is to maintain the body and its functions. It accomplishes this task by monitoring internal states, taking in and judging external impulses and initiating required adjustments, such as hormone levels, heart and breathing rate etc. These essential and survival ensuring tasks are located in the limbic system that is beyond an individual's direct control or awareness (Taylor 2006).

In general, external stimuli (e.g. changes in an environment) are perceived through the senses. These stimuli are then associated within the organism with certain prior experiences, emotions, ideas, concepts etc. and afterwards linked to action generating motor elements (physical movement or behaviours) (Zull 2006). This process is now illustrated a bit further: the parts of the brain called "neocortex" and "frontal lobes" have – from an evolutionary perspective – developed later than the other parts of the brain and are the places where consciousness or the mind is assumed to be located (Taylor 2006). The signalling chain reaction that started with the perception of stimuli happens in diverse regions within the brain, the neocortex containing a major part for the association elements. Associations are vital for cognitive understanding and if some time is invested in allowing them to become transparent, new and growing insights and ideas for unsolved problems can be gained. In two distinct areas within the neocortex (the back and the front) different associative functions are fulfilled: in the back part, sensory information is associated with each other whereas in the frontal area, creative action is planned and problems are solved by a conscious association and modification of sensory data and memorized experience (Zull 2006).

Now, the actual learning process has to do with neural plasticity: next to the described association activities, there are chemical-delivery neurons which influence the signalling (in frequency, duration etc.) between the other activities. They do so, by sending off chemicals (adrenaline, dopamine, serontonin etc.) that overflow cortical neurons which then create the changes in signalling. These changes happen much slower than other processes within the brain and thus cause the resulting changes in action to be similarly delayed. But this also means that the action that causes the learning process needs to be repeated for a longer period of time so that the change processes within the brain are sustainable.

Here the second question concerning learning and its connection to emotion is addressed: The provided chemicals originate back to early evolutionary stages, are thus located in the most ancient part of the brain (brainstem) but have an immense influence on our emotional system and the brain processes. As Cozolino and Sprokay (2006) point out, in all regions of the neocortex emotion chemicals are secreted by other neurons; they affect the signalling systems and with that they directly modify the contribution and the strength

of information processing and knowledge construction. Thus, learning happens when there is an increased signalling by cortical neurons that enhances the growth of more branches and the density of the neural network. This also illustrates why learning is thought of as a cumulative process: the more branches and signalling there is, the easier it becomes to connect with other neurons and form a more complex network of synapses (Zull 2006, Taylor 2006). "These changes occur only in the parts of the brain that are used. They result from repeated firing of the specific neurons engaged in learning experiences, as well as from the presence of emotion chemicals around those neurons." (Zull 2006, p. 5).

Hence, the emotional state a human being is in, determines to a large degree how much and what she or he will learn and how she or he will be able to remember it (connected to a good or bad emotion). Since individuals have had many prior experiences that are connected to emotions they felt during these situations, new information is linked not only to an association respectively a neural network but also to an emotional state. So if the stress level becomes is too high (oftentimes connected to emotions such as fear and anxiety) it has a debilitating effect on the brain.

The emotional state that is most beneficial for successful learning is one that Cozolino and Sprokay (2006) termed "safe emergency" (p. 14). This state is characterized by a moderate level of arousal, a high attention but without anxiety: "If the response is a teacher's supportive caring, encouragement, and enthusiasm balanced with an appropriate level of challenge, learning is enhanced through dopamine, serotonin, norepinephrine, and endogenous endorphin production." (Cozolino/Sprokay 2006, p. 14). So, a teacher's way of treating a student, creating a favourable student-teacher-relationship and influencing his or her emotional state is the core to a biological state within the brain that in turn is responsible for successful learning.

In this following paragraph the focus is on the third question, on how all of that relates to a network manager's situation and thus to this thesis.

Here it is argued that one reason why network managers had a hard time in trying to convince the other players to collaborate and thus 'make the network work' is because most members of the networks as well as most individuals in today's society have not yet learned to continually learn. One of the core tasks in professional networks is to identify relevant interfaces with other organisations and thus, find new ways of collaboration and giving up old ideas about competition. So far, most people are strongly influenced by globalisations effects, the media reports on it and experience a growing uncertainty, sometimes fear for their jobs and try to deal with rising complexity in their daily lives (see chapter 2). These developments foster self-protective, resistant and competition-conserving mental models and behaviours which can be basically characterised as the challenge to get the better share of markets, certain customers, ideas, products etc.: things that are already there. In analysing the expert interviews with the network managers, an assumption is that some of them succeeded in initiating a creative process that results in new products, services and ideas. Thus, if social networks are formed in order to generate solutions that one player alone could not have developed, it is the basic task of a network manager to establish a learning space that allows for creation.

In short, everything human beings experience causes their brains to modify the biochemical balance within their bodies and thus create certain emotional states that again are "(…) the undercurrent of cognition" (Taylor 2006, p. 81, see also Damasio 1999). Looking at the physiology of the brain, learning means a modification in neural networks. So, changes in our neural networks correspond to changes in our way of knowing and this process cannot be successful if very high degrees of anxiety and defensiveness are prevalent within the human body. Moreover, LeDoux (2003) provided evidence that too much stress on a continuous base damages neuronal functions. Since the "brain is a social organ innately designed to learn through shared experiences." (Cozolino/Sprokay 2006, p. 11), a safe and empathic relationship is the precondition for neural reorganisation that allow for deep understanding and deep changes in personal and professional development. In social interaction, individuals create the means and spaces by which another's internal biological state is influenced. These internal biological states determine whether there can be an option for creative thinking and innovation processes or not.

### 3.3.2. Individual Learning Theories

Since learning is basically defined as intra-individual changes caused by experience (Slavin 2006) or as the OECD (2000) has put it (see chapter 3.1) the acquisition of skills that allow for a more successful life, it is an important concept to deal with when looking at a certain new role and the newly learned skills in implementing social network projects. Individual learning theories lie at the heart of all organisational learning concepts or knowledge management models and are thus the starting point for comprehending the following concepts. Moreover, network management also creates new learning spaces and opportunities for the involved network members between organisations (see for example Prange 1996, Schulz 2005).

Nevertheless, studying learning and learning processes is a relatively new scientific activity going back to the late nineteenth century. Since then different theoretical developments on how humans and animals learn have evolved but no one overall learning theory has yet been defined. Instead, there are three big paradigms in learning and teaching: behavioural and cognitive approaches as well as the concept of constructivism (for a more detailed overview see Slavin 2006).

Originating in psychological research behavioural learning theories (for example Skinner 1971) focus on instruction: external stimuli, their effects on behaviour and the means of influencing behavioural and learning outcomes by reinforcement or punishment. These theories concentrate on setting suitable stimuli and reward or correct the resulting behaviour. Cognitive learning theories are centred on the idea that learning content forms closed and clearly structured knowledge systems. These can be represented independently from a particular learner. Knowledge is so to speak an objective entity that is transported by information processing, storage and retrieval within the brain from the teacher to the learner (Reinmann-Rothmeier/Mandl 2001). Thus, the learner is seen in a relatively passive and receptive role, whereas the teacher is to provide the content in an optimally chosen structure and sequence. The teacher is to define learning goals, present the necessary knowledge entities and control the learning output.

Hence, cognitive learning theories started to shift the attention of the scientists from observable behaviour to what happens inside the black box of intra-individual learning processes.

The third paradigm of learning and teaching is focused on the concept of constructivism. Here the underlying assumption is that all perception of reality is based on subjective construction and interpretation by the learner (Schmidt 1987). The latest findings in neuro-science are in congruence with the scientific and epistemological theory of "constructivism" (Tschamler 1996) which states that the individual (the subject) is the only reason and initiator for its learning processes because these processes include the active constitution and construction of knowledge. Also Cozolino and Sprokay (2006) state that: "(…) learning is a process of continuous modification of what we already know. This constructivist view seems strongly confirmed by neuroscience. Change in synapses occurs whenever neurons are highly active and immersed in emotion chemicals." (p. 7). This means that human beings "construct" the world they live in and in a self-referential and autopoietic way reproduce the underlying belief systems. Thus, it follows that an objective external world does not exist. This is also the concept of absolute subjectivity in perceiving the world which becomes relative only by the consensual agreement between individuals because of similar stimuli which again cause similar neural connections.

In contemporary pedagogic-psychologic learning and didactic research the concept of moderate constructivism is prevalent. Learning is thus understood as an active, self-regulated, constructive and social process dependent on specific situations (Gerstenmaier/Mandl 1995). Knowledge can thus not be a blueprint of reality but rather an active effort of creating meaning within the given social environment (Reinmann-Rothmeier 2003). Learning is regarded as a cooperative active construction of knowledge that is dependent on prior knowledge, experience and mental models and happens as an interactive, cooperative process between teacher and learner (Reinmann-Rothmeier 2003). Some contemporary approaches among the moderate constructivism are for example the situated cognition movement (see Reinmann-Rothmeier/Mandl 1997), the Community of Practice Approach of Lave (1991), Anchored Instruction Approach (Cognition and Technology Group at Vanderbilt 1992) and the Cognitive Apprenticeship Approach (Collins/Brown/Newman 1989).

These theories on learning try to explain how knowledge is acquired, stored and put to practice. Once gained the relevant knowledge needs to managed – not just within one individual's brain but also between individuals in social systems. Thus, the following section focuses on a interpersonal theory on the management of knowledge.

### 3.3.3. The Management of Knowledge – (SECI-Model)

Managing knowledge is, as shown in the previous section, a core task in order to create value in the emerging knowledge or learning society. As Willke (2004) points out, the management of knowledge is at the same time the management of its negation, of "not-knowing" or uncertainties. This means that in order to create value, knowledge needs to be transferred to certain individuals, groups and places and this in turn requires the collaboration of all involved members of this value chain. In knowledge management

literature this fact is dealt with by referring to the concept of communities (Winkler 2004). In the context of this thesis the broader concept of social networks (see chapter 4) that includes communities as one possible form is taken into account. The connection between knowledge, innovation, knowledge management and social networks ist also pointed out by Hargreaves points out when writing about further education among teachers,

> (…) what we have traditionally called professional learning is very often a form of knowledge creation and knowledge transfer, alternatively conceived as innovation and the dissemination of such innovation. We now understand better than ever that innovation is very often a social, interactive process rather than one of individual creativity, and that networks play a vital role in the creation and the transfer of new knowledge and innovation. (Hargreaves 2004, pp. 84-85).

In order to show how this concept is theorized, the next paragraph describes a model of knowledge creation by Nonaka and Takeuchi (1995).

*The SECI-Model and the concept of "Ba"*

Many organisations focus on "knowledge management" as building efficient and effective information technologies that store knowledge so that users can access and use it whenever they are in need of. But this way the "management of knowledge" remains static and deals with only explicit knowledge and information. As Nonaka and Takeuchi (1995) argue, organisations are not just knowledge and information processing machines but dynamically create knowledge within their organisational boundaries: "By organizational knowledge creation we mean the capability of a company as a whole to create new knowledge, disseminate it throughout the organization, and embody it in products, services, and systems." (p. viii and p. 3).

Any community of individuals that enables interaction and dialogue will support the exchange of information and knowledge and therefore help to create new knowledge. The SECI-Concept includes the explicit and implicit dimension of knowledge. Explicit and implicit knowledge are seen as complementary forms of knowledge which can transform from one into the other ("knowledge conversion") and this way create knowledge: "They interact with and change into each other in the creative activities of human beings. Understanding this reciprocal relationship between explicit knowledge and tacit knowledge is the key to understanding the knowledge-creating process." (Nonaka/Konno/Toyama 2001, p. 14).

In the SECI-Concept four forms of knowledge conversion are discussed: (1) socialization (from tacit to tacit knowledge), (2) externalization (from tacit to explicit knowledge), (3) combination (explicit to explicit knowledge) and (4) internalization (from explicit to tacit knowledge). These conversions take place in dynamic processes that span different ontological levels and are illustrated by the authors as a spiral of knowledge creation: "Thus, organizational knowledge creation is a spiral process, starting at the individual level and moving up through expanding communities of interaction, that crosses sectional, departmental, divisional, and organizational boundaries." (Nonaka/Takeuchi 1995, p. 72). The knowledge creating process is also a self-transcending one because knowledge flows beyond the boundaries of one individual to another.

The most interesting part of this approach to knowledge creation is firstly the idea that new knowledge emerges through the combination of inter- and intra-individual processes while individuals interact with each other and their environment and secondly the concept of "ba". This concept refers to the "place" where knowledge and the individuals who own it are concentrated at a certain time and in a certain space. Drawing from the fact that knowledge cannot be stocked, is dynamic, non-material and boundaryless it needs to be used wherever and whenever it creates most value. And with the concept of ba, the knowledge creating process becomes also a process of creating new interactions and the boundaries that go along with it: "For knowledge to be created organizationally, knowledge within a particular individual needs to be shared, recreated, and amplified through interactions with others. Ba is a space where such interactions take place. (…) ba is a context that harbors meaning" (Nonaka/Konno/Toyama 2001, p. 19). Moreover, ba is rather shared time and space that creates meaning than a mere physical space. Interactions can take place physically (face-to-face) but also virtually, via teleconference or by e-mail and experience, vision and ideas are exchanged on a mental level. Embedded in ba is the knowledge and experience of all participating individuals that becomes mere information if ba is separated from it.

Ba supports the knowledge conversion processes in a particular mode and can therefore also be differentiated into four types: originating, dialoguing, systematizing and exercising. For this process to happen, leaders in organisations need to provide some requisite preconditions: autonomy, creative chaos, redundancy, allowing variety and love, care, trust and commitment (Nonaka/Konno/Toyama 2001). Thus, a leader's function in the knowledge creation process is a very distinctive one. The implications the authors draw from comparing the "Western" approach to knowledge management in companies to knowledge creation in Japanese companies are mainly drawn from the Japanese perceiving and valuing implicit knowledge more than Westerners do so far (Nonaka/Takeuchi 1995):

- It shifts the focus from perceiving organisations as information processing machines to organisations as living organisms,
- It shifts the attention from looking at innovation as re-constructing different bits of data and information to "re-create the world according to a particular ideal or vision." (p. 10) and
- it contributes to the shift from tangible assets and explicit knowledge that can be controlled, measured, and certified to the more intangible, informal, non-explicable, subjective and less systematic side of knowledge.

These necessary preconditions for the transformation and exchange of knowledge are basically the same enablers for learning processes (see chapter 3.3) and moreover, it is more likely to find these preconditions in networks than in organisations. Networks are by definition a collective form in which every member is autonomous, there is no formal hierarchy nor formal power structure, the social level is very important, heterogeneity is valued here and trust as well as commitment let networks sustain and be efficient (see chapter 4). Thus, it seems as if networks are more likely to produce the prerequisites for knowledge creation than formal organisations.

The creation of knowledge is closely linked to the creation of innovations in that there need to be certain organisational and personal pre-conditions. The delimitation of those two ideas is oftentimes not clearly conceptualised. For the purposes of this thesis knowledge creation is used the way it was described in this section whereas the understanding for innovation as well as for the creation of innovation is explained in the following section.

### 3.3.4. The Creation of Innovation

Within the programme "Learning Regions – Providing Support for Networks", innovations were viewed from the open innovation approach (Chesbrough 2006, Chesbrough/Vanhaverbeke/West 2006) that basically states that in knowledge societies' innovations with a powerful market success can hardly be created within closed organisations. Instead there is the tendency for innovations with a high level of innovative strength and the resulting market success, to emerge "in between" organisational borders (see also Strobel/Kuwan/Reupold/Tippelt 2009, OECD 2000). This statement is also supported by Powell et al. (1996) who argue that in rapidly changing environments the key resource is knowledge innovation which is created in the interstices between organisations (see also Kilduff/Tsai 2006).

This statement receives some further evidence by the results of the programme's evaluation team (see Strobel/Kuwan/Reupold/Tippelt 2009, p. 62): if the network managers (n=52, 2006) were asked to prioritise the innovations according to the areas in which they originate from, they chose "Transitions in Educational Phases" as highest priority ((1) 27%). Moreover, the other areas followed with a big distance: (2) 13% Marketing, (3) 12% New Learning Environments, (4) 12% Curricula and Concept Development, (5) 8% Consulting and Counselling Services, (6) 4% Courses/Seminars, (7) 4% Quality Management etc. The fact that those innovations that stem from an area that is by definition ("transitions") characterised by interfaces between educational organisations seems to be in advance of the above stated link of innovations emerging in the "gaps" between organisations.

In general, the term innovation is used to mean something new, be it an idea, an invention or a practice. Schumpeter (1911/1939) was a pioneer in thinking and writing about innovations in analytical and in economic terms. Concerning social innovation there is less literature to be retrieved but for this thesis, Dennings (2004) definition is used:

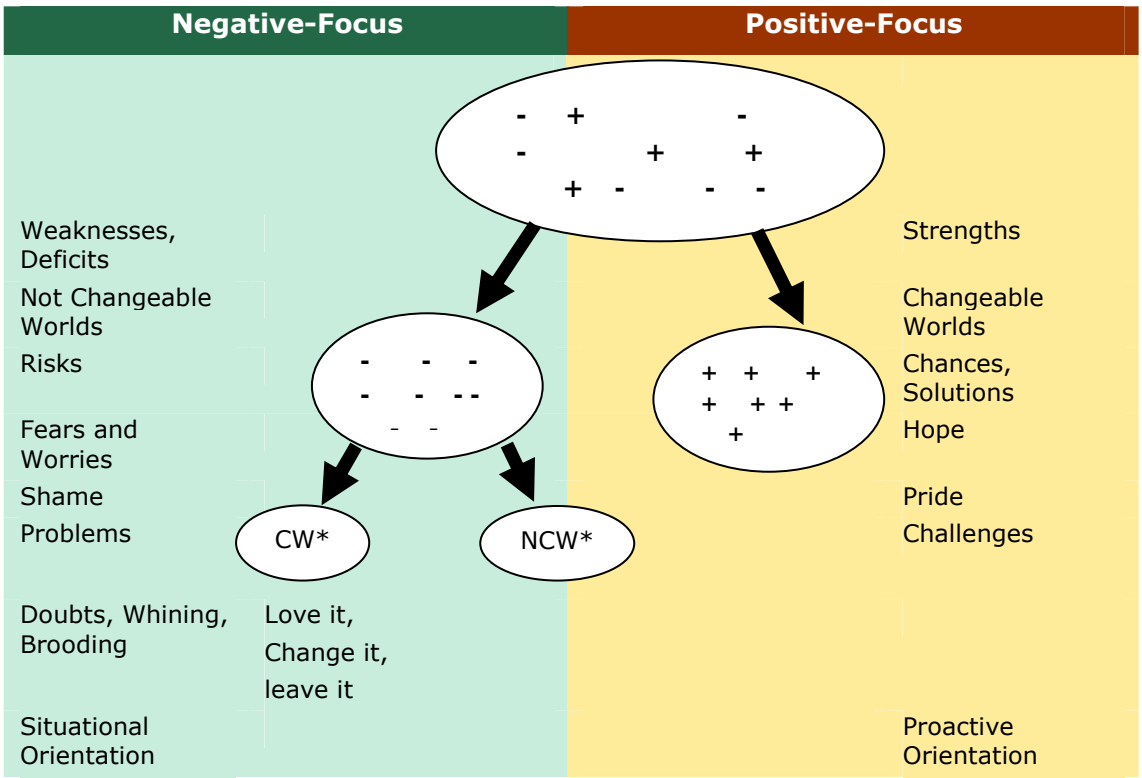
> The word innovation has been used to mean either new ideas or new practices. Since ideas have no impact unless adopted into practice, I use innovation to mean the adoption of a new practice in a community. Innovation is therefore a social transformation in a community. (p. 15).

The author stresses that a clear distinction needs to be drawn between invention and innovation: whereas invention is simply the creation of something new, innovation "(…) requires attention to other people, what they value and will adopt; invention requires only attention to technology." (p. 15). So, inventions or new ideas become innovations only when they have social impact and are adapted into the practice of a community. Following the idea of innovation being adopted by a community under certain circumstances, Denning (2004) and Drucker (1993) identified the following potential sources of

innovation: unexpected events, process need, change of industry structure, demographics, change of mood or perception, new knowledge and marginal practices. Drucker (1993) and Denning (2004) go even further in stating that there are some basic personal practices innovators frequently show. These are: Awareness, Focus and Persistence, Listening and Blending, Declarations, Destiny, Offers, Networks and Institutions and Learning. Now, these personal practices are patterns of behaviour that originate from a guiding mental model of how the world works and some psychological inner processes. Frey, Traut-Mattasch, Greitemeyer and Streicher (2006) focused on the psychology of innovations and identified as well as described influencing factors on a personal level: personality characteristics, intelligence and knowledge, motivation, mental models and on a team level: the heterogeneity and the team culture. In this thesis, I want to draw on some of their findings concerning group heterogeneity, team culture and perception. The latter is best illustrated by the authors' model of positive-negative-focusing (fig. 5).

This model essentially differentiates firstly two poles of directed attention, a) to changeable and b) to unchangeable worlds and secondly between positive and negative aspects. This polarises or typifies peoples' general direction of attention. Frey et al. (2006) state that people have a diffuse perception and understanding of their complex environment, which is why very often their attention is caught by the negative aspects. This insight also goes along with Castells (2004b) description of globalisations effects on the individual (see chapter 4.1.2). In just looking at this side of the current situation, the other side is blended out so that all subsequent action is based on a fragmented view. The same conceptual ambiguity results if only the positive focus is chosen.

*Figure 5: Model of Positive-Negative-Focusing (translated by the author according to Frey et al. 2006, p. 11)*




* CW= Changeable World, NCW= Not Changeable World

Thus, perceiving and taking into account both sides is important; the crucial point is to know which negative aspects of the situation (weaknesses, problems etc.) can be changed and which of them cannot be changed. In general, there needs to be a conceptual clarity about options, challenges, competences, tasks and strengths. This is an important driver for action and motivation. But on the other hand gaining clarity about the negative aspects is helpful too. Hence, knowing about one's weaknesses can also be very motivating in terms of actively striving for change. A sense of suffering and understanding may arise when focusing on the negative aspects and both are necessary in order to overcome barriers that are hindering the realisation of strengths and widen the perceived area of changeable aspects. At the same time positive aspects need to be considered so that a person does not remain stuck within these feelings of lethargy, apathy or depression that hold back a proactive approach.

Transparency about strengths and weaknesses are a necessary precondition for strategies, visions and action plans. As Frey et al. 2006 point out, it is essential to accept the co-existence of negative and positive aspects and balancing both.

Concerning this thesis a special interest within this framework given by Frey et al.'s model is on mental models ("Mentale Grundhaltung", p. 9): Innovations will not be developed if the acting persons do not perceive any deficits, if there is no reason for change, if everything is ok the way it is or also if the world is perceived as unchangeable. But innovation is per definition a change, the creation of something new that is put into practice. And innovations are developed where people have space to be active, feel safe and try something new, where deficits and mistakes can be turned into new solutions and where the courage exists to see the current border of the unchangeable world as a challenge rather than a limit. Thus, Frey et al. (2006) conclude that "[…] innovations are often initiated by stepping into not changeable worlds. This can be done by creating ideal worlds and thinking about concrete action steps of how to reach them.[14]" (translated by the author, p. 10).

The approach of creating organisations which leave that space for their employees in order to draw from all of the involved persons knowledge and creativity as well as create learning opportunities on a personal, group and organisational level is oftentimes referred to as creating a "learning organisation". The next chapter focuses on concepts of organisational learning and learning organisations in order to illustrate the basic and guiding ideas that lead to the development of Theory U (Scharmer 2007) – a major theoretical approach to the interpretation of the data in this thesis.

## *3.4. The Concept of Organisational Learning and Learning Organisations*

If, again, learning is seen as an adaptive process to a changing world then not just individuals have to learn in order to successfully master their lives but also institutions, organisations and other collective structures need to learn in order to ensure their

[14] „Das heißt: Innovationen werden oft initiiert, indem man in sogenannte nicht veränderbare Welten eindringt. Dies kann dadurch geschehen, dass man sich Idealwelten ausdenkt und gleichzeitig konkrete Aktionsschritte überlegt, wie man diese erreicht." (S. 10).

existence (Jarvis 2007). The assumption here is that the environmental dynamic of organisations puts the challenge of continuous inner-organisational change processes that have to be guided and lead (Room et al. 2005). Thus, the core characteristic of a learning organisation is that it can sense signals of change in its environment, take them in, adapt to them and change its actions accordingly (Senge et al. 2007). This implies that an organisation acts like a single living organism with a collective brain and neural network (as described in chapter 3.3.1). Early organisational theorists like March and Olsen (1975), Argyris and Schön (1978), Duncan and Weiss (1979), and mainly Hedberg (1981) and Hedlund and Rolander (1990) pointed out that there are similarities between organisations and human brains concerning their functions as information-processing systems. Thus, theories of organisational learning conceptualize collective learning processes within the framework of an organisational strategy, structure and culture. The idea of a learning organisation (Senge et al. 2007) in contrast, tends to describe how to create organisations that continuously and successfully learn. In this section, a brief introduction to how organisational learning is theorized is given in order to facilitate the understanding of the recently developed models of Learning Organisations and Theory U. The last two theories named here are the basis to the following qualitative data analysis.

### 3.4.1. Organisational learning

The question of how personal and organisational knowledge is related to each other and how this relation can be organised and understood is the basic problem in organisational knowledge management (Willke 2004). In interorganisational knowledge management an additional level of complexity is added in that the question is how knowledge can be created and exchanged between organisations. At the same time there is a limitation to knowledge that is to be exchanged because no organisation is willing to give away knowledge that causes a competitive advantage.

The first question to be answered in this section is what organisational learning is and how organisations learn. In general, organisations have and generate knowledge as well as individuals do. According to Argyris and Schön (1978)

> Organizational learning occurs when members of the organization act as learning agents for the organization, responding to changes in the internal and external environments of the organization by detecting and correcting errors in organizational theory-in-use, and embedding the results of their inquiry in private images and shared maps of organization. (p. 29).

Willke (2004) argues that an organisational knowledge base is created by individuals and the organisation. One perspective that helps to understand seeing an organisation and its knowledge independently from the individuals who work there lies in looking at the life span of some organisations or institutions. Their life span is oftentimes much longer than the ones of human beings. One example can be the Catholic Church or some of the old universities or even some companies that outlived their founding mothers or fathers by far. In these organisations or institutions knowledge is stored and transmitted to individuals in the form of anonymous systems of regulations, organisational structures and clearly defined organisational and working processes that describe the operating mode of a social system. The behaviourally guiding knowledge is thus no longer available on a

discursive level. Moreover organisations have symbolic systems (rules, data, explicit experiential knowledge, process diagrams, organisational charts etc.) that make their knowledge systems more transparent and more easily to deal with than this is possible in individuals. Thus, Willke (2004) states that due to these aspects organisations, compared to individuals, have advantages if it comes to collecting and storing knowledge. So, the learning of organisations becomes transparent in the ways in which an organisations knowledge base is used, kept, changed and developed. In the following two paragraphs two concepts (March/Olsen 1975 and Argyris/Schön 1978) of organisational learning that are pioneering theories for those concepts are introduced.

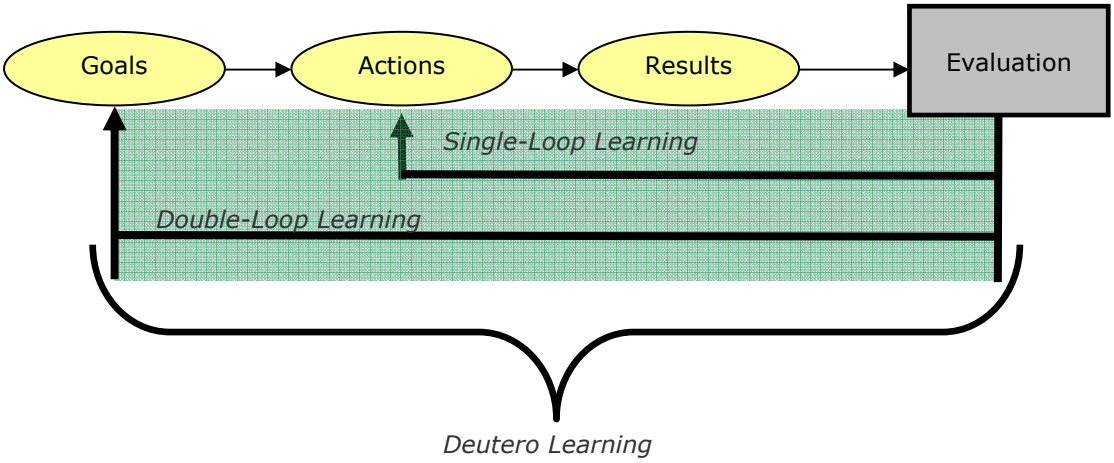
March and Olsen (1975) were the first to state that an organisational knowledge base is further developed by organisational learning. According to the authors, this process happens in a cycle and is dependent on (a) the innerorganisational transfer of relevant knowledge, (b) the matching of prior organisational knowledge and the newly introduced or transferred knowledge, (c) the commonly shared attitude within the group of affected employees that this knowledge is beneficial and relevant and (d) a collective development of perception and insight on reality. At the same time March and Olsen also point out that, in practice, organisations are not entirely rational so that aims are regularly not clearly defined, criteria that would enable employees to assess a certain situation are often vague etc. (Geißler 1994). So, according to March and Olsen (1975) organisations also enact a high degree of chaos and organisational learning in essence helps to create order in the employee's minds. The resulting organisational learning model is a cycle-concept that includes individual beliefs that influence individual action, which influence organisational action and that in turn has an effect on the environmental responses that again influence and change individual beliefs.

In this learning cycle, the authors identify four types of learning: (1) role-constrained experiental learning: here individual cognitions are turned into individual action whereby this process is strongly influenced by the restrictions to freedom organisational members experience due to their organisational roles. (2) audience experiental learning: this learning step illustrates how the effects of individual actions within the organisation can to a certain degree not be perceived by the acting employee. This may create a dysfunctional relation between action-result for the employee but also for the organisation. (3) superstitious experiental learning: in this step organisational actions and the resulting environmental responses are under focus. If the information on the links between cause and effect concerning the organisational success on the market are not passed on to all organisational members, a collective belief or ideology is created that closes this information gap. These ideologies of legitimisation support the sustaining of the organisational order and are thus maintained and enhanced by the responsible organisational members. (4) experiental learning under ambiguity: this last step is concerned with the contextual conditions of an organisation and their effects on individual cognition. Here again, the complexity of the influencing factors may not be adequately perceived or explained so that an ideology is an easy solution to construct collective beliefs that explain the organisations dependencies on external factors and thus its success or failure.

Argyris and Schön (1978) developed a more knowledge-based concept of organisational learning that focuses on the congruency of individual needs and organisational demands. The resulting organisational learning model is basically a model of learning levels and their connections to each other. Some basic concepts, namely espoused theory vs. theory-in-use as well as images and maps in this approach should be explained before taking a closer look at the learning model. An espoused theory is what a person communicates to others when asked how she or he would act given a certain situation. In contrast, the theory-in-use is the underlying 'real' concept of that person that is enacted and can be directly perceived as the person's behaviour when the situation becomes real. These two theories can be congruent but they can also differ from each other. Another prominent concept is the theory-of-action which is the basis of intentional behaviour and is consciously reflected upon in order to modify and optimize it (Argyris/Schön 1978, p. 10ff). These theories do not just apply to individuals but also to organisations: an organisation's theory-in-use is learned by new members as part of their organisational socialisation process and is thus handed down from one generation of employees to the next. An individual's image of the organisational theory-in-use is a cognitively constructed representation that is according to Argyris and Schön (1978) always incomplete: "An organization is like an organism each of whose cells contains a particular, partial, changing image of itself in relation to the whole." (p.16). This is not a static matter-of-fact but rather a dynamic process in which each organisational member tries to complete his or her own image by understanding themselves and their performance in the context of the organization and in interaction with others. This process of reflexive inquiry becomes even more complex as the conditions continually change and the pace of the change accelerates. This private and individual inquiry is complemented by public representations of the organisation which serve as external references. Individuals can refer to these public representations of organisational theories-in-use, such as provided by the organogramm, a plan for compensation and benefits etc. In summary, "organizational theory-in-use, continually constructed through individual inquiry, is encoded in private images and in public maps. These are the media of organizational learning." (Argyris/Schön 1978, p. 17).

As these concepts are explained, the model of organisational learning levels according to Argyris and Schön (1978) is introduced now as illustrated in figure 6.

*Figure 6: Learning Levels according to Argyris and Schön (1978) (translated and adapted by the author according to Goihl 2003, p. 27)*




Single-loop learning[15] refers to learning that occurs in situations where a single feedback loop "connects detected outcomes of action to organizational strategies and assumptions which are modified so as to keep organizational performance within the range set by organizational norms." (Argyris/Schön 1978, p. 18/19). Basically this means an operative adjustment in order to optimize the internal organisational processes while the framework of norms for performance remains stable. The espoused theory stays untouched and the criterion for successful learning is effectiveness. This is the case when e.g. sales numbers do not meet the set goals and marketing managers investigate the shortfall, looking for an explanation that then leads them to the development of new marketing strategies in order to meet the sales numbers set as norms. The marketing managers in this example are the agents of organisational action but they will become agents of organisational learning only if they succeed in encoding their learning outcome in the organisational theory-in-use to which the other members of the organisation refer in their individual images and shared maps. Oftentimes though individual learning outcomes are not induced in the organisational theory-in-use and thus remain unfulfilled potential for organisational learning.

If an organisation engages in double-loop learning[16], it questions and alters its espoused theory. This modification at the same time changes the context for single-loop learning situations. So the marketing managers of the earlier mentioned example cannot engage in doing what they already do in a more efficient or otherwise better way. They have to learn to do something else because, for example, the external conditions on the market changed considerably or because the growth of the firm can only be enhanced if different products/services/etc. are produced, marketed and sold. Thus, organisational norms are

[15] In single-loop learning „(…) members of the organization respond to changes in the internal and external environments of the organization by detecting errors which they then correct so as to maintain the central features of organizational theory-in-use." (Argyris/Schön 1978, p. 18).

[16] „We will give the name ‚double-loop learning' to those sorts of organizational inquiry which resolve imcompatible organizational norms by setting new priorities and weightings of norms, or by restructuring the norms themselves together with associated strategies and assumptions." (Argyris/Schön 1978, p. 24).

modified, and with it oftentimes organisational strategies which in turn require an altered theory-in-use that results in the requirement for individual members of the organisation to change their images and maps on the organisations theory-in-use. Hence, the requirements for the predictability of organisational actions conflicts with the requirements for changes for organisational growth. These two incompatible requirements oftentimes are expressed by representative groups of people within the organisation: "In this sense, the organization is a medium for translating incompatible requirements into interpersonal and intergroup conflict." (Argyris/Schön 1978, p. 23). The arising conflict can only be resolved as a process of deep inquiry by the two groups and finally results in organisational survival and continuity.

The idea of deutero-learning goes back to Gregory Bateson's conception of learning to learn. This means a process of reflection on single-loop and double-loop-learning activities which results in knowledge about one's learning progress and previous learning contexts. This knowledge facilitates creative and innovative action competency on all learning levels that in turn ensures the highest form and speed of adaptation. Here, the members of an organisation learn about their organisations learning. Moreover, since change has become a continuous societal process (see chapter 2) learning to learn or also learning successfully to adapt to ever changing conditions is what Bateson's or Argyris and Schön's concept of deutero-learning entails.

After these elaborations on organisational learning, Senge et al.'s (2007) concept of learning organisations is introduced in the next section.

### 3.4.2. The Learning Organisation and its Five Disciplines

A learning organisation in the way its main author, Peter Senge, thought of it is an organisation that supports its members in continually expanding their capacity to create an environment in which innovative and new patterns of thinking is fostered and in which employeed are keenly motivated to continually learn to perceive the system they are in.

It is basically about self-organisation, community building and dialogue. Senge questions the fragmented worldview that is the undercurrent of fierce competition and reactivity in organisational and management behaviour. This worldview is also seen as the root of a dysfunctional society that does not provide the base for sustainable action of its members (Weber 2005). Senge's theory rather contributes to a more holistic view of management and organisations, emphasizes human relations and trust, shared responsibility as well as caring and humanity. The need to focus on knowledge creation in a globalised economy is in favour of Senge et al.'s theory that might otherwise be seen as a too idealistic concept in a capitalist society which is primarily concerned with profit.

At the heart of the theory of learning organisations are the so-called 'five disciplines' or 'component technologies' which support the implementation of the envisioned learning organisation.

***Personal mastery***: development of personal capacities that enable us continually to identify, clarify and reach one's personal vision. This means to perceive oneself as the object of development by engaging in continuous – lifelong – learning endeavours. And it also means a concentration of attention, energy and action but being patient and learning

to perceive reality in new ways continuously. Thus, personal mastery in its very essence is a self-directed developmental process combined with a strong commitment to one's personal vision. "Personal mastery implies a willingness to invest what is necessary to create an environment that helps employees become high-quality contributors." (Senge et al. 2007, p. 199). So creating organisational conditions that encourage, enable and support other organisational members to engage in this discipline is necessary because no one person or leader "(…) can increase someone else's personal mastery." (Senge et al. 2007, p. 193). Hence, enabling others to develop personal mastery sparks their learning with intrinsic motivation and a deeply felt meaning in life which is just the opposite of artificial incentives, rewards or punishments that are so profoundly part of today's organisational life.

***Mental models***: learning how to "see our seeing", identifying and reflecting upon the inner pictures people have of the world and how it works so that they become aware of how these assumptions shape their actions, decisions and finally their perceived reality. Many scientific results and/or also new possibilities on the markets are not realised because they contradict implicit but powerful mental models (Senge et al. 2007). These mental models are basically simple patterns of explanation of realities' phenomena, such as a certain human or organisational behaviour in order to reduce complexity. These explanations – that people are unaware of – tend to influence decisions and behaviour that creates perceived reality which in turn reinforces the perception of how the world works. In order to get out of this vicious circle, awareness about what basic beliefs and models cause the behaviour and thus reality needs to be developed. This process of learning to "see our seeing" is the precondition to enabling deep change. These processes can be fostered by open conversations with team members where basic assumptions and perceptions are articulated and reflected (Zeitz 1998).

***Shared vision***: building a commonly shared image of a future reality that a group of people wants to realise and defining principles and practices of how this can be done. A shared vision is a guideline that leads the general orientation of organisational members into the same commonly agreed upon direction. It also defines criteria of the future organisational behaviour and culture and clarifies the roles of the organisational members within that framework. Some decisive factors that contribute to the success of a shared vision are: the vision must be easy to understand, management needs to live the vision so that the other organisational members can trust and believe in that vision and their leaders, the vision is the final goal from which strategy and operative aims are derived and if necessary for the realisation of the vision, a change in direction must be supported (Zeitz 1998). What is important to add here is that firstly building a future image of how we want reality to unfold automatically creates a tension to the way reality is perceived now. This tension can result in either an increased energy for change or in resistance, a feeling of frustration or helplessness. In order to accomplish an organisation's vision to become reality it is secondly necessary to enhance the development and clarification of personal visions of individual organisational members so that these two can be in alignment. Fulfilling one automatically results in fulfilling the other and this way create win-win situations (Senge et al. 2007). The energy individual members put into realising

their personal visions (which includes all aspects of life not just a professional one) contribute to the learning and implementation of the organisations vision. Thus, dealing with tensions, dilemmas, contradictions between reality and vision is among the core skills of organisational members as well as taking action in those areas that are identified as fields that are in need of change (Zeitz 1998).

***Team learning***: transforming collective communication and thinking skills in order to develop a group intelligence and capacity that is more than the sum of its parts. Team learning starts with actively engaging in dialogue, which means listening keenly to another person's point of view, trying to understand and at the same time giving up own assumptions that prove to be inadequate while listening and comprehending. But it also means to offer one's own opinion and trying to make one's ideas and concepts explicit and understandable to the others. This means also going beyond one's own understanding and sharing knowledge that might have been a competitive advantage if a fragmented worldview is taken. If employees think of themselves as separated individuals who separately fight for their survival and take up competitive behaviour within an organisation, they will not share what ensures their survival in this environment, their knowledge. But if on the contrary, they understand themselves as part of a whole, they will contribute to the benefits of the whole. In team learning the focus is commonly to create a better understanding of the whole by contributing one's understanding and integrating the views and perceptions of the others.

***Systems thinking***: learning to understand, think and talk about the interconnections and forces that influence the behaviour of systems. This last discipline is the cornerstone of learning organisations because it integrates the first four disciplines into a coherent body of theory and practice. At the same time it addresses the whole system as well as the interrelationships of the parts. This perspective and shift in attention helps "(…) to see how to change systemic behaviour more effectively, and to act more in tune with the larger processes of the natural and economic world." (Senge et al. 2007, p. 7). Here, it becomes obvious that organisational behaviour is not caused by easy to understand cause-effect-relations but rather by dynamic, complex processes and feedback loops that produce effects which might backfire at some other place within the organisation and at some other time. This thinking and comprehending of systems helps to understand that we and the causes of organisational problems are part of the same system.

Moreover, Senge et al. clearly point out that in practicising those disciplines individuals engage in lifelong learning and walk along a developmental (spiritual) path. Learning to understand and practice these disciplines will result in looking at the world in a different way and perceiving reality and one's own contribution to shaping it in a different way. Senge et al.'s (2007) example for this is: "(…) once you begin to master team learning or systems thinking, it is very difficult to play the old office game of optimizing your position at the expense of the whole." (p. 7). In terms of the programme "Learning Regions – Providing Support for Networks", this might mean that these disciplines help to make the actors see their benefits once they cooperate and share a common vision for their region. Based on this concept of Learning Organisations, Scharmer (2007) developed a theory on

systemic changemanagement as part of a multi-stakeholder approach. Since this theory is very suitable to this thesis' goal, it is introduced in the following section.

## *3.5. Theory U*

Basically, Theory U is an idea of how to initiate fundamental change that goes beyond scheduling and controlling tightly planned outputs. Rather, Otto Scharmer (2007), who is an MIT fellow and colleague of Peter Senge, describes an inner journey by which new realities are collectively created. He refers back to his research, consulting and teaching experiences when he claims that accessing an 'underlying source of mastery' collectively is the key to finding new ways out of the many globally emerging social, financial, environmental, health care system or also educational system breakdowns. Thus, it is a novel way of finding solutions to commonly shared problems, such as educational ones. This inner journey is based on the practice of a concept he calls "presencing" a new word he created from unifying the words presence and sensing. It names a heightened state of attention that also brings the awareness of oneself being part of a larger system. This shift of the inner locus of where one's attention generates from results in the ability to tap into a future space of possibility that is, according to Scharmer, the fundamental nature of leadership today. This theory provides the basis for the analysis of the gathered data.

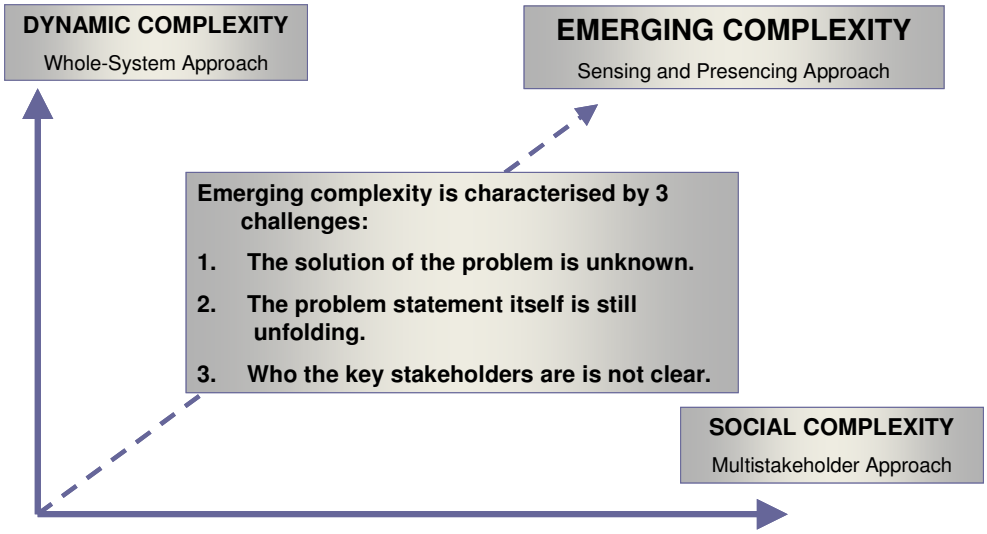
### 3.5.1. Basic Concepts

Basic concepts of Theory U include emerging complexity, the blind spot, and the changing economic context in which companies and institutions co-evolve.

*Emerging Complexity*

Dynamic complexity is at the vertical axis in fig. 7 and means that "there is a systematic distance or delay between cause and effect in space or time" (Scharmer 2007, p. 59). In the programme "Learning Regions – Providing Support for Networks" this meant that the project aimed at solving regional problems that were caused years ago, when for example the lack of integration and language courses for immigrants resulted in young children not being taught German at home. This lack of language proficiency oftentimes caused their unsuccessful educational and professional careers. As young drop-outs they hardly find jobs and thus became for example a target group for "mobile educational counsellors" who try to arrange a different way back into participation in the educational system, society and the labour market. The timely length of the chain of cause and effect is different for different problems and the interventions that may have an impact, need to penetrate this complexity. So, if dynamic complexity is low, a stepwise approach can be chosen; if it is high, a whole-systems approach needs to result because the interdependence between subcomponents is high (Scharmer 2007).

*Figure 7: Three Types of Complexity (according Scharmer 2007, p. 60)*




At the horizontal axis, social complexity is pictured. This form of complexity refers to the stakeholder's interests, worldviews, values and mental models. Scharmer (2007) points out that the lower the level of social complexity, i.e. the more homogenous the group of stakeholders and their interests etc. are, the more adequate traditional forms of governance are: "The lower the social complexity, the more we can rely on experts to guide decision and policy making." (p. 61). If the group of stakeholders and their interests etc. are more diverse and heterogeneous, i.e. social complexity is high, all of their voices must be heard and taken into account. Thus, on a managerial level, a multi-stakeholder approach is more suitable.

*The blind spot and changing economic context*

Scharmer (2007) argues that organisations and institutions are confronted with these three forms of complexity plus they need to deal with different spheres of value creation each of which requires another organisational structure and managerial mind-set (see table 1). As so often, when presented with differing options, there is a tendency to make a decision for the one or other option because it provides a quick solution but the possibility of an integrative solution is left out here because it might be more time consuming or just not part of the potential options perceived. This is where the blind spot is located: at the option individuals are not aware of in a certain situation.

*Table 1: The Changing Economic Context (according to Scharmer 2007, p. 77)*

| | **Goods** | **Services** | **Innovation** |
|---|---|---|---|
| **Focus of value creation** | Make standardized products | Deliver customized services | Stage and co-create personalized experiences |
| **Customer as** | Target for mass marketing | Target for mass customization | Partner for co-creation |
| **Economics** | Economies of scale | Economies of scope | Economies of presencing |
| **Organizational model** | Functional, single sphere: mass production | Divisional, two spheres: production; customer interface | Networked, three spheres: production; customer interface; innovation |
| **Locus of entrepreneurial impulse** | Centre of one's own organization (product focus) | Periphery of one's own organization (customer focus) | Surrounding sphere of one's own organization (co-creation focus) |
| **Relationship logic with customers** | Product-driven (push) | Service driven (pull) | Co-creation driven (presence) |
| **Primary class** | Working class | Service class | Creative class |
| **Managerial mind-set** | The world is as it is (self = onlooker) | The world evolves as people interact (self = participant) | The world arises as we choose to attend (self = source of co-creation) |

The resulting question that institutions have to adequately answer now is, how to integrate these value dimensions in the context of an ever changing emerging complexity. At the same time this appears to be an insurmountable task:

> We must face the sobering fact that we, as leaders and managers, do not have a methodology for approaching the key challenges that surface in emerging complexity. We just do not know what it takes to lead effectively from 'in front of the blank canvas' when the ground under our feet erodes and pulls away. (Scharmer 2007, p. 79).

In terms of organisational or institutional structures this means that for most of the key challenges there is no way of organizing, planning and controlling at the level of the organisation anymore. Scharmer (2007) states that most of today's organisations are too big to solve adequately the small problems; these are better addressed at a local level. And in addition to that, other organisations prove to be too small to cope with the big problems created by emerging complexities. These problems are adequately dealt with by the larger ecosystem that surrounds the organisation. So Scharmer concludes, that the blind spot, that which is actually missing are "The 'cross-institutional places' in which we could enable productive conversations among all key stakeholders, including supply-chain members, customers, the community, investors, innovators, and the stakeholders that are marginalized or voiceless in the current system." (Scharmer 2007, p. 80). These cross-

institutional places could be regional networks as in the learning region's programme that connects different organisations and institutions on a local level. And while that idea sounds like a great solution, in practice it needs certain people who start to create and manage these networks between organisations and it takes time. In chapter 4, this task and the required skills as far as there is information and evidence in management and scientific literature is introduced. In referring back to Scharmer (2007) Theory U provides some tools and ideas of how to arrive at a commonly created social reality as portrayed in the next section.

### 3.5.2. The "U"-Process for Creating Social Reality

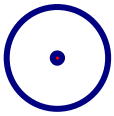
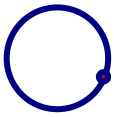
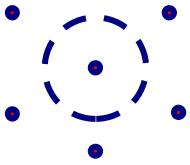
Theory U is as presented by Scharmer (2007) in its essence a collective social technology for creating new realities. It is based upon a deep appreciation of individual differences in understanding, worldviews, perspectives on and feelings in a certain situation etc. because in that lies the possibility of gaining a novel understanding of the whole. In combining all of these maybe conflicting data and stakeholder interests also a new positioning of one's own place within a system emerges. Scharmer argues that there are different modes or levels of dialogue individuals can engage in and that fundamental change can only happen when the fourth level is accessed. These levels of dialogue also correspond with the four identified levels at which change can possibly be answered by individuals (compare table 2, the third column). These include the first and most basic level of the so-called "quick fixes" which tend to backfire (Senge et al. 2007) and thus produce more difficulties that have to be taken care of on the long run. At the second level changes are answered at a policy stage where the processes and structures are redesigned. The third more complex level is concerned with the changes of mental models which include values and belief systems. These three levels have already been subject of organisational learning theories (Argyris/Schön 1978, March/Olsen 1975 etc.). For example Argyris and Schön (1978) called these levels single-loop, double-loop and deutero learning (see chapter 3.4.1). Scharmer (2008) adds a fourth level which addresses a creative regenerating source of energy and inspiration that allows for "seeing from emerging future possibilities" (p. 8).

*The field structure of attention and its conversational results*

In this section Scharmer's "U-Process" that he sees as the very core process in profound change or social reality creation is introduced. Here, firstly a basic precondition for the U-process to happen is explained: the conscious choice of the inner place from which the attention people pay to the world generates. In his presentation in Vienna, Scharmer (2008) cites the former CEO from the Hanover Insurance Company to make this concept more concrete: "The success of an intervention depends on the interior condition of the intervener." And moreover, the field structures of attention do not just influence the way people listen, but also the way team members communicate with each other and organisations form their power balances. In table 2 below, the first column illustrates the locus of the inner places from which a person may operate, the second column names the field which emerges through that position and the resulting behaviour, the third column

shows the level of change that results from this behaviour and action and the fourth column describes the conversational outcomes at the four levels.

*Table 2: The Field Structure of Attention and the Conversational Outcomes (according to Scharmer 2007, p. 273 and to a presentation held in Vienna, 26th January 2008)*

| Field-Structure Of Attention | Field | Change | Communicative Outcomes |
|---|---|---|---|
|  I-in-me | **Downloading**: Talking nice | **Re-acting:** quick fixes (manifest action) | **Speaking from what they want to hear** Polite routines, empty phrases *Autistic system* (not saying what you think) |
|  I-in-it | **Debate**: Talking tough | **Re-designing:** policies (process, structure) | **Speaking from what I think** Divergent views: I am my point of view *Adaptive system* (say what you think) |
|  I-in-you | **Dialogue**: Reflective inquiry | **Re-framing:** values, beliefs (thinking) | **Speaking from seeing myself as part of the whole** From defending to inquiry into viewpoints *Self-reflective system* (reflect on your part) |
|  I-in-now | **Presencing**: Generative flow | **Re-generating**: sources of commitment and energy (source of energy, inspiration and will) | **Speaking from what is moving through** Stillness, collective creativity, flow *Generative system* (identity shift: authentic self) |

*I-in-me*: The first level of paying attention is what Scharmer calls the "I-in-me": a familiar stimulus activates a habitual response pattern that results in the least possible change, a quick fix (single-loop learning). According to Scharmer's terminology individuals are downloading (see table 2) familiar patterns from the past, patterns that the brain is already wired in and for which there already exist a variety of associations. Thus, individuals move within their comfort zone and in reacting to the stimulus as habit lets them; they reproduce what is already there. This way of reacting to external stimuli is deeply embedded in many organisations and institutions and results in the continuous reproduction of past structures, cultures and experiences (Scharmer 2007). The communicative patterns are characterized by nice and polite exchanges where no one really says what he or she thinks. Scharmer identifies this kind of listening as the

sensation when everything a person can hear is reconfirming what that person already knows. The barriers to change that reactive pattern are: "1. not to recognize what we see, 2. not to say what we think, 3. not to do what we say and 4. not to see what we do" (Scharmer 2007, p. 128). Hence, the first active step to take when entering the "U-process" is to stop downloading.

*I-in-it*: At this level, individuals already say what they think and strongly identify with their position. The talking is tough, concentrates on objects and focuses on competitive action. Scharmer points out that at this level the inner voice of judgement (VOJ) is switched off so that new or disconfirming information is perceived and close attention is paid to the factual data that differs from what individuals already know. Scharmer calls this state of awareness suspending (see table 2), here individuals see and take the external world into account on a material level.

These first two fields are the widely shared and commonly used fields of operating. Scharmer's core argument is that if profound change is to be reached, members of a system need to engage in operating more in fields 3 and 4:

*I-in-you*: In terms of negotiation this stage might be compared to the understanding of the difference between an interest and a position. Giving up one's identification with a certain point of view (positioning), opens the possibility of reaching the now identified interest in the negotiation (see Fisher/Ury/Patton 1991). In this field the inner voice of cynicism (VOC) is shut down so that deep empathic listening allows individuals to start to see, feel and experience the world from another person's angle. Here, an "open heart" is required that allows the relationship to enter a totally new realm. At this point real inquiry, reflection and trust can take place within a mutually created dialogue. This capacity of an "open heart" can only be accessed when others and their "being different" are appreciated. In referring back to the introductory paragraphs on how the brain works and under which conditions human beings learn best, here is the place in theory U that confirms that an appreciating, supporting and caring relationship contributes to change and to learning. Scharmer points out that the main task is to go to the places of most (learning) potential and to observe with all senses (sensing). This is also what the author identifies as limiting factor to transformational change: an inability to *sense,* "(…) to see deeply, sharply, and collectively. When the members of a group see together with depth and clarity, they become aware of their own collective potential – almost as if a new, collective organ of sight was opening up." (Scharmer 2008, p. 8).

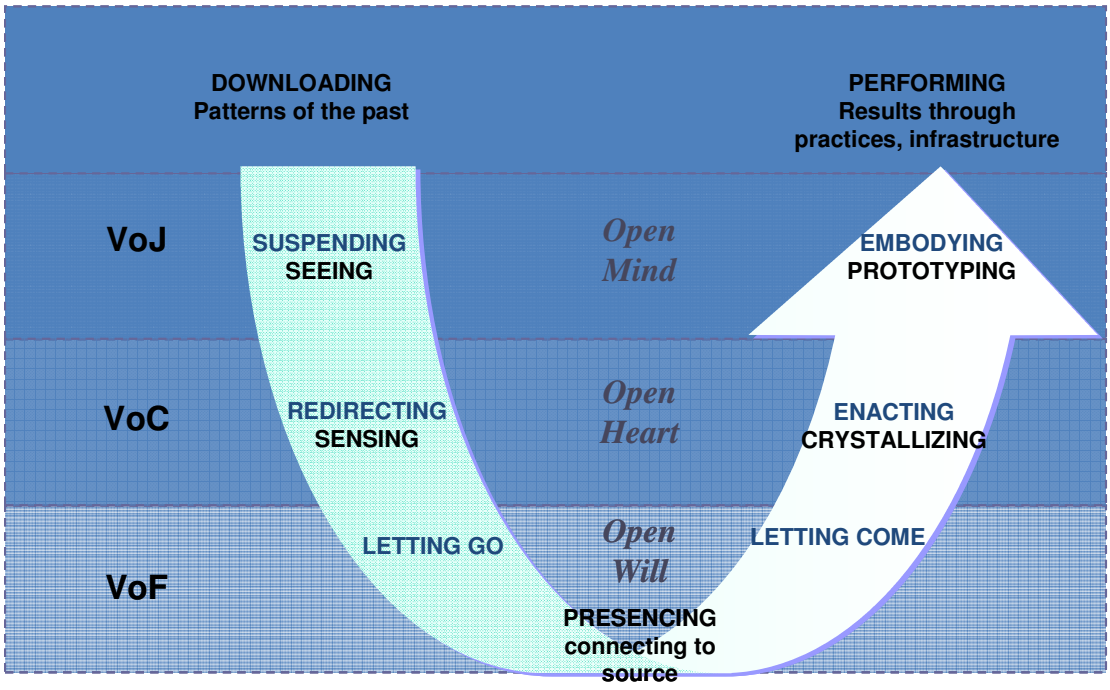
*I-in-now*: This is the field that is most abstract if looked at from a conventional point of view. It is the field in which the places for ba (Nonaka/Takeuchi 1995) are created and the listening mode is named "generative listening" by Scharmer.

> This level of listening requires us to access not only our open heart, but also our open will — our capacity to connect to the highest future possibility that can emerge. We no longer look for something outside. We no longer empathize with someone in front of us. We are in an altered state. "Communion" or "grace" is maybe the word that comes closest to the texture of this experience. (Scharmer 2008, p. 2/3).

This altered state of awareness can only be reached in a safe environment when the members of this collective action are able to agree to let go of their individual will. Here

the voice of fear (VOF) has to be switched off in order to let go and advance to the next level.

*Figure 8: The U-Process: Six Inflection Points (adapted according to Scharmer 2007, p. 38 and p. 43)*




The entering of the U-field is not a linear process that can be planned and implemented in a mechanical manner. It is rather seen as a situation in which a team is in a heightened state of alertness, continuously observing and sensing, overcoming the three emotional voices so that authentic, deep communication and the final crossing of the threshold, of letting go of everything that is not essential happens. At this point a "connecting to the source" (Scharmer 2007, p. 45) is possible: Presencing.

The next step, Scharmer termed "letting come" the group determines what in the situation at hand is really needed. From then on the co-creating part starts, where a vision and an intention guide the crystallizing process. Small groups would begin to put the sensed information together in order to come up within a very short time, with some first prototypes that are then tested, discussed and decided upon. The author emphasises that the prototyping phase is still a part of the sensing and discovery process, it clearly is a phase that allows for trial-and-error learning in which no perfect end-product is expected:

> The co-creation movement of the U journey results in a set of small living examples that explore the future by doing. It also results in a vibrant and rapidly widening network of change-makers who leverage their learning across prototypes and who help each other deal with whatever innovation challenges they face. (Scharmer 2008, p. 10).

Going up the right side of the U-curve (see fig. 8) requires the group to deal with their own resistance concerning thought, emotion and will while practically applying what they learned in the previous phases. Very often the outcome at the end of such an innovation process differs substantially from what the involved players imagined at the start. What emerges at the end of the process is performed then by bringing together a certain set of

players and going beyond debating from individual points of views to co-creating innovation and change (performing). The enablers for this process to happen are the seven distinctive capacities highlighted in the paragraphs above and a leader who basically works like a facilitator, mentor and midwife. The leader creates the enabling learning architecture for the team.

## *3.6. Summary and Consequences*

This chapter on knowledge management and individual as well as organisational learning states some core ideas that serve as basis for the research questions formulated in chapter 5. In the following paragraphs, the main ideas of the elaborations are summed up:

Tacit knowledge is bound to an individual and only by sharing practice it will be able to flow to another person or context. Thus, a common culture of dialogue which in turn creates a shared vocabulary, rules etc. needs to be created. As Kilduff and Tsai conclude in one of their research studies: "Knowledge transfer was, in fact, embedded in kinship relationships rather than following purely economic logic." (Kilduff/Tsai 2006, p. 26).

This culture serves the creation of innovations because this process is based on knowledge exchange and transformation. One clearly articulated goal is innovation in education and a meaningful impact on the labour market. According to Chesbrough/Vanhaverbeke/West (2006) it is unlikely for innovations that promote huge market success or lead to sustainable changes in educational systems to be developed by one closed organisation. The authors instead point out that "open innovation" is a novel form of modernisation that is more successful in the knowledge society. This means that integration and synergetic use of several organisations' resources leads to innovative strength and results in economic success (Strobel/Kuwan/Reupold/Tippelt 2009).

This is also confirmed by Nonaka and Takeuchi (1995) who state that the continuous innovation successes of Japanese companies originates to a great extent in the companies eagerness to look to the outside surroundings of the company and into the future as well as to discard practices, products etc. that have long been successful.

Thus, in order to creatively innovate and change continuously, psychological findings (Frey et al. 2006, Denning 2004, Drucker 1993) suggest that among other aspects, a certain kind of mental model and the resulting behaviour is most rewarding. This includes a heightened awareness, a clear positive focus, the assumption of a basically changeable world and strong persistence, a search for opportunities, a deep interest in and willingness to listen to other people, the ability to integrate different interests, ideas and positions etc. (see Denning 2004). Moreover, a supportive but challenging social relationship ("safe emergency") stimulates neural plasticity (Cozolino/Sprokay 2006) that is required for certain kinds of learning which might be termed double-loop- or deutero-learning (Argyris/Schön 1978) in organisational learning language or a change in someone's mental model (Frey et al. 2006) in psychological language. Since organisational learning has observable results, such as a change in structures and rules and unobservable results: cognitive insights it is indicated herewith that at some point in time it becomes difficult to measure learning results. Organisational learning is thus a mutual exchange process

between individuals and the organisations whereby the members of an organisation gain knowledge about their organisations' ties to its environment and exchange and legitimise that knowledge. This contributes to the organisations survival because it induces a continuous organisational transformation by combining individual knowledge and learning experiences so that underlying collective assumptions, norms, rules and mental models are affected (Prange 1996). On the other hand, organisational and individual learning during change processes (as in inter-organisational network creation) is initiated by problems, dilemmas, opportunities and people. Very often these developments together with a high level of uncertainty cause negative emotions like worries, fear and anxiety which may have a "debilitating effect" (Cozolino/Sprokay 2006).

Thus, the environment, in Scharmers terms "field" or in Nonaka and Takeuchis terms "ba" that supports the innovation, knowledge creation and change processes to take place needs to be equipped with certain criteria, such as creative chaos, autonomy, variety, trust, care etc. One option of how to induce change is to apply Scharmer's ideas as summed up in Theory U.

This theory is basically a social technique that provides guidelines for deep and collective change in social systems. It could be applied for open innovation approaches and it will only work if all involved parties agree on the goal. It is focused on the common creation of new realities in that it states that the field of attention needs to be aligned towards upcoming opportunities. Since social systems are made up of persons, structures and the inter-linkages in between as indicated in table 1, changing the existing structures is one way of introducing change. In order to understand the structural goal of the programme "Learning Regions – Providing Support for Networks", the following chapter offers an in-depth introduction and examination of social networks, their analysis, the connected research findings and their potential as a governance structure.

# 4. Social Networks, their Analysis and Knowledge Flows

This chapter is about the underlying concept of network societies: the concept of social networks as a governance structure, as an organisational and management tool and as a tool for analysis. Moreover it focuses on leadership and management in networks as a form of field creation.

## *4.1. The Concept of Social Networks*

The term "network" and its relevance come from societal developments as described in chapter 2 but also from developments in multiple disciplines, like in mathematics and information technologies. Globally networked computer systems and the internet provided the basis for the connection of all societal areas worldwide. This in turn created a fascination about the idea of networks and its transfer to social relations offers a completely new perspective on society's transformation and modernisation (von Küchler 2007). The core benefit that social networks are said to provide is a high capacity in problem solving that outreaches that of other organisational forms (Tippelt 2005). In general, networks are a support structure for the currently growing problem that one player cannot solve all of the tasks (in high quality) he or she has to solve in order to compete continuously and successfully in a free market. Within networks, multiple actors cooperate and can accomplish these tasks more easily. Thus, in a network, certain activities (such as creating a specific common product or service) can be realised by choosing and connecting possible cooperation partners and their resources in a pool of potential cooperation options (Baitsch/Müller 2001).

### 4.1.1. Defining Networks

A network in general is a limited system of actors and the relations between those actors. It can also be described as a structure for interaction with a meaningful boundary. But relationships among people can be called a network only by fulfilling particular conditions.
According to Taschereau and Bolger (2007) who compared definitions of networks and of networking, the following four key aspects are constitutive for networks: "groups of individuals and/or organisations, with a shared concern or interest, who voluntarily contribute knowledge, experience and/or resources for shared learning, joint action and/or to achieve a shared purpose or goal, and, who rely on the network to support their own objectives." (p. 2).
While these aspects define some more static characteristics of networks that are important but do not sufficiently take into account the social return of an active membership in a network over time. Mitchell (1969) provides a definition that focuses more on the social exchange within a social network: "(…) a specific set of linkages among a defined set of persons, with the additional property that the characteristics of these linkages as a whole may be used to interpret the social behaviour of the persons involved." (p. 2). This also implies that actors in networks have – next to their common interests or concerns and the mutual benefits – a need to engage in social learning, in communication and in the

common creation of shared meaning (Wöllert/Jutzi 2005). Social networks are thus defined as a set of social relations that are created by interactions of actors and that in turn influence the behaviour of those involved. Hence, the network concept is applicable to actors on many levels, such as the individual, the group, the inter-organisational, the state level etc. and moreover it can also be applied to link these levels with each other (micro-macro-linkages). Social networks emerge in the first place between individuals and can have any content or focus, such as a private one or a common interest in sports etc. But networks between individuals can also originate in shared professional interests, as in networks between companies of the automobile industries (Endres/Wehner 1999).

In order to illustrate the potentialities and the complexity of the network concept, a special feature concerning the actor's ties should be mentioned here: Cooperation in networks uses two different sets of ties; one that refers to the relations between the actors inside the network, the direct ties and the other set of ties are those that belong to the actors outside this network, the indirect ties (Baitsch/Müller 2001). The actors are normally also part of other networks and thus offer access options to new possibilities, information and knowledge bases.

In this thesis, inter-organisational networks are at the centre of attention and they are understood as a specific cooperation of persons from different organisations who are collaborating in order to accomplish a task or gain value that they could not do on their own. Inter-organisational networks consist of autonomous organisations that decide to be in a situation of interdependency for a clearly defined time as a part of a network. The relations within the network are the product of negotiations, are oftentimes heterarchic, focus on a certain task and are very often not legally binding. These loosely coupled systems are based on voluntary commitment and mutual trust (Wöllert/Jutzi 2005). Oftentimes these basic principles for collaboration within the network are put down in a cooperation agreement (Wohlfart 2006a). Here the rules for membership are defined.

Network cooperation can be characterised by some basic principles (Endres 2008, Schubert 2008, Strobel/Reupold 2009, Reupold/Strobel/Tippelt 2009, Wohlfart 2006b):

- the involved players have a commonly defined goal that determines the content of the collaboration and its coordination which is formally or informally settled,
- the involved actors remain legally and economically autonomous, are voluntary members of the network and have the option to exit the network or come back,
- the steering and control over the cooperation in the network is distributed among the actors in a way that ensures that the accountability for individual contributions is decentrally organized but transparent. Another possibility is a commonly agreed delegation of these tasks to an (external) lead organisation.
- the newly created network organisation is shaped by transparency. By communicating decisions, the uncertainties of involved organisations are continuously replaced by a self-created security of the network organisation.
- all of the participating players add value to the network and in turn receive value. The exchanged values can be tangible or intangible (Allee 2006).

With these principles in mind, the next section concentrates on how and why networks emerge as well as how membership is constituted.

### 4.1.2. Network Emergence and Membership

Networks between persons, organisations, social groups etc. have always existed but have not been called "networks" but clans, old boys' clubs or lodges (Wohlfart 2006b). These networks have constantly evolved over time and are emerging as a social pattern even more so in present times because networks as organisational forms can help (1) to meet the challenges posed by globalisation, (2) to cope with complexity and lack of transparency, (3) to take into account the regional disparities of societal difficulties, (4) to enhance the development of quality and economic working (5) to support regional policies, like in the programme "Learning Regions – Providing Support for Networks" (Wohlfart 2006b).

Thus, in times of globalisation, there are two main phenomena that influence people's lives: a growing complexity and an accelerated pace of change (see chapter 2). Castells describes the effects of globalisation and informalisation for the individual as follows: "With the exception of a small elite of globapolitans (half beings, half flows) people all over the world resent the loss of control over their lives, over their environment, over their jobs, over their economies, over their governments, over their countries, and ultimately over the fate of the Earth." (Castells 2004b, p. 72). These two phenomena oftentimes result in a high level of uncertainty and the impression of a difficult and uncontrollable situation/life. One possible solution to lowering the perceived uncertainty is to refer to other people for help and support by providing their knowledge, skills, goods etc. These personal ties facilitate cooperation and sometimes involve a high trust culture. For agents – no matter if they are individuals, organisations or institutions – this can be a source of security that ensures survival and participation in economic and social life.

According to Creech and Willard (2001) some key drivers for networks to emerge are: a sense of urgency, a sense of frustration and/or possibilities provided by ICTs. Networks sometimes emerge without the members' consciously creating a network. But they can also be created by intent, for example because a certain goal can only be achieved with the contribution of others. At the same time the 'others' have to benefit in some ways so that they are motivated to contribute. According to Scharmer (2007), the relevance of a multi-stakeholder approach increases with a rising social complexity (i.e. a high number of people and organisations are affected). If social complexity is low, it is reasonable and feasible to rely on experts and their advice for policy making and decision taking in general (compare fig. 7). In contrast, whenever social complexity is high, a suitable mulit-stakeholder approach also includes network creation. In the following section the advantages and disadvantages of membership in a network are identified.

### 4.1.3. Advantages and Disadvantages of Membership

Being a member of a social network can help to obtain resources and information needed to be able to handle a certain situation – quickly and reliably. Granovetter's well accepted

study on how jobs are found, holds valid proof for the rich opportunities of weak ties[17] mainly concerned with new information, opportunities and new contacts (Granovetter 1973). But as Porter and Powell (2006) point out embeddedness entails advantages and disadvantages at the same time:

> Embeddedness can be a double-edged sword, as access to information is enhanced by both close as well as diverse ties; however, the ties that bind can become ties that blind, restricting the flow of information as well as the capacity to adapt. (p. 779)

The advantages of creating and participating in networks can basically be condensed into eight points (Baitsch/Müller 2001, Schubert 2008, Benger 2007, Berkemeyer et al. 2008, Neugebauer/Beywl 2006, Tippelt 2005):

- It enables the reduction of the environment's complexity for each member,
- The newly created system is very flexible,
- A combination of competencies and resources creates new opportunities and might save additional cost,
- The range of potential products, offers etc. is extended, therefore the potential for acquisition of new jobs and orders grows,
- In collaborating, more innovations can be created in a shorter time because different competences and skills are combined and the costs for the research and developmental risks can be shared,
- Products and services can be created and offered that would not have been a possible offer of one single organisation or of a bilateral cooperation, such as a common counselling agency (financed and institutionalised by all relevant regional but specialised consulting and counselling agencies) that offers impartial orientation for potential customers and gives objective advice about which offer to take.

Networks can also be regarded as networked eco-systems which consist of single companies and organisations that learn from each other and are engaged in a common evolutionary development ("co-evolution"). The core strengths of those networked eco-systems are trust, knowledge, skills, resources and common effort.

Networks are thus a means for organisations to be better connected to their environments and hence have a closer contact to developments that make change within the organisation necessary.

Organisations or individuals who are members of social networks keep their autonomy and contribute with their diversity to a common goal. Since the degree of formal commitment (e.g. contracts) is characteristically low in networks the informal commitment and the focus on the relationship is high (Jütte 2002). This implies a high trust culture with mutual support and exchange relations. At the same time networks are not completely free of power and competition which can show as conflicting interests. Besides, there are all kinds of influences that are not rational but originate in the social, cultural and personal

[17] „the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie." (Granovetter 1973, p. 1361).

situations of the involved individuals. After all, social networks consist of people and some phenomena that are created by human collectives (for example groups, organisations, networks etc.) cannot be explained by cognitive principles. Rational thoughts and actions are important but there are other factors as well that influence human interaction and communication. Thus, values and attitudes of individuals for example seem to directly influence their economic behaviour (Field 2004, p. 3). This statement is also mirrored by the findings of intercultural research (see for example Hofstede 1980) which clearly indicates that human behaviour is strongly influenced by the (national) culture individuals were socialised in. In contrast to the rational actor theory that views people as atomised, autonomous individuals who clearly define their own interests and make choices accordingly (Field 2004), social network theory looks at individuals as integrated members of different groups that also have an impact on the individuals choices and behaviours.

In social network theories an individual is regarded as embedded in the social structures that surround him or her. Thus, social network analysis tries to balance the structurally focused views on human behaviour and the exchange of resources with agency focused views (Jansen 2006). Other influencing factors are for example emotions, prior experience, bounded rationality, subjective and selective perception and the general situational dependency of human behaviour etc. (Baitsch/ Müller 2001).

So, on the one hand, membership in a network offers more options: good relations to others enable actors to make use of the others' knowledge, experience and other resources. On the other hand being embedded in a social network means a restriction of freedom: interrelated actors expect certain behaviour from each other and might restrain from sharing resources when their expectations are not met. But as Kilduff and Tsai (2006) put it: "Firms in knowledge-based industries that fail to establish requisite connections with other industry firms may suffer from the "liability of unconnectedness" – a reduced capacity to participate in the ongoing process of learning and innovation that lead to firm growth" (p. 8).

Thus, professional networks can be characterized by a unique arrangement of autonomy and dependence, of power, influence, trust and restrictions, cooperation and competition on the member's behaviours (Sandhoff 1999, Aderhold/Wetzel 2004). In summary, the potential benefits are: the enhancement of strategic flexibility, distribution of economic risk, lowered production costs and required capital investment, interorganisational learning and development of cooperative core competences (Sydow 1999b).

### 4.1.4. Preconditions for and Risks of Networking

In order to reap these benefits the participating players need to define their core competencies (Prahalad/Hamel 1990) and be specific about their individual profiles as well as their individual interests (v. Küchler 2007, Reupold/Strobel/Kuwan/Tippelt 2009). This is a necessary precondition so as to be able to identify their most valuable resources and to communicate about how to contribute and what is needed in return. At the same time networks also put some restraints on their members and have some limits and risks attached to them that are summarized below (Sydow 1999b, Ortmann 2006, Schubert 2008):

- Network ties depend on certain individuals so that fluctuation poses a special risk and highlights the importance of personal ties in networks.
- Since participation is voluntary, finding and defining common rights and duties takes time in the beginning and needs commitment.
- Participation in networks presupposes resources that can be exchanged.
- There is a danger of an extremely high internal network complexity because of highly heterogeneous participant structures, the given insecurity in planning due to voluntary membership and oftentimes informal commitment, a general openness of the network to new members and the possibility that members could leave.
- A deficit in autarky: members face the danger that a double dependency might emerge if they a) specialise to a degree that limits their own ability to act independently on the market/ losing their core competency and b) outsourced resources to the network that they need on short-term themselves.
- There is the risk of "network egoists": new network members creating short-term advantages at the cost of the other partners involved in joining the network, taking the wanted resources and leaving the network again without an adequate reciprocal activity.
- Strategic governance for a single organisation becomes more difficult within a network and strategic autonomy might be lost (strategic lock-in).
- There is the danger of leaky knowledge (see chapter 3.2.2) leaving an organisation and thus creating competitive disadvantages.
- A single organisation might lose a certain amount of organisational identity by being involved too much in the network and hence provide fewer options for identification to its employees.
- And in general, as mainly Ortmann (2006) points out, networks might become cartels, even corrupt ties are cases of cooperative behaviours and moreover the idea of highly integrated supply chain management systems across many organisations might also be seen as a logistic utopia.

So, networking presupposes a process of becoming aware about individual, organisational, institutional but also societal resources in order to be able to trade them. In thinking about trading resources within social networks, some clarifications on organisational forms, namely market, hierarchies and networks ought to be made here.

### 4.1.5. Delimitation to Other Forms of Organisation

The following "classic" forms of coordination – hierarchies, markets and networks – can be described and explained as institutionalised, complex forms of governance. They are viewed by the current growing discussion on governance in Germany as higher forms of coordination that are rooted in elementary mechanisms for the coordination of action such as observation, influencing and negotiation as well as the right of disposal (Schimank 2007). These activities have an inherent order that Schimank builds on when categorising

them: in order to influence, the other players must have been observed before and negotiation is based on the former two (Kussau/Brüsemeister 2007, Schimank 2007):

1. Human behaviour and action can be mutually adapted based on observing actions of others and fitting one's own behaviour to it or feeling observed and thus being pressured to take up a certain behaviour.
2. People and their actions can also be influenced in first observing the other's actions and then using one's own potentials of influence (such as power, money, emotion, knowledge etc.) to coordinate and change the others behaviours.
3. In negotiations – which are based on observation and influencing – the behaviours of the involved players are coordinated by mutual agreement.

These three forms of coordination are described as ideal types that exist mainly in a theoretical area and are rarely to be found in these pure modes in reality. They rather appear in mixed forms, showing different behaviours of organisational members throughout an organisation. For example, in a situation of organisational change employees could use the observation mode due to a lack of information while the management is negotiating. This also shows that these constellations can be symmetric or asymmetric: the state for example has more abilities and options to observe teachers than they have to observe the state (Kussau/Brüsemeister 2007).

*Hierarchies, Markets and Networks*

Hierarchy

An organisation is usually characterized by a hierarchical form of order that helps to coordinate work and work assignments with an underlying bureaucracy and a few positions that concentrate the power for making decisions. According to Tannenbaum et al. (1974) hierarchy "(…) is a part of the system of authority that is essential to the maintenance of order. Organization is a system of rules and commands, and organizations cannot function without a line of authority to assure that the decisions of leaders at the top are carried out reliably by members at the bottom" (p. 3). But hierarchy also means an inequality in the distribution of resources and goods, for example the distribution of prestige, money and power (Tannenbaum et al. 1974). Mulgan (2004) refers to that inequality in distribution of resources as the key characteristic of hierarchies. According to him hierarchies are basically a "(…) concentration of resources at the points where it can make most impact, and concentration of control over resources that others need: money, knowledge, votes, even processing power." (p. 52). Hierarchies can be illustrated as organisation charts that mainly show how responsibilities and accountabilities are organised but they do not ensure cooperative behaviour.

Market

Markets are commonly characterized by anonymous coordination of actions ("the invisible hand"). Mutual observation causes anticipations about the behaviour and actions of the relevant others (customers, competitors, contractors etc.) which results in a reaction to something that is expected as a common reaction from the others (Luhmann 2002, p.

102f.). So one's own goals and mainly their likelihoods to be realised cannot be estimated without contacting and interacting with others.
Contrasting to the definition of hierarchies given above, a market is seen as a basic form of coordination that is beyond organisations whereas a hierarchy is an inner-organisational form. Markets characteristically offer free access, social symmetry and anonymity concerning the actual exchange interests. Thus, trade market activities are constituted if market members can choose freely from a high amount of trading partners, frequently initiate such activities and are free in negotiating their conditions for trade (Czada 2007). In contrast, networks are forms of inter-organisational relationships among organisations (Jütte 2002).
Subsequently networks, hierarchies and markets are oftentimes classified in a triptych of organisational forms with networks "in between" markets and hierarchies (Wald/Jansen 2007). Markets are – following this perspective – at the one end of a continuum where any form of organisational life is originated with market partners who link each other with contracts and exchange services, products and/or money. At the other end are hierarchies as the highest form of organised order and structurally managed responsibilities. Stephenson (2004) argues that networks are not the "mixed breed" or "doomed hybrid" but rather the long mistaken "real" end replacing hierarchies and putting them in the middle. Her argumentation builds on the logic of exchange: "At one extreme are disinterested, non-repetitive exchanges typically found in markets. The logical inversion would be repetitive exchanges of mutual interest evidenced in networks. Hierarchy, comprised of routine exchanges (repetitive like a network) with a governing authority (more in keeping with the contractual characteristics of market exchanges), is now squarely in the middle, having qualities of both network and market." (p. 38).

Network

According to Sydow (1999a) networks are the flexible alternative to vertically and deeply integrated or/and strongly diversified companies (see also Scharmer 2007). A network hence combines some of the advantages of a market with those of a hierarchy: in a network there is on the one hand – like in markets – a broad variety of autonomous actors and on the other hand – like in hierarchies – these actors show the typical skill of meeting certain goals by coordinated common action (Berkemeyer/Bos/Manitius/Müthing 2008). But professional inter-organisational networks present just potential cooperation relations, not realised cooperation (Aderhold 2005). Networks are preconditions for cooperation and represent a pool for potential collaboration. And since cooperation is normally time limited for example because the commonly defined goal was reached, this temporary cooperative system falls apart, back into a state of potentiality. Of course, it can then be reactivated again in this same form or a different one (Baitsch/Müller 2001). Thus, networks are latent social infrastructures with members who are potentially interested in common beneficial action.
In networks usually each player can avoid taking over a certain type of behaviour by leaving the network. Thus, collective action of networks can only be created by voluntary agreement and mutual commitment (Kussau/Brüsemeister 2007). Moreover the potential

network state needs to be nurtured and kept alive as well, mainly if the network structure is intended to be kept on the long-term by members (Aderhold 2005).
In comparing these forms of organisation, three main aspects stand out that make networks special:

1. the boundaries of networks are constituted by meaning rather than formal regulations and thus remain vague,
2. the complexity of problems that have to be dealt with is higher and the context in which people are acting is characterized by dilemmas, non-trivial conflicts, high dynamics and uncertainty (see Endres 2008),
3. the space for intervention depends on the situation and with it the modes of intervention.

That implies that there is no given authority defined by structure or formal power. Decisions are made according to the outcomes of negotiations among the actors involved (Baitsch/Müller 2001).

*Regional networks*

Sydow (1999b) points out that strategic networks are usually led by one or more focal organisations which define more than others what the networks market is, what strategies and technologies are applied and how the network should be organised and structured. In contrast, the author identifies regional networks as a spatial aggregation of smaller organisations that are oftentimes motivated to create a network in order to realise advantages of scale or/and an increased strength of innovation. Wöllert and Jutzi (2005) point out the specifics of benefits and goal relations in regional networks: the primary goal in a regional network might be the regional development and the members' benefits are only secondary effects or the primary goal are the members interests and regional benefits are secondary. Characteristically regional networks lack a strategic network leadership because of their tendency to a more heterarchic structure and thus, network strategy rather emerges through agreements while the network develops. Sydow (1999b) even states that the biggest challenge in regional network is its coordination because network management has to do without the "coordinating strength of hierarchy" (p. 288). One other type of network that is interesting in the framework of this thesis is the project network which is time limited. The relations between the members of those networks are still latently existent even after the project ended so that for a new upcoming project the members can refer to their experiences and knowledge. Thus, networks of the programme "Learning Regions – Providing Support for Networks" can be characterised as regional networks with a project focus.

### 4.1.6. Networks in Education

The networks that were created in the Programme "Learning Regions – Providing Support for Networks" in Germany are focusing primarily on educational institutions and on all

other organisations that influence the regional market for educational products and services.

Their typical goals are the coordination and balancing of educational services, offers and products so as to avoid unnecessary competition and reduce inefficient double and multiple offers. A higher level of transparency, more and better information about further education offers, a more sophisticated educational market in both quantity and quality, a better match between offers and demands, impulses for innovation, an exchange of resources and experiences etc. (Wohlfart 2006b, Strobel/Reupold/Tippelt 2009).

Compared to other products and services, educational offers are special in many ways (Freudiger 1996, Reupold/Strobel/Kuwan/Tippelt 2009):

- Firstly, education in the form of courses is non-material which implies that potential customers cannot check the product and the promise that went along with it after buying it. Thus, it is especially important that the offering organisation is a trustworthy and credible one.
- Secondly, education is produced and utilized at the same time for example in a course and has dynamic features in contrast to consumer products which are first produced, then sold and afterwards used or consumed.
- Thirdly, since producing and consuming is inseparable here, education can also not be stocked, it is boundaryless as well. Thus, a sudden rise in demand (such as more places in a course) cannot easily be answered with an adequate rise in more capacities.
- Fourthly, the potential standardisation of the service and its quality are limited and dependent on individuals and their contribution.
- Fifthly, the possibilities to protect innovative services (like a new teaching method) are very limited and can easily be copied.

These special features of education can and should be interpreted and used as options. There is a growing research body in Germany focusing on educational target groups and marketing which lead to extensive studies and publications (Tippelt/Reich/Hippel/Barz/Baum 2008, Tippelt/Weiland/Panyr/Barz 2003, Suter-Seuling 1996). The focus of these studies is on education as a special kind of service, theoretical foundations of economic marketing and the preconditions of the target groups according to their belonging to social milieus. In essence, these efforts contribute to a consumer and output orientation in education that has long been ignored in Germany.

In taking the perspective of educational institutions that offer these services it becomes clear that their need to cooperate increases if they want to a) ensure their own existence on the market with a long-term perspective and b) be able to offer adequately what the identified target groups and the regional education market are in need of. Cooperation is becoming more important in a globalised economy in general and in education even more so. The most important reason is because lifelong learning and the necessary learning options can only be created by networked cooperation of all the institutions and organisations that are 1) involved in offering education for individuals during a life course

(kindergarten, schools, universities, companies, higher education institutions etc.) or 2) dependent on well-educated individuals (Strobel/Reupold/Tippelt 2009).
These networking efforts of educational institutions need a professional and holistic action strategy (Meisel 2003) that spans throughout functional areas of a society and will eventually result in a "networked ecosystem". One of the first steps in that direction is to increase the ability to perceive already existing social networks and affiliations (Freeman 1992) so that these potentials can be made use of. In this sense, networks can influence the connectivity of the involved organisations. This development results in a variety of profits for the customers if local educational institutions are networked:

- Objective information and guidance on the most suitable offer for individuals and organisations through professional education counselling,
- Increased transparency on learning options and life perspectives,
- Educational offers better fit the customers' needs, are locally accessible and support their success in participating in social and economic life (Schäffter 2004, Tippelt/Strobel/Reupold 2009).

A networked educational and qualification structure is a necessary requirement and a relevant developmental factor for the overall development, competitiveness and attractiveness of a region (Tippelt 2005, OECD 2007b Reupold/Kuwan/Tippelt/Lindner 2009). Regional networks differ largely in their structures, dimensions and extent, goals etc. because they are dependent on the regional preconditions such as the existence of educational institutions in number and kind, the possible access options to institutionalised and informal learning, the teaching staff and their competence, the qualifications, interests and activities of the inhabitants, how knowledge-intense the regional work-places are, the population structure and density etc. (Bretschneider/Nuissl 2003).

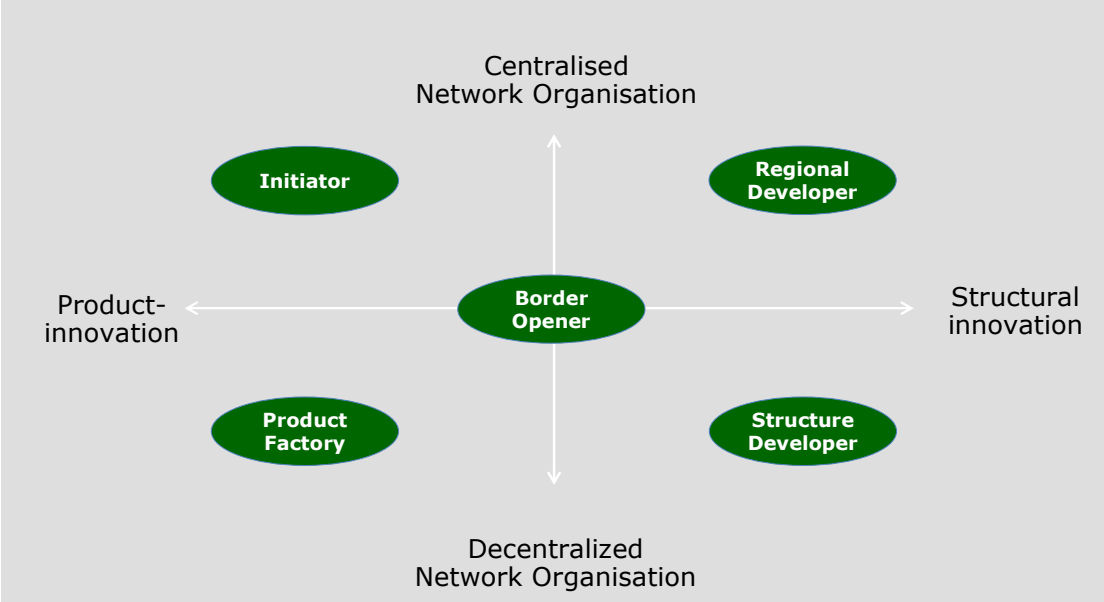
*Types of networks*

Though Sydow (1999b) stated that the possibilities for categorising networks are endless, some basic dimensions help to characterise and sort part of the complexity given in professional networks. In reference to Schubert (2008) four basic dimensions are depicted here (for an overview on types of interorganisational networks see Sydow 1999b, p. 285):

- steering orientation: on an operative level concerned with products and services (primary processes) and on a strategic level focusing on the choice of strategic coalition partners (secondary processes).
- the kinds of connections that define different forms of interdependency: a symbiotic one (organisations cooperate that are different in kind) and a commensalistic one (organisations cooperate that are similar in kind).
- vertical and lateral networks are concerned with either a central coordinating agency or a heterarchic network structure which has more than just one centre.
- primary, secondary and tertiary networks are already combinations of the following aspects: the degree of organisation and whether the networks are mainly concerned with social resources (natural networks) or professional resources (artificial networks).

For the networks created in the Programme "Learning Regions – Providing Support for Networks", the evaluating board[18] developed a joint typology that focused on two central dimensions, namely an organisational one and an innovation dimension (Abicht/Schönfeld/Reupold/Tippelt 2009, Tippelt/Reupold/Strobel/Niedlich/Emminghaus 2009). Based on the qualitative data and the analysis of good practice examples, some basic patterns of networks were identified and clustered into certain "ideal types of networks" (see fig. 9).

*Figure 9: Network Typology by the Scientific Monitoring Board*




The basic underlying assumptions to this network typology and its dimensions are the following:

*Organisational dimension*

Network structures in the learning regions can be either centralized with a strong network management that coordinates, formally organises and controls actions and the information flows, for example, by setting up and participating in communication structures (weekly meetings of sub-networks). Or network structures can also be decentralized with a network management that strongly encourages self-organisation of relatively independent sub-networks in a heterogeneous system. Information flow and exchange of knowledge and experience are also organised but the need for control is much lower and pan-network concerted action and communication are less frequent.

*Innovation dimension*

Concerning innovations the learning regions networks showed some interesting patterns, too:

[18] Ludwig-Maximilians-University Munich (in cooperation with Institut für Strukturentwicklung und Wirtschaftsförderung and Helmut Kuwan, Sozialwissenschaftliche Forschung und Beratung München) and Rambøll Management.

The networks tended to either create common educational products (such as new courses, new professions, study programmes or new didactic ways of teaching etc.) and/or they focused on novel educational structures. These structures include, for example, a new institution that the region needed in order to provide missing educational offers (such as an institute for research and education of professionals on early childhood development or learning centres) or also the ongoing support of novel communication and cooperation channels among existing structural players of a region (for example common documents for regional development, novel channels of knowledge transfer, the general improvement of educational infrastructure etc.).
So, for learning within regions, educational networks become more important as an intermediary structure between institutions, policy levels and the individuals that fine-tunes educational offers and needs, mutual expectations and overall educational and life quality.

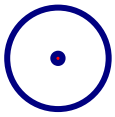
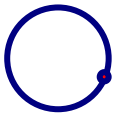
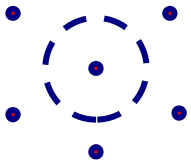
*Networks and Business Ecosystems*

These networking activities of organisational members result in the tendency of dissolving boundaries between branches. And instead of analysing one certain organisation within its industrial limits, there is the possibility to shift attention to a so-called "business ecosystem" (Moore 1998, Scharmer 2007). The importance of such business ecosystems is growing because single organisations and their limited and insular knowledge bases are not prepared to innovate continuously and serve the diverse demand situations on the market (Schuh/Friedli/Kurr 2005). Many organisations begin to realise that their cooperation with similar or somehow related organisations and the exchange of knowledge strengthens their common business ecosystem, reduces risks, enhances potential, widens the perspectives, enables a higher reaction speed and more holistic solutions (Schuh/Friedli/Kurr 2005). Hence, every organisation which is a member of the ecosystem benefits from the others' cooperation. A further benefit for all involved organisations in these networked ecosystems is derived from defining interfaces and developing common products as system partners. These activities result in mutual agreement on their individual contributions in order to avoid the deficits of traditional organisational structures (Scott 1995). More advantages lie for example in closer customer relations, the common use of resources, the common definition of (quality) standards etc. Thus, the cooperation even with competitors improves the conditions and flexibility for the involved organisations. In this sense, an organisation is regarded more like a living organism which is collaborating, competing and co-creating as part of a complex network of organisations. Creating and adding value for one's own organisation but also for the other network members is crucial to being an attractive partner in this system. A networked system in this sense is based on the behavioural rules of "spontaneous order" (Schuh/Friedli/Kurr 2005, p. 33) that also resulted in the model of organisations as evolving systems as it is object of research and publications done by the management school of St. Gallen (see for example Bleicher 1992). Schuh, Friedli and Kurr (2005) summarized the basics of systems thinking: a) The whole is not the sum of its parts, b) complex systems are networked, dynamic entities, c) open systems and their environments are intertwined and exchange

matter, energy and information, d) complex systems' behaviours are not predictable but can be influenced, e) complex systems have perceivable structures that can be (co-) created, f) a system can be controlled by steering and g) social systems can learn and develop.

Table 3, the most essential concepts of theories and ideas elaborated so far are put into context by Scharmer (2008). The individual perception is put in relation to conversational outcomes, organisational structure and system coordination. Thus, forms of organisation as defined above (hierarchy, market and network) are part of this illustration as well as certain concepts of knowledge creation and knowledge management, like Nonaka and Takeuchi's (1995) concept of Ba (see chapter 3.3.3).

*Table 3: The Field Structure of Attention and the Governance Structures (according to a presentation held by Scharmer in Würzburg, May 2008)*

| Field-Structure Of Attention | Individual Perception | Group Conversation | Organisation Structure | System Coordination |
|---|---|---|---|---|
|  I-in-me | **Listening 1** Downloading habits of thought | **Downloading** Talking nice, politeness, rule-re-enacting | **Centralised** Machine Bureaucracy | **Hierarchy** Central plan |
|  I-in-it | **Listening 2** Factual object focused | **Debate** Talking tough, rule revealing | **Decentralised** Divisionalised | **Market** Competition |
|  I-in-you | **Listening 3** Empathic listening | **Dialogue** Inquiry, rule reflecting | **Networked** Relational | **Dialogue** Mutual adjustment |
|  I-in-now | **Listening 4** Generative listening | **Presencing** Collective creativity, flow, rule-generating | **Eco-System** Ba | **Collective Presence** Acting from the emerging whole |

A report by the OECD (2000) summarized the research findings on how innovations emerge. And quite the opposite of the traditional assumption that innovation is the result of a linear process, the resulting innovation models emphasise that innovation "is an interactive process in which firms interact with customers, suppliers and knowledge institutions." (p. 23). These interactions and interrelationships between actors who are

involved in innovation processes are complex rather than linear, differ across sectors, regions and nations and they form innovation systems (see also Nonaka/Takeuchi 1995). Moreover, the OECD (2000) states that "In national systems, the education and training system is among the most important for explaining patterns and modes of innovation." (p. 23). Hence, creating new forms of organisation and intermediate structures that serve as channels for exchange is one of the key conditions for creating innovations in general. Doing that within the education and training market seems to be the most promising strategy for innovation systems to emerge. What appears to be not touched so far is a time aspect: large scale changes certainly have also short-term results but their main effects are presumably mid- and long-term consequences. Unfortunately these are hard to measure because of the multitude of variables and the emerging complexity issues involved.

Actively engaging in network cooperation is thus seen as a post-competitive strategy that ensures the organisations survival (Powell et al. 1996), supports the creation of innovations (Brown/Duguid 2001) and intentionally dissolves boundaries of organisations into cooperative structures "in between" (Sydow 1999b). One of the most important and also challenging tasks in network cooperation is the one of the organiser or as this position was called in the programme "Learning Regions – Providing Support for Networks", the network manager. This person needs some innovative and novel competences, skills and knowledge which enable him or her to balance peoples' interests and provide necessary information as well as skilfully handle complex situations that are characterized by cooperation and competition at the same time. This position and the connected challenges will be elaborated on in more detail after a brief introduction to social network analysis in the following section.

## *4.2. Analysing Social Networks*

This section offers a closer look at what social network research is, at its scientific roots in history and at its objects of interest as far as this PhD thesis is concerned.

### 4.2.1. Social Network Research: the Structural View and Method

The moment an interested reader starts to take "the relevant" literature about social network research into account, he or she soon realises that there is a huge body of books, internet pages, software, studies etc. that represent the interdisciplinary knowledge and expertise that has been produced not only in recent years. On the one hand these ideas are highly specific, and focus for example on the sustainability of ecosystems (Walker/Salt 2006) or on a social-cognitive quantum theory of human behaviour derived from information technology (Carley 1999). On the other hand all of these ideas are still concentrating on the one or other aspect of social networks and on how to look at them and analyse them.

But what exactly is that fascinating idea about structurally analysing networks? As Kilduff and Tsai (2006, p. 13) put it "the network approach allows researchers to capture the interactions of any individual unit within the larger field of activity to which the unit belongs." So what social network research really does, is: it looks at an actor as an

interacting element of a system and consequently focuses on the structural quality and effects of social relations. Thus, the individuals are not seen as independent actors who make rational decisions on what is the best solution for them but are rather regarded as interdependent parts of a larger social structure. This social structure in turn is not just the sum of individual characteristics but it emerges with the relationships between the actors of the system (Jansen 2006). The behaviour of the networks' actors is therefore explained through their relationships to other actors within the network (Sydow/Windeler 1999).

In order to obtain a more concrete idea on how this connection of actor and social structure can be analysed, the following categories of information on social networks can be helpful: Social networks can be categorised by three groups of features: relational, functional and structural ones (Röhrle 1994).

- Relational features refer to the strength of ties (Granovetter 1973) which is defined by the effort that is spent in keeping and nurturing relationships, the degree of mutual trust and support as well as the emotional intensity. These features are measured by criteria such as the frequency of contact, durability and stability of the relationship, egocentrality, reciprocity, homogeneity and openness to new relationships.
- Functional features are distinctive features of networks as self-regulated and self-sustained systems, for example, the exchange of resources, value and norm orientation, social support for the individual members etc.
- Structural features are those features that can be calculated by the relational data of collective elements (Jansen 2006), for example, the density (number of possible relations that are realised), interactions of subgroups (denser parts of a social network with an own momentum), distance of actors (how quick can a certain target person be contacted by the members of a social network), centralisation of the network (degree of social integration) etc.

Furthermore Kilduff and Tsai (2006) describe several distinctive features that let network research stand out against traditional approaches in the social sciences: Firstly, network research "(…) focuses on relations and the patterns of relations rather than on attributes of actors (…)" (Kilduff/Tsai 2006, p. 19) and thus produces relational data in contrast to attributional data (Scott 2007). Secondly, network research can be applied to different levels of analysis and to the relations in between those levels and so provide micro-macro-linkages. Thirdly, network research provides the possibility to combine quantitative and qualitative research methods in order to graphically visualise the data and hence allows for a more holistic in-depth analysis (Kilduff/Tsai 2006).

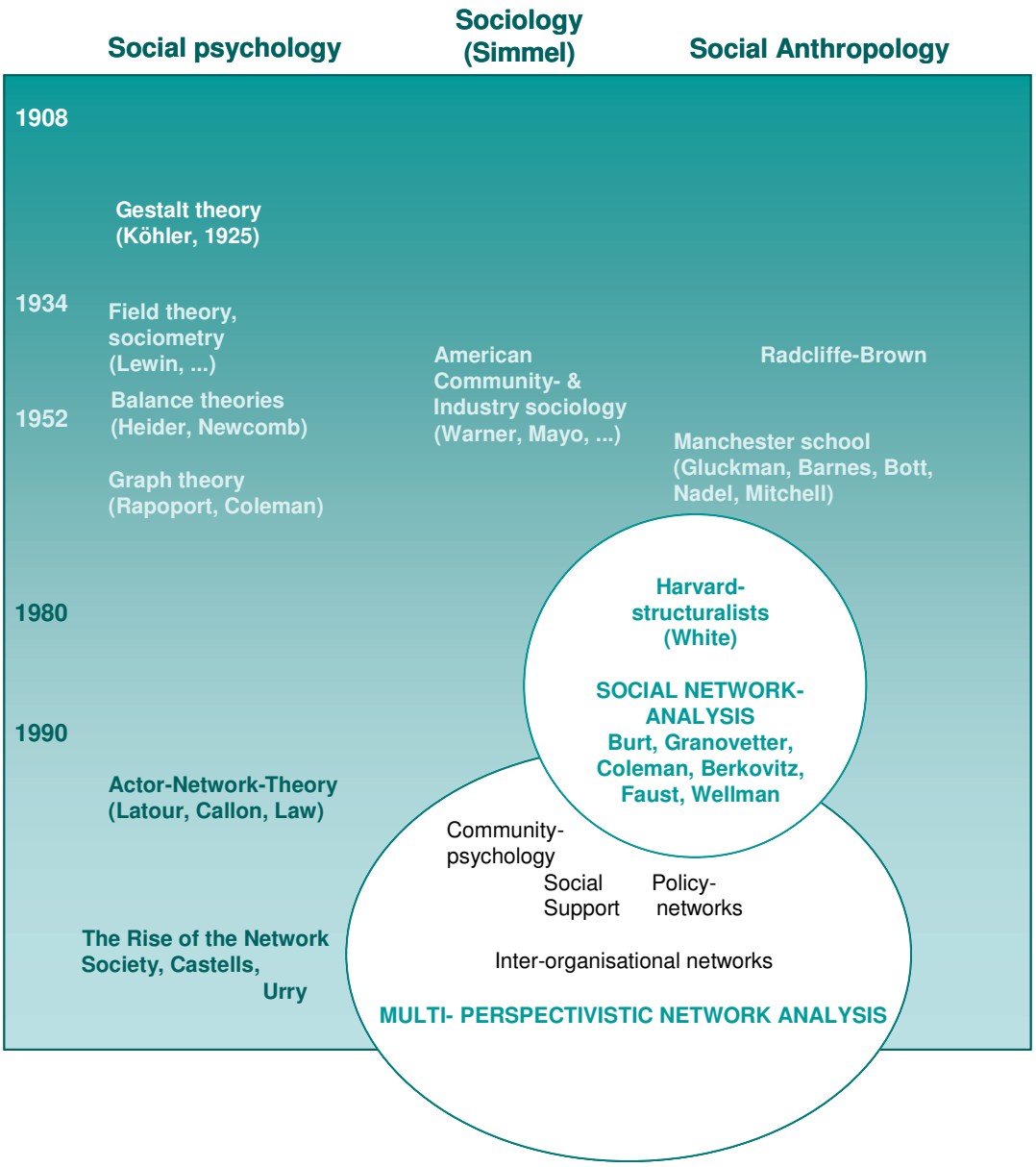
### 4.2.2. A Short History of Social Network Analysis

An early pioneer in thinking about human interaction in terms of social networks was Georg Simmel (1858-1918). He saw the interactions as the core object of sociology whereby for Simmel the focus should rather be the resulting dynamic morphology of society than the content of the interaction. Simmel himself analysed dyads (a set of two actors and their relationships) and triads (a set of three actors and their relationships). He

concentrated primarily on social cohesion, super- and subordination and the structural social dynamics that influence the creation of norms, the conformity to norms and the preconditions for individualisation (Jansen 2006).

The first approaches to network analysis reach back to the 1930s when German researchers (such as Kurt Lewin, Fritz Heider) who were influenced by Köhlers (1925) "gestalt theory" and by the ideas of field theory from physics, brought their ideas as immigrants to the USA. They transferred these developments as the concept of networks to the social sciences, more exactly in cognitive and social psychology, in order to do research on social interactions among individuals (Scott 2007, Kilduff/Tsai 2006). They focused their research on the structure of groups, group dynamics and on the flow of information through groups. Meanwhile anthropologists and sociologists from Harvard University studied factories and communities based on an approach by Radcliffe-Brown (see fig. 10). Their results highlighted the relevance of informal interpersonal relations in social systems (Scott 2007). This development together with some advanced studies at Manchester University also based on Radcliffe-Brown's ideas produced the first synthesis of mathematics and social theory. Thus, research on social networks was enabled to move beyond mere description to real in-depth analysis. Finally in the late 1960s/early 1970 a sophisticated methodology of social network analysis was developed by a group at Harvard University around Harrison White (Kilduff/Tsai 2007). Scott (2007) sees their perspective of algebraic analysis of the structure of roles and positions as the final breakthrough for the method. For a more detailed picture of the historical developments, compare Scott (2007), Kilduff and Tsai (2006), Jansen (2006) and Straus (2002).

*Figure 10: History of Social Network Research (modified and translated by the author according to Scott 2007, Straus 2002, Jansen 2006)*




### 4.2.3. Theoretical Developments on Social Networks within Social Network Analysis

Kilduff and Tsai (2006) summarize the present theoretical developments on social networks into three main categories:

1. imported theories that mainly concentrate on the micro-level,
2. indigenous social network theories that are potentially applicable to the micro-level as well as to higher levels and create the necessary inter-linkages between them and
3. ideas and concepts exported into existing organisational theories.

Social network analysis derives its central concepts such as reciprocity, transitivity, embeddedness and social capital from the first two categories of theories. Concerning the

imported theories from other disciplines, Kilduff and Tsai (2006) focus on the one hand on graph theory from mathematics (Harary et al. 1965) and on the other hand on balance theory (Heider 1958) as well as social comparison theory (Festinger 1954) from Social Psychology.

*Imported Theory from Mathematics*

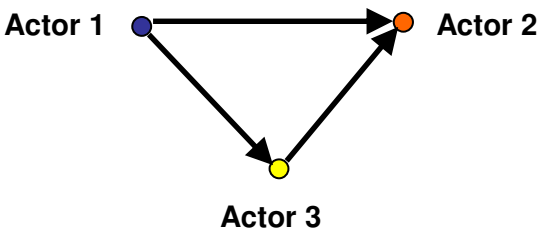
Graph Theory as referred to in social network analysis considers points (as actors) and lines (as the actors' ties) in between them as graphs. Directed graphs are one-way or two-way arrows in between the points that illustrate the degree of reciprocation between actors. Other exemplary central concepts of this approach refer to aspects of informal organisation like the degree of connectedness, graph hierarchy, graph efficiency and least upper boundedness etc. (Kilduff/Tsai 2006).

*Imported theories from Social Psychology*

Heider's theory on interpersonal balance in social groups concentrates on four central axioms which are themselves based on the concepts of reciprocity and transitivity. Reciprocity refers to the tendency of human relationships to give and receive equally: an equilibrium of relations in a dyad is given only if actor 1 is positively linked to actor 2 but then there is social pressure on actor 2 to have a positive attitude towards actor 1 as well (compare fig. 11).
The concept of transitivity includes a third actor and the opinions of the other two towards him or her: if actor 1 is positively linked to actor 3 and actor 3 positively linked to actor 2 then there is social pressure on actor 1 and actor 2 to at least have a positive opinion about each other (compare fig. 12). Or more positively put: The likelihood that two of my close friends that I spent lots of time with have some interests etc. in common is very high. So they probably know and like each other as well. Concerning the illustration it could be said that strong relations tend to create triangles (see Buchanan 2002). But the relations among the three actors are balanced only if they are all positively linked to each other or all of them are negatively linked. Every other possibility (e.g. 1 and 2 like each other; 3 is negatively linked to 1 and positively linked to 2) creates asymmetric affiliation.

*Figure 11: Reciprocity*


*Figure 12: Transitivity*



These figures illustrate the first axiom of Heider's balance theory and also the only one that can easily be illustrated in a graphical form. The four axioms of Heider's balance theory are concerned with how people set up their relationships in order to reduce feelings of discomfort:

1. Individuals favour balanced interpersonal relationships.
2. Individuals rather interact with others who are similar in one or more aspect.
3. Unbalanced interpersonal relationships cause feelings of discomfort.
4. Individuals will strive to turn unbalanced relationships into balanced ones by changing the other people's attitudes or break off the relationship.

Another theory that influenced social network theory and originates from Social Psychology is Social Comparison Theory by Festinger (1954). This theory focuses on the decisions that lead people to interact with certain others which was taken up as one of the basic principles in social network research: people tend to interact with others who are perceived in being similar in one or more important aspects. Festinger stated that people compare themselves to others in order to learn about themselves and that others who are similar are chosen for these comparisons. Moreover, according to the author, these social comparisons tend to have strong impact on the attitudes of an individual if a) the others opinion is highly valued by the individual that draws the comparison and if b) the individual lacks an objective comparison which is not social in kind (Kilduff/Tsai 2006).

The concept of homophily (Lazarsfeld/Merton 1954) underlies these two theories because it basically states that people choose their interaction partners according to perceived similarity. Whereby the factors that create similarity could be demographic ones such as sex, ethnicity, age and so on but also social or motivational factors or values, such as having the same interests, striving for the same goals, having the same kind of difficulties etc. can create a sense of being similar. Heterophily is thus the opposite theory that refers to the degree to which individuals are different in certain aspects. Moreover, the argument is that the more heterogeneous a combination of people, the more variety in their expertise and the more likely it becomes that benefits in terms of novel insights can be derived (Palonen/Hakkarainen/Talvitie/Lehtinen 2004). Homophily will occur more frequently because communication is most effective if meanings, beliefs, values etc. are shared. Moreover, this kind of communication is perceived as more joyful and comfortable, the degree of uncertainty is very low. In contrast, for an interaction between two very different individuals, efficient communication takes more effort, patience and tolerance. Communication in heterogeneous groups might cause uncomfortable psychological states because beliefs, values and underlying concepts of the world are inconsistent.

In addition, people belong to a variety of different sub-networks due to their having many attributes that connect them to those at the same time, such as being female, young, catholic, interested in the stock market etc. This being part of many sub-groups leads to higher and more diverse pressure but also to more freedom since there are more options that can be taken (Kilduff/Tsai 2006). Thus, moving skilfully in networks requires social skills and competence in dealing with the resulting emotional states.

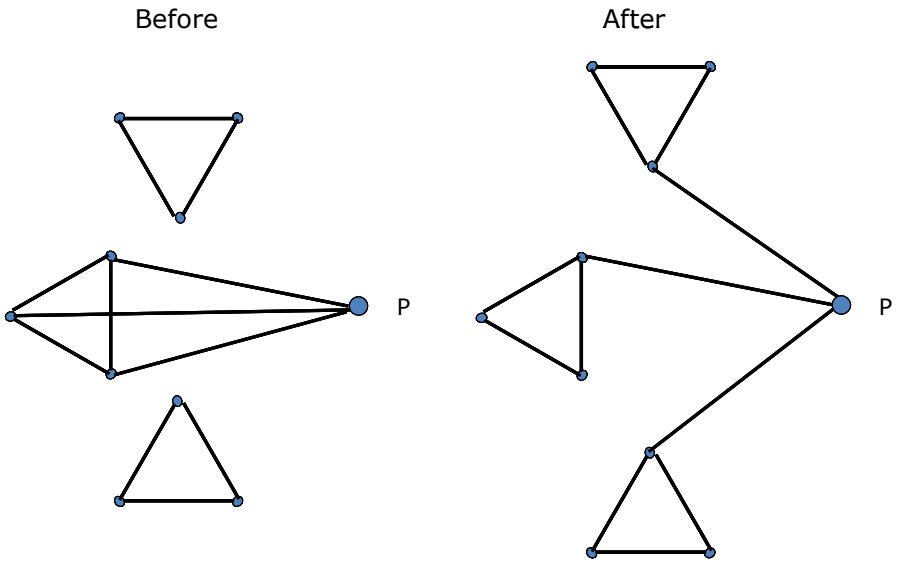
*Network Theories from Social Network Research*

There are also some theories that were created as interpretations of social network analysis' findings, namely: the already mentioned heterophily theory and structural role theory. Heterophily theory points out that sometimes interaction to strangers or people who differ strongly from the own groups is intentionally sought. This is done because novel and diverse knowledge is gained by including those strangers in social interaction: "The heterophily perspective therefore suggests that new information and unusual resources tend to flow from relative strangers who may be members of other social organizations, or who may be brokers joining groups that are themselves disconnected." (Kilduff/Tsai 2006, p. 54). This theoretical assumption is supported by research findings, such as Nonaka and Takeuchis (1995) research on knowledge creation and continuous innovation within Japanese firms:

> Times of uncertainty often force companies to seek knowledge held by those outside the organization. Japanese companies have continually turned to their suppliers, customers, distributors, government agencies, and even competitors for new insights or clues they may have to offer. (p. 5).

In the language of social network analysis this would mean that representatives of the internally densely networked organisations of Japanese firms sought for ties with individuals that were in brokerage roles in order to gain knowledge inherent in other social networks (compare fig. 13).

*Figure 13: Strategic Realignment of P's Network Contacts to Reduce Redundancy and Connect Enconnected Sub-Networks (Kilduff/Tsai 2006, p. 57)*



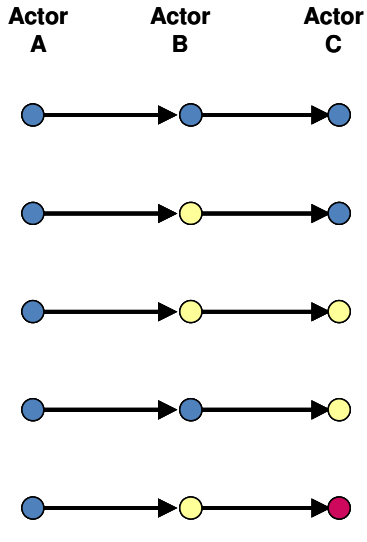

This seeking of new input by creating ties is sometimes also called creating bridging social capital[19] and is for example taken up by Burt's (2002) structural-hole research in which this activity is called "bridging ties". This is very relevant to learning regions because one of the main tasks of network managers was exactly that: connect (to) people who are embedded in different social and work networks but who need to cooperate in order to

[19] Putnam (2000) differs between bonding (or exclusive) and bridging (or inclusive) social capital: "Some forms of social capital are, by choice or necessity, inward looking and tend to reinforce exclusive identities and homogenous groups. […] Other networks are outward looking and encompass people across diverse social cleavages." (p. 22).

create additional benefit for all and the educational market in the region. Maloney, Smith and Stocker (2000) emphasise that social capital does not reside in an individual but is a result of the relationships people develop to meet certain goals: "Unlike physical or human capital, [social capital] is not the property of individuals or institutions. Social capital inheres in the relations between actors and is a resource that is drawn upon to facilitate collaborative activities." (p. 802). One the main interest of the thesis is therefore the "bridging capacity" of network managers. What does it consist of? What skills do they need? Since Burt (2000) pointed out that this role as a social broker is more easily to be solved by an individual who has legitimacy within the relevant social context, it is also interesting to find out how they gained legitimacy. One option to gain legitimacy for those who do not have it on their own is also suggested by Burt (2000): individuals can borrow social capital from structural-hole spanning supporters. Here the question would be how network managers gained this kind of support. In addition to these first insights in social brokerage activities some relevant research findings by Granovetter (1973) concerning the "strength of ties" are complementing the relational features of networks: Granovetter pointed out that strong ties with closely affiliated members like in families facilitate cooperation and involve trust and reliability. But these kinds of ties are also connected to a high level of social control, social role expectations, restrictions of individual freedom and a stagnating flow of information. However, these ties are best for exchanging complex knowledge (Kilduff/Tsai 2006), indicating dense networks, with highly reciprocated relationships and thus creating bonding social capital. The bridging of networks oftentimes connects members of different densely networked circles and thus creates weak ties that are more valuable in terms of connecting to acquaintances who help to acquire novel information and knowledge, such as passing on information about vacant positions like in Granovetter's (1973) study. So, information that is exchanged in weak ties is oftentimes not very complex, refers to explicit and/or strategic knowledge and is normally part of informal talks.

So the bridging capacity of network managers seems to be a vital part of their skills to create a social network that connects individuals in ways that create value for all involved. From a structural social network analysis point of view there are different kinds of brokerage roles with special names to indicate their typical function:

*Figure 14: Brokerage Roles (according to Hanneman/Riddle 2005)*



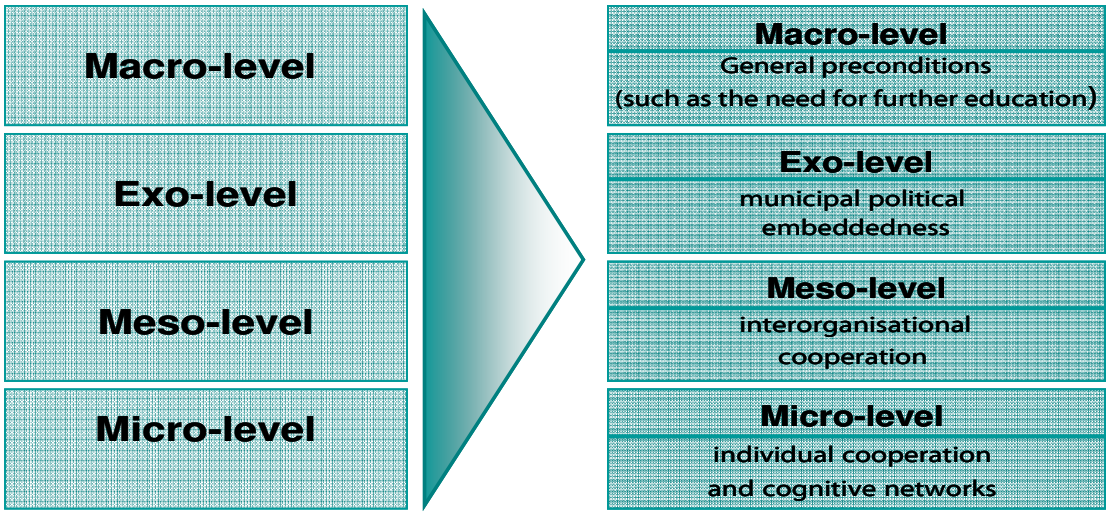

Another question that refers to these elaborations is what social skills network managers need to have developed in order to be able to move between different sub-cultural social spheres and leave the impression of a "similar one" in each of these spheres in order to be given relevant knowledge. Putnam (2000) indicated this when he referred to the effects of bridging or brokerage activities to the identities of the involved: "Moreover, bridging social capital can generate broader identities and reciprocity, whereas bonding social capital bolsters our narrower selves." (p. 23). Thus, the essential fact homophily theory brings to mind is that information, be it cultural, behavioural or material that flows through a network tends to be localized and network distance[20] translates in distance in terms of social characteristics.

### 4.2.4. Levels of Organisational Social Network Research

The social network approach can be applied to a broad variety of organisational phenomena from micro to macro levels. At any level a social network approach will focus on relational processes and structures that occur and exist between individual actors. Thus the kind of data that is gathered is relational: "(…) the contacts, ties and connections, the group attachments and meetings, which relate one actor to another and so cannot be reduced to the properties of the individual actors themselves." (Scott 2007, p. 3).
The following paragraph will give a short overview of the potential levels of analysis and an in-depth elaboration on the cognitive level that is used as the guiding method in this PhD thesis according to Kilduff and Tsai (2006). These levels of analysis (see fig. 15) are also reflected as levels of action and innovation in the findings on learning regions (Tippelt/Reupold/Strobel/Kuwan et al. 2009).

[20] The number of nodes that separate two individuals from one another.

*Figure 15: Identified Levels of Action and Innovation in Learning Regions (translated by the author according to Tippelt/Reupold/Strobel/Kuwan et al. 2009, p. 57)*




At the macro-level of figure 15 there are general preconditions as they are typical in some cases even specific for Germany and its educational market. These preconditions cannot be analysed with a social network approach because they are much broader, depend on political decisions, international relations, economic development and also the specific conditions shaped by the individual German states etc. At the next stage, the exo-level where municipalities and their typical political and administrative systems are addressed, social networks already have a high impact but were not in the centre of analysis. The meso-level deals with cooperation and ties between organisations and was one of the core interests of the evaluation. Kilduff and Tsai (2006) identify another plane: the intra-organisational level which is concerned with the relations of business units within one organisation. Again, this was not one of the foci of attention of the evaluation board.
The micro level of analysis addresses the individual, his or her perspective as well as his or her cognitions on the surrounding social networks. The following sections concentrate on cognitions about network ties and interpersonal ties.

*Cognitions about network ties*

An individual has a set of cognitions about the connections that exist between colleagues at the workplace and draws conclusions from that. In organisational research these cognitive concepts are part of the so called "mental model[21]" of a person and are known as being usually tacit (Senge et al. 2007). Tacit knowledge refers to this kind of knowledge that remains unaware to the beholder and thus stays unexamined and is not tested against reality (for a closer elaboration of tacit knowledge see chapter 3.2). Kilduff and Krackhardt (1994) give an example of a perceived friendship link:

> If your colleagues at work think that a prominent person in the organization is your friend, then your colleagues will tend to think of you as a high performer: the perceived friendship link to the prominent person will bathe you in reflected glory.

[21] „Mental models are the images, assumptions, and stories which we carry in our minds of ourselves, other people, institutions, and every aspect of the world. Like a pane of glass framing and subtly distorting our vision, mental models determine what we see." (Senge et al. 2007, p. 235).

> What matters is the perception that you have the friendship tie – irrespective of whether there really is such a tie or not. (Kilduff/Tsai 2006, p. 4).

This area of social network research in organisations is concerned with perceived network ties within one organisation and the (social) consequences that result from it (see for example Freeman 1992).

*Interpersonal relations*

This area of network analysis concentrates on the existence and nature of interactions between individuals in organisations. Individuals structure their network of constraint and opportunity by choosing certain colleagues to communicate with and excluding others from this frequent exchange (Kilduff/Tsai 2006). Other researchers such as Stephenson (2004) go a step further and differentiate the nature of the interaction in their research. She takes a differentiated look at informal networks (work networks, friendship networks, career advice networks, networks of innovators, established experts, and process improvers etc.) within and throughout organisations. These networks provide access to information and are focal points of power. Stephenson stresses that a certain position within a hierarchy does not per se grant power but rather the position in the social networks (see also Kleiner 2002).

Another core aspect of network analysis on interpersonal relations is specialised on research dealing with dyads, triads and cliques that goes back to Georg Simmel ("Simmelian ties"). Dyads are two-person units, triads three-person units and cliques are several people who interact with each other but have no common ties with anybody else outside the group. For social network analysis and an adequate illustration of networks, the interactions and necessary movements to meet each other can be imagined as a pattern. The contacts people make are not random but appear as a social structure. Some members of a certain region for example meet often, some occasionally and some never. The emerging pattern or social structure that is created thereby becomes visible if persons are imagined as small moving dots from a sufficiently distant vantage point.

These concept about social networks within organisations can als be applied to other forms of social groups, such as regions. There are also prominent people in a region who can let somebody borrow their social capital or refuse to do so etc. This has an effect on the people's perception of the persons involved in the network project of the learning regions. Thus, the findings of social network research as presented here can be transferred to the endeavours of creating a professional network in learning regions. The following section now focuses on how networks can be managed and how knowledge flows can be directed.

## *4.3. Managing the Network and Its Flows of Knowledge*

In order to foster the changes in regional stakeholder's interests, mental models, attitudes and behaviour that are preconditions for networking, collaborating and developing a different approach to dynamic competition, a special kind of leadership and change management is essential. The programme "Learning Regions – Providing Support for Networks" can be regarded as an initiative for macro-structural change processes that aims at instigating a culture of lifelong learning in society. This culture, like any other

culture, includes shared values, norms, mental models etc. (see for example Geertz 1987, Maletzke 1996, Gudykunst/Kim 1997) – a special feature to the culture of a learning society is the ability and willingness of its members to continuously react to change. So the network managers within this programme can be regarded in their ideal state as the primary societal change agents who set impulses for a learning orientation between regional stakeholders.

Leaders or change agents in networks need other tools, instruments, attitudes and modes of behaviour if they want to successfully initiate collective action. In regional networks there is no formal power, no given hierarchy and no organisation chart that can be followed. Uncertainty, ambiguity, untransparency, unclear responsibilities and an open ended process characterise the situation in networks (Endres/Wehner 1999, Wohlfart 2006b, Prasopoulou/Poulymenakou 2006, Schubert 2008). At this point the terms "management" and "leadership" need to be defined as they are used in this thesis: Management here is used as describing all the tasks centred on organising and structuring processes, i.e. how to do things; whereas leadership is more concerned with providing direction, vision and sense and meaning, i.e. where to go. But leadership in this thesis is not understood as influencing and persuading people to follow a certain vision and so impose change as conventional models might suggest (Rosenstiel 2000). Leadership is rather understood as clearly identifying and openly communicating why change is necessary and then create the space for it to happen: "Leaders create a holding environment for those they lead, managing the tension and stress that change inevitably generates but never allowing them to run away from it." (Skidmore 2004, p. 95). There are certain characteristics that make network leadership and management stand out against those roles in organisations. These are described more closely in chapter 4.3.1.

Thus, leaders in regional networks (Sydow 1999b) that lack a formal hierarchy very often emerge as informal leaders. Balkundi and Kilduff (2005) relate social network theory and informal leadership and hence emphasize social relations, social capital, social structures, and embeddedness. In this context, leadership is understood as the social capital inherent in certain individuals and originating from their social insight and the structure of social ties around them (Pastor/Meindl/Mayo 2002). The network approach provides insights into the ways in which informal networks function within and between organizations. In more formally organised networks, these individuals are often collectively granted power by network members in the form of a written contract. In the programme "Learning Regions – Providing Support for Networks", the network managers did not always emerge as those informal leaders but they were given that position by definition from the start of the programme because they applied for the grant. In some cases, there was personnel fluctuation over the seven years of the programme. But in many networks, network managers kept their positions from the start, learned to fill them and become a trusted and credible informal leader who enacts commonly agreed upon rules for cooperation.

In the following chapter network management is differentiated from management in organisations; the role and the resulting challenges for network management as portrayed in the research literature is described, research deficits are identified and the focus of this thesis is outlined.

### 4.3.1. Differences of Managing in Organisations and Managing Networks between Organisations

According to Wohlfart (2006b) there are clearly defined goals on all relevant levels in organisations: the overall systemic goals for organisations, such as efficiency and profit; the sub-divided systemic goals, such as production and sales of certain goods and structural aims, such as the rules and regulations for work assignments, responsibilities and collaboration within the organisation. Thus, the management of organisations is mainly concerned with the leadership and management of the organisation and its employees; that includes tasks such as developing goals and strategies to reach them, then implementing and controlling those activities as well as personnel recruiting, placement and integration, and the distribution of labour within the organisation (Rosenstiel 1999). Management's tasks are centred on the level of one single organisation, its economic and functional areas (Sydow 1999b). So, management supports the organisation in coping with disturbances caused by the organisations environment and tries to re-adjust and stabilise it and its structure accordingly (Aderhold/Wetzel 2004). As a result, the number of stakeholders (contractors, customers, management, personnel and shareholders) is – compared to the situation in a network – relatively low and transparent (Wohlfart 2006b).

While leaders within organisations can accomplish a task with referring to formal power and a hierarchy and hence choose whether they apply a relationship oriented leadership style or not (Rosenstiel 2000), leaders in networks need to be able to facilitate negotiations between independent or interdependent actors. As Skidmore (2004) put it:

> Networks challenge our conceptions of leadership, which too often are still rooted in an outmoded 'great man' theory that mistakes the formal authority of status, rank or station with the exercise of leadership. When you ask people about the leadership of an organisation, most people reach for the organogramm and point to the top. When it comes to leading across networks there are no such easy answers. (p. 91).

Indeed, the individual's social ties are embedded in larger social networks and may have implications beyond the individual level (see chapter 4.2). An individual's social ties across different working groups can help integrate the groups, providing flows of resources between disconnected social actors (Granovetter 1973). Furthermore, the structural network approach suggests that relationships between actors affect actors' attitudes and behaviours. So, an individual's behaviour is, in part, a function of the particular pattern of relationships the individual develops and maintains. Relationships help individuals exercise influence, seek social support, and gain information (Kilduff/Tsai 2006). Based on these concepts leadership takes on a quite different connotation.

As mentioned in chapter 4.1.5 there is a difference between networks and cooperation in that sense that networks are potential cooperation relations and only activated network ties as in the realisation of common projects are a form of cooperation (Aderhold/Wetzel 2004). Thus, the management of networks differs from the management of cooperation relations as well as classic organisational management is different from the latter two. The network managers of the programme "Learning Regions – Providing Support for Networks" actually dealt more with cooperation within projects and knowledge exchange between

these projects but they also referred to those network members who did not or could not sign a cooperation agreement. Thus, those latter relations were called "informal" in contrast to the relations which were "formalised" ones as there were cooperation agreements (see Sydow's descriptions of regional and project networks, 1999b).

Aderhold and Wetzel (2004) argue that networks cannot be the object of an intervention because they are simply not observable. Moreover, steering and controlling the latent, the unobservable is just not possible, so intervention in networks should be regarded rather as system creation than system designing[22]. Looking at network management in its most basic connotation, it stands for the acquisition of contacts to other people and the continuous nurturing of those relations. This again denotes the potential benefits of social networks since the main reasons for sustaining these contacts are a) that for whatever motive they might be useful in the future or b) because not sustaining these contacts might have negative effects on actors, their goals or those of relevant others now or in the future.

In contrast, cooperation management concentrates on a more complex form of project management, in that it is concerned with the acquisition of funds and partners, the joint definition and pursuance of goals, the creation of win-win situations and relationships of trust and also commonly agreed on and implemented ways of a) knowledge sharing and distribution as well as b) rules for collaboration and conflict resolution (Roehl/Rollwagen 2005, Aderhold 2005). Schuh, Friedli and Kurr (2005) conclude their chapter on the special challenges and difficulties with nine consequences for the management of cooperation: 1) acceptance of limited power of influence which only allows for the creation of a framework in which the cooperation relations will evolve, 2) the strategic clarity of one's own position enables rational communication on interests and goals of the cooperation or, 3) do not transfer the rules and regulations of one organisation to the cooperation, 4) do not overestimate the configurations at the start of the cooperation because stability can only be attained during the actual collaboration situations which need to be evaluated and adequately answered by the management, 5) strong orientation towards dynamic developments – at the level of the whole cooperation and at the level of single companies, 6) stronger focus on the influential and creative processes that determine the actions of the management, such as establishing routines derived from higher order cooperation processes, 7) take informal processes into account: next to perceivable manifestations of the cooperation there is a multitude of informal ties and relations so that much of the communication between network partners happens at a lateral level, 8) strictly separate the design and management of a cooperation: a sequential process of firstly a clear and definite design that is then implemented neglects implementation effects that influence design issues (see also Skidmore 2004, on 'leading from the outside in') and 9) trust is a definite prerequisite for cooperation that evolves through actually collaborating at the interfaces. That is also why the start of cooperation is so important and takes some time. In order to address the strategically relevant areas of an organisation some prerequisite action and trust is a necessary condition. Thus, in

[22] „Die Arbeit am Netzwerk soll nicht vornehmlich system*gestaltend*, sondern system*generierend* wirken." (Aderhold/ Wetzel 2004, S. 27).

learning regions, cooperation management takes place the moment a concrete task, like a project is at hand; otherwise the network contacts and their resources remain in a potential state (Aderhold/Wetzel 2004).
So, these forms of human interaction, on the one hand social networking as creating and becoming aware of potential collaboration opportunities and on the other hand cooperating in projects can be clearly differentiated. In the networks of the programme "Learning Regions – Providing Support for Networks" these two forms were intertwined in that from the pool of committed network partners, only some could participate in financed projects and others had to be kept or preferred to stay in that potential state. This potential state did include communication in the form of meetings or informal exchange of information.

### 4.3.2. Network Management: Existing findings and descriptions of a new leadership role

In general, the terms of "network management" and "network leadership" are oftentimes used in the same way with the same meaning. As the findings of this thesis will show, this probably happens due to the fact that this social role has both aspects to it: some tasks are leadership and others management tasks. For this thesis, the term "network management" is chosen because – as will be shown as well – this seems to be more appropriate concerning the other network members perception of that role.
Nevertheless, managing networks differs strongly depending on the kind of network (see chapter 4.1.6), the involved players and their interests, the goals, the persons etc. But there are four general functions that are universal to all network management tasks: selection of partners, allocation of tasks and resources, regulation of collaboration and evaluation of the network, its relations, products etc. (Sydow 1999b). Moreover, network management is in need of network competences (Endres 2008, Roß 2004, Sydow 1999b) that refer to relational capabilities on an interorganisational level (strategic thinking, segmenting the network, creating a network architecture, flexibility of network configurations etc.) as well as an interpersonal level (creating and nurturing personal and business networks, intercultural competencies, facilitating and negotiating skills, managing tensions etc.). Sydow (1999b) doubts that the necessary network competencies needed for a successful management are fully understood yet. One example for such a particular network management competency that seems odd, is the knowledge about one effective way to lead in networks is to just let go and let the agents self-direct their actions. As Bienzle, Gelabert, Jütte, Kolyva, Meyer and Tilkin (2007) put it "But it is crucial that a network manager is sometimes able to allow the network to evolve by itself, and to give the actors the freedom to interact in the manner that they feel is most appropriate for them. The art of network management consists of making the right decisions to achieve this balance." (p. 61). And this is also the most commonly shared finding in the reviewed literature (for example Endres/Wehner 1999, Endres 2002, Sydow 1999b, Wöllert/Jutzi 2005, Prasopoulou/Poulymenakou 2006, Bienzle et al. 2007, Endres 2008): network management is always a balancing act, whether it is concerned with contradicting perspectives and interests, influence and power structures, resource and value exchange, the sharing and precise delivering of knowledge and information, relationship-

management, the minimisation of conflict potential and the solving of existing conflicts or the balancing of social and emotional needs of the involved members.

In order to give some insight into the practical course of action, a growing body of research literature that originally focused on the shift from (huge) centrally organised, multilevel hierarchies towards inter-organisational networks among flexible, small scale organisations derived guidelines for efficient management of inter-organisational networks (Lipnack/Stamps 1994, Sydow 1999b, Baitsch/Müller 2001, Endres 2002 and 2008, Khan 2004, De Man 2004 etc.). Many of those lists and guidelines are based on the idea that networks underlie some basic life cycles (such as birth, growth, maturation and transformation) like companies do (Howaldt/Ellerkmann 2007, Porter/Powell 2006, Bienzle et al. 2007, Prasopoulou/ Poulymenakou 2006, Bornhoff/Frenzer 2006, Taschereau/Bolger 2007, Backhaus/Frank/Hees 2008). This stresses the assumption that networks follow developmental stages and transition processes that need to be actively mediated and moderated. Prasopoulou and Poulymenakou (2006) provide guidelines, recommendations and implications that are based on empirical evidence and structured according to a life cycle model of inter-organisational cooperation. Apart from that, there also is research literature that focuses on the perspective of single network partners and characterised core "network competencies" or networking strategies or also organisational change management that organisations need to develop in order to be an attractive network partner and invest in the growth of the organisations network ties (De Man 2004, Roß 2004, Ziegenhorn 2005, Jørgensen/Vintergaard 2006).

Moreover there is a variety of theories that are used to analyse the evolution and management of networks: institutional economic theories, industrial economic theories, game theory, strategic management research, interaction theory, resource-dependence theory, systems theory, evolutionary theories, structuration theory and complexity theory etc. (Sydow 1999b, Staber 1999, Kappelhoff 1999, Zentes/Swoboda/Morschett 2005, Capra 2004, Aderhold/Meyer/Wetzel 2005, Benz/Lütz/Schimank/Simonis 2007). Most findings and insights were produced by economic research, sociological and political research whereas the study on regional networks – oftentimes conducted by disciplines like regional economics or regional sociology – was for quite some time not as fruitful as stated by Sydow in 1999. Meanwhile there is some research evidence on network management and its tasks in regional networks to be found (Emminghaus/Tippelt 2009, Backhaus/Frank/Hees 2008, Wöllert/Jutzi 2005, Trier et al. 2003, Field 2004).

In regional networks that are created between spatially agglomerated stakeholders, this social aspect is even more important: unlike international strategic networks in which the level of multiplexity is likely to be low, regional networks consist of actors who know each other from other contexts, interact in more activities and will probably be confronted with each other for the future as well (Wöllert/Jutzi 2005, Reupold/Strobel/Tippelt 2008). Thus, the social pressure of showing pro-social behaviour to most of the actors (see transitivity concept in chapter 4.2.3) and finding common ground in the network is likely to be much higher here.

Widespread difficulties in professional networks arise from unclear goals, interests, roles, responsibilities and ambiguities (Duschek/Wetzel/Aderhold 2005). One of the most

intriguing aspects is the multiple commitments the actors have to make in order to be a member of the network. First of all, they need to represent and also seek advantage for their organisation and its goals. But looking exclusively for ones one selfish benefit will result in being excluded from the network and its beneficial effects as a so-called "network egoist". Thus, members in networks follow at least a two-fold commitment: to the organisations they represent and to the goals of the network. If some of them collaborated in a project earlier and benefited from each other, they might be more loyal to each other then to the rest of the network. Multiple loyalties and commitments result from common membership in networks and shape the options and restrictions for further collaboration. Besides, effective communication and cooperation need to be organised and facilitated in a variety of different ways and platforms. Self-commitment to the network is oftentimes secured within cooperation contracts that ensure the option to pro-actively represent single organisations interests but also include the engagement for the networks goals (Schubert 2008). Moreover, being in an inter-organisational network is a form of improved connectivity to the organisational environment, each organisation is required to operate as an integral part of a larger entity as the idea of co-evolving business eco-systems suggests (Riemer/Klein 2006). The resulting task for network managers is to balance individual organisation's viability and profitability with the demands of a whole-system approach.

Apart from that, Sydow (1999b) argues that essentially symbolic leadership tasks have to be accomplished. Though focused on cooperation management a core statement of Schuh, Friedli and Kurr (2005) refers to the limits of standardisation which seems to lie within the individuals themselves: "Management and avoidance of dysfunctional relations – anticipation as success factor" (p. 81). The authors point out that for cooperation to be successful, the relations between individual stakeholders need to be balanced and positive or at least functional. Some preconditions for this are: 1) involve stakeholders early in the process, 2) offer informal meeting options in order to foster mutual understanding and 3) all involved parties should reflect upon their position and the one's of the others before the negotiations start so that critical issues can be discussed upon early on (Schuh/Friedli/Kurr 2005).

*Network Management*

Network management has been researched and discussed more intensely in recent years and different terms have been used for it in order to highlight some specific aspects, such as intermediary (Wöllert/Jutzi 2005) which focuses on a mediating role in regional educational networks, interface manager ("Grenzgänger", Endres 2008) which is concentrated on process-, case management between organisations, and network leadership which takes on a more transformational leadership approach (Skidmore 2004). And while there are a variety of identified tasks, challenges, developmental stages and recommendations about network management, it is hard to find a good definition. Baitsch and Müller (2001) defined "network moderation" and provided at least one part of network management definition. They describe network moderation as one part of a complex leadership and governance task that is developing with the network, is concerned with

dilemma-management and performed by a particular person. Who that person or those persons are and how long the role is filled with them must be decided upon within the network. Very important is that Baitsch and Müller (2001) also point out that this decision encompasses a certain awareness (conscientious vs. implicit) as well as a structural component as to the kind of position the network moderator takes (external vs. internal). Thus, the authors conclude, network moderation can hardly follow the classic moderation's dogma of neutrality.

Whenever network management is defined as a whole, the authors tend to use images in order to illustrate the complex tasks, such as Riemer and Klein (2006):

> The metaphor of orchestration captures the challenge of network management to create a coherent and outstanding unity (the performance) by bringing together specialist with assigned roles (the musicians) and conducting their efforts based on a joined, but underspecified strategy (the selected piece of music). The process of joined learning is repeated over time and across multiple projects. The musicians depend on each other and have to learn to act together. (p. 60).

Since this is a very abstract way of capturing a concrete task in management a more detailed description of the role is necessary here. Thus, in the following sections three exemplary approaches to network management are characterised in brief.

*Intermediaries (according to Wöllert/Jutzi 2005)*

Wöllert and Jutzi (2005) describe the role of intermediaries in a regional network context and make out as their core tasks: communication, balancing and support of network challenges (regional needs analysis, building trust, coordination of shared work assignments, motivation of network members and consensual alignment of individual and network goals). In contrast to Aderhold and Wetzel (2004), Wöllert and Jutzi (2005) state that networks can be influenced[23]. Intermediaries are thus meant to influence the network processes and structures by applying leadership and management techniques. An active intermediary links different societal areas among each other or formal with informal spheres by taking the role of a mediator. Intermediaries link originally separated areas, interests, systems, functions etc., whereby as Wöllert and Jutzi (2005) point out that the core task is not just to create some kind of link but to create a meaningful subject-focused exchange relation that is most likely to succeed in creating a new solution or productive way to work together. This kind of common action is needed if representatives of societal areas are to concentrate and take care of a third matter that is not per se given by their basic responsibilities and functions. In order to be able to mediate and facilitate that process, intermediaries need to understand the processes and structures on how decisions are made and the underlying systemic logic of each involved societal area. Thus, intermediaries need to learn about the areas where the network members come from, understand their value systems, logics, learn their specific languages and their general orientation in taking action in order to facilitate communication and interaction. Their competences and skills in interaction, negotiation, mediation and moderation need to be adapted to the involved societal areas and the situation.

[23] „In regionalen Netzwerken können sogenannte Intermediäre Prozesse und Strukturen von Netzwerken beeinflussen, indem sie steuernd eingreifen." (Wöllert/Jutzi 2005, S. 65).

An aspect that is important here is that the intermediaries themselves are also employees of organisations that are integrated in any one of the societal areas. The requirement to be neutral is thus difficult to be met. Wöllert and Jutzi (2005) conclude that intermediaries are rather all-party representatives than neutral.

*Interface Manager (according to Endres 2008)*

The hard to translate concept of a "Grenzgänger" (border commuter) - is derived from empirical network studies in the automobile industries by Endres (2008) and Endres/Wehner (1999). Endres (2008) strongly focuses on the boundary-spanning activities between communities of practice (Lave/Wenger 2001) fostered by the guiding principles of apolitical leadership (focus on fixing the problem instead of looking for the responsible one, see also Skidmore (2004) on not playing "the blame game").
Endres (2008) points out that though being independent from an organisational and departmental structure and thus very autonomous, the personal and organisational expenditures for creating and maintaining network relations are very high. This is because the organisations and their employees come from different 'social worlds' with differing goals, interests, organisational cultures and logics.
Because of the interface managers' neutral position Endres (2008) claims that formal structures can be overcome more easily. By creating personal networks they gain systematic knowledge about processes and relevant contact persons at the boundaries of communities of practice. They organise their work along not formally defined interfaces, work process oriented and in different areas and organisations. Their tasks are mainly defined by concrete problems that occur in interorganisational cooperation and are normally bound to certain cooperation partners. To meet these challenges, interface managers need suitable strategies and methods as well as the capacity to interact with those persons in the field they subjectively feel are most adequately equipped to contribute to a solution. At a strategic level of organisational development, interface managers are opening intermediary fields between cooperation partners or communities of practice. The task for an interface manager is here to mediate the fragile relationships by creating new relations. Another strategic task is to anticipate upcoming problems and sources for disturbances whereby interface managers let the knowledge they gain through their unique position flow back to the involved communities of practice.
Endres (2008) also points out the limitations of this function and identifies the following aspects:

- By concentrating on the nurturing of relationships, a deficit of concrete process knowledge might result.
- The danger of monopolised knowledge on processes and social contacts.
- Interface managers are required to be present in processes most of the time and be accepted by the involved stakeholders all the time. That results in excessive social and personal demands. This is why they need supervision and time and space for reflection.
- Since the core criteria for an interface manager's success is to avoid disturbances of the cooperation process the pressure for them is highest in moments when

power and influence possibilities come to an end. This is especially so because the role in general is not granted any formal power.

*Network Leadership*

Skidmore (2004, p. 95ff.) provides some clarity with describing six basic characteristics of network leadership that are portrayed here. The basic structure given by Skidmore is enriched with references to the theories presented so far:

1. Network leaders lead from the outside: Organisations usually define their strategy by concentrating on internal aspects, such as the organisation's purpose, defining its core competences etc. and only then looking at the organisations surrounding environment. Thus, organisations perceive the world through their organisations perspective and are less likely to frequently and thoroughly switch perspectives to those actors they are linked to and they are trying to serve (customers, suppliers, citizens etc.). Network leaders start the other way around: they analyse the needs of their most relevant stakeholders on all levels and in trying to serve those, they work back in establishing the structures (arrangement of organisations, resources and competences) in the network. Consequently, they tend to see strategy as guided evolution (Lovas/Ghoshal 2000). Their actual, real task is to get the involved organisations to collaboration.
2. Network leaders mobilise disparate supplies of energy: Leadership in networks is not so much about defining a vision and implementing it, since in an unpredictable world planned, decisive action by not taking into account the stakeholders perceptions/opinions is likely to result in failure (Scharmer 2007). It is more about the leaders realising that the explicit and implicit knowledge needed in order to improve performance is already located in front-line staff. The resulting leadership task at hand here is to bring those people together and create a common language in order to foster conversation that in turn creates new knowledge (Nonaka/Takeuchi 1995). This knowledge creation process can hardly happen if no new contacts would have been enabled beforehand (see also homophily and heterophily theory and Granovetter's (1973) strong/weak tie characteristics).
3. Network leaders foster trust and empower others to act: Network leadership is not about basic democratic processes in which the involved stakeholders try to act on the lowest common denominator. It does not mean that every actor has to agree on the course of action beforehand which is difficult anyway because this course is not always clear in a complex world. Finding this correct path may require a series of trial and errors. Thus, network leaders must take the risk of failing and invest heavily in building trust because the necessary requirement for such common action is a sufficient degree of trust. In general, the tendency in networks is not to control others' actions but to empower others to act and trust in their proficiency.
4. Network leaders help people grow out of their comfort zones: As long as individuals work, think and act within their known structures, like silos within organisational structures then – following homophily theory, situated learning and thinking in terms of sticky and leaky knowledge – a sense of identity, stability and comfort is experienced. In such an environment, a high-context communication (Gudykunst/Ting-Toomey 1988) is

enabled and knowledge travels fast (Brown/Duguid 2001). Thus, these structures are attractive but at the same time they tend to reinforce existing routines, behaviours and thinking structures, focus on single-loop learning within an already 'known world' and block deep change or conceptual change. A network leader's task is to know about these facts and support people in moving out of their silos. Now this can be connected to Senge's (2007) idea of realising and reflecting on mental models (in team learning) and Scharmer's (2007) U-Process. At the same time this task takes a considerable amount of time but is the precondition for the preferred active and committed partnerships in contrast to inter-organisational formal structures and formal mechanisms for decision-making. Skidmore (2004) also points out that within organisations traditional performance management tends to reward employees for remaining within their silos and for staying away from problems between silos. So, in professional networks, the reward system should focus on people actively taking care of the problems within the gaps. Here, intrinsic rewards are more promising for long-term perspectives and can according to Skidmore (2004) be found by "(…) tapping into people's sense of professionalism, and reconnecting them with the higher moral purpose that first motivated them to enter that particular field." (p. 98). Now this aspect parallels Senge et al.'s (2007) ideas on a personal vision and Scharmer's (2007) concept of "connecting to the highest future possibility" (2008, p. 2).

5. Network leaders are lead learners, not know-alls: In acknowledging that in a globalised society, the certainty of one person's vision is likely to be dangerously leading in the false direction, network leaders admit that they do not know everything and cannot control a complex system. They rather see themselves as "lead learners" who continuously learn by listening to other network members: "They understand that a large part of leadership is about shutting up and listening. Network leaders make a point of not having all the answers." (Skidmore 2004, p. 98). This point is closely connected to Scharmer's (2007) core assumption of different fields of attention generating different levels of listening and thus understanding, referring to certain organisational structures (see table 3) and thus creating an environment that enables the emergence of novel solutions.

6. Network leaders nurture other leaders: The basic understanding that a network is a complex open system that needs to self-develop and cannot be governed and controlled top-down is a necessary precondition for network leadership. As a result, network leaders need to be able to nurture other leaders and implement a distributed leadership model across organisations. This also means to find leadership allies in organisations that help to "(…) align leadership with the built-in instinctive adaptive responses of organisations (…)" (Skidmore 2004, p. 99). Consequently, a good network leader deprives him or her of the visible, front-man, ego-nurturing position and steps back to support the network actors and facilitate their dialoguing structures.

In taking into account the descriptions of these three network management models, it is clear that the authors all agree that a network cooperation project should integrate this management role because of the beneficial and facilitating effect it has on network development. Furthermore they all agree on the following aspects:

- A network is manageable

- The guiding underlying principle for network management is trust

Network managers should:

- Link parts that were separated so far (boundary spanning),
- Understand differing social and cultural worlds and within it the value systems, logic and action structures, decision processes,
- Be able to adapt their social skills according to need of involved parties and the situation,
- Mediate and facilitate dialogue among stakeholders.

The three concepts also differ at the following criteria:

- The regional market structures need to be analysed (Wöllert/Jutzi 2005) similar is Skidmore's (2004) idea on "leading from the outside in",
- Network management has a neutral position between the stakeholders (Endres 2008, Skidmore 2004)/employed at one of the stakeholders (Wöllert/Jutzi 2005),
- Danger of monopolised knowledge (Endres 2008),
- Leadership is involved (Skidmore 2004) vs. network management support to reach the stakeholder's common goal(s) (Endres 2008) vs. network management creates a common task for the involved stakeholders that it then helps to meet (Wöllert/Jutzi 2005).

These aspects are scrutinized as one part of the data analysis of this thesis. Moreover, there are some further questions left for research which are presented briefly in the following chapter.

### 4.3.3. Open Questions for Research: Network Managers as Societal Change Agents

As Wohlfart (2006) points out, networks need a professional result-oriented management in order to successfully meet their challenges. And Skidmore (2005) predicts that "New network-based ways of organising social and economic activity will only thrive if we can evolve new models of leadership that embrace the distinctive 'organising logic' of networks, and do not seek to apply an old set of principles in an environment that has been dramatically altered." (p. 91). The findings and research literature provided so far are put into context in this chapter. But this effort also leads to some questions that are left to other researchers and studies to be answered. It is clear that management is concerned with many different competences but network management is more than most other management tasks in need of profound personal and social skills as well as a particular mind-set (Prasopoulou/Poulymenakou 2006, p. 303).

And while some of the above mentioned research literature touches these topics, an analysis and description of predominant and guiding mind-set for networks and even more so for a successful network manager to my knowledge there is largely missing. So my argument is concerned with an observation in the field: those network managers who focused their attention on cooperation and creation were generally more successful (in creating a network) than others who were preoccupied with competitive aspects. This

observation needs empirical evidence as well as some more hypotheses, conclusions and recommendations.
Nevertheless the perspective taken in this thesis focuses strongly on the social role of the network manager and the influence of his or her mind-set or mental model as far as this is possible on the grounds of the available data.

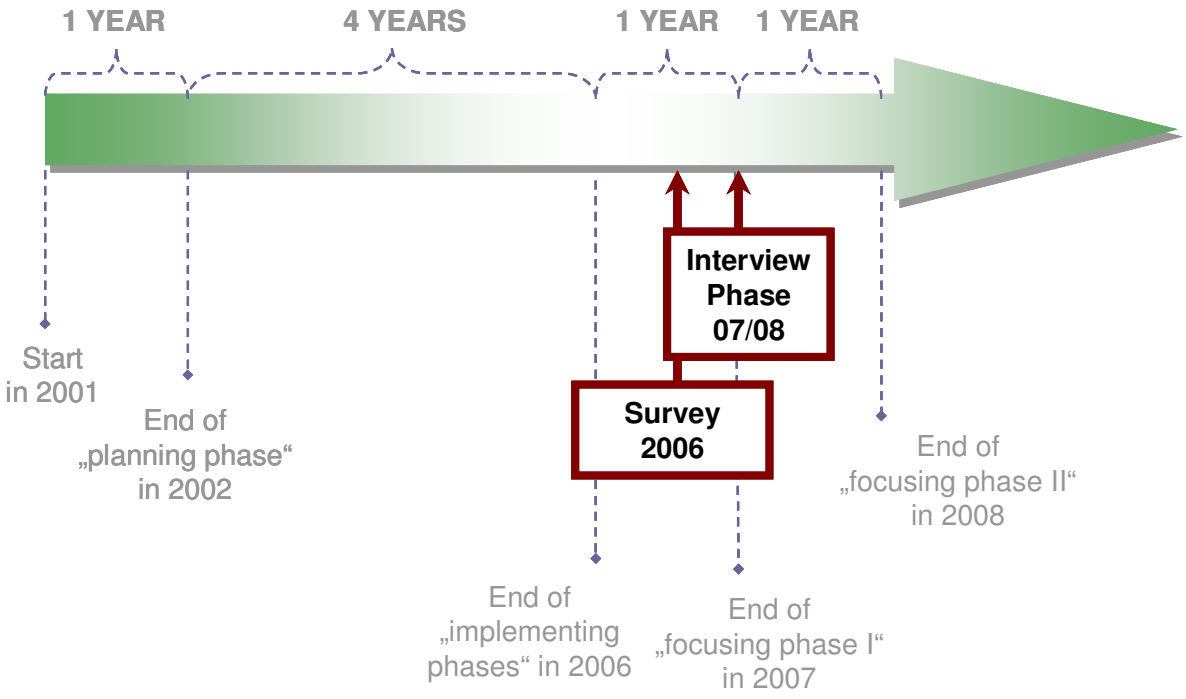
## *4.4. Summary and Consequences*

This chapter illustrated the concept of social and professional networks, gave a brief introduction into underlying theories of their analysis including possible levels of analysis and connected these structural ideas with the exchange of knowledge. Social networks can thus be regarded as a way of conceptualising social affiliation in society but they can also be seen as a means of professional collective action. Moreover, networks are also categorized as a form of governance next to markets and hierarchies. For this thesis the perspective of professional networks between organisations is taken and data is analysed and interpreted accordingly. Concerning the structural aspect a certain social role inhabitant is in the centre of attention: the network managers. As shown in the last section of this chapter managing professional interorganisational networks is a newly emerging profession in the network and knowledge society. This profession is not well researched yet and the tasks, challenges as well as its limits within the learning regions has not been analysed as well. Thus, for this thesis the above described aspects of social networks, their theoretical concepts and their analysis are used in order to interpret the existing data and draw conclusions on the network manager's role.

# 5. Research Questions, Methods and Evaluation Design

The programme "Learning Regions – Providing Support for Networks" was structured in different phases: the first year (2001-2002) was the so-called "planning phase" that was financed to 100% and served as an orienting and network partner selecting as well as vision defining phase. After that, four years (2002-2006) of implementing the commonly planned projects were part of the programme. Besides, there were two additional years (2006-2007 and 2007-2008) in which some special topics[24] were put forward. For the first years from 2001-2004 another team of scientists[25] evaluated the programme (Nuissl/Dobischat/Hagen/Tippelt 2006). The second evaluation team, from which the data in this thesis are taken, had different evaluation designs for the years 2005-2007 and 2007-2008. Figure 16 illustrates the phases of the programme and the data sources that were used for this thesis. There were of course more surveys and interview phases conducted by the evaluation team (see reports of the evaluation team: Tippelt/Reupold/Strobel/Kuwan et al. 2009, p. 34ff and Emminghaus/Tippelt 2009, p. 35ff.). For the thesis only the marked ones in fig. 16 were used.

*Figure 16: Programme Evaluation and Data Sources for the Thesis*




For the purposes of this thesis the survey of 2006 is the most interesting because firstly, the implementation phase was over, the network members had worked together and known each other then for 4-5 years so that they had a sound basis for estimating, for

[24] These were learning centres, transitions and educational counselling agencies

[25] The team consisted of the German Institute for Adult Education (DIE), the University Duisburg-Essen (UDE), the German Institute for Economic Research (DIW) and the Ludwig-Maximilians-University (LMU)

example, what the network managers core tasks are, secondly, relational data were ascertained here so that a social network analysis is possible and thirdly, all network members (manager and partners) were asked to fill in the questionnaire so that the cognitive perspectives of all answering persons of single networks could be taken into account.

## *5.1. Research Questions*

One of the core goals of the programme was to induce structural change in regional educational markets. These structural changes also need a corresponding change at a behavioural level which again will most likely be the result of a change in the mind-sets of the actors involved. This was initiated by a financed process of network creation and active cooperation in sub-projects. On a regional level these processes were organised and implemented by network managers who created ties between (educational) organisations so that collective action was enabled, whereas the situation they started from was characterised by a variety of uncertainties[26]. As described in chapter 4, network management differs from management in organisations in that it is firstly dependent on social relations, the awareness of mid and long-term benefits for members, members' commitment and engagement etc. and secondly deprived of any form of hierarchy or formal power. Thus, network management needs to find other ways to motivate partners. In chapter 4.3.3 the present research findings on network management were described and existing deficits were identified. Given these, the guiding research questions and the main hypothesis are:

*I. What are the complex tasks and challenges of network managers in educational networks?*

Hypotheses:
I.1 The main tasks and challenges are concerned with social contacting, relationship management and creating a sense of commitment and identity.
I.2 Network managers are in a very complex situation that mainly originates in a multitude of interests.
I.3 Network managers need to be able to find committed and resourceful partners for network creation.

*II. What is the special task of "bridging" relational fields concerned with?*

Hypotheses:
II.1 Network managers ability to lead a network depends on their knowing about important institutional and relational fields in the region.

[26] a) who the key stakeholders are is not clear, b) the solution of the problem is unknown, c) the problem statement itself is still unfolding

II.2 Network managers ability to lead a network depends on their knowing about existing contacts within their region.
III.3 Network managers need to be impartial and diplomatic.

*III. What does a network manager perceive in his or her particular structural position?*

Hypotheses:
III.1 Network managers need to be able to perceive accurately the social ties between agents.
III.2 Network managers tend to have a more congruent and thus accurate conception of the networks' ties and their strengths than the network partners.
III.3 Network managers need to be good at facilitating to overcome the actors' competitive mind-set as far as the common interest is concerned.

*IV. What is an adequate leadership style for network managers in terms of attitudes and tools?*

Hypotheses:
IV.1 Network managers need to be perceived as good leaders who perform.
IV.2 Network managers need to facilitate the creation of a common vision.
IV.3 Network managers need to structure and organise the network.

*V. How can network managements' results and performance become transparent?*

Hypotheses:
V.1 Since the network management's tasks, activities and concerns lies mainly in an intangible (social) area, they suffer from their results being mostly untransparent.
V.1 Some network managers have found ways to make those results visible. The developed instruments and tools are documented.

## *5.2. Quantitative Methods*

The methods (questionnaire, questionnaire for relational data and expert interviews) that are used to answer these questions vary: there are two quantitative methods applied (questionnaire and ego-sheets) and one qualitative (expert interviews) whereby the quantitative data are analysed with SPSS and UCINET (Borgatti/Everett/Freeman 2002) and the interviews with a method called "Variable Oriented Content Analysis" developed by Gläser and Laudel (1999). The methods, the reason for choosing those and their application to this thesis are described subsequently in the following section.

### 5.2.1. Questionnaire

The questionnaire that was developed in 2006 by the scientific monitoring team of the Ludwig-Maximilians-University in cooperation with the consulting company Rambøll

Management enclosed 34 questions for network managers and 27 for network partners (see attachments 1 and 2). Most questions were the same for both groups and some additional questions that only applied to one of the groups were included in one questionnaire but not in the other.

This questionnaire is used in the thesis in two ways: firstly, some basic descriptive data (SPSS) are derived from the survey (n=239) in order to provide an overview to core research interests before other methods that are concerned with more qualitative and in-depth analysis are applied. And secondly one question that produced relational data is extracted and exported to UCINET in order to illustrate on an exemplary level (n=5)[27] how perceptions of network members differ.

These data analysed with the Social Network Analysis software (UCINET) offer some information on the cognitive social perceived by the members of one network (Rehrl/Gruber 2006). The last analysis done with NETDRAW (Borgatti 2002) illustrates the strength of ties within a network. The examination of expert interviews with network managers provides the background rationale and the reasons for the network manager's actions and behaviour as well as the network structure and organisation they helped to implement.

In the next section the questionnaire data concerning the participating networks are briefly analysed in a descriptive way in order to provide a better understanding of the networks in the sample.

*Survey Sample:*

Instead of using the orignal quantitative database (n=557) including the answers of network managers and all participating network partners, the database was reduced according to the interests of the thesis. This implied firstly, reducing the database to networks from which at least five members answered in order to have a variety of response options and, secondly, to focus on networks in which the majority of the members agreed on having successfully created one or more innovations. After applying those filters a new database with n=239 resulted. In this study the questionnaire did not include questions for socio-economic data but rather questions about network features. Thus, the sample chosen for this thesis can be characterised according to regional aspects, the overall number of partners, whether there is a legal form etc. Some of the questions were only part of the network managers' questionnaire so that the sample size is in some questions n=36 (network managers) and in others n=239 (network managers and network partners). It is important to note that the vast majority of the network managers within that sample have experienced the development of the network right from the start in 2001 (69.4%) only 8.3% are in their positions more than two years but not right from the start and 16.7% less than two years. This indicates that the estimates and experiences the network managers draw on are reliable information, such as the plans for a new organisational form etc.

[27] One network structure's illustration is analysed and described in depth.

The regions of the network sample (n=239)[28] seem to be quite well distributed over eastern and western Germany: 53.1% say that the regional focus is in the old federal states and 41% say that about the new federal states (incl. Berlin)[29]. If the same group was asked for estimating the regional unemployment rates, more than half of them (56.5%) stated that it is above the national average which was at 12.0% in 2006 (Statistisches Bundesamt 2009), whereas 23.4% say that it was around the average of the national rate and only 12.6% say that it is lower than average[30]. Concerning the regional structure only the network managers (n=36) were asked and here is also a good distribution to be seen: 25% say that their network is located in a region that is urban incl. catchment area, 33.3% say that the region of their network is characterised by middle sized cities with catchment areas and 36.1% are located in rural areas with small sized cities. Concerning the answers (n=239) to the number of network partners there is a tendency to a network size of 40-99 members (44.4%); 21,8% give a number between 21-39 network members, almost as many (19.7%) say their number of network members sum up to 1-20 whereas only 8,4% claim that their network consists of 100 or more partners. Thus, as many answering network partners claim to be in a network with 40-99 partners as the two groups of 1-20 and 21-39 partners together. So, at this point in time (June 2006) there was a tendency to larger networks.

If later on analyses in UCINET are done, this databank was filtered again according to two more criteria: 1. The network manager questionnaire had to be part of the sample of one network's answers. 2. This should be an additional person, so that the networks analysed consisted at least of five partner questionnaires and one network manager questionnaire (n=146 managers and partners from 14 networks, see tables and figures in attachment 4). Again, one network was analysed and described in depth, the other thirteen illustrations are in attachment 4.

### 5.2.2. Cognitive Social Network Analysis

The question of greatest interest was the one that produced cognitive relational data which are needed for cognitive social network analysis (Hannemann/Riddle 2005). This question was directed at the perception of certain players within the region: "Are the present cooperation relations between the following players in your region fairly intense, fairly sparse or is there no cooperation between them?"[31] (Question 3[32] in the network manager and partner questionnaire, see attachments 1 and 2). The higher the estimated

[28] There are 36 networks and thus also 36 regions in the sample; 239 partners and managers answered the question on whether the region is located mainly in western or eastern Germany.

[29] Rest are Missings

[30] Rest are Missings

[31] a) between institutions of further education, b) between representatives of different educational areas, c) between educational institutions and the economy, d) between educational institutions and regional developmental initiatives, e) between educational institutions and the communal government politics, f) between educational institutions and labour/ employability oriented institutions, g) economy and labour/ employability oriented institutions and h) economy and regional developmental initiatives.

[32] „Sind die derzeitigen Kooperationsbeziehungen zwischen den im Folgenden genannten Akteuren in Ihrer Region eher intensiv, eher punktuell oder gibt es keine Kooperation zwischen den genannten Akteuren?"

intensity of the relation, the higher the given answer value[33] but it is important to note that this analysis is about perceived ties, i.e. whether the actors have a perception of a tie and what kind of perception they have. For the valued answer categories this means that if the network members chose "no cooperation", the interpretation is that they still have the perception of a non-existent tie. Knowing that there is no contact between two actors is a clear perception of a (non-existent) tie. This is why the value here is 1 instead of 0. The network members also had the option of crossing "I do not know" and only then is the tie valued = 0 because here the answering person has no perception of whether there is any contact or not.

The software UCINET allows for an analysis of cognitive social ties and the options of analysis are summarized under the term "CSS". The potential procedures (consensus, slices, sum, average etc.) recombine the different perceptions of actors on the same network (Borgatti/Everett/Freeman 2002). Given the answer categories of question 3 in both questionnaires, there was a difficulty in transferring the first two answer items (a) between institutions of further education and b) between representatives of different educational areas to UCINET because they asked for relations within the areas. In the logic of social network analysis an actor will always have a relation with himself/herself/itself, that is why UCINET automatically sets this value = 1. Concerning the data, "the actor" is rather a societal area in terms of Luhmann's (1984) functional differentiation of society. The answering partners provide their perception on whether there are ties between actors and if yes how strong the relations among these actors in the region are. So, the interest is on the loose structures, i.e. social networks between these areas rather than within single areas. Thus, I decided to leave out the first two answer items and focus the analysis on the remaining six alternatives.

Since the programme that was analysed intended to influence and change regional structures concerned with education, these six alternatives concentrate mainly on the perception of ties between the educational area and other areas. Table 4 together with the following image created in NETDRAW (fig. 17) illustrates the remaining potential ties that the answering actors could have perceived and chosen in the questionnaire.

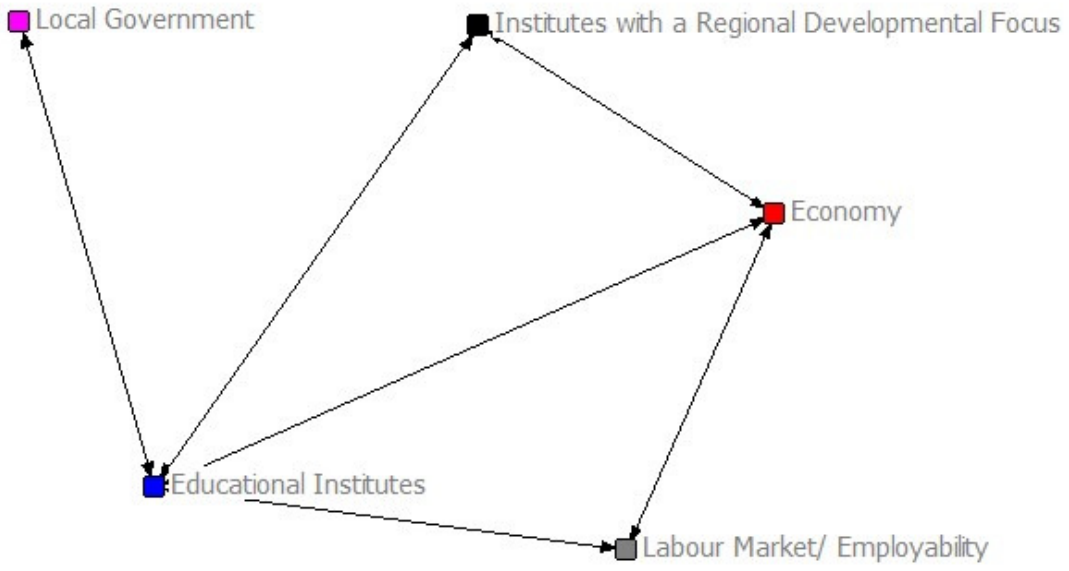
[33] fairly intense=3, fairly sparse=2 or is there no cooperation=1

*Table 4: Connections Asked for in Question 3*

| | Educational Institutes | Economy | Institutes with a Regional Developmental Focus | Local Govern-ment | Labour Market/ Employability |
|---|---|---|---|---|---|
| **Educational Institutes** | -- | X | X | X | X |
| **Economy** | X | -- | X | -- | X |
| **Institutes with a Regional Developmental Focus** | X | X | -- | -- | -- |
| **Local Government** | X | -- | -- | -- | -- |
| **Labour Market/ Employability** | X | X | -- | -- | -- |

In this table the "X" is put whenever it was possible to give an answer and "--" when it was not possible to give an answer here.

*Figure 17: Connections that were Asked for in Question 3*




Hence, the underlying research question: "What do the regional networks look like in terms of cognitive structures in the minds of the network members?" that produces a cognitive map of social relations in NETDRAW can only be answered for the above illustrated potential ties or less. In addition, the positions of the nodes and the distances between them have no interpretative meaning at all. The only two questions this

illustration can answer are: "What areas are perceived to cooperate with what other areas?" and "How intense is the cooperation?".

### 5.2.3. Ego Network Analysis

With five items that focused on the strength of ties, the ego-sheets asked for the five or more most important contacts of the interviewee and the perceived quality of the tie. Unfortunately, it was not possible to ask the named five other contacts for their mutual perception of the relation. But since next to the network manager, three core persons per network were asked to fill it in, it is possible to show a fragment of the network around the network manager. As the interpretative quality of the single items is therefore limited, the analysis of this instrument is focused on a strong or weak tie perception. This was possible by constructing separate relational matrices in UCINET, by assigning values to answer categories (see table 5) and by adding these numbers, a value per perceived tie was created. In order to analyse the relative strength of the relation, the values were dichotomised by choosing a cut-off value of 9. Thus, relations that had a value below this number are defined as being weak and relations scoring at 9 or above this number are per definition strong. This is a chosen value that seemed to polarise the added values well but there is no standard way or recommendation of how to choose the cut-off value: "(…) it is often desirable to reduce even interval data to the binary level by choosing a cutting -point, and coding tie strength above that point as "1" and below that point as "0". Unfortunately, there is no single "correct" way to choose a cut-point. Theory and the purposes of the analysis provide the best guidance." (Hanneman/Riddle 2005, online-text). Thus, for this thesis' analysis the first step is to combine and illustrate the ties and their strength perceived by the three to four members of the network and in the second step to differentiate the combined network according to perceived strong or weak ties. This action allows for a comparison of tie strength between actors and conclusions concerning exemplary strong/weak tie differences of network managers compared to network partners. Interpretation is also possible on a higher level concerning the functional differentiation of the network and its ties because the organisations that the named contacts are representing were categorised – as well as the organisations the ego-sheet interviewees represented. This additional and attributive information is added to the binary data and illustrated as differently coloured nodes (see section 6.3).

*Table 5: Ego-Sheet with Answer Categories and Assigned Values*

| Item | Response Options | | | | Explanation for the assignment of values |
|---|---|---|---|---|---|
| Have you had contact with each other before the network was founded? | Yes | No | | | Answer "Yes" indicates a strong relation, therefore a higher value is assigned. |
| *Points* | 2 | 1 | | | |
| How long have you known each other? | < 1y | 1-3y | 3-5y | >5y | A longer lasting contact indicates a stronger relation. Therefore: the more years, the higher the assigned value. |
| *Points* | 1 | 2 | 3 | 4 | |
| Is this contact mainly a formal one or does it include an informal level as well? | formal | (as well) informal | | | If a contact is not just professional but also personal, a stronger relation seems to exist (multiplexity). Therefore a higher value is assigned here. |
| *Points* | 1 | 2 | | | |
| How often do you have contact to this person (per week)? | < 1x | 1-3x | > 3x | | A higher frequency indicates a stronger relation. Therefore: the higher the frequency, the higher the assigned value. |
| *Points* | 1 | 2 | 3 | | |
| What is the focus of the relation? In what context do you meet? | A: limited to issues concerning the network | B: also in other professional contexts | C: there is also a personal contact | | Answer combinations were assigned higher values than single answers because they indicate a stronger relation. The highest value is assign to combinations that also include a personal relation (multiplexity). |
| *Points if single item is chosen.* | 1 | 1 | --[34] | | |
| *Points if a combination is chosen.* | A+B: 3 | A+C: 4 | B+C: 4 | A+B + C: 5 | |

[34] Has never been chosen as a single answer

Sample:
During the last interview phase (2007/2008) this questionnaire (see attachment 3) was developed and it was possible to apply it to four networks. These four networks share some basic characteristics: in all networks the network manager answered the ego-sheet and the data were consistent (readable, identifiable partners). For this thesis, one exemplary network is chosen and the results are analysed and interpreted in section 6.3.

## *5.3. Qualitative Methods*

In general, network analysis offers the possibility to connect micro and macro levels by concentrating on the sociological dimension: human relations (Hollstein 2006, Kilduff/Tsai 2006). Qualitative methods in network analysis were long neglected and were first developed and elaborated on by Elisabeth Bott (1955/1957). In her research group which consisted of a sociologist, a psychoanalyst and a physician, Bott examined the role of families in western societies and concentrated on the distribution of social and psychological tasks among spouses. The research group chose a qualitative design, limited their sample to 20 families and conducted eight to twelve interviews per family. This pioneering work and its results were criticised heavily, mainly because of its lack of conceptual clarity (Straus 2002). In Germany, early qualitative network research focused primarily on anthropological studies of local communities (Hollstein 2006) and only in the beginning of the 1980s some first qualitative research designs were developed that examined ego-centred, personal networks (for an overview see Straus 2002, p. 213). Commonly applied instruments are, for example, expert interviews, narrative interviews, network maps, other possibilities of network visualisation and a variety of triangulation methods with quantitative networks. In 2006, the first handbook for qualitative network analysis and its potential was published by Hollstein and Straus in German.
Qualitative methods in general are very "close" to the individual actors, their perceptions, their ways of interpreting the world and prioritising certain aspects in it. Whereas network analysis goes beyond the individual actor and his or her individual interpretations, it rather takes the structure of relations between actors as the object of analysis. While at first this seems to be a description of two poles on one dimension, it is regarded by Hollstein (2006) as a tension that can be used to bear beneficial effects and insights for network research.
The potential of qualitative methods in social network analysis are to be found in four cases: 1. if research is explorative, that is if there is a newly identified phenomenon or if 2. interpretations, perceptions and ascribed meaning of actors are in the centre of the researcher's interest or if 3. the interview data are used to reconstruct action, interaction and the context in which this behaviour was shown and 4. if the emergence and dynamics of networks are studied (Hollstein 2006). Since interview data are always situated and textual (Silverman 2006), I do not try to use the method of triangulation in order to check whether the interview data confirms what the other quantitative methods suggest or the other way round. The actors' point of view is thus not used as a looking glass that allows of itself the explaining network management and/or its implications. Rather the meaning ascribed to interactions and developments as well as the perception of their roles, the

involved tasks and challenges lead to an understanding of how network management is portrayed by the primary role inhabitants. For representatives of the "Interpretative Paradigm", social reality is a) constructed, b) structured in alignment to a certain sense or goal and c) always bound to a specific perspective (Hollstein 2006). The studied dimensions in the expert interviews aim at the perception and structural schemata of network managers that guided their actions. And in a second step the analysed data are interpreted to the influence of these schemata on the network managers own perception or social construction on network creation and project cooperation (Jütte 2006). The prevalent mental models or mind-sets which are characteristic for network managers are derived from the data in order to elaborate on a better understanding on how they look at the world, on what is important from their point of view given by their role, on what they learnt while being the network managers and on what is an adequate leadership style for educational social networks.

The answers to those questions are transported indirectly and only a small part is derived from what interviewees reported as a part of their self-reflection. In order to limit the research to the network managers' position and perception, only the expert interviews conducted with them were analysed and not the ones with the other network members. Moreover, the expert interviews chosen (n=12) are conducted with network managers who had their position from the very start of the programme or from the start of the implementing phase.

As Bogner and Menz (2005) point out, expert interviews are very attractive because of their promise to easily and quickly obtain objective information. So, the danger of naïve and non-reflexive belief in the absolute truth of expert knowledge is avoided by analysing the interviews in comparison with each other. Thus, the relevance of this expert knowledge is not likely to be overestimated.

*Expert-Interviews*

Expert interviews are chosen as a method of data collection in order to let representatives of certain roles or/and institutions elaborate their complex expert knowledge which is specific and based on experience within a certain area (Meuser/Nagel 1997, Flick 2000). The interviewees are not so much looked at as (whole) persons or individual cases but rather as representatives for certain groups (Flick 2000). In general, this method of data collection has not been well explored, scientifically validated and not much scientific literature is exploring it so far. And yet, it is obvious that pluralized expert knowledge has profound meaning for the perception and definition of problems as well as for the way to the problem's solution (Bogner/Menz 2005). According to Bogner and Menz (2005), the relevance of expert knowledge is on the one hand diminishing because in times of globalisation and a rising institutionalisation of pluralised, controversial views, a deficit in rationality of expert knowledge is to be perceived. And on the other hand, the need for expert knowledge and thus orientation is rising because of ever-increasing uncertainties in institutional, biographic, scientific and technical etc. areas. So here, knowledge and certainty are drifting apart but more expert knowledge is needed in order to close this gap which is caused by modernisation and globalisation. In this thesis' data, the interviewees

are in a key position within the network and their primary challenge is to deal with uncertainty and plural interests, needs and positions. In the expert interview, network managers elaborate on topics such as their perception of their role in the network, the network and its main concept, what partners are now members of the project, the organisational structure, communication and cooperation with the members and what the network manager learnt as well as what he or she thinks the members learnt. The two underlying interests that were prevalent during the interviews and applied to each question were: 1) what has changed in the recent years and 2) why? Thus, developments in the network's concept, role definitions or social role inhabitants as well as organisational, structural or also financial aspects were depicted here.

*Variable Oriented Content Analysis according to Gläser and Laudel*

This method of analysing qualitative data is based on the qualitative content analysis according to Mayring (1995), developed by Gläser and Laudel (1999) and applied if theories are tested against empirical data. It adds an important aspect to qualitative data analysis in that it introduces the concept of complex research variables which are characterised by a combination of criteria that vary along diverse dimensions. In addition, these dimensions can be scaled in different ways. Thus, the variables are multidimensional. Moreover, in order to be able to connect the oftentimes abstract theoretical developments with the empirical data, these complex research variables are used as an analytical framework. Thus, the variables are defined before the analysis, derived from theory whereas the variables' characteristics are extracted from the interviews as free verbal descriptions. Hence, the option of extracting new influencing factors that could not be foreseen before the interview analysis is still given and the resulting informational basis compared to the original text is strongly condensed and structured according to content criteria.

The advantages of this method are 1) that an effective coping with huge amounts of qualitative data is fostered, 2) increased security concerning the empirical foundations of consequent findings because the connection to the original text is consistent, and 3) unexpected findings can be integrated. There is one disadvantage that refers to a timely dimension: mainly the extraction step is very time consuming because all original data (all interviews) are reviewed and extracted here. Nevertheless for the analysis of the expert interviews within this thesis' theoretical and empirical framework, this method was most adequate because it allows for a complexity that mirrors the described complexity in the field.

Procedure:

If qualitative data are analysed with the Variable Oriented Content Analysis there is a procedure to be followed which is defined by the authors. Applied to my data the procedure was this:

1. The first step is the theoretical preparation in terms of a definition of variables derived from theory and a description of those characteristics that are already known.

2. The next step is the preparation of extraction. For this, the interviews were typed, imported to the software MAXqda2 and made anonymous. The analytical entities were identified interview paragraphs that focused on a certain characteristic of the variable. These paragraphs were then coded as a form of extraction.
3. In the third step the data are edited and the coded paragraphs are sorted to each variable, so that information that bears the same meaning is summed up.
4. Finally, the last step of the procedure is the analysis of the data whereas firstly major classifying errors are corrected so that afterwards cases and cross-case linkages (reported causal relations etc.) can be examined. The result is a structured informational base that can be analysed for answering the research question.

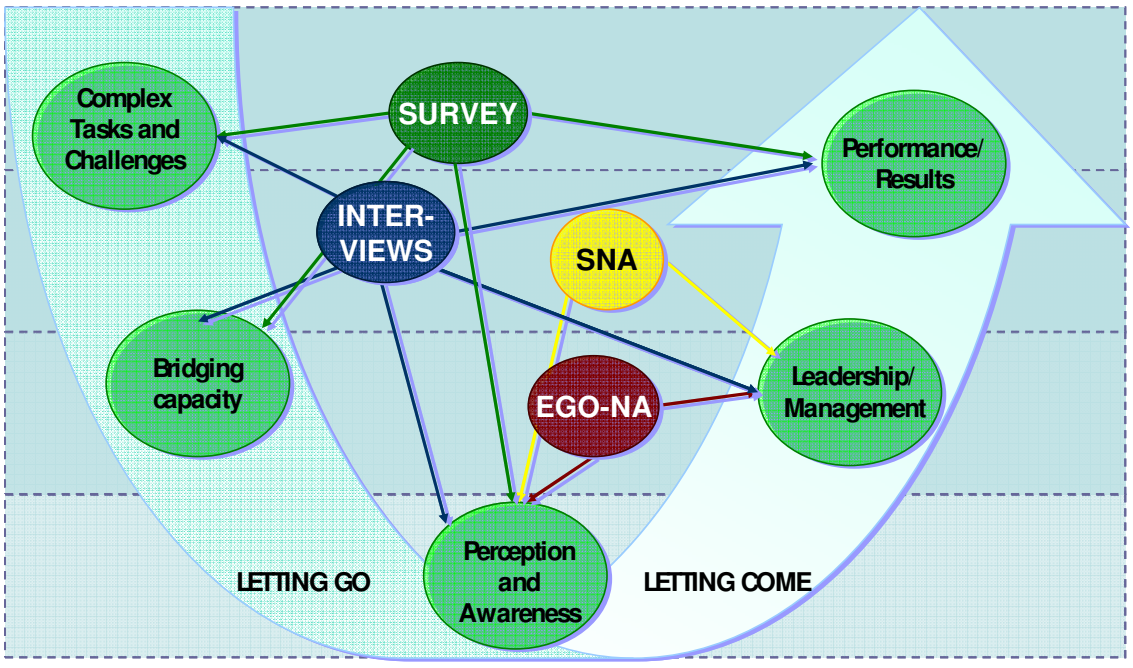
Sample:

The sample for the expert interviews consisted of twelve network managers who firstly, were part of the evaluation and who secondly, filled the position from either the start of the programme or took the position when the implementation phase started. The latter criterion was especially important to me because these network managers have more experience to draw from and a different insight into network development and occurring changes when answering the questions.

## *5.4. Evaluation Design*

In figure 18 the core research topics (I.-IV.) that serve as sources for the guiding research variables for the analysis of the expert interviews are structured following the U-process of Theory U (see chapter 3.5). Here it becomes visible, how the described methods and instruments are applied to the existing data based on theoretical developments.

*Figure 18: Analytical Framework with Data Sources*



In summary, the methods used serve some specific functions and answer different questions:

*Survey*

The survey answers (n=239 network managers and partners) deliver an overview on aspects concerning the network managers tasks and the satisfaction his or her performance caused. Moreover the data provides insight into the institional range of networks.

*Social Network Analysis*

The social network analysis (n=1 networks) offers some insights into how network structures are perceived concerning existing ties and tie strengths as well as the differences in perceptions concerning the different social roles (manager and partner) in the network. These relations are illustrated with NETDRAW.

*Ego-Network Analysis*

The ego network analysis (n=1 networks) shows what different interview partners perceive as their most important contacts, whether the relations are perceived as strong or weak and these relations are then illustrated with NETDRAW.

*Interviews*

The variable oriented content analysis (n=12 expert interviews) sheds some light on the hypothesis that network managers have certain novel tasks and challenges, that their awareness of their own position and the perception of their social environment is unique within the network, that they need a "bridging capacity" and that they are in a leadership and management position in the network.
Derived from this analytical framework including the research guiding variables a code plan (see table 6) was developed for the analysis of the interviews. At the first level it contains the research variables (Complex Tasks and Challenges, Bridging Capacity, Perception and Awareness, Leadership and Management, Results). The second and third levels are the various characteristics of the variables and resulted from analysing the interviews. In the following chapter 6 the variables are used as the basic structure for the presentation of the results and the second and third level characteristics are sub-headings.

*Table 6: Code Plan*

| Levels | Variables/Characteristics |
|---|---|
| | |
| **I. Variable** | **Tasks/Challenges at the start** |
| I.1 Characteristic | The complex situation |
| | *Complexity Issues* |
| | *Own institutional background* |
| | *Dilemmas* |
| I.2 Characteristic | Network creation |
| | *Creating ties* |
| | *Limits* |

| | |
|---|---|
| **II. Variable** | **Bridging Capacity** |
| II.1 Characteristic | History/Path Dependency |
| II.2 Characteristic | Relational fields |
| II.3 Characteristic | Strategic Orientation |
| | |
| **III. Variable** | **Perception/Awareness of Tie Structures** |
| III.1 Characteristic | ..Awareness of Tie structures |
| | *Direction of Attention* |
| | *Mind-Set* |
| | |
| **IV. Variable** | **Leadership/Management** |
| IV.1 Characteristic | Own role definition |
| IV.2 Characteristic | Common Vision |
| IV.2 Characteristic | Structuring and Organising |
| | |
| **V. Variable** | **Results** |
| V.1 Characteristic | Network Members and Learning Effects |
| V.2 Characteristic | Common rules for action |
| V.3 Characteristic | Network instruments |

The methods and data resources presented in this chapter are combined in the following chapter and its sections according to the above mentioned research variables. Thus, the research variables are at the same time the sections of the next chapter and illustrate the stages of the adapted U-Process.

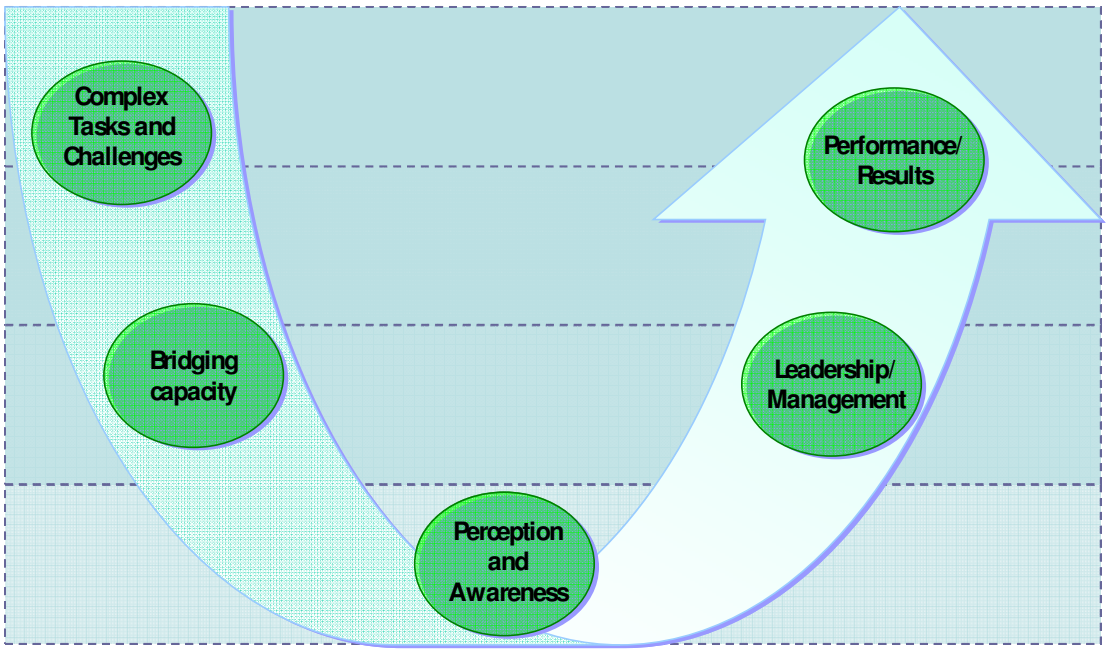
## *5.5. Summary and Consequences*

In chapter 5 the guiding research questions including the attached hypotheses are clarified, and the evaluation design was presented. A closer description of the methods that are used to analyse the existing data is given and the guiding framework for analysis that was developed for this thesis on the basis of the illustrated theories (chapters 3 and 4) is introduced. The combination of structural approaches to network analysis and qualitative ones supports a deeper understanding of ongoing change processes within learning regions. Moreover, the connection of the individual and organisational learning approaches with developments of changemanagement and the social network paradigm generate a theoretical framework that is very suitable for fostering the comprehension of developmental processes within learning regions.

# 6. Results and Discussion

In chapter 5 the analytical framework was described as to how the empirical resources relate to it. Here, in fig. 19 a version that is deprived of the quantitative and qualitative resources is shown.

*Figure 19: Analytical Framework*




The suggestion here is to view network management as a developmental process that is to be experienced each time a person takes on the task of a network manager. The analytical framework illustrates that developmental process in five stages: firstly, the network manager is presented with a highly complex situation filled with widely undefined tasks and challenges that he or she needs to see and understand. Secondly, in order to fulfil his or her tasks concerning network creation, he or she needs a "bridging capacity". Thirdly, in trying to create a network, the persons in charge are required to perceive the social structural patterns, be aware of the perception of others and consciously direct attention. Fourthly, network managers have so far been more in a chairing or facilitator's role; if they succeeded in being accepted they now take on their roles as leaders. And fifthly, network managers created results that they then start to evaluate.

The next sections refer to the above described five core stages or also variables in that the empirical findings are analysed in order to prove or negate the hypotheses that go along with this model.

## *6.1. Findings concerning Tasks and Challenges at the Start*

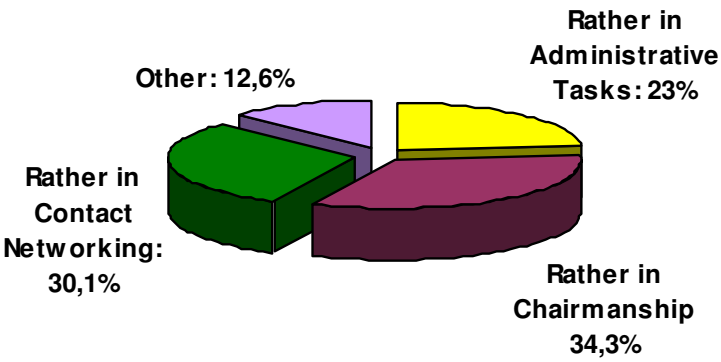
The existing research literature provides some lists of tasks for network management that were derived either from theory (for example Skidmore 2004) or from empirical

data (for example Prasopoulou/Poulymenakou 2006, Endres 2008) and are either general (for example Skidmore 2004, Endres 2008, Wöllert/Jutzi 2005) or suited to a developmental model of network emergence (Riemer/Klein 2006). For the "learning regions" there is no such analysis on what exactly the network managers' tasks and challenges during the different phases of network development are. Therefore at this point the existing data are analysed according to this question.

The research guiding hypotheses here are that 1. One of the main tasks and challenges is concerned with social contacting, relationship management and creating a sense of commitment and identity, 2. Network managers need to be good at solving dilemmas and 3. Network managers need to be able to perceive accurately the existing social ties between the network members.

The survey results on the core functions of network management confirm the hypotheses that contact networking (30.1%) and chairmanship (34.3%) are regarded as the most important tasks. 23% also see administrative tasks as a vital part of the network managements' functions which is probably connected to the reporting tasks within the programmes funding practices. Interestingly, 12.6% (n=20) identified other tasks for a network management. From the 20 open answers given to that question, more than one third (n=7) refers to combinations of the given answer categories and thus also agree with the general hypotheses that these are the main tasks; three name explicitly a marketing function which is also recognized by Tippelt/Emminghaus/Reupold/Lindner/Niedlich (2009). A further two identify an organisational task and three more refer to an initiator's function. The latter two become more important at a later stage in the network creation process and will be discussed more deeply in the following chapters 6.3 and 6.4.

*Figure 20: Main Functions of the Network Management (n=209[35])*




In analysing the expert interviews and in finding features for the theoretically defined variable two general aspects were identified for characterising the tasks and challenges at the start of a network: (1) the complexity of the situation network managers find themselves in and (2) concrete tasks related to network creation.

[35] n=20 were „other", n=8 chose „I don't know" and n=2 were missing

### 6.1.1. Complexity of the Situation

*Complexity defined*

As Scharmer (2007) has illustrated, the emerging complexity originates in a multitude of stakeholders involved and in the fact that cause and consequences are distant in time and place. In the learning regions the network managers were confronted with this complexity at the very start of their activities. In the planning phase they invited the regional stakeholders they perceived as relevant to the educational needs of the region and created the network (see 6.1.2). Before they are able to do that they need to get a clear picture of who is on the regional education market. They also need to be very careful in not interfering in the businesses of those stakeholders they want to have as partners in the network (see for example Interview 4, 33). But in order to create an attractive network, the network managers have to produce some early and good services or products so that they are able to let others see a representative output of the network. Thus, the network managers need to support the network in becoming a centre of positive regional attention (stakeholders, inhabitants, press etc.). And the products and services needed to connect new theoretical developments and praxis so that something innovative and useful will result (see for example Interview 3, 131-133).

*Own institutional background – legal forms*

What added to the complexity of the situation and is not discussed by any of the above mentioned authors is the own institutional background of the network managers and its effect on network creation and the (potential) network members. The re-analysis of the quantitative data and the interviews concerning the institutional and organisational level serves also to create a better understanding of the network management's structural position within the network. The findings concentrated on the levels: legal forms and strategic positioning.

In the questionnaire the network managers are asked what legal form their network has. Three answer categories are given (registered society, limited company, cooperative system[36]) and an open answer category for "other" is provided. Interestingly, only 7 network managers (19.4%) say that their network has the legal form of a registered society ("eingetragener Verein"), one says it is a cooperative system and no network in the sample has formed a limited company. Consequently, 23 networks (63.9%) have either a different organisational and legal form or none. If the network managers were asked which other organisational form they have chosen instead in the open answer category, only 2 of them name an existing institution to be in charge whereas the other 15 answers refer to some new organisational form that manages the "in between", such as a voluntary merger with a network management and a steering committee, or cooperation based on contracts, associations of combined cooperation, a network based on cooperation agreements, combined cooperation etc.

[36] See question 30 in network manager questionnaire, answer categories: „Verein", „GmbH" and „Genossenschaft"

This indicates that in the analysed learning regions there is the tendency to organise an impartial network ground between organisations that ensures and regulates the rules for cooperation and resource exchange. At the same time, the programme's funding guidelines required the networks to develop a business plan, i.e. a financial and organisational plan that ensures the network's sustainability. Now this contradicts the basic idea of a network being a loosely coupled system of potential cooperation partners (Aderhold/Wetzel 2004) in so far as it tries to institutionalise the structures. Thus, the networks tendency to develop a new organisation could be a possible answer to this requirement of the programme. The newly founded organisations are rather the impartial ground that is responsible for network management than a higher level umbrella organisation for the organisational members of the network. This confirms Endres' (2008) and Skidmore' (2004) argument that a network management role requires an impartial arrangement between the involved organisations so that the person(s) in that position can act from an organisationally, rationally and emotionally detached position.

*Strategic location of network management*

a) Located as employee of a new "network management" organisation

At some point during the interview, the experts come to pick up the strategic positioning of the network management as a central theme. In general, most of the network managers clearly distinguish between the network management role – which might be extended to some other core members of the network or, at a later stage of network development, be subject to a network office or agency – and the external relations of the network. So, those network managers who work for a newly emerged impartial organisation between the involved partners would talk about the "network office" or "network agency". They perceive themselves and their colleagues as a service organisation for the network members.

> *"(…) we did that as a network office. We are responsible for all the organisational tasks and of course also the contact to the strategic partners.[37]" (Interview 8, 7)*

> *"That means that most of us are active in some external concrete projects or working groups half of our working days where we have a coordinating or sometimes a leading role. You know what I mean; you invite, write the protocols, and foster the processes.[38]" (Interview 4, 85)*

b) Located as employee at one of the network member organisations

By contrast, there is also the option of one network member emerging as the leading organisation which is said by many network managers to be a difficult process that brought arguments, conflicts and sometimes resulted in the exit of some network

[37] „(…) das haben wir auch schon als Netzwerkbüro gesteuert. Die ganzen organisatorischen Aufgaben drum herum liegen bei uns, natürlich auch der Kontakt zu den Strategen."

[38] „D. h. die meisten von uns sind jeweils eine halben Tag vom Arbeitstag irgendwo in konkreten Projektarbeitszusammenhängen oder Arbeitskreisen aktiv und in diesen Arbeitskreisen übernehmen wir meistens, nicht immer, aber meistens koordinierende Rollen manchmal geschäftsführende Rollen ein. Sie wissen was ich meine, man lädt ein, man schreibt die Protokolle, man treibt die Prozesse."

partners right at the start. Here, existing regional power structures are very likely to be reproduced.

> *„The partners have a right to a say in a matter of course and that is also taken into account. But at the end there are one or two persons that lead. A democratic game does not get us anywhere here. (…) Certain persons just become more concrete concerning their interests and they are the ones who take lead positions."*[39] *(Interview 9, 63)*

In the network from which the following citation is taken, many of the regional stakeholders wanted to apply for government funds in order to take the lead position within the learning region. In order to avoid losing this development option in general because too many stakeholders submitted single applications, they decided to agree on one organisation to submit an application and take the lead. The network manager here describes the meeting of the stakeholders and the effects:

> *"And then there was a quite dramatic meeting. At the end of a two-hour discussion, that was fought with no holds barred, the [author's note: educational institution the network manager works for] emerged as lead organisation. But it took a year or a whole planning phase in order to make it acceptable. Not with the more relevant partners, for example the chamber for industry and trade, the job centre etc. (…) but smaller ones could not really accept this. You have to assert yourself a bit.*[40]*" (Interview 1, 18-20)*

These reports on early network formation suggest a phase that can easily be connected to Scharmer's (2007) second stage of conversations (see table 2). Here the stakeholder went beyond the stage of exchanging polite routines without saying what they think. Rather, they engage in a tough way of arguing with each other, debating, exchanging divergent views and speaking their minds. The outcome of this level of communication in terms of changes is a re-designing of structures and policies. In this case the outcome determines the structure of the network and its management.

No matter if network management is organisationally bound or impartial, a central understanding that all network managers shared is that they need to be the "unifying knot" (see for example Interview 5, 300). This meant that one of the most difficult tasks was to bring peoples' and organisations' interests together so that one common denominator could be identified. Here, many network managers reported about their perception of being caught "in between":

> *"(…) that is of course very difficult because as the coordinating agency you literally sit between the chairs.*[41]*" (Interview 5, 307)*

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[39] „Die Partner haben mit Sicherheit ein Mitspracherecht und das wird auch berücksichtigt. Aber am Ende sind dann ein oder zwei Personen da, die das Sagen haben und führen. Ein demokratisches Spiel bringt uns hier nicht weiter und da kommen wir nicht vorwärts. (…) Da werden bestimmte Personen dann eben innerhalb der Ansprüche etwas konkreter und haben mehr zu sagen als andere." (Interview 9, 63).

[40] „Und dann gab es eine ziemlich dramatische Sitzung. Dann am Ende einer zweistündigen Diskussion, mit harten Bandagen geführt, kam dann [Anm. der Autorin: die Einrichtung der Erwachsenenbildung für die der Netzwerkmanager arbeitet] als federführende Einrichtung heraus. Das bedurfte dann aber eines ganzen Jahres oder einer ganzen Planungsphase, um das akzeptabel zu machen. Nicht bei den wichtigen Partnern, also ich sag mal bei der IHK, Arbeitsamt oder so. (…) Aber so Kleinere konnten sich nicht so ganz damit abfinden. Muss man sich schon ein bisschen durchsetzen." (Interview 1, 18-20).

[41] „(…) das ist natürlich schwierig, weil man sitzt als Koordinierungsstelle zwischen den Stühlen."

*Dilemmas*

Hence, the results confirm that network management is concerned with coping with a series of dilemmas (see chapter 4.1.3) that focus for example on competition vs. cooperation:

> *"If the learning region tries to enter the educational market – with public funding and limited resources – it causes irritations. (…) On the other hand there is so much work that needs to be done and which is hard to accomplish [author's note: for the existing stakeholders] within these existing structures.[42]" (Interview 4, 33)*

An additional example for the network manager's dilemmas is an organisational one: since their job is not clearly defined beforehand they develop their tasks and also how they use their time while doing it. As the quantitative findings show (see fig. 20) administration is also one of their tasks next to contact networking and chairmanship. Since the administrative workload is very high in publicly funded networks, network managers run the risk of neglecting some of their other core tasks. At the same time taking care of the administrative tasks is a service function for the network members. So, network managers need to be very aware of their tasks, service functions and the organisation of their time. Plus, network managers oftentimes did not have full-time positions but had other projects or another position to fulfil as well.

Moreover, network managers need to be able to deal with the broad variety of reactions and conflicts that go along with choosing some network members and not choosing others for network membership or concrete collaboration in projects. The network managers risked losing some of the members if their expectations were not met or if they felt they were not treated as they should be. It is important for network managers to also be able to deal with emotional reactions. Here the results also show that at the above identified second stage of communication, Scharmer (2007) explicitly addresses the "open heart" and elaborates on the "voice of cynisism" that needs to be turned down so that a deeper level of communication and change is possible. In the network of the learning regions, these members had the option of exiting the network and in this way also exclude themselves from further collaboration opportunities that might arise in the future. Staying in the network and dealing with not being appointed might be the option that turns out to be more beneficial in the future. But in leaving they also withdraw their resources from the overall potential of the network. Hence, the network manager's ability to handle such dilemmas also on an emotional level needs to be highly developed.

In the following section the findings concerning the network manager's ability to find partners create ties and nurture business relationships are presented. Furthermore, the results concerning the limitations to network creation are described.

[42] „Wenn ich als Lernende Region mit den begrenzten Ressourcen, die ich habe, und öffentlicher Förderung jetzt versuche in diese Märkte einzudringen, erzeuge ich Irritationen. (…) Auf der anderen Seite gibt es natürlich unglaublich viel an Arbeit, die gemacht werden muss, die zum Teil in den kommunalen Strukturen nicht ganz einfach zu bewältigen sind."

### 6.1.2. Network Creation

*Creating Ties – Finding etwork Partners*

A tough challenge for the network management at the start of the programme was to find partners for the network. Though, network managers in general see it as their task to find the right persons from organisations that are relevant to the networks goal. And moreover, they look for certain kinds of people. They describe those individuals mainly as those who take responsibility, are proactive and strive for a goal that is in alignment with the overall network's goals (for example Interview 9, 28-31). Network managers put significant stress on their dependence on those people.

> *"And you need to have people. The most important thing is people. One needs to have individuals from institutions that make it their task. If this is not the case one exerts oneself for nothing. Or also if there is high personnel fluctuation.[43]" (Interview 10, 82-82)*

The interviewed experts also point out that this process of finding network partners takes time and effort and that it is a process, such as

> *"I have permanently worked on them.[44]" (Interview 1, 58-61)*

> *"(…) not like phoenix from the ashes but by a process that took years. You should not underestimate that.[45]" (Interview 4, 142)*

At this point in time, network managers do not bring up the topic of the network members' hierarchical positions within their organisation. They would rather think in terms of which person functions as the "door opener" for an organisation.

The interview data suggest that the core team of a network is made up of those very committed and responsible persons. After a first phase of network existence when some first positive results or benefits for the partners are to be perceived by some interested but more sceptical potential partners, a second phase in which those potential partners join the network starts. Thus, after finding, inviting and convincing those persons, the network managers claim to help those new partners to access the network by stating some basic rules, such as that a proactive approach is expected from them. This procedure can clarify expectations and support the existing network culture.

> *„It has been confirmed that as the leader you need to press on finding persons. Once they have been found, one needs to tell them, that no other person is going to work for them but that they need to become involved themselves: If you find the right thing to do, do it and take responsibility for it .[46]" (Interview 9, 82-83)*

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[43] „Und man muss Menschen haben. Das Allerwichtigste sind Menschen. Man muss einfach einzelne Menschen aus Institutionen haben, die sich das zu ihrer Sache machen. Wenn das nicht der Fall ist, rennt man sich einen Wolf. Oder wenn sie häufig wechseln."

[44] „Ich hab die ständig bearbeitet."

[45] „(…) nicht wee Phönix aus der Asche, sondern über einen mehrjährigen Prozess. Das sollte man einfach nicht unterschätzen."

[46] „Es hat sich bestätigt, dass man eben als Leiter darauf drängen muss Personen zu finden. Wenn man sie gefunden hat, muss man ihnen sagen, dass nicht andere für sie machen, sondern sie selbst etwas anpacken: Wenn ihr etwas für richtig haltet, macht es und steht dafür auch gerade."

At this level of network development and communication values and beliefs that are inherent in the network culture now are articulated. Here the network manager sees himself or herself as a part of the whole and expects the new stakeholders to do the same and stick to the existing behavioural rules. Scharmer (2007) identifies this level as a dialoguing one where communication is possible that is more a reflective enquiry than a defensive debate or tough talking etc. In a macro-structural sphere the author categorizes this as the typical network stage.

The finding of network partners and bringing them together involves a time-intensive chairmanship and facilitation phase and later on this task develops into a leadership task. Since most of the network managers have not originally been managers in the educational sector and have never done such a task before, they had some difficulties dealing with it:

> *"There, we were still in the presentation-phase (…) in the planning stage of the learning region. That was a process characterised mainly by facilitation and this has personally shocked me. Because I am an engineer and as such I work differently.[47]" (Interview 3, 12)*

Moreover, network managers point out that every single stakeholder needs to be treated and approached in a very individual way. Thus, they had to develop a strategy for each stakeholder that is based on their interests, needs and logic of action (see for example Interview 5, 296-303). Here it is essential that the network managers do not judge the other stakeholders by their interests or way of behaving. These modes of behaviour and interests are the visible part of the societal and organisational cultures the other stakeholders come from. Scharmer (2007) refers to that as the "voice of judgement" that needs to be switched off in order to find win-win solutions. As educational organisations have per definition a different societal task to fulfil than for example economic organisations or special interest groups; these two follow different organisational goals and thus act differently. In moving between the societal areas or relational fields (see section 6.2), judgements on certain kinds of goals or behaviours originating in these specific cultures hardly lead to mutual trust and win-win-situations.

Depending on that, the network manager also needs to be aware of who is involved in what ways and contributes to what. Some organisations might be involved in other activities that again are involved in the network's activities or even in its funding. So, the indirect influences in terms of the controlling of resources and opinion leadership need to be considered as well. On the other hand, the network also creates an image or a profile depending on who is a member. This image is perceived by potential members and is prestigious to some of them. The important question for the network manager here is, for which organisational target group he or she wants the network to be attractive? Or: For whom should the network be appealing? The participation of potential stakeholders also depends on this perception (Kilduff/Tsai 2006).

In summary, every player in the network has certain preconditions concerning interest, structure, freedom of action etc. Labour market or employability oriented institutions are

[47] „Da waren wir noch in der Moderationsphase (…) in der Planungsphase der Lernenden Regionen. Das war ein stark moderierender Prozess und der mich, mich persönlich auch schockiert hat. Weil ich bin Ingenieur und als Ingenieur arbeit ich anders." (Interview 3, 12).

special because their preconditions and interdependencies may vary according to regional standards ("Optionskommune" etc.). Thus, solutions might be timely limited and the outcome of long negotiations. That again requires serious and deep interest to find a solution by all involved partners. The way to find win-win-situations obviously lies in engaging in a prolonged dialogue and the shared strong belief that there is a solution. Thus, network managers need to be very well prepared concerning negotiation skills (what are our core interests, our must-haves, where is there space for compromise, differences between positions and interest etc.), effective communications and profound social skills.

*Limitations to Network Creation*

If network managers fail to establish certain ties this is not just because of his or her lack of proficiency or capacity; there can also be limiting factors given by for example the social or financial preconditions in the region. The limitations to network management as derived from the expert interviews can be summed up in four major points (general, time, money and stakeholders) but are of course not comprehensive. In the following sections these factors are presented, explained and illustrated by quotations taken from the interviews.

a) General

In establishing common rules for interaction and preconditions for accessing the network, the network itself runs the risk of functioning like a controlling agency which should not be the guiding idea of it (see for example Interview 6, 140).
The success of networking is bound to the endogenous potential of a region in terms of organisational partners within the network but also in terms of customers for educational products. I.e. if there are mostly inhabitants who feel that their existence is threatened (for example by unemployment, low income, experiences with further education having no effect on their employment status etc.), their will and also their ability to learn with an open mind (see chapter 3.3.1) and participate in educational offers is low. Oftentimes networks started to take care of tasks that are per definition those of the communal authorities. This was either appreciated and fostered by outsourcing and financing this task or blocked completely.
Network managers agreed that the term "learning region" is an artificial product that can hardly be communicated or explained. Hence, network managers tended to either quickly create some convincing products that are associated with the network or they tried to create experiences for their customers in order to make a "learning region" stick as a positive experience in people's minds.

b) Time

All experts pointed out that the time it took to create this network and establish trust between the network members is enormous. Some even question the general effectiveness of networks but see at the same time the benefits on the structural level:

> *„And network processes take an immeasurable amount of time and that has*

> *nothing to do with economic effectiveness. (…) Whenever I think solely about the resources then I wonder whether we could have spent that money differently or where it had more effect. I am uncertain here because I do understand that structural changes take some time.*[48]*" (Interview 3, 13-14)*

Thus, the long-term effects of the network activities and the resulting structural changes are valued but cannot be predicted at this point in time.

c) Money

To receive public funding was reported on as being great at the start but did not help to make the network sustainable because once the sub-projects had been completed many believed that what was done was only possible with the grants. Thus, one network manager insisted that the grants were necessary but suggested that it could rather be used to fund the network agency in order to let something "grow from the ground" (Interview 3, 55). This way it could also be avoided that practical needs that were outside the funded areas cannot be satisfied (see for example Interview 3, 111). In addition, some of the core topics that the networks took care of are hard to re-finance except by other public funds. Moreover it is hard to measure success and benefits because on the one hand it is oftentimes intangible, and on the other hand, the measuring activities might be even more expensive than the event or campaign itself (see for example Interview 6, 114-115).

d) Stakeholders

A network manager can only connect stakeholders who are part of the defined regional stakeholder landscape. Thus, regions that lack for example universities might not be able to provide the necessary educational offers. In some regions this leads to some major developments in the educational infrastructure of the region (see for example Tippelt/Emminghaus/Reupold/Lindner/Niedlich 2009, p. 193ff.). Where this could not be achieved the lack of some stakeholders turned out to be a limitation.

And of course, there is always the difficulty that some stakeholders cannot be convinced: "they simply do not have the will to join" (Interview 2, 55). One other reason could be that members of existing networks strive to keep the now established power balance within the region and not change anything. A few network managers also stated that education does not seem to be a top priority for local politics and thus they lacked especially the political backup. However, at some point the network grows and network managers state that there are a limited number of contacts that can be maintained. This is the time when they need to make strategic decisions in order to keep the network and efficiently work on satisfying stakeholders' needs.

One network manager was not living within the region for a very long time which resulted in not being accepted at the start and not knowing about path dependencies

[48] „Und Netzwerkprozesse brauchen unendlich viel Zeit und das hat nichts mehr mit Wirtschaftlichkeit zu tun. Und die Frage – und die darf man aus meiner Sicht und die muss man auch immer wieder stellen – inwieweit waren solche aufwendigen Netzwerkprozesse wirklich sinnvoll. (…) Wenn ich nur über die Ressourcen nachdenke, dann muss ich mir überlegen, hätte man Geld nicht anders oder sinnvoller ansetzen können. Ich bin mir da unsicher, weil ich sehr wohl verstehe, dass Strukturveränderungen auch Zeit brauchen."

(see chapter 6.2). Thus, he needed to spend even more time in finding out about the existing ties, their quality, duration etc.
For more limiting factors for the network's activities see Tippelt/Reupold/Strobel/Kuwan et al. (2009) and Emminghaus/Tippelt (2009).
This first stage of network development includes for the network manager the task of finding partners and starting the network creation process. As shown above it was not an easy task to convince regional stakeholders of a network project with a goal that is not necessarily one of their immediate and core concerns. In referring back to the three hypotheses formulated in chapter 5.1 all three are confirmed by the existing data:
I.1 The main tasks and challenges are concerning with social contacting, relations management and with creating a sense of commitment and identity within the network. There are certainly more tasks but judging from the quantitative findings these seem to be the most important ones.
I.2 It also can be confirmed that network managers are in a very complex situation. This situation results from a multitude of interests as supposed but also in taking the own institutional background into account and then strategically positioning the network management as well as overcoming other dilemmas. This hypothesis is thus confirmed but needs to be extended on more aspects as shown above.
I.3 And also the last hypothesis that states that network managers in the learning regions need to find committed and resourceful partners was confirmed. The educational networks of the learning regions are in between network organisations that strive for economic interest (like in the automobile industries) and those networks that strive for a more social value. And while some partners might be more closely connected to one pole of that dimension others are more closely aligned with the other pole, the network management needs to pick out those who align their individual interests to the network's goal.
If these results are linked to the U-Process, it becomes obvious that Scharmer (2007) has a clearly defined group of persons most likely within an organisation in mind whereas in the learning regions the central persons had to be found and convinced to join this developmental process. Once the partners had been found, had committed themselves to their membership in the network and actively engaged in the dialogue the results are easily to be linked with the U-process.

## *6.2. Bridging Capacity*

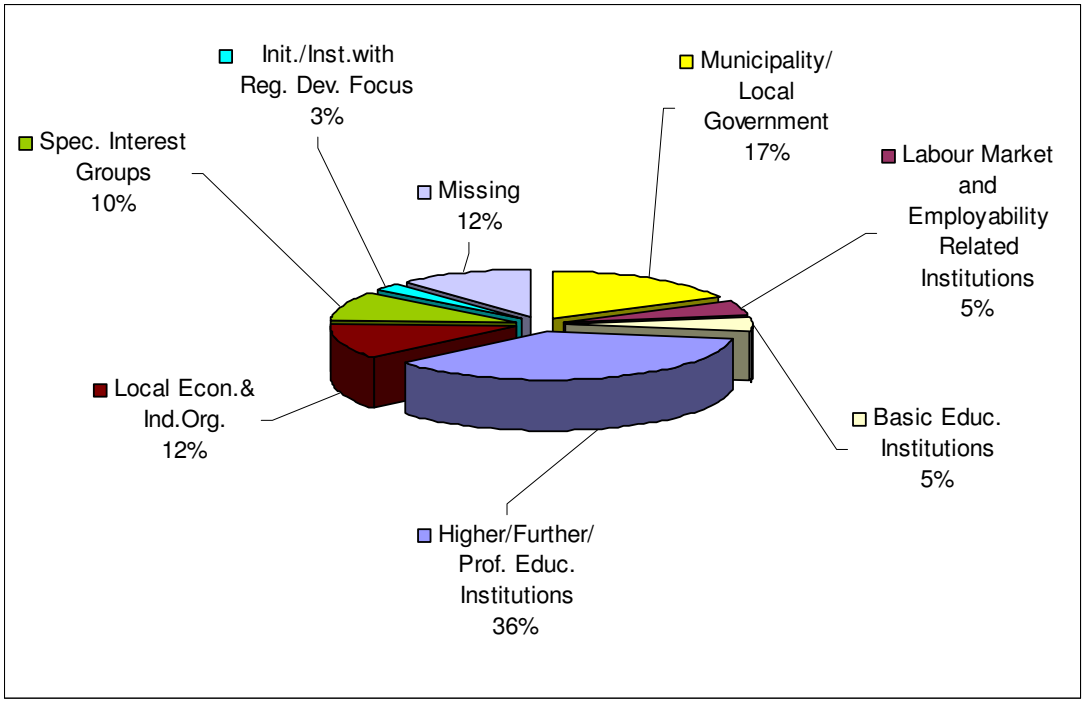
One of the core arguments in the literature on network management is that network managers are actively managing the in between. The authors differ in their description of in between who or what: Schubert (2008) mainly refers to organisations, Skidmore (2004) calls it comfort zones, Endres (2008) concentrates on communities of practice and Wöllert and Jutzi (2005) refer to organisations as part of different societal areas and their rational frameworks. Thus, these theoretical approaches lead to the definition of the variable "Bridging Capacity" that was used in order to prepare the extraction according to the Variable Oriented Content Analysis of Gläser and Laudel (1999). The variables' characteristics were derived from analysing the expert interviews and describe

relevant aspects if it comes to spanning the boundaries between different units in a regional network. This section's structure is given by the interpretation of these characteristics in the following order: "History/Path Dependency", "Relational Fields", and "Strategic Orientation".
Concerning the learning regions, the approach by Wöllert and Jutzi (2005) can be more easily applied to the existing quantitative data set whereas on a deeper level concerned with communications, meaning, learning and interaction, Skidmore's (2004) as well as Endres's (2008) concept seems more suitable for the qualitative data.
Since it is obvious that network managers are managing between groups of people whether they may be organisational, geographical or societal areas, the data are analysed according to the groups that can be made out here: societal areas.

### 6.2.1. Institutional Range

So, in first looking at the quantitative data and analysing the organisational structure of the sample the organisations were assigned to societal areas. Thus, the overall distribution of the societal areas as represented in the sample can be derived. Figure 21 illustrates that the vast majority of the involved stakeholders originate in the educational sector (41%). Since the programme "Learning Regions – Providing Support for Networks" was started as an educational initiative that intended to serve educational needs, this sector is strongly represented in the sample. Thus, this area was further differentiated in basic education institutions (5%) and higher/further/professional education institutions (36%). Moreover, 17% of the sample are constituted of municipalities and local government, 12% of the organisations came from local economic and industrial backgrounds, 10% of the network members were special interest groups, such as migrant communities, 5% were organisations that were assigned to the area of labour market and employability related institutions, another 3% of the sample consisted of initiatives or institutions with a regional developmental focus and 12% were missing.
These findings suggest that while there are seven identified societal areas in the sample, the distribution of the organisations to the areas is not balanced (see fig. 21), they are rather dominated by educational organisations, mainly in the higher, further and professional education fields. However, in terms of emerging complexity (Scharmer 2007) and the associated governance processes (compare table 3), a multi-stakeholder approach is to be applied. As Scharmer (2007) suggests the more stakeholders and the more diverse the stakeholders' interests are, the more suitable a multi-stakeholder approach becomes (see also section 3.5).

*Figure 21: Institutional Range within the Chosen Sample (n= 239)*




A closer look at the single networks reveals whether the networks partner structures differ in intra-network terms, i.e. many networks are heterogeneous in their partner structures or if maybe the networks specialised strongly, have a homogenous partner structure and differ in inter-network terms. Thus, this differentiation was done for 14 exemplary networks of the sample (see attachment 4) and is referred to and analysed in more detail in section 6.3. In general, the result is that there is a certain tendency for particular network member profiles but the risk of an organisational concentration that completely focuses on one or two societal sectors is avoided. There are only two networks with three areas; all other networks have at least four areas to be bridged.

In general, the argument here is that the more variety of areas as portrayed above, the more complex and difficult the network manager's task of bridging these areas and finding common interests becomes. And at the same time a broad variety of areas and stakeholders ensures the necessary heterogeneous resources in terms of knowledge bases and experiences that is needed in order to create high benefits of new knowledge and innovation. Thus, the potential for knowledge creation from a structural point of view is given in the learning region networks of the sample.

As stated above, the variable "Bridging Capacity" refers to the network management's core task of spanning boundaries. The analysis of the interview data resulted in three major aspects that characterise this variable: 1. "Path Dependency" refers to the developments and existing relations with in a region, 2. "Relational Fields" are the societal areas or communities of practice that need to be bridged but also places of interest where relevant information can be gained and 3. "Strategic Orientation" refers to the network managers' awareness and actions on a strategic level.

### 6.2.2. Path Dependency

The term path dependency is used for example in governance research and means basically that a relatively continuous process is determined by past developments (Schreyögg/Sydow/Koch 2003, Werle 2007). Regions consist of a limited number of actors who are very likely to have already had some direct or indirect contact and experiences with each other beforehand. The knowledge about prior developments and behaviour of certain stakeholders influences the interactions within the network and also the work of the network manager. In the following paragraphs some of these prior experiences and their effects are explained or illustrated with a citation in order to show the relevance of this characteristic that in turn influences the options and possibilities for the network manager to span boundaries.

Some of the network managers stated that the vision of creating a "learning region" has long been there but the resources were missing that would allow for its implementation (see for example Interview 3, 8-9). In most of these cases this vision was not just the idea of one or two persons from one organisation but it was a shared one between a few regional stakeholders. Thus, the programme "Learning Regions – Providing Support for Networks" finally brought about the financial resources and the option of implementing the vision. Path dependency in this case provided so to speak the fruitful grounds for a successfully running network within a learning region.

On the other hand there are limiting path dependencies as for example one network manager points out: two organisations in the region had to cooperate for years already because it was the political will in that region. The results for the region and also the benefit of the two organisations were good but the relationship between the two was disturbed and conflict loaded. These two organisations are also involved in the network of the learning region and brought with them these difficulties (see Interview 1, 37). So, some historically grown complicated relations also guide the network manager's considerations and decisions in so far as he or she tries to balance their relation and satisfy them as to not let the conflict become acute within the network. Thus, existing disagreements between powerful organisations in a region have an effect on the general direction of attention of the network management.

Another network manager states that it was possible for the network to not give in to the regional power play of some stakeholders because the network management was located at a strong institution. Thus, the network members and the network manager had the option of acting relatively autonomously and sovereignly (see Interview 2, 42). This is a clear advantage of a network that is strategically located at one of the network member's organisation.

In addition, path dependency also refers to the early developments of the network. One network manager stated that early mistakes in how the network and its goals are presented in relevant regional meetings are associated with certain persons and have long-term effects:

> *"They screwed up and you do not get ten options. You get one and that is enough. And that is so for five years. And here you really have to work. You have*

*to do ground work and work hard.[49]" (Interview 3, 283)*

Thus, the resulting options for contact networking with the stakeholders involved in that meeting are strongly limited and even if new persons take over the relevant positions, they learn about these past events early and might refer back to it, according to this network manager. Producing positive results mainly at the start is very important and even more so since the most important stakeholders are involved and will observe the networks output. The stakeholders will tend to prolong their support for the network if they perceive its actions as successful and beneficial.

Moreover, in all of the analysed interviews, the network managers stated that the existing contacts and networks of the stakeholders involved, the indirect ties were activated if these were beneficial for the network. So the active persons were already here and had existing ties with each other but the programme and its funding enabled them to span even more boundaries that were "unthinkable" combinations for the actors until then.

### 6.2.3. Relational Fields

"Relational Fields" is another typifying aspect for the variable "Bridging Capacity" because here the fields are defined that are to be bridged by the network manager. In the following paragraphs these fields are defined in more detail by analysing and interpreting the expert interview data.

Each network has its own specific relational fields oftentimes depending on the goals and topics it takes care of. Figure 21 illustrates all potential fields where the stakeholders can possibly originate from. Another important activity for a network manager is to find out what relevant relational fields and stakeholders there are. The experts report on analysing market structures, products, competitors, what financial possibilities clients have etc. and also how this might change in the years to come.

One possible form relational fields can take is that of densely networked small geographical areas that are hardly connected with each other. These geographical areas might be within one larger rural region. In urban settings this is paralleled by certain quarters within a city, termed social community areas ("Sozialräume"). So, in bigger German cities there could be around ten of those social communities in which, as one network manager states, some statistical measures point to the fact, that there are some problems in this area. The network manager now tries to connect organisations and groups of persons within these areas in order to better meet the locally identified social needs:

> *"We enter the social community areas and meet them on their ground that means that we also go to the institutions that are there, whether it is intercultural parent cooperation or youth facilities or sports clubs and we use them as multipliers for*

[49] „Die sind unten durchgefallen und man hat nicht zehn Chancen. Man hat eine Chance und das reicht. Das hebt fünf Jahre. Und da muss man arbeiten. Dann muss man Buckelarbeit und Basisarbeit machen."

*suitable offers.[50]" (Interview 3, 283)*

Basically network managers and also the network members try to find out who needs what in the wider surroundings within a certain region. This also implies a continuous stakeholder analysis because the stakeholders are the primary customers of the network manager.

Thus, network managers need to be aware of the others' needs, interests and expectations and also about what and who could contribute to the fulfilment of these. But this is probably not possible for the whole region. As one network manager states, a deep and thorough need analysis within a region is illusory because there are too many variables and parameters to be considered, i.e. the complexity is too high. What is possible according to many experts is a notion of where the region might head for and what general needs there are then.

> *"I think that this is impossible because even developments of branches, economic situation, trade cycles etc. need to be included then. But at least you should develop an approximate picture regionally. (…) Where do we head for and what needs do we have. Here [authors note: in this region] we are tempted to go for certain clusters.[51]" (Interview 1, 95)*

So, by either going to the places of highest interest or by talking to some of the experts from those places, network managers can become aware of the institutional and social environment concerning education. Some network managers organised workshops within city or regional districts and invited the most relevant stakeholders in order to bring together the relevant information resources. This is where many of the networking activities and network's activities originated from.

> *"In that phase, we organised community-based consultations, we have used structures, data, materials from those places and also did an expert survey. And from that the first ten workshops developed along the identified needs. Because we proceeded according to a method of elimination, what is already there and where is the necessity to act.[52]" (Interview 7, 5-6)*

Another approach to bridging fields and thus exchanging relevant information was to organise events, a conference, a workshop and invite pertinent experts or experienced practitioners of a certain topic.

> *"We had a presentation from [name of the presenter] here in our network. Every quarter of a year we have a series of lectures on interesting topics, informative meetings.[53]"(Interview 5, 218)*

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[50] „Wir gehen in die Sozialräume rein und holen die Leute dort dann auch ab D.h. wir gehen auch in die Institutionen, die vor Ort sind, ob das jetzt interkulturelle Elternarbeit oder Jugendeinrichtungen oder Sportvereine sind, und nutzen die als Multiplikatoren für die entsprechenden Angebote."

[51] „Aber das man wenigstens regional eine Vorstellung davon entwickelt. (…) wo könnte das eigentlich hingehen und welchen Bedarf haben wir. Hier in der Region zum Beispiel ist das man versucht sich auf bestimmte sogenannte Cluster zu stürzen."

[52] „Wir haben in der Phase stadtteilorientierte Befragungen durchgeführt, haben die ganzen Strukturen, Daten, Materialien aus den, der beschriebenen Region genutzt und haben eben auch Expertenbefragungen gemacht. Und daraus haben sich dann die ersten 10 Werkstätten eigentlich bedarfsorientiert entwickelt und auch die thematischen Schwerpunkte entwickelt. Weil wir eben auch ein bisschen im Ausschlussverfahren vorgegangen sind, was ist schon vorhanden und wo gibt es eigentlich Handlungsbedarf."

[53] „Wir hatten auch einen Fachvortrag von [N*ame des Vortragenden*] hier bei uns im [Anmerkung: Netzwerkname]. Wir haben alle Vierteljahr eine Vortragsreihe zu interessanten Themen, Informationsveranstaltung."

At a later point in time during network development, network managers feel responsible for continuously bringing in new information and stimuli into the network's internal processes and discussions. And vice versa, they want to contribute to the relevant processes and discussions in their environment as well.

> *"(…) well, that is what is important to me, that we do not just sit in our own swamp, but that we regularly pipe up to the processes that are discussed here (…), that we are heard and that we can collaborate.[54]" (Interview 2, 120)*

Thus, at the one hand, network managers actively go to places that are of high interest to them in terms of customers, multipliers, local politicians, trade unions etc. the "relational fields". On the other hand the network managers try to make the network attractive for potential stakeholders and the attached relational fields. Hence, presenting the network and with it marketing becomes a very important task. For a more detailed analysis of the educational marketing activities in the networks see Reupold/Strobel/Kuwan/Tippelt (2009).

Network managers spend a lot of their time and attention to their surroundings and manage as Skidmore (2004) stated from the outside in. That means that they look for groups of people, organisations or cumulated interests, i.e. relational fields and only then find ways to start a dialogue. In doing that they first need to analyse the regions existing relational fields and also take the path dependencies into account when bridging these fields.

### 6.2.4. Strategic Orientation

Most network managers in the programme "Learning Regions – Providing Support for Networks" have according to their own reports not been in management roles prior to the programme but rather in pedagogic, educational, administrative, counselling or teaching roles. Thus, one core challenge of the new role in a network for them turned out to be a strong strategic orientation. This refers to the choice of network partners, to the combination of them in certain sub-projects, to concerting a multitude of interests, to the right way of setting priorities concerning the order of tasks and the order of addressing certain partners before others etc. Becoming aware of the impact that the own behaviour and actions might have on the others or even just on how others perceive that behaviour is one of the main characteristics that the interview output on strategic orientation point to. Here the latter variables' characteristic of relational fields is important too because the network managers frequently report on becoming aware of who "the others" exactly are, i.e. who is concerned with what they do. To the question of what the interview partners learned during the project, these strategic aspects were one of the most important and commonly agreed upon answers. The following citation illustrates this aspect very well:

> *"That you have to proceed very prudently and use good tactics. That many tasks cannot be done quickly and by putting your mind on autopilot but you really have*

[54] „(…) dass ist ja das, was mir wichtig ist, dass wir da nicht nur in unserem Sumpf sitzen, sondern dass wir uns in den Prozessen, die hier diskutiert werden, (…), immer wieder zu Wort melden und gehört werden und mitarbeiten."

> *to focus on how to implement those things with partners who have different interests. That you think of a strategy, that you do not take the shortest way, but in a difficult working environment where people do not try to make it easy for you (…) that here you need a sound and good strategy. We continually work on that. And this again is difficult to connect to our daily work, if you have to stick to certain deadlines, feedback loops etc. organisational processes.[55]" (Interview 5, 303-305)*

In general, the expert interviews show that the strategic orientation of a network manager needs to be directed at least at four core aspects: the partner structure, the resulting benefits for the partners, products or services and financial aspects. Thus, network managers frequently report on why they chose to include a certain partner in the network and oftentimes the reasons are strategic ones:

> *"We integrated the administrative districts as political board and also as financial donors. (…) Yes, informal. That has also something to do with the fact that if we take one major, we need to take at least four others as well because otherwise the competitive situation is worsened.[56]" (Interview 2, 104-109)*

At the same time, network managers should take care of making intercessors for themselves in the involved organisations. This should be a person that shares the intention and vision of the network and thus supports the network manager by representing his or her interests within the intercessor's organisation and own social networks.

> *"And then you also need intercessors. [Name of the intercessor] who said at a certain point in time that she will promote this topic and wants to create something new with it. If you have such persons then you will also have such [great] results[57]". (Interview 4, 142)*

The more relevant and powerful the organisation is for the region and the network the more valuable and beneficial the intercessor becomes. This is also one of the reasons why the interviewed experts put so much stress on how troublesome personnel fluctuation is within a network.

Moreover, some stakeholders that might be interesting concerning some aspects (like firms and their financial resources) do not have a mutual interest at first. So the strategic orientation here might be to go for the stakeholders target groups or to trigger these stakeholder's interests and needs that are not readily visible on the surface. Apart from that, the products or service strategies need to be in alignment with the consequences from path dependencies and placed well within certain relational fields.

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[55] „Dass man sehr klug und sehr taktisch vorgehen muss. Dass sich viele Dinge nicht schnell schnell, jetzt mach ich das mal, sondern man muss sich wirklich überlegen, wenn man Dinge umsetzten will mit Partnern, die unterschiedliche Interessen haben, wie komme ich da hin. Also dass man sich auch eine gewisse Strategie überlegt, dass man nicht den kürzesten Weg nimmt, sondern in so einem doch zu Teil auch schwierigen Arbeitsumfeld, es wird einem ja auch nicht immer leicht gemacht (…) dass man dann im Grunde eine kluge Strategie braucht. Da arbeiten wir ja immer dran. Und das ist wiederum schwierig zu verbinden mit dem Alltagsgeschäft, wenn eben bestimmte Termine, Rückmeldungen etc. Organisationsprozesse eingehalten werden müssen."

[56] „Wir haben die Kreise integriert als politische Gremien und auch als Finanzgeber (…) Ja, informell. Hat natürlich auch etwas damit zu tun, dass wir, wenn wir einen Bürgermeister nehmen, wir mindestens noch vier andere dazu nehmen müssten, weil sonst die Konkurrenzsituation noch größer geworden wäre."

[57] „Und man braucht dann eben auch Fürsprecher. *[Name der Fürsprecherin*] die dann an einem bestimmten Punkt gesagt hat, das Thema push ich und das Thema nehmen wir und da machen wir was draus. Und wenn sie solche Personen dann auch haben, erzielen Sie solche Ergebnisse."

Thus, network managers also facilitate the relations between customers and suppliers in that they contribute to better communications.

The financial background of network management offices seems to be very diverse. Here, a strategic advantage is to have the office financed by as many stakeholders as possible so that the costs are very low for each of them and that the network management office can act neutrally within the network.

> *"(…) but this is a very sensitive point that the network is not representing one of the stakeholders but really consists of the sub-projects and is really neutral then (…).[58]" (Interview 5, 121)*

And at some points during the networks development strategic financial decisions have to be made so that either there is a possibility to get new funds or the network members need to take over some of the tasks:

> *"We always thought about how we are going to proceed with the network about three quarters of a year prior to the end of a funding period: what do we carry on? What are business models that pay for themselves? Then we presented that to the network members. And it was always unanimously stated: we carry on with the learning region, just in a slightly declined version.[59]" (Interview 6, 76)*

In order to be able to think strategically network managers point out that some creative phases are necessary and that enough time needs to be reserved for that. Here, it proves to be of advantage if there is more than one person in the network management position because problems and ideas can be discussed within a team. Thus, there need to be creative phases, time for reflection in order to generate ideas for strategic orientation.

This result is in alignment with the findings of brain research as presented in chapter 3.3.1. Thus, network managers need to avoid their stress levels exceeding a certain limit because otherwise they are not able to work creatively and support the creativity of other involved network members to emerge. Now this is not just the case for network managers but for all individuals and it is needed in many jobs. But since creativity, innovative ideas and emotional stability are preconditions for the network manager's job, very good self-management skill or as Senge et al. (2007) put it "personal mastery" is needed. Apart from that, the unique position of the network management, a service position in between organisations results in many stakeholders having high expectations. The existence and success of the network depends on the network management's ability to deliver and facilitate dialogue.

Concerning the hypotheses formulated in chapter 5.1 which state that the ability to lead a network is dependent on II.1 the network managers knowing about important relational fields and the institutions within those, on II.2 the network managers knowing about existing contacts within their region and III.3 the network managers capacity for being neutral and diplomatic these results are confirmative.

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[58] „(…) aber das ist ein ganz sensibler Punkt, dass das Lernnetz wirklich nicht eine der Gesellschaften repräsentiert, sondern sich wirklich aus allen Teilprojekten zusammensetzt und dann wirklich neutral ist (…)"

[59] „Wir haben uns immer so gegen Ende rechtzeitig, immer so ein dreiviertel Jahr vor Ende der laufenden Maßnahmen, Gedanken gemacht: Was führen wir wie weiter? Was sind Geschäftsmodelle, die sich selbst tragen? Also das haben wir auch unseren Mitgliedern präsentiert. Und es ist halt immer unisono gesagt worden: Wir führen die Lernende Region weiter, aber eben schmaler."

They illustrate that network management is always bound to very specific challenges that originate from a) the path dependencies that structure the patterns of affiliation within the region b) the institutional range, i.e. how heterogeneous the network is concerning its internal partner structure and concerning its relational fields that are also mediated by the existing partner structure and c) the awareness and proficiency of the network managers strategic orientation and decisions.

In addition, what Scharmer (2007) subsumes under the term "multi-stakeholder approach" turns out to be a very complex process filled with dilemmas, conflicting interests, highly emotional meetings and processes as well as a strong strategic dimension.

Moreover, the findings suggest that the network manager's capacity to lead also depends on the number of fields and organisations to be bridged. On the level of communities of practice that mainly Endres (2008) refers to concerning the boundary spanning activities of network managers, the brokerage roles as described in chapter 4.2.3 become important. Network managers will probably have to deal with all of the roles in different times of network development. Nonetheless there are three roles that seem to be more frequently used than others and network managers need to be proficient in taking those roles. The first of these is the coordinators role which basically states that the network manager engages in bridging a relationship between two organisations within his or her own relational field. This could for example be two adult education organisations whereas the network manager is located as an employee at another educational organisation. The likelihood that there are highly competitive attitudes to be overcome is very high here. Another role that is taken and probably most difficult to apply is the one of a "liaison broker". Here the network manager is brokering a relation between two organisations of different relational fields and is himself or herself not part of either. The requirements of not judging, not being cynical about possible path dependencies that might seem weird to an outsider and having an open mind in order to facilitate a process with an open end are probably highest here. At this point Scharmer's Theory U and theoretical developments of social network analysis match and explain the findings very well.

Thus, path dependencies and competitive mind-sets in general urge the network manager to not judge or be cynical but diplomatic and respectful. Moreover, network managers have to have a strong interest in finding out about the stakeholders needs in order to be able to relate to them. Here the communicative abilities of network managers are pointed to by the clear advice of the interviewed expert to avoid "analysis paralysis" and rather identify the places of highest interests and talk to people.

## *6.3. Perception and Awareness of Tie Structures*

An important finding from structural social network research is that certain positions within a network go along with a particular perception of ties and information flows (Kilduff/Tsai 2006). The general hypothesis for this thesis is that the network manager's structural position within the network allows for a different perspective on the network: namely a broader and more holistic perception of the networks ties – in terms of

strengths of ties as well as in terms of the existence of ties. This leads to the next hypothesis that claims that network managers need to be able to perceive these ties and their quality accurately in order to refer to them correctly and thus be able to lead the network.

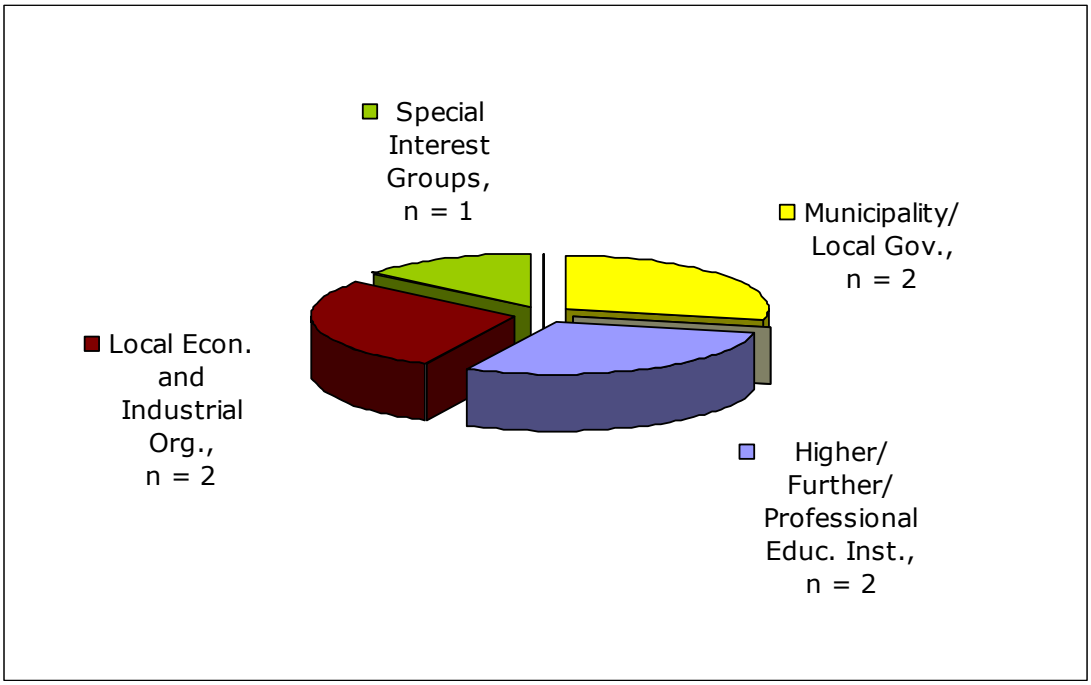
In the following sections three aspects are elaborated on that refer to perceptions of tie structures: perception of relational fields, perceptions of the core network team and their indirect ties and the network managers' awareness of the tie structures and the effects of that.

### 6.3.1. Perceptions of Relational Fields

For this analysis one exemplary network is chosen (No. 10201). This network is located in a rural area and spans between four different relational fields and the network manager or the institution he or she works for belongs to one of those fields. In figure 22 it becomes clear that six partners and the network manager answered the question[60] and furthermore the figure illustrates the institutional range within the network.

The following analysis is based on network data that were computed in the software UCINET and illustrated with the software NETDRAW Network Visualization. These data provide structural insights into network configuration and allow for conclusions on knowledge flows. These illustrations and values are then complemented by the results from the interview data.

*Figure 22: Institutional Range of Network No. 10201*

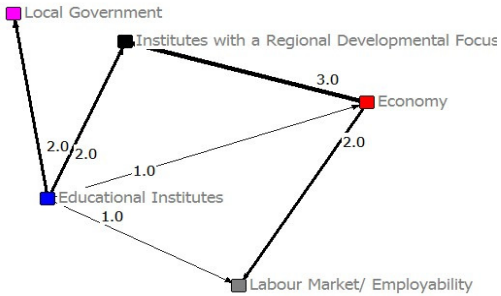
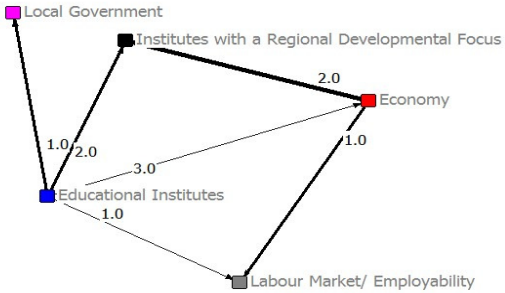
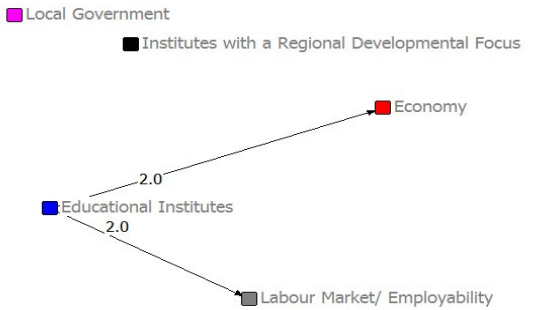
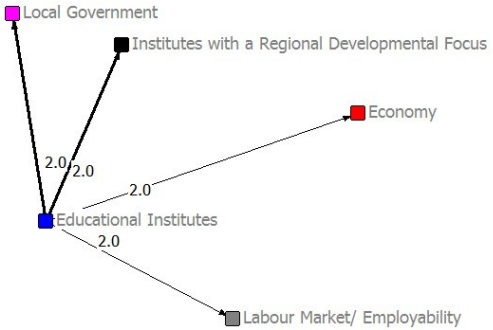
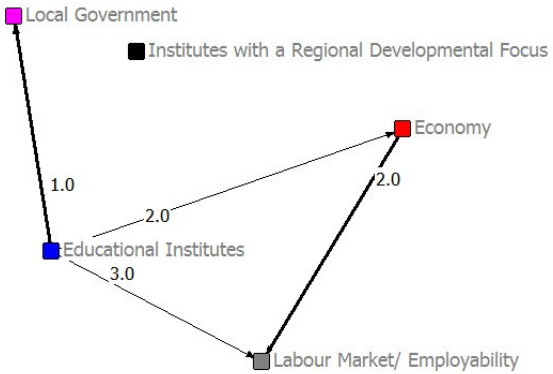
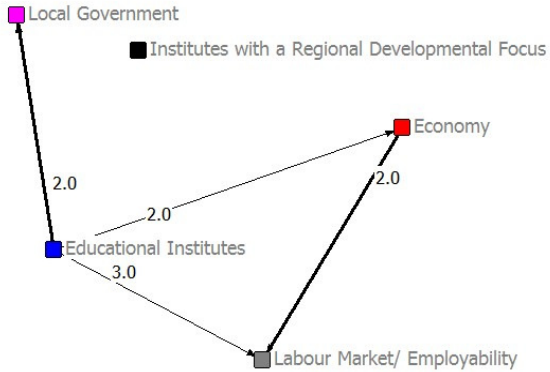



[60] „Are the present cooperation relations between the following players in your region fairly intense, fairly sparse or is there no cooperation between them?" (Questions 3 in the network manager and partner questionnaire, see attachments 1 and 2).

By taking into account that from the seven potential areas, this networks institutional range covers four (Local Economic and Industrial Organisations, Higher/Further/Professional Education Institutions, Special Interest Groups and Municipalities/Local Governments), it is quite heterogeneous in its partner structure. The areas that are not part of the network's institutional range here are Labour Market/Employability Related Institutions, Institutions with a Regional Developmental Focus and Basic Educational Institutions. Presumably, the network's core goals and tasks do not include topics that would make it necessary to cooperate with organisations from these areas. Moreover, in analysing the partners per area ratio, the network is balanced too: in three areas are two partners and in one area is one partner. The power balance in terms of structural distribution and partner numbers is good and the challenge for the network manager to find common ground and connect the areas is clearly to be seen.
In order to find out how the network manager's perception differs from the ones of the partners, a first step is to illustrate the given answers to question 3[61] of the questionnaire (see chapter 5.2.2) with NETDRAW. The results for network no. 10201 are illustrated in figure 23. These results identify firstly whether the network members do have a perception of a tie at all and secondly what intensity they assign to the tie.

[61] „Are the present cooperation relations between the following players of your region fairly intense, fairly sparse or is there no cooperation between them?"

*Figure 23: Tie Perception within the Network 10201*

| Network Manager[62] | Network Partner 1[63] | Network Partner 2[64] |
|---|---|---|
|  |  |  |
| **Network Partner 3[65]** | **Network Partner 4[66]** | **Network Partner 5[67]** |
|  |  |  |

[62] Local Economic and Industrial Organisations
[63] Higher/Further/Professional Education Institutions
[64] Special Interest Groups
[65] Higher/Further/Professional Education Institutions
[66] Municipality/Local government/Local Municipal Services
[67] Municipality/Local government/Local Municipal Services

When analysing the illustrated tie perceptions, the first thing that becomes obvious is that some of the members cannot perceive a tie between the given nodes. This is where there are no connectors between the nodes in the picture (see for example network partner 3 or 4). The reasons for that might be that the network partners are embedded in their own relational fields and are not connected so well to these other areas as to even have a perception of whether there is cooperation or not. The network manager on the other hand has a perception on all of the relational fields and their cooperation intensity.

On the next level of analysis the perceived intensity of the cooperation is displayed by the numbers next to the ties whereas 1.0 means no cooperation, 2.0 indicates a fairly sparse cooperation and 3.0 reveals fairly intense cooperation. In taking a closer look at these pictures there is a strong diversity to be seen between the estimates of the network members. There are two patterns that resemble each other: between the network manager and network partner 1 as well as between the latter two pictures of network partner 4 and 5 whereas both of them originate in the area of Municipalities/Local Government/Local Government Services.

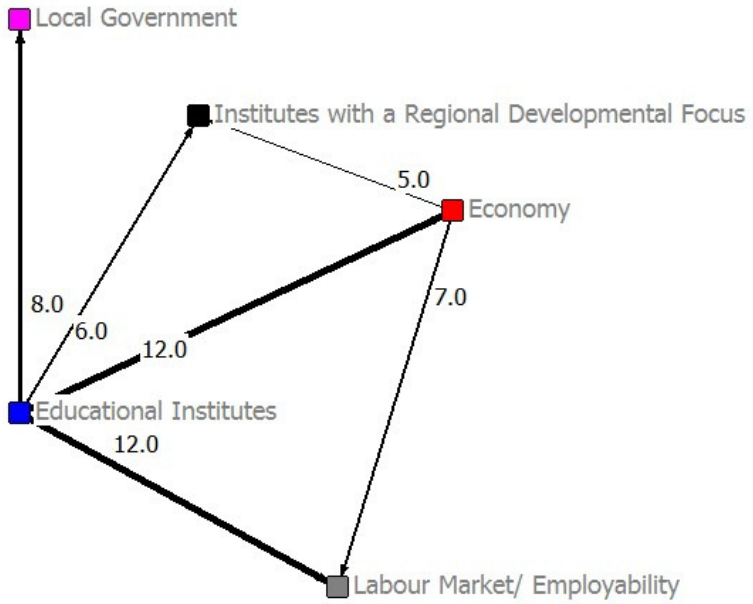
For exemplary reasons one of the patterns is chosen here in order to interpret it in more detail: in the second pattern (network partners 4 and 5) the network partners perceive the same connections between the areas whereas their perception on the intensities coincides in three cases of four. Interestingly, it differs concerning their own relational field (Local government) and its connection to Educational Institutes (network partner 4 perceives no cooperation and network partner 5 perceives a fairly sparse one). Possibly, one reason for that might be that the answering persons' own social networks within their relational field either do not include the cooperating person from Local Government or the existing connection is so weak that this information did not get through to them. Now, these findings do not necessarily mirror the actual relationships in real life, they merely state what the network members think they look like. The contact person in the Local Government Office might have a different perception of this connection.

However, the illustration done with NETDRAW does not deliver any more information on that. Thus, a further analysis on the cognitive social networks of the network members was done with UCINET. If for this network the network manager's perception is correlated with the average of the network partners' perceptions a very high correlation[68] of r = 0,96 results. In order to check whether even for the few cases given in this sample this is a fairly consistent result, the procedure was repeated for seven more networks. These exploratory findings suggest that there is a relation but on the one hand the results are very inconsistent and on the other hand the correlations are not viable. Thus, the results do not support the above mentioned statement any further.

There is one finding that is pointing to and illustrating the oftentimes discussed added value of networks and refers to the added perceptions of the network members (fig. 24).

[68] From a strictly statistical point of view it is not correct to calculate correlations with a 3-answer categorical ordinal measure. But for this exploratory study, this was done in order to generally get an impression of whether there is a relation at all.

*Figure 24: Addition of Perceived Ties*




In this illustration the tie perceptions of all of the above mentioned network members are added and thus a virtually comprehensive picture of the tie structure emerges. Thus, this resulting picture can be interpreted as the collective and probably most accurate as well as differentiated perception of the regional network structures. This shared knowledge about the structures is empowering insofar as it also provides a picture of and access to the resources linked to the fields. Since the exchange of such sensitive information needs a trustful and safe environment, this could be regarded as an ideal state for the core circle within the network that is equipped with quite strong relations then.

If the network manager's perception of the ties is very close to the real relations, this has another effect on the perceived power structures as Kilduff and Tsai (2006) point out. People whose perception of the surrounding social networks is accurate are oftentimes regarded as more powerful by their co-workers. Thus, being well-connected and knowing about the others' ties puts the network manager in a unique strategic position. Here, the danger of monopolised knowledge on the part of the network manager becomes evident (see Endres 2008). The solution to that is to keep the channels that transport this information and knowledge well connected with each other and create platforms for exchange.

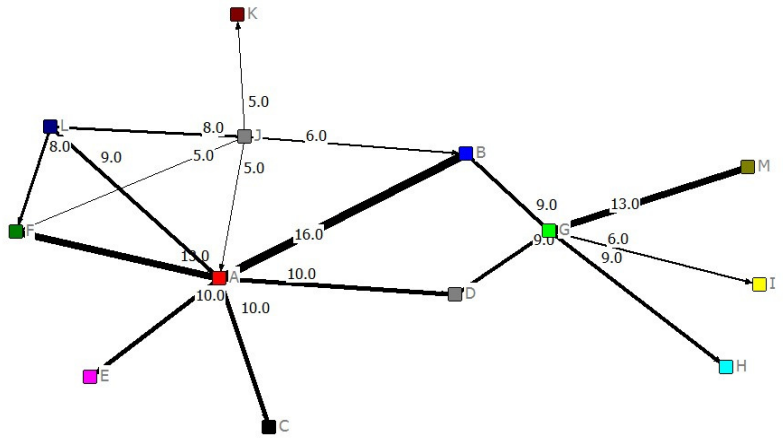
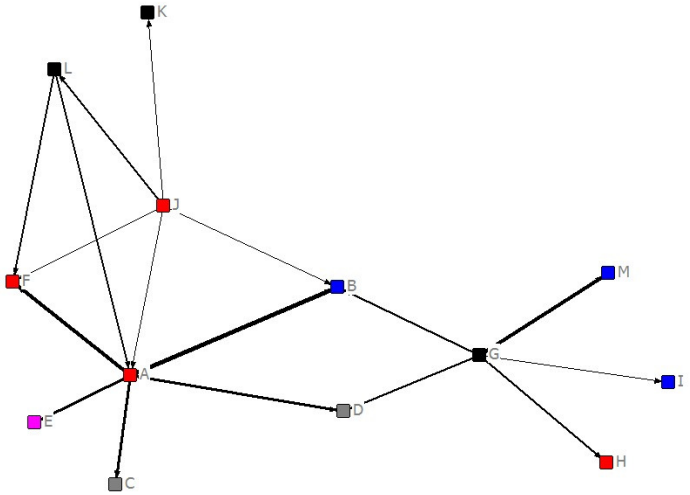
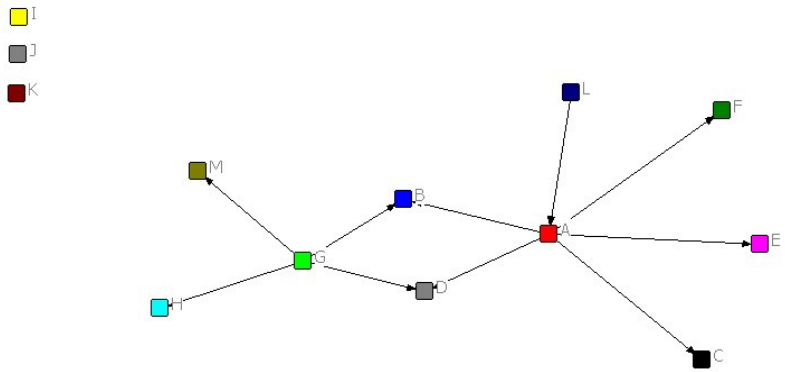
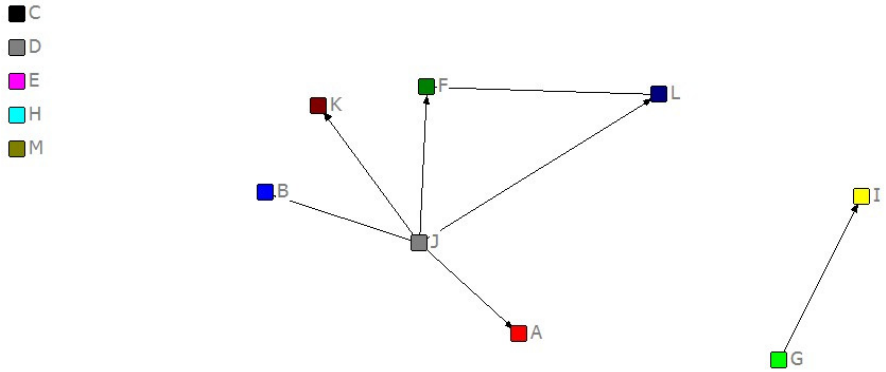
Thus, in order to arrive at the point at which these individual perceptions are articulated frankly and thus become shared knowledge, the network members need to create these platforms for exchange, a common goal and trust in each other. Here, the connections to the knowledge creation model of Nonaka and Takeuchi (1995) and Scharmer's Theory U (2007) become visible. The human interactions that precede this ideal outcome need to happen within a certain communicative culture ('ba'), so that the network members will start to speak about what they really think and actively engage in debating and dialoguing. On this basis the exchange of knowledge can lead to knowledge transformation

as described by Nonaka and Takeuchi (1995, see chapter 3.3.3) and thus result in inter-organisational learning processes that aim at fostering the regional education market.
In the following section the perceptions of a network's core team and their indirect ties is analysed in order to draw further conclusions on the social networks of the network members and their effects on knowledge exchange.

### 6.3.2. Perception of the Core Network Team and Their Indirect Ties

The following figure (fig. 25) is an exemplary illustration of the answers given by the interviewees from the network no. 100103 to the questions asked on the ego-sheet. The first picture is an illustration of the combined answers of the network manager and three members of the core team whereas the network manager = **A** (municipality/local services), network partner **G** and **L** are from a higher/further/professional education institution and network partner **J** has an organisational background in municipality/local government/local government services. These four persons named their most important contacts concerning their engagement with the network. Hence, the resulting network of direct and indirect ties of these combined four ego-networks becomes visible. Again, the position of the nodes or the lengths of the ties do not have any meaning. What is important here is: who is connected to whom and how strong the relations are. Here it becomes obvious that the network manager (A) has more connections than any of the other nodes and that he or she also spans to two organisations that no one else in this fragment of the network would have contact with. Apart from that the network manager tends to have strong relations since six of the seven illustrated ties have a value above the defined cutting value of 9 (see chapter 5.2.3).

*Figure 25: Network 100103 (Ego-sheet)*

| Anonymised commonly perceived ties strengths | Sectorised |
|---|---|
|  |  |
| **Strong ties** | **Weak ties** |
|  |  |

The above presented picture on the right upper side of figure 25 points to the relational field perspective: here the colours of the nodes show their affiliation to a particular societal field[69]. From the distribution of the coloured nodes, a heterogeneous composition of relational fields within this fragment of the network is shown. This pattern is the result of the forged links from the four answering network members who themselves belong to only two different relational fields. Hence, the picture illustrates a part of the potential that four persons have if it comes to spanning, in this case, five different relational fields. Now this illustration does not provide any insight concerning the quality of these relations but it does show that there are contacts and that these contacts were perceived as the most important ones concerning the work within the network.

Moreover, the latter two pictures reveal the weak and strong tie differentiation according to the defined cutting value of 9. The strong tie illustration basically shows that most of the strong ties within this fragment of the network are concentrated around the network manager. There is another node that concentrates strong ties around him or her and this is network partner G whereas the network manager is connected via his strong ties to that circle. Thus, the two nodes **G** and **A** are directly or indirectly connected to all existing strong ties within this fragment of the network. Now that shows that the network manager has some central contacts where he or she established a very high level of interaction and exchange, possibly a trusting relationship and thus a strong tie. If again the relational fields are taken into account (the picture "sectorised") that these contacts are affiliated with, it becomes obvious that the network manager chose one representative from each of the five relational fields. This way he or she ensures the most diverse input of information and opinions since they all come from completely different societal areas. At the same time balancing the heterogenous interests seems to be easiest when there is a close and trustful relation to the representatives of these interests. And in addition to that the network manager creates a high level of knowledge flow by nurturing a strong tie in terms of high meeting frequency, long lasting relation (duration) and diverse aspects that the contact is focusing on content-wise (multiplexity). The representatives of these relational fields might in turn function as the intercessors of the network manager's interest, i.e. the networks interests. Thus, this network manager might have succeeded in borrowing the social capital from the intercessors and this way gained legitimacy within the relevant social context, i.e. the relational field.

Another aspect that is portrayed in this picture is that there are network partners within the analysed fragment that are not perceived as having strong ties (network partners I, J and K). But these are among the group of network partners that are perceived as having weak ties. In this last picture the weak tie network pattern shows a focal node: network partner J. This person is connected to almost all nodes in the weak tie network. On the other hand two other nodes that are connected by a weak tie are probably more at the edge of the overall network. This is becausefor the network partner I, G is his or her only connection to the network and G is only indirectly (but with a strong tie) connected to the network manager, as can be seen in the upper right picture. Interestingly, the network

[69] Red = municipality/local government/ local government services, blue = labour market related institutions, black = higher/further/professional education institutes, grey = economic and industrial organisations, pink = institutions with a regional developmental focus

manager has only one weak tie and this tie leads to the focal person in the weak tie network. So, from a strategic point of view, since almost all information that is gained by weaker ties which is by trend also rather explicit than implicit knowledge transferred by this person, this is the best choice for the network manager to be connected with. This way he or she is most likely to also be connected well to the weak tie network with as little effort in nurturing contacts as possible.

In the expert interviews this finding that the network manager needs to be connected well and communicate regularly with all representatives involved as shown above is also oftentimes picked out as a central theme. Here the words of a practitioner illustrate the core point:

> *"Thus, talk to different people so that you get a holistic picture in the end.[70]" (Interview 3, 314).*

After finding partners and creating a network, it is necessary for network managers to be aware of who is in the network, with what resources can individual network members (the person and the attached organisation) contribute to the networks goal as well as who knows and exchanges what information with whom. Since it is illusionary to think that one person can be present on all occasions and participate in all conversations, the results from the above shown connections within the network are helpful in understanding the knowledge flows. Here it becomes obvious that there are nodes in the network which are information bottlenecks (Kleiner 2002). These people have contact to many others and collect knowledge. A network manager needs to be able to identify those people and connect to them so that he or she gets receives the relevant information about the network. For the further development of the network it is essential to bring those people together, facilitate their interactions and create a common perception of "we are all in the same boat". This common perception of a systemic problem fosters the understanding of the interdependencies between the stakeholders. This point is a key moment because on the one hand the heterogeneous range of knowledge is exchanged and some tough talking is likely to happen but it is the preparatory stage that leads to Scharmer's (2007) bottom of the "U".

In the following section this point of being aware of the surrounding network structures, the structural roles certain network members take, the attached resources and also what is said about this crucial point in time is analysed by referring to the results of the expert interviews.

### 6.3.3. Awareness of the Tie Structures and the Effects

As a result from the preceding sections it can be concluded that after the first phase of finding and connecting partners (see sections 6.1 and 6.2), the network is regarded as a macro-structure in that relational fields are connected and certain ties are activated for certain contents and projects. As the relevance for the contents and sub-goals in the network changes, the once activated ties become inactive and others are activated:

[70] „Deswegen reden Sie mit verschiedenen Leuten, dann kriegen Sie nämlich ein rundes Bild."

> *"What changes is the focus. That means which wires are active. You could easily draw that like a field, then the different organisations, like a neural network. So, which focus is in the game at the moment?"*[71] *(Interview 1, 54-55)*

Thus, in order to let this and the above mentioned information exchange happen, a network manager's awareness in terms of mind-set or mental model, his or her direction of attention and a continuous process of reflection and vision-building is essential. In this section, the first two of these aspects are illustrated by the expert interview results. The other two will be discussed more thoroughly in the following section 6.4 leadership.

*Mind-set*

Since network managers do not just connect persons but also engage in initiating projects with and for other stakeholders, they need to be very open minded. This open mindedness is concerned with individuals and their behaviour as it is bound to their relational field as well as sub-goals and thus the products and services of the sub-projects. In this programme the intention was clearly set on innovative solutions and the whole programme was regarded as a pilot project. Thus, trying new things, making mistakes and continuously modifying project outcomes is one of the primary concerns of network managers. This clearly goes along with Scharmer's (2007) ideas for prototyping: early in the process a few first ideas are put into practice. The one that works best is chosen and modified for a really good and suitable solution. One network manager puts it this way:

> *"We comprehend ourselves [as a network management office] as a research laboratory. (…) And for one social community there was this thought (…) because one always approaches this with the social work paradigm. We will try a different thing: we try to affect a whole city district with cultural means. And then we developed the concept.(…)We teach music to a whole city district.* [72]*"(Interview 7, 18-31)*

Now this seemingly odd prototype proved to be so successful that the city agreed to finance it in the coming years.

In order to get the involved stakeholder to cooperate, network managers needed to find new ways. Therefore, one of the crucial aspects of a successful approach was to respect others and their professional activities. One network manager argued that this is exactly what brings people to the point where they open up. This opening up helps to create a cooperative field that allows for honest dialogue and innovative solutions.

> *"Well, this has of course something to do with the fact that no one who has done this for years on a professional basis feels his or her job outcome questioned. Whether he does it well or not is absolutely irrelevant.*[73]*" (Interview 2, 88)*

And here it becomes evident that the network management must be by definition a cooperative stakeholder itself. It has to keep a cooperative mind-set even if some of the

[71] „Was sich verändert ist so die Schwerpunktsetzung. Das heißt also welche Drähte sind aktiv. Man könnte das durchaus leicht als so ein Feld aufmalen. Dann die verschiedenen Einrichtungen und wie bei einem Neuronennetz."

[72] „Wir verstehen uns als Entwicklungslabor. (…) Und in einem Stadtteil war dann der Gedanke, weil man immer über diese typische sozialarbeiterische Tätigkeit da ran ging. Wir versuchen mal einen anderen Weg. Nämlich mit kulturellen Mitteln auf einen ganzen Stadtteil einzuwirken. Und dann wurde das Konzept entwickelt. (…) Wir musikalisieren einen ganzen Stadtteil."

[73] „Das hat natürlich auch etwas damit zu tun, dass sich niemand in Frage gestellt sieht, der bereits über viele Jahre das dienstlich macht. Ober er es gut macht oder nicht, ist dabei völlig egal."

surrounding partners may have competitive approaches towards each other. The guiding principle here is well described by one of the experts:

> *"(…) ok, we won't subordinate our own economic interests in favour of our common project; but we also do not always say: we want more. That is a point that was very helpful that we really had partners who were willing to work with each other.[74]" (Interview 2, 88)*

Another aspect that was stressed in the expert interviews is that network managers should not be very ego-centred and that they need to be able to go for results instead of personal credit.

> *"(…) these persons cannot be egomaniacs. There are certainly some conditions that go along with it [author's note: the network management position]. That needs to be clarified in advance.[75]" (Interview 9, 63)*

There has to be the awareness that one's own behaviour will have effects on the perception of others and they will draw conclusions that include the professional tasks at hand. This is why some network managers came up with some rules that include the following list: we do our best, we do not show off and trigger others' jealousy, we keep in touch, we are open as is the network and we always offer our support and active cooperation. This is how these network managers claim to act in order to deliver the impression that they are good and trustworthy collaborators.
Realising that they are in interdependent structures and thus only a part of the whole system is also referred to in the interviews. Network managers who also have a lead position must transfer that to their strategy which is a complex task:

> *"I always need to think one time 'around myself'.[76]" (Interview 7, 45)*

*Direction of attention*

Another finding of the study is that network managers tend to consciously direct their attention to certain aspects of the network development. The first and seemingly most important point here is a process orientation (see for example Interview 11, 105-107). Since one of their main tasks is the management of relations, they focus to a strong degree on processes and try to facilitate as well as improve the interactions.
At the same time they are aware of their ambitious goals and try to keep focused on that. They seem to do that in two ways: firstly, they actively avoid those people who continuously try to find reasons for why it will not work out (see for example Interview 9, 91). The description of these people resembles strongly Frey et al.'s (2006) type of negative focus and unchangeable world type as illustrated in figure 5. In contrast to them, network managers tend to have a proactive orientation with positive focus and the notion of a changeable world. In analysing these basic orientations within the expert interviews, three aspects were very consistent findings throughout the data: 1. network managers

[74] „(…) okay wir stellen unser ökonomisches Eigeninteresse zugunsten des gemeinsamen Projektansatzes nicht zurück, aber wir sagen nicht immer, ich will noch mehr. Das ist ein Punkt, der ganz hilfreich gewesen ist, dass man hier wirklich Partner hatte, die bereit waren miteinander zu arbeiten."

[75] „Aber diejenigen Personen dürfen nicht selbstherrlich sein. Es sind daran sicherlich bestimmte Bedingungen geknüpft. Das muss im Vorfeld geklärt werden."

[76] „Ich muss immer einmal um mich rum denken."

tend to look for positive aspects, such as resources, knowledge about target groups etc., i.e. everything that adds to the pool of valuable networked resources, 2. they also look for those aspects the other stakeholders involved do not have, know about or are competent in etc. in order to know where to add value by complementing these profiles and 3. they generally tend to hold a "service-attitude", they want to be helpful, they are aware of that and they suppose that the other stakeholders know that too.

At the same time they prefer to gather people around them who also contribute proactively to create something new as shown in section 6.1. One network manager gets to the point here:

> *"It is characterised by the fact that today we [the network] consist of people who really want to participate and that we do not try to carry dogs to the hunt.[77]" (Interview 12, 13)*

> *"I personally learnt that when you know what you want and you try to get it, then you will get it through. The best example for that are the beginnings of this network.[78]" (Interview 9, 84)*

Along with this a certain tolerance for risks goes along:

> *"Of course you need to be creative but such decisions also need to be kept. Then you get along. But you cannot always just shiver because of fear.[79]" (Interview 9, 76)*

These quotations and the general tendencies that are indicated by them clearly point to what mainly Skidmore (2004) refers to when he states that network leaders are quite different from what was long called the "great man" (-theory). One of the most basic characteristics of a network manager that can be derived from the results here is his or her ability to competently deal with interdependencies, human relations and emotions as well as the ability to not insist on personal credit.

The hypothesis formulated in chapter 5.1 argued that network managers III.1 need to be able to perceive accurately the social ties between the stakeholders, III.2 tend to have a more congruent and thus accurate conception of the networks ties and their strengths compared to network partners and III.3 need to be good at helping others to overcome a competitive mind-set in order to cooperate concerning a certain common interest.

Now these hypotheses can only be answered differentiated and the data does only help to support them partly. Concerning hypothesis III.1 it is not possible to judge from data available what the accurate tie structure is. Thus, it can also not be confirmed that the network manager's conception fits it more than the network partner's perception (III.2). It would be necessary here to firstly have the accurate tie structure and then to correlate the network members perception of it. These results would then be able to support or disconfirm the first two hypotheses. This was not possible because of the limited scope of the data (three answer categorical ordinal measures, see section 6.3.1). With the data available, it was possible to describe the perceived structures and compare perceptions of

[77] „Es zeichnet sich dadurch aus, dass wir uns heute im Grunde aus Leuten zusammensetzten, die wirklich mit tun wollen, und nicht versuchen, Hunde zum Jagen zu tragen.

[78] „Ich persönlich habe gelernt, dass wenn man weiß, was man will und hinterher ist, dann bekommt man es auch durchgesetzt. Das beste Beispiel ist hier eigentlich der Beginn dieses Netzwerks."

[79] „Man muss natürlich kreativ sein, aber Beschlüsse müssen auch eingehalten werden. Dann kommt man auch durch. Aber man darf nicht immer bloß vor Angst zittern."

network members. Thus, it was shown that for the one exemplary network the perceptions of network members differ, that the network manager had a perception to each of the relational fields in contrast to most of the network partners. Another exemplary network created by the combination of ego-perceptions, it could be described how the network manager positioned himself within his or her core team. The danger of monopolised knowledge residing in the network management position was illustrated this way. Furthermore, the added value of exchanged tie perceptions and the related knowledge about the access options to the connected resources was depicted.

Concerning the third hypothesis (III.3) relating to the overcoming of competitive mind-sets, the interview data provided confirmative findings and further insights. Here, mainly showing a consequent, open and honest behaviour was named to be a successful method as well as being aware of the effects of one's behaviour and ties on other stakeholders' decisions.

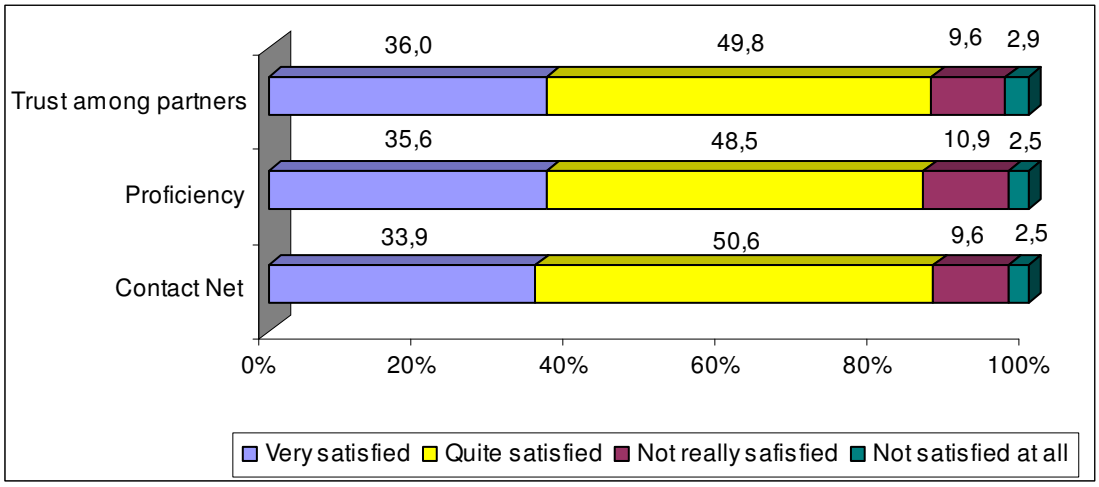
## *6.4. Leadership and Management*

As described in chapter 4 a network is a very special form of collective organisation and it requires a different form of leadership and management style. And as shown there, this style is different from the ones in hierarchies (principle of formal power) and markets (principle of trading) in general. Moreover, network management is dependent on the network member's acceptance and their perceiving the network managers job activities as an adequate style of leadership. Thus, before analysing the expert interviews according to which leadership and management activities were applied, some evidence from the quantitative survey is presented. The sample consists of the network managers and the network partners (n=239) with the questions[80] referring to the level of satisfaction with 1. the network manager's contact network, 2. the network manager's proficiency and 3. the trust between the network partners. In figure 26 the answers to these questions are illustrated.

The overall results here imply that the satisfaction concerning these three aspects is very high because for each question the added answer percentages of "very satisfied" and "quite satisfied" lie between 84%-86%. Hence, it seems to be a reasonable conclusion to state that concerning these aspects the network managers in the learning regions were successful in their applied leadership and management style.

[80] See question 11a in the network managers questionnaire and question 11 in the network partners questionnaire

*Figure 26: Satisfaction with the Network Managers Concerning their Contact Network (n= 231[81]), their Proficiency (n=233[82]) and the Created Trust between the Network Partners (n=235[83])*




The results for the satisfaction with the established contact network already indicate that the network managers' roles were perceived as necessary and their activities concerning contact networking were perceived to be very successful. And since in section 6.1 contact networking was identified as one of the three core tasks for network management, good results with this task are one important step to being a successful network manager.

In interpreting these data, it has to be taken into account that the item "Satisfaction with the Network Management's Proficiency" is quite abstract and "network management's proficiency" was not defined. So here, the respondents referred to what they expected the network management to do and be good at. But also here the answers to the level of satisfaction with the network management's proficiency point into the same direction as the preceding ones: 35.6% were very satisfied, 48.5% were quite satisfied, almost 11% were not really satisfied and again only 2.5% were absolutely not satisfied with the network managements proficiency.

Concerning the "Satisfaction with the Trust between the Network Partners" it needs to be noted that creating trust does not exclusively reside in the network manager's abilities. He or she can provide the grounds but cannot control the network partners' behaviour toward each other. The satisfaction with the created trust between the network partners is thus regarded as a result of common effort. Nonetheless, the results to this question again show that all network members seem to be highly satisfied with the created trust: 36% are very satisfied, 49.8% are quite satisfied, 9.6% are not really satisfied and 2.9% are absolutely not satisfied.

An important part of analysing the Network Managers' leadership role is to take a closer look at how they define their role themselves. The expert interviews revealed some overall characteristics of their role descriptions which are briefly specified in the following paragraphs and exemplified by quotations from the interviews.

[81] Rest are missing: n=8

[82] Rest are missing: n=6

[83] Rest are missing: n=4

### 6.4.1. Own Role Definition

Network managers need to make it very clear to all stakeholders involved that their core understanding of their own role is not to be another player in the region who wants to compete on the educational market. They need to point out where they see their own role and tasks. For example, they should insist on their interests add to the others and that they do not try to substitute some other stakeholders position (Interview 4, 97). Thus, to create cooperative structures (see for example Interview 4, 38-39) is oftentimes the main goal.

Nevertheless, the interviewed network managers all found the one or other way of claiming and taking a certain leadership role for themselves.

> *"You call it 'network-leadership'. I hold the strings together.[84]" (Interview 12, 3-6)*

> *"(…) I am the project-leader, with my own definition of what that is, with actually more emphasis on leading than on chairmanship because I have been doing this for quite some time now.[85]" (Interview 3, 6-6)*

Some of the network managers tried to define what network management is to them, mainly referring to their daily work. Here it becomes obvious that some of them focus on their internal team of the network agency and talk about their leadership role there (1) whereas others talk about being the "spider in the net" and focus more on the internal network environment around them (2).

> *(1) "These people here are professionals and my task is to coordinate them and apply that knowledge as effectively for all of us as possible. I see myself mainly as a coordinator (…) I would even sometimes have a facilitating role. I also see myself as leader, facilitating. I am responsible that the people can work as optimally and as well as possible and that we are successful. This is what I see as my central task. And this is what I really spend time on. I observe, I know a lot, actually I know everything that goes on here and I lead if it is necessary.[86]" (Interview 3, 223)*

> *(2) "I knew how to work in fixed working groups; that has always a clear boundary. But with the network it is that there is more hidden than you can see. And that you can still work with what is on the surface at the moment and that the boundaries vanish in the unknown and that everything is always a bit chaotic. But if you remain with the process you can work well with it … a tolerance to step into an unclear context and to operate there and give it structure. And that you fill in gaps in order to initiate change between organisations … where there was a ditch before, something new, innovative is supposed to emerge. (…) there where there was nothing before, something is to be created. Even if no one funds that - still - something new is to emerge here. And I learned to handle that, to handle people, and to give them process and structure but mainly this endurance of chaos,*

[84] „Man nennt das ‚Netzwerk-Leitung'. Bei mir laufen die Stränge zusammen."

[85] „ (…) ich bin Projektleiter, mit meiner eigenen Definition für das was Projektleiter ist, mit dem wirklichen Schwerpunkt auf Leitung und nicht Moderation, weil ich das nämlich schon relativ lange mache."

[86] „Das sind hier Fachleute und mein Ding ist es diese Fachleute zu koordinieren und dieses Wissen nutzbringend für uns gesamt einzusetzen. Ich sehe mich im Wesentlich als Koordinator und da habe ich fast schon, da würde ich mir manchmal sogar die Moderationsrolle ansehen. Ich sehe mich auch als Leitender, moderierend. Ich bin dafür zuständig, dass die Leute so optimal und so gut wie möglich arbeiten und dass wir den Erfolg haben. Das sehe ich als meine zentrale Aufgabe an. Und dafür verwende ich auch wirklich Zeit. Da beobachte ich, ich weiß sehr viel, ich weiß eigentlich alles was hier läuft und steuere, wenn es nötig ist."

*uncertainty and untransparency.[87]" (Interview 11, 112-113)*

One network manager points out the bridging function that was already described in earlier chapters (6.2 and 6.3). Here it is important to note, that this is not just an analytical level but also an experienced one by the practitioners in the field. Thus, they define their own role as the one of an interface manager (see for example Endres 2008, Wöllert/Jutzi 2005):

> *"As project manager, my task is to function like an interface to the political parties, to inner-city organisations, to the region, thus, to all decision makers and to direct the project organisationally, structurally and content-wise.[88]" (Interview 7, 5)*

The next quotation was taken from the interview of one network manager who explained what he is doing on a daily basis and elaborates on establishing platforms for communications (meetings, workshops, conferences, working groups etc.), instruments for the distribution of information (newsletters, events, website etc.) and organisational structures for sharing responsibility and creating a high level of commitment (such as steering committees). But next to these tasks that are already quite unique since they always aim at bringing together people from different organisations and relational fields and thus require a considerable amount of convincing efforts. And since the network members involved do all that besides their actual job within their organisations, network managers do a lot of their work in the informal area of professional life.

> *"Apart from that the creation of networks is a task that is very much an informal one.[89]"(Interview 1, 297)*

In addition to that, network managers are very aware of the other stakeholders being experts in their field. As pointed out in section 6.3, the involved persons need to open up and share their knowledge and network managers have to find ways of establishing trust and getting there. After this has been accomplished, network managers try to organise these experts and make use of their very specific and valuable knowledge:

> *"These are experts and my job is to coordinate these experts and apply their knowledge where it creates most value for us. I see myself mainly as a coordinator and I would rather see myself in having the chairmanship. I also see myself as a leader, facilitating dialogue. I am responsible for that the people work as optimally and as well as possible and that we have success. This is what I see as my core task. And I really do spend time on that.[90]" (Interview 3, 223)*

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[87] „Aber mit dem Netzwerk ist es ja so, dass mehr im Verborgenen bleibt als man sieht. Und dass man da trotzdem arbeiten kann was grade an der Oberfläche ist und die Ränder so im Nichts verschwinden und dass das alles immer ein bisschen chaotisch ist. Aber wenn man bei seinem Prozess bleibt dann kann man gut damit arbeiten. Eine Toleranz sich in einen unüberschaubaren Zusammenhang zu begeben und da zu agieren und zu strukturieren. Und dass man da Zwischenräume ausfüllt um Veränderungen zwischen Organisationen zu initiieren (...) da wo ein Graben war soll ja jetzt was ein. Auch wenn das niemand finanziert, aber es soll ja was Drittes, Neues entstehen. Und das zu handeln, den Umgang mit den Leuten und denen Prozess und Struktur zu geben habe ich natürlich auch gelernt. Aber vor allem dieses Aushalten von Chaos, Unsicherheit und Unübersichtlichkeit."

[88] „Als Projektleitung habe ich die Aufgabe, die Schnittfläche zu den politischen Parteien, zu den innerstädtischen Organisationen, zur Region, also zu allen Entscheidungsträgern herzustellen und das Projekt eben organisatorisch, strukturell, inhaltlich auszurichten und zu steuern."

[89] „Ansonsten besteht die ‚Netzwerkknüpferei' von so einem ‚Netzwerkknüpfer' ziemlich viel in informellen Dingen."

[90] „Das sind hier Fachleute und mein Ding ist es diese Fachleute zu koordinieren und dieses Wissen nutzbringend für uns gesamt einzusetzen. Ich sehe mich im Wesentlich als Koordinator und da habe ich fast schon, da würde ich mir manchmal sogar die Moderationsrolle ansehen. Ich sehe mich auch

This network manager explained the difficult circumstances in the region concerning profound industrial cluster dissolutions and thus the consequences of many people being unemployed and not having a professional perspective. The social effects of this development on the inhabitants of the region he describes as de-motivating, frustrating and a sense of living in unchangeable circumstances that need to be endured. People tend to wait for others to act, he points out. The network is a means of changing this:

> *"That has always been our demand towards ourselves: to get out of this at least a bit. So, not to send a list with requirements to [the state's capital]. And that has also nothing to do with the new government of the state. In the past it has been just like that. You can make the list for [the state's capital] but it will not help a lot.[91]" (Interview 1, 279)*

This tendency of feeling responsible for the educational and social needs in a region and trying to initiate a new way of thinking and interacting with the given circumstances could be regarded as a form of social entrepreneurship. Moreover, this approach also results in the network managers directing the involved stakeholder's attention to their own system and in how far they contribute to their problems. This is one main focus of Theory U (Scharmer 2007): the members of a system start to understand that they are part of the same larger entity and perceive themselves as contributing to a problem they complain about. Once this understanding has been formed (at the bottom of the 'U'-process) a new perspective and direction can be commonly created. This is why a very important aspect in network leadership is to keep others involved. As one network manager points out, a product is not good if we do not need others for it. Hence, he says

> *"Sometimes I decide to include them all, very much on purpose.[92]" (Interview 3, 220-221)*

Now as much as this is a symbolic or strategic decision, network managers need to be aware of how the network is perceived and what effects that has. On this basis they make decisions for the network as one interviewed expert points out, there seems to be a certain size of a network management office that is regarded as pleasant by the surrounding regional stakeholders. Thus, growing even more would again raise some basic competitive fears and then the network manager stresses how much effort he spent in reducing these fears in the first place so that he now is not interested in returning to that phase again.

Another core aspect in learning regions that supports the network manager in leading the network and uniting the stakeholders concerning their goals as well as in keeping them motivated is a common vision. This aspect is a central issue in many of the interviews and is presented in more detail in the following section.

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als Leitender, moderierend. Ich bin dafür zuständig, dass die Leute so optimal und so gut wie möglich arbeiten und dass wir den Erfolg haben. Das sehe ich als meine zentrale Aufgabe an. Und dafür verwende ich auch wirklich Zeit."

[91] „Das war auch immer so ein bisschen der Anspruch da heraus zu kommen. Diesen Anspruch haben wir auch an uns selbst. Also nicht einfach eine Liste mit Forderungen nach [Name der Landeshauptstadt] zu schicken. Ds hat mit der neuen Landesregierung auch gar nichts zu tun. Das war früher genauso. Diese Liste nach [Name der Landeshauptstadt] kann man zwar machen, aber es hilft nicht viel."

[92] „Manchmal entscheide ich bewusst alle mitzunehmen."

### 6.4.2. Common Vision

Most of the interviewed network managers pick out a common network vision of all stakeholders as one of the core aspects when it comes to leadership and commitment. They all point to the fact that there needs to be some identification and emotional attachment to a commonly defined higher purpose of the network:

> *"You need to go a common dream. This vision of a learning region, there needs to be a benefit at the end, a regional benefit. And transport this benefit. Then you have many partners.[93]" (Interview 3, 333)*

Most of the network managers who had a vision in mind wanted to change something in their region. Some generally wanted to increase the fun of learning and help people to see the value of learning (see for example Interview 5, 191). Or they want to support the inhabitants of the region concerning the increase of self-efficacy:

> *"People should again start to believe in themselves. Then things will start to develop and people would notice that they have advantages with education and can achieve something.[94]" (Interview 9, 19)*

Thus, network managers together with their core team try to direct people's attention towards education and its benefits (see for example Interview 2, 134). Moreover, some point out that education and information are an obligation to be fulfilled in that they try to implement projects that activate potential learners. They invest in "Go-Structures" rather than in "Come-Structures", i.e. to go where the potential learners are, bring the information to them and try to transport some fun (see for example Interview 1, 183). Some also claim that it takes "lighthouses", i.e. people who have charisma, affect people's opinion and convince them but who also have the political prestige within the region.
In addition to that they sometimes think in "big pictures" like the network manager who compares the network to a neural network with active and inactive ties and nodes (see section 6.3.3). Here the network manager's comprehension of a networked structure of potentialities as stressed for example by Aderhold (2005) becomes visible: it is possible for him to choose or activate certain specified partners for certain topics/projects within the potentials of a dynamic substructure. Another network manager has illustrated the vision together with his core team in drawing a picture that portrays the network and its beneficial effects for the three involved municipalities as waves in a lake:

> *"At three points in the lake a big stone is thrown into the water, you can imagine how the resulting waves overlap at some point. And there are intersections, there are commonalities but there is also always an autonomous part that works for the needs of a municipality.[95]" (Interview 3, 26)*

On a more concrete level some network managers reported on the idea of developing regional industrial clusters and tailor-making the educational offers for these employers so

[93] „Man muss diese Vision einer Lernenden Region, da muss am Ende auch ein Nutzen sein, ein regionaler Nutzen sein. Und transportieren Sie diesen Nutzen. Dann haben Sie die vielen Partner."

[94] „Die Leute sollen wieder lernen verstärkt an sich zu glauben. Dann geht es auch los und die Menschen merken, mit Bildung habe ich Vorteile und kann etwas erreichen."

[95] „Drei Stellen im See wird ein großer Stein ins Wasser geworfen, das kann man sich bildlich vorstellen, wie sich die Wellen irgendwann schneiden. Und da gibt's Schnittmengen, da gibt's Gemeinsamkeiten aber es gibt auch immer so einen eigenständigen Teil, der auf die Bedürfnisse eines Landkreises hinarbeitet."

that the competitiveness and attractiveness of the region is fostered. This also results in actively engaging in changing regional structures with all stakeholders involved. Thus, another vision is to develop a regional culture of cooperation that induces trust on an organisational level. Another network manager clearly states:

> *"We want to become the best networked educational landscape in Europe.[96]" (Interview 3, 44)*

### 6.4.3. Structuring and Organising

As described in chapter 4 the structure of a social network, i.e. the potential interactions along the ties determines how knowledge can possibly be passed on. On an abstract level the relationships between people were described as the streets on which knowledge travels. Nevertheless, in most cases, the network started off with some educational products and services that were either innovative or generally missing in the regions educational market portfolio. But this meant that the already existing educational organisations perceived the network and its products as a new competitor on the market and would in some cases not collaborate. The network strategy that turned out to be most fruitful here is focusing on two main points: (1) network management needs to find a niche between organisations that serves the potential competitors' needs and interests and (2) if new projects are initiated by the network management, their implementation should be passed on to the most adequately skilled and equipped partner organisation in order to create value there. If there are projects that the involved organisations cannot handle themselves (for example because they do not have project oriented organisational structures with timely flexible staff in terms of their time, such as schools or because their legal form does not allow for that), the network management keeps doing it (such as regular events etc.)

> *(1) "The first step is then to communicate to the existing counselling agencies that you do not try to compete with them but rather that you are offering a service to them. If you succeed with that, you have won. That sounds quite simple but I tell you, you should certainly plan that this will take you two to three years until you succeed.[97]" (Interview 4, 94)*

> *(2) "In that we do not only have our own interests in mind but also observe what happens in our environment and then to some degree we also withdraw from the actual projects, we only initiate them. (…) We have done our job by the end of the planning and initiation phase. And that has a regional impact.[98]" (Interview 4, 154)*

The next quotation illustrates the process of connecting people from different fields, the experienced difficulties and resistance as well as the network managers learning process within these meetings:

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[96] „(…) wir wollen die bestvernetzte Bildungslandschaft in Europa werden."

[97] „Der erste Schritt ist dann den vorhandenen Beratungsstellen zu vermitteln, dass man nicht in Konkurrenz tritt, sondern dass man eine Dienstleistung für diese Beratungsstellen erbringt. Wenn einem das gelingt hat man gewonnen. Das hört sich unheimlich einfach an, ich sage Ihnen aber, da können Sie mit Sicherheit einen Zeitraum von zwei bis drei Jahren hinterlegen bis Sie das geschafft haben. "

[98] „Indem wir nicht nur unsere eigenen Interessen im Kopf haben, sondern schauen was in der Umwelt passiert und es ist dann auch teilweise so, dass wir selber in den eigentlichen Projekten uns dann auch zurückziehen, wir initiieren diese Projekte nur. (…) Da haben wir unseren Job dann in der Planungs- und Initiierungsphase dann auch erledigt. Das hat schon regionale Wirkung."

> *"The experience I made that though everybody complains and moans about people in these networks coming from different cultures, there are institutional cultures, sitting together and trying to communicate with each other in a painstakingly slow process with all the accompanying alienated feelings gradually starts to develop a certain viability for me (…) And for a very long time, I thought, I am not going to do this. I left these meetings and was really worn out (…). But meanwhile I can listen more calmly because I found out that this situation has certain attractiveness to it for the people. I believe they find it exciting. Some of them like it more, some less. So, even if it's just that they understand that the others look at them and their actions as if from a different planet. I find that fascinating and this is when I learned how something like that can support a network and what I also learned is to operate within interdependent structures. A network is also always face to face.But networking is more: it means that you always need to work with the centres where something concentrates and intensifies just now and everything just vanishes into nothingness and that this isn't a bad thing! And I learned that you can work like that.[99]"(Interview 11, 109-111)*

Moreover, if something cumulative is perceived and identified, this is when a new sub-topic emerges. So, the network manager's job is more to go to the people and places and find out where project ideas and partners accumulate around a certain topic. Thus, network managers see it as their role to look for the potential, the needs, the resources and the people's will to contribute. This is the starting point where they facilitate for something innovative and new to emerge. These sub-topics are initiated and then the further organisation and implementation are passed on to other sub-project coordinators.

> *"So (…) that we now have 12 houses, 12 institutions equipped with the personnel that take over exactly that task of network coordination: approaching the educational institutions and providing the educational offers or organise it in their close surroundings and to organise that tailored to the needs.[100]"(Interview 7, 20)*

Furthermore, in passing on the responsibility for developing sub-projects and with it sub-networks, network managers build other leaders (see Skidmore 2004) and need to be able to let go. If they were successfully establishing such a regional network at some point they cannot be the "personified learning region" (Interview 2, 6) anymore but they need to be able to step back so that the leaders they nurtured can take over. This is a process that is described as very difficult on the one hand but also as a rewarding success on the other hand. It is difficult because it is connected to a high degree of uncertainty again and of not knowing the loose ends of the network anymore. At this point network managers are required to let go the taking of the initiative so that the network can develop itself. This is also pointed out by Bienzle et al. (2007) as described in chapter 4.3.2. One network

[99] „Das fängt langsam an für mich eine gewisse Tragfähigkeit zu bekommen, dass ich die Erfahrung gemacht habe, dass die Tatsache, obwohl alle stöhnen und jammern, dass Menschen in diesen Netzwerken aus den verschiedenen Kulturen, also Institutionskulturen zusammen sitzen und sich mühsam versuchen zu verständigen mit allen Fremdheitsgefühlen die dazu gehören. Und da hab ich lange gedacht: das mach ich nicht. Ich ging da immer raus und war fix und fertig weil ich gedacht hab ich muss die jetzt.... Aber inzwischen kann ich da gelassener zuhören weil ich erfahren habe, dass allein diese Situation eine gewisse Attraktivität für die Leute besitzt. Die finden das glaube ich ganz spannend. Die einen mehr die anderen weniger. Also allein dass sie da von den anderen mitkriegen, dass die vom anderen Stern aus zugucken. Das finde ich sehr spannend und da habe ich gelernt wie so etwas im Netzwerk tragen kann und was ich noch gelernt habe ist agieren in Zusammenhängen. Netzwerk ist ja auch immer Face-to-Face. Was anderes ist für mich auch Netzwerkarbeit: das man da immer mit den Zentren arbeiten muss wo sich gerade was bündelt und verdichtet und alles andere verschwindet aber im Nichts und, dass das nicht schlimm ist! Dass man so arbeiten kann habe ich gelernt."

[100] „So (…) dass wir jetzt 12 Häuser, 12 Einrichtungen haben mit ausgestattetem Personal, die genau diese Koordinationsleistung - nämlich die Bildungsträger anzusprechen und die Bildung in der Kindertagesstätte anzubieten oder im nahen Umfeld das zu organisieren und das bedarfsgerecht zu organisieren für die Eltern, das übernehmen dann diese Netzwerkkoordinatoren."

manager describes this as an answer to the question of what the effects and results of his work are:

> *"There are other effects. There are great collaborations. There are developments of new projects and things alike. I believe that there are really great effects. But I need to say it again here. Here I am sitting in my network node and cannot see the end of the spider's net. I do not see all nodes.[101]" (Interview 3, 337-338)*

Here, the network manager goes on to explain that he does not want to be the "learning region" in person. This might happen for the boss of a company as he says but a network is not to be compared with a company.

> *"This is not a company. This is a network and a network creates itself by networking. There are new nodes and I do not know all of the nodes.[102]" (Interview 3, 342-343)*

The network manager's own uncertainty of what is developing at the ends of the network that he can perceive is articulated here. Thus, this is one point where he or she can no longer manage people, resources and processes. This could be regarded at one point at which network leadership starts. Another network manager has a very positive image of what is probably happening at these loose ends. He reports about a sub-network (concentrating on environmental learning) that was initiated within the larger learning regions network:

> *"(…) where now we do not have the responsibility for it anymore, the stakeholders still collaborate and succeed at getting certain topics on their way and where they understood that it is possible to interact with each other and engage in mutual exchange and look for new partners.[103]" (Interview 2, 80)*

Thus, in general, there is the tendency to organise the partners of a network in terms of intensity of contacts and frequency of meetings in concentric circles around the network management. There is the core team of the network members who were very often with the network from the very start and are very well informed, committed and active. This core team should be open, beneficial for the stakeholders involved and have an integrative and cooperative approach to differing opinions, new knowledge and interested stakeholders. Moreover, they should also be well connected to the involved relational fields.

These findings confirm to a high extent the hypothesis stated in chapter 5.1. in that IV.1 network managers really have to be perceived as good leaders who bring about the desired results. This finding is confirmed by the survey results concerning the items for satisfaction and the network managers own role definition. Regarding the second hypotheses that focused on facilitating the creation of a common vision, the findings do show that most of the network managers have a vision and that a few of them also talked

[101] „Es gibt andere Wirkungen. Es gibt tolle Zusammenarbeiten. Es gibt Entwicklungen neuer Projekte und so. Ich glaube schon, dass es auch wirklich tolle Wirkungen gibt. Aber da muss ich wieder sagen, da sitz ich in meinem Netzwerkknoten und sehe nicht das Ende des Spinnennetzes. Ich sehe nicht alle Knoten."

[102] „Das ist keine Firma. Sondern das ist ein Netzwerk und ein Netwzerk, das knüpft siche weiter. Da gibt es neue Knoten und ich kenn nicht alle Knoten."

[103] „(…) wo auch jetzt, wenn wir nicht mehr die Verantwortung dafür haben, die Akteure weiterhin zusammen arbeiten und verschiedene Dinge auf den Weg bringen und sie verstanden haben, dass es möglich ist, sich miteinander auszutauschen und neue Partner zu suchen."

about having created them with their fellow core team. However, neither of them actually described a facilitating process and of the clearly defined goal of creating a common vision. Thus, the findings suggest that having a vision is beneficial in that it helps to unify the network members in their interests and motivations but they do not show that for the networks of the learning regions this was necessarily an important part of the common work.

The last hypothesis concerning the necessity for the network managers to structure and organise the network is confirmed but not solely on the basis of this chapters elaborations. Some looking back to sections 6.3 and 6.4 is required. Here it turns out that network mangers take over the responsibility of caring for the relations within the network. And in order to fit the network's purpose to its structure, a network manager needs to cluster people with their organisations around their "cumulating" interests. Within this clustered structure a network manager also needs to nurture other leaders so as to overcome the members over-reliance on him or her and also to not monopolise knowledge. Khan (2004) points out that the four core activities of the network manager here are: dividing members into groups, engaging members within those groups, growing relations within it and only then connecting the clusters formed. While the author suggests to do that from the very beginning, the findings of the learning regions state that first the overall network was formed starting with the core team and only then on a later developmental stage the clustered were formed according to the members needs and interests.

Hence, leadership in networks could be summed up as a process in which the network manager intensely senses what is happening in his or her environment, does not focus solely on the own interests, helps to initiate projects that create win-win-situations for all involved parties and engages in ongoing caring for the relations within the network. This includes that network management taps into the places of highest interest (see chapter 6.2) where something is concentrated that is located outside his or her own organisational focus and feeds back this knowledge to the network so that new ideas, innovation and cooperative projects can be initiated. Network leadership also includes the notion of not being able to manage and control people, resources and processes from a certain point on.

## *6.5. Network Management's Results*

Results of a network management's activity can be observed in general on three levels: 1. on the level of the network structure, culture and cohesion (interorganisational network effects), 2. on the level of concrete effects of the network in terms of products and services (external to the network), and 3. on the level of learning effects. In this chapter only the results of the third level will be presented because the first two levels have already been analysed by the evaluation board of the programme "Learning Regions – Providing Support for Networks" (see Nuissl et al. 2006, Tippelt/Reupold/Strobel/Kuwan et al. 2009 and Emminghaus/Tippelt 2009).

Firstly, it is important to note that the network managers cannot "produce" any of the following results completely on their own. Quite the opposite: they need to become part of a networked system of partners, act proficiently in interdependent structures, take informal leadership and motivate their contacts to work together. Thus, if in the following

sections the network managers results are described it is to be understood in this socially embedded framework of collaborating stakeholders.

### 6.5.1. Network Members and Learning Effects

The interviewed experts state that the network with its cooperation achieved what one organisation could not have accomplished on its own, having aspects like time, volume, service, knowledge, technology in mind (see for example Interview 2, 137). And in order to let these effects and results be beneficial for the whole region, the advice of many network managers is to pass on the successes commonly produced by the network to be "consumed" by regional politics (see Interview 6, 58). The consequent action and promotion by regional politics will then contribute to establish the core ideas within the minds of the regions inhabitants. As one network manager pointed out (see quotation in chapter 6.4) there should be charismatic people in political positions who promote the ideas and function like "lighthouses". One example for such a successful process is mirrored by a network manager who states that the lord mayor has now, after six years of networked projects, commissioned the development of an educational plan for the region.
Moreover, some network managers stated that in the end the network and its work resulted in an increased regional attention for education and learning.

> *"(…) that we contributed that more people are interested in education. One tiny indication for that is for example that after our start with the learning region, after the first conference on the future a regional registered association [name of the region] was founded that aims at fostering education/social issues and culture. If such a registered society suddenly states that education is an issue for [name of the region] then at least we helped to raise the level of attention for the topic.[104]" (Interview 2, 134)*

Apart from that the network manager's activities in creating a network and then focusing the network members' attention on shared aspects and common interests so that cooperation can result, also resulted in a shift within the network partners mind set.
One network manager clearly states that almost everything depends on the persons in network and even if these were people he could not deal with at the start, the moment he entered a dialogue and cooperation levels on which they could finally contribute with what they are good at, he profited a lot from them and the interactions with them (see Interview 2, 149). According to this network manager's attributions, these processes could have happened because of this ability to communicate, lead and manage.
If asked what they themselves learnt during the project, network managers agree on some core aspects, such as showing consequent behaviour, endurance, keeping commitments, being reliable, honest and open:

> *"Frankly addressing conflicts of interests cannot be avoided in networks. It is better to talk about conflicts of interests at a very early stage instead to pretending that they do not exist and wonder after two years why the cooperation structure does*

[104] „(…) glaube ich, dass wir dazu beigetragen haben, dass sich mehr Menschen für Bildungsinteressieren. Ein kleines Indiz dafür ist beispielsweise, hier hat sich nach unserem Einstieg in die Lernende Region, nach der ersten Zukunftskonferenz, hat sich ein Regionalverein in [Name der Region] gegründet (…) der sich auf die Fahne geschrieben hat, Bildung/soziales und Kultur. Wenn so ein Verein auf einmal sagt, Bildung ist ein Thema für [Name der Region], dann haben wir zumindest dazu beigetragen, dass eine größere Aufmerksamkeit für das Thema Bildung geschaffen wurde."

*not work (…).[105]" (Interview 4, 187)*

And if asked how the network members benefit from collaborating in the network, network managers refer to that it sometimes really paid off in terms of money or novel ideas for products, new cooperation partners for future business development etc.:

> *"I think that they learnt that cooperating in projects within networks takes time, proactivity and if you are seriously interested it results in added value and what should not be underestimated as well is that it is really great fun (…)[106]" (Interview 4, 190)*

The finding that network management is in need of a shift in mental models referred to by Prasopoulou and Poulymenakou (2006) is most evident if it comes to cooperation and competition. One network manager illustrates how these two aspects are coming into a new balance within a network:

> *"Competition is the life source in the learning region. Of course, clearly. Firstly among those who joined in the game and those who didn't. The latter naturally state that this is all stupid what you do there because actually you only want to represent your own interests. Secondly, the cooperation between the involved organisations does not eliminate the existing competition between them. Not at all. How could it? Every company and every educational institution have their own economic interests and sometimes it really is such that from these individual economic interests the readiness to cooperate is created. But this is what I said before, this is the art: We succeeded in cushioning the effects of those competitive situations in favour of a common goal; absorbing it a bit but not eliminating it.[107]" (Interview 2, 126)*

Thus, if network partners focus on their immediate profits only, they will most likely remain on a competitive level. Only if they realise the added value hidden in cooperative action with their competitors and other stakeholders, can a network emerge. Hence, with the programme "Learning Regions – Providing Support for Networks", a reason for learning how to become involved in inter-organisational networking was given.
But this positive situated learning space within the network can only be established if the network manager succeeds in producing some early good results.

> *"(…) you know if my fair doesn't go well, in that case I may as well give up, then the learning region [name of the region] is over. That has nothing to do with whatever theory, It just has to be successful and it has to be loved by the active persons." (Interview 6, 100)*

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[105] „Verlässlichkeit, Offenheit und das offene Ansprechen von Interessenkonflikten sind für Netzwerke eigentlich unumgänglich. Es ist besser zu einem relativ frühen Zeitpunkt Interessenkonflikte anzusprechen, als so zu tun als wären sie nicht vorhanden, und sich dann nach zwei Jahren zu fragen, warum die Kooperationsstruktur nicht funktioniert (…)."

[106] „Ich glaube, dass die gelernt haben, dass diese Projektarbeit in Netzwerken Zeit braucht, Eigenengagement braucht und wenn man sie ernsthaft betreibt in jedem Fall auch einen Mehrwert bringt und, was man auch nicht unterschätzen sollte, unheimlich viel Spaß macht (…)"

[107] „Konkurrenz ist das Leben in der Lernenden Region. Natürlich, völlig klar. Als erstes zwischen denjenigen, die mitspielen, und denjenigen, die nicht mitspielen, die natürlich von außen sagen, das ist alles blöd, was ihr da macht, weil ihr ja nur eure Interessen vertreten wollt. Das Zweite ist auch, dass zwischen den beteiligten Einrichtungen die Kooperation die Konkurrenz nicht aufhebt, überhaupt nicht. Wie sollte es denn? Jeder Betrieb und jeder Bildungsträger, jede Einrichtung hat ein eigenwirtschaftliches Interesse und manchmal ist es tatsächlich so, dass durch das eigenwirtschaftliche Interesse die Bereitschaft zur Kooperation gegeben ist. Aber, das ist das, was ich vorher sagte, das ist ja Kunstprodukt. Wir haben es geschafft, diese Konkurrenzen in konkurrenten Situationen zugunsten des gemeinsamen Ziels etwas abzufedern, nicht auszuschalten, aber abzufedern."

Thus, a network manager's track record is essential together with emotionally involved network members. One other network manager puts it very clearly when he says, that he sees his success indicated by the readiness of the network members to invest money in one of the next events of the network (see Interview 6, 173). Then there were barriers resolved in that some of the regional stakeholders who were not willing to collaborate with each other are now part of some working groups and actively engage in the regions educational projects.

> *"There is trust. They don't cheat on me. They don't want to rip me off. We would be stupid if we didn't do that together and together we created something bigger and greater. That is what makes the thrill of a network[108]". (Interview 3, 360-361)*

But network managers also point out that trust only comes with common work experience and is dependent on the persons involved. Thus, in the first phase of network creation a commonly shared inspiring idea carries the network and only later on if ties have once been established by common practice, this experience supports further cooperation. And this is beneficial and also promising for all of the involved stakeholders as one network manager stresses:

> *"I have not had that before. That means, we have a network, we know each other and that is good. That facilitates communication a lot. You can do many great things together[109]." (Interview 3, 357)*

These findings show that working together on common projects helps to develop mutual trust but they also point to the fact that there must be some shared rules for common action. Since the stakeholder originate in different societal areas, each with its own culture, logics of action and mind-set, this newly formed collective needs to define shared rules for communication and action. The next section explores this process and sheds some light on several exemplary rules.

### 6.5.2. Common Rules for Action

By the fact that network managers lack formal power, the success of their ideas depend upon their ability to facilitate the process of developing the same perception of the network's challenges and let the stakeholders draw commonly shared conclusions. This might also ensure a better fit to the real needs because all involved stakeholders – the regional experts in their particular field of practice – need to be heard and convinced. They will most likely only go for something that makes sense to them. The shared understanding of the issues at hand is the result of a prolonged process of dialogue as also described in Scharmer's (2007) Theory U (see for chapter 3.5.2). Once the challenges are clear, experienced and shared with the other stakeholders, network managers know that they alone have not sufficient knowledge to come up with possible prototypes. Thus, the active collaboration of and knowledge creation by the network members is needed then.

[108] „Da ist Vertrauen vorhanden. Die bescheißen mich nicht. Die wollen mich nicht über den Tisch ziehen. Mensch wir sind doch blöd wenn wir das nicht gemeinsam machen und wir haben doch gemeinsam was viel Größeres, viel Tolleres noch mal geschaffen. Das macht den Kick von Netzwerk dann schon aus."

[109] „Das hatt ich früher nicht. Das heisst, wir haben ein Netzwerk, wir kennen uns und das ist gut so. Das vereinfacht die Kommunikation in vielen Dingen. Man kann ganz tolle Sachen gemeinsam machen."

Network managers also learnt to develop clarity on what the common rules for action are. Frequently upcoming questions here are for example: For which topics does the network manager need or want commitment? Is he or she authorised by the other network members for that? Network management may sometimes develop a leadership notion but it always is at its heart a service function and never had a controlling aspect concerning the network partners internal businesses (see for example Interview 6, 142). The aspect of controlling is part of the network development for example as concerned in controlling the access of new members to the network. But again, this is based on commonly agreed upon rules that are enacted by network managers. Depending on the involved persons and their goals the common rules for action are tailor made and differ accordingly in inter-network terms.

One of these rules was for many networks that the autonomy of the network members is not questioned in any aspect. Thus, also the benefits that the members derived from the network action was theirs to decide upon, here an example concerning participant numbers is given by a network manager:

> *"I do not need these numbers here. Just to say that very clearly. They have their numbers. Their cooperation and their participation in our events is the confirmation that these activities make sense because otherwise they would not participate. They would not participate in a costly learning feast or further education fair if it did not pay off.[110]" (Interview 4, 57)*

In the first two years the networks oftentimes just tried new things, and what works best and is liked by the customers is then kept and established. This is clearly what Scharmer (2007) calls a "prototyping" phase. Beforehand, many network managers did a need analysis in the region that can be done quickly with the instruments briefly described in section 6.2.3. But in general the network managers learnt to avoid "analysis paralysis" as also recommended by Scharmer (2007) and illustrated in the following quotation by one of the interviewed experts:

> *"You know, these numbers do not exist. If you do a thorough need analysis (…) then the funding period is over. You own a needs analysis then but have not succeeded with anything else. (…) You have to become active. The best needs analysis does not position a learning region within a region.[111]" (Interview 12, 166)*

They learnt to think strategically and plan in phases for reflection:

> *"(…) where it is about working creatively, and thinking strategically, then you need the time and leisure for it (…).[112]" (Interview 5, 118)*

And in order to connect to the different relational fields, the network managers learnt to know, respect and apply the communicative rules of the other party – whoever that is.

[110] „Was jetzt die Teilnehmerzahlen bei den Partnern, also den Weiterbildnern, angeht, diese Zahlen brauche ich hier nicht. Um das mal ganz deutlich zu sagen. Die haben ihre Zahlen. Deren Kooperation, deren Teilnahme an den Veranstaltungen ist letztendlich die Bestätigung dafür, dass diese Aktivitäten sinnvoll sind, denn ansonsten würden sie nicht daran teilnehmen. Die würden sich nicht kostenpflichtig für ein Lernfest oder eine Weiterbildungsmesse anmelden."

[111] „Wissen Sie, diese Zahlen gibt es nicht. Wenn man eine Bedarfsanalyse macht (…) dann ist die Förderperiode zu Ende. Man hat eine Bedarfsanalyse aber nix geschafft. (…) Mann muss aktiv werden. Die schönste Bedarfsanalyse positioniert eine lernende Region in der Region nicht."

[112] „(…) gerade beim kreativen Arbeiten, wo es dann auch mal darum geht, sich strategische Gedanken zu machen, wo man einfach etwas Zeit und Muße braucht (…)."

Thus, they learnt to be diplomatic, have the others' interests in mind as well, be clear about their own interests and try to establish partnerships on a level playing field, so that there is benefit generated for all involved stakeholders (see for example Interview 5, 302). A network membership can thus never be a one-way street. Very much in alignment with this result, one network manager pointed out that she saw that a development process in which institutional limits are overcome starts to evolve more and more:

> *„(…) that slowly but surely the institutional limits are not the limits of action anymore.[113]" (Interview 10, 109)*

Crossing borders was very often stressed by the interview partners and here they referred to institutional, cultural, geographical, historical, language borders (see for example Interview 2, 7 or Interview 3, 21) but also the borders in people's mind-sets (see for example Interview 6, 110).

Moreover, networks with their network managers learnt to generate money for common projects. These projects oftentimes fill the "social gaps", i.e. that what is needed in a region, often a product for the commons that no one else is legally responsible for or has the necessary resources and motivation to accomplish it.

> *"(…) we need to balance the necessities with the re-financing options. As I said, there are many topics that need to be taken care of, but you cannot do it all on your own. You have to go where there is not just work but also money. There is always more work than you can handle, but [you need to go where] there are financial resources immediately or in the medium term.[114]" (Interview 4, 178-179)*

At the same time network managers also experienced some difficulties that they communicated as perceived deficits, i.e. aspects they missed or have not learnt to do. The last part of this section illustrates these aspects.

*Perceived Deficits*

This intermediary position is not just facilitating processes, developing strategies how to implement certain projects, how to foster collaboration among certain partners but it is also again and again confronted with their non-existent resources of formal power which is oftentimes perceived as a deficit.

> *"We can appeal, we can say this should be done but we cannot enact that direct pressure. We only have the professional and the financial responsibility.[115]" (Interview 5, 310-311)*

Another deficit is the network managers' perceived lack of feedback. Since they are responsible for project initiation and implementation as well as processes that can only occur as consequences of socially facilitated contact networking, their perception of how well they do their job is difficult to validate externally.

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[113] „(…) dass langsam aber sicher die institutionellen Grenzen nicht mehr die Grenzen des Handelns sind."

[114] „(…) müssen wir in Einklang bringen, Notwendigkeiten mit Refinanzierungsmöglichkeiten. Ich hatte ja gesagt, es gibt viele Themen an denen gearbeitet werden müsste, man kann nicht alles machen, man muss da hingehen, wo man nicht nur Arbeit hat, Arbeit ist immer mehr da als man abarbeiten kann, sondern wo unmittelbar oder mittelfristig eine Finanzierung erfolgen kann."

[115] „Wir können appellieren, wir können sagen, das sollte so gemacht werden, aber diesen direkten Druck können wir nicht ausüben. Wir haben lediglich die fachliche Aufsicht und wir haben die Finanzverantwortung."

> *"We know what the job takes, and how it can be achieved. Whether we are good at it I do not know (…)" (Interview 5, 315)*
>
> *"We did not found a new school but we created novel possibilities based on the existing structures and started something new.[116]" (Interview 2, 83)*

These quotations already indicate that in general the network managements' achievements are difficult to measure, quantify and make visible. Since some networks have found ways to evaluate and quantify their internal processes and achievements, the following section gives an overview of the identified tools and instruments.

### 6.5.3. Instruments for Network Evaluation

In general, the challenges defined at the start should be a commonly agreed upon matter of concern. If then, at some point during the project work and network development, the network managers state a need for consolidation and evaluation of the present stage concerning products, services, financial background, strategic decisions, stakeholder arrangement, future options etc. (see for example Interview 5, 202) a common process of self-reflection can follow. The following results on tools and instruments of network evaluation were briefly referred to in the expert interviews. Upon further research and analysis of for example the publications of the networks (Endres 2006, Endres 2007, Sprenger 2006, Kopp 2006) or presentations held for the evaluation board's workshops (see for example Endres 2008) the following instruments could have been identified.

*Necessity of Network Evaluation and Preconditions*

The often referred to need for serving the stakeholders interests and expectations can only be met if those are clearly communicated in the first place. Thus, network managers have to find ways for making these interests and expectations transparent and also the degree to which these are successfully met. Otherwise the network managers can hardly communicate their own contribution and their results. Engaging in evaluation and consolidation is thus also a way for a network manager to make his/her efforts visible to the other stakeholders and legitimise their position. The instruments and tools for organising, managing and evaluating networks should hence be applied in networks in order to organise feedback loops. Here, all levels of learning or feedback loops (single loop learning, double loop learning and deutero learning) as presented in chapter 3.4.1 and referred to by Argyris and Schön (1978) should be considered.

Thus this activity of organising feedback is concerned with the common projects and the expectations towards each other. At this level, good instruments should answer the following questions: "Do we do the right things?" and "Do we do those things the right way?" So, the stakeholders in the network need to find ways of how to answer those questions for themselves on a continuous basis and a high level of honesty. As a consequence the core question to be answered is: "What aspects do we want to address

[116] „Wir haben ja keine neuen Schulen geschaffen, aber wir haben die Möglichkeiten, die sich aus den vorhandenen Strukturen ergeben, so zusammengeführt, dass wir gemeinsam etwas auf den Weg gebracht haben."

on a regular basis in order to give feedback to each other so that we are capable of serving our common network goal the best way possible?"
Thus, the common elaboration of a vision, a strategy, (sub-)goals and cause and effect chains between the sub-goals help to establish transparency, mutual understanding and acceptance of the networks goals and the other stakeholder's interests.

*Some Exemplary Instruments*

For this common process of self-reflection, the stakeholders involved have to agree on criteria and on who is allowed to see which results beforehand. It needs to be clarified how openly the results are communicated and what consequences there are. Some core questions in that process are for example:

- What are the common goals and the consequent strategy for the network?
- Who has what interests and what benefits from being a member in the network?
- How can criteria for evaluation and controlling be developed?
- How can these aspects become transparent?
- How can processes and business development be led in the network?
- How can the stakeholders become involved in the evaluation process?
- How can the results be presented to the stakeholders?
- Which forms of evaluation are suitable?

If these aspects are discussed and agreed upon, network management will want to establish platforms for communicating the results and giving feedback to the stakeholders. These processes can be facilitated by the use of some instruments and tools, namely: Value Benefit Analysis, Stakeholder Analysis, Balanced Scorecard, Value Network Analysis, Intellectual Capital Statement, Task and Instrument Matrix and a Partner Rating. For exemplary reasons, two of them are briefly introduced in the next paragraphs.

Value Benefit Analysis ("Nutzwertanalyse")

This is a method that facilitates the process of asserting value to projects and outcomes that cannot be measured in financial terms. It is applied to complex projects that are concerned mainly with intangible assets and requires the general openness and honesty of the stakeholders in order to get a valid image of real circumstances (see also section 6.3). In a first step the criteria are defined and then the network members classify the importance, i.e. the weight of the criteria. This communicative process initiates learning about the others' interests by finding agreements and talking about why some aspects are more important than others to them. Afterwards, the criteria are related to each other so that a complex and holistic model of the network, its benefits for the involved stakeholders and the degree of satisfaction of these interests is created. This way network developments and project progress can be made visible and controlled.
The basic goals here are a consensual process in which criteria for measurement are defined and the flexibility of not taking the numbers as cutting points in first place but as hints as to where modifications are necessary. For a more detailed description of the process in networks see Endres (2006).

Stakeholder Analysis (Anspruchsgruppenanalyse)

This method focuses more on the individual stakeholders, helps to estimate them, their perspectives and thus fosters the creation of ties. Since networks consist of a mixture of stakeholders (relational fields) that control critical resources, the core goal of this approach is to find ways of how to mutually exchange these resources according to the interests of the involved stakeholders. Thus, a first step is to differentiate between 1) internal and external stakeholders, 2) tangible and intangible claims/expectations and 3) the influence of the network on the stakeholders and vice versa, the influence of the stakeholders on the network. These differentiations and their implications are first discussed and then presented in the form of a matrix that consists of an "active" (strengths of influences on the network) and a "passive" (strengths of influences on the stakeholders) dimension. Thus, the most important questions to be answered here are: Who are our internal and external stakeholders?, What tangible and intangible expectations do they have?, What influence do we have on them and what influence to do they have on us?
In sum, this method's benefits lie in the capacity to help the network members become aware of how many and what kinds of groups have interests and expectations on the network and mainly what their needs are. On a mid- and long-term basis the probability of a network to become sustainable rises with its member's ability to perceive and satisfy these needs realistically. With the implementation of a stakeholder analysis it is possible to not just describe the present state of the art but to develop future perspectives for the creation of goals and relations.

In referring back to the hypothesis stated in chapter 5.1 that focused on the transparency of the network management's results and performance, the findings are mostly confirmative: Hypothesis V.1 stated that the network management's tasks, activities and concerns lie mainly in an intangible (social) area so that the network manager suffer from their results being untransparent. This is true for the tasks that lie in the intangible area, like caring for business relationships but it is not right for other results, such as the organisation of big events or fairs. In the latter case, it is exactly the other way around: if network managers do not produce early good results the network is not attractive for the partners and thus might not exist very long. But for all of the intangible values created, some network managers found ways that on the one hand helped to evaluate the network and on the other hand made their efforts transparent. Two of those are described earlier in this section. Moreover, the explorative analysis on the network managements' results brought about more findings than stated in the hypotheses. These focused mainly on the learning effects concerning interaction in interdependent structures, systems thinking and establishing common rules for (inter-)action.

## *6.6. Summary and Consequences*

The re-analysis of the interview data, the exemplary results on network structure and the survey data presents interesting new insights to the understanding on network

management in the programme "Learning Regions – Providing Support for Networks". There are some core aspects to be seen that seem to be very special to professional regional networks in education.

Firstly, these regional network initiatives are very complex new ways of organising collective action and might add an interesting approach to the recent governance debate. They are for example based on already existing structures, relations and also services and products that need to be taken into account before becoming active. Already here some core stakeholders and their resources and access options to others' resources are decisive concerning networking options.

Secondly, there needs to be a position within the network that is designed to actively pursue network creation, bridge boundaries that have so far been separated, nurture business relationships and thus contribute to mutual inter-organisational trust building.

Thirdly, this position should to be filled with a person who knows about the existing and the potentially created tie structures and is aware of his or her behaviour's effect on the associated network partners and their decisions. This person also should to be able to produce some early good results so as to contribute to the networks attractiveness. This perception among the core network partners is a necessary precondition to trusting that person. Here strong ties are especially helpful because they provide the grounds for honest and deep dialogue and interaction. This again is the basis for the knowledge creation process according to Nonaka and Takeuchi (1995). New knowledge can be created by combining the existing knowledge – also the more tacit aspects of knowledge by shared practice and a trustful relationship. In addition to that the application of the "U-process" enables deep change with unexpected outcomes and the active engagement of all involved stakeholders. This was done by the network and its managers without consciously applying theory U; they just found that this was the most suitable way of initiating that change.

Fourthly, network managers take on a leadership role in that they define their own role as such, need to be able to self-manage, act in interdependent structures and relations, try to create a commonly shared vision, perceive themselves as a part of a larger system and structure and organise the network and its knowledge exchange platforms accordingly. These findings are strongly in alignment to what Senge et al. (2007) point out as the core activities of a learning organisation: personal mastery, mental models, systems thinking, team learning and a shared vision. If network leadership is put forward, voluntarily participating and committed representatives of regional organisations may want to contribute to the creation of a learning region. The sometimes hindering limits of organisations and their structures can be inspired to change by their representatives who are active in the network. These could lead the organisations to engage in double-loop and deutero learning (Argyris/Schön, 1978) so that their structural and organisational preconditions would better fit network activities. As McCarthy et al (2004) points out, "Networks are the language of our times, but our institutions are not programmed to understand them." (p. 11). For a more in-depth analysis of network identity among

network partners and typologies see Tippelt/Emminghaus/Reupold/Lindner/Niedlich (2009).

And fifthly, the programme "Learning Regions – Providing Support for Networks" brought about valuable learning effects for all involved stakeholders. These are concerned with directing people's attention to educational issues and learning, enhancing the regional stakeholders cooperation fitness (i.e. their attitude towards cooperation), thinking in terms of being part of a system, perceiving a new balance of competition and cooperation, profiting from the interactions with persons that are perceived as very different to oneself, activating regional stakeholders for education and being aware of time-intensive processes that affect the whole regional system. Moreover, network managers learnt to fill their "service function" for the network and establish shared rules for common action. In some cases instruments for network evaluation were applied and the results were used for the further development of the network and its strategy.

Overall, it shows that the findings of this analysis point into the same direction as earlier mainly theoretical elaborations (such as Skidmore 2004, Wöllert/Jutzi 2005, Schubert 2008, Endres 2008) do. This study adds the dimension of deep change in regional education markets and also regional developmental issues instead of merely managing relations between networked organisations. By connecting the findings to theories of knowledge creation, the psychology of innovation and organisational learning this thesis also contributes some further understanding for the added value of inter-organisational networks on a learning and knowledge level. But by also referring to the theory and findings of structural and cognitive network analysis this study's findings offer insights into structural developments and changes that were brought by this programme. Newly created interactions and resource exchanges also had effects on the attitudes and learning of the involved persons. Thus, some advice and insight for network managers, change agents and social entrepreneurs can be derived from that.

# 7. Perspectives

In this last chapter the core findings are connected to the theoretical elaborations in section 7.1, afterwards research desiderata are formulated in 7.2 and a perspective focusing on the pedagogical consequences is given in section 7.3.
The core research questions of this thesis were: "What are the complex tasks and challenges of network managers in educational networks?", "What is the special task of "bridging" relational fields concerned with?", "What does a network manager perceive in his or her particular structural position?", "What is an adequate leadership style for network managers in terms of attitudes and tools?" and "How can network managements' results and performance become transparent?"
Moreover, the results suggest a learning process that fits Scharmer's "U-Process" very well and goes along with neurological findings on learning processes.

## *7.1. Core Findings and its Connection to the Theoretical Elaborations*

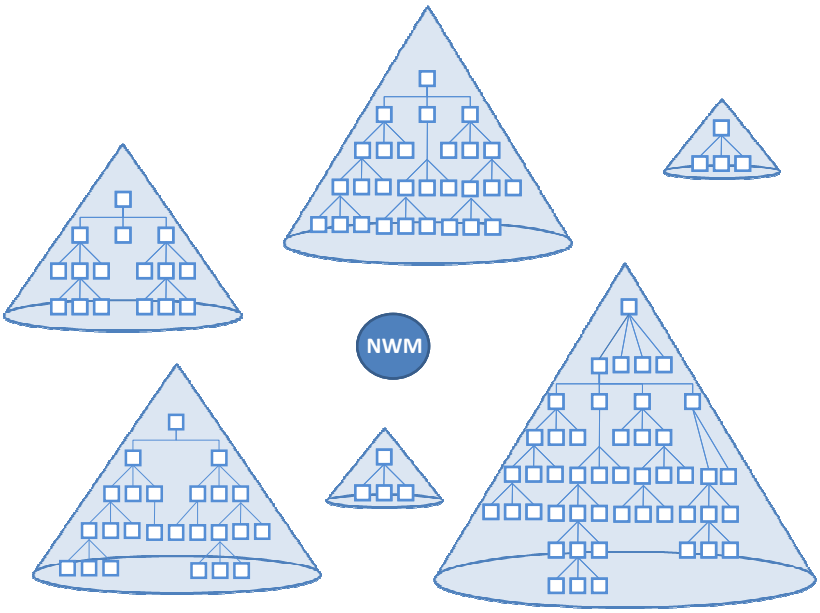
In general, the interviewed experts agreed that networks are pools of potential cooperation that can be activated if needed (Aderhold 2005). The findings also suggest that network management is a collectively created governance institution that facilitates the "in-between" in professional networks. Network managers tend to gain a more holistic view of the network than the members due to their structural position. This different perspective results in the network manager's awareness of other options compared to the network partners perspective. Moreover, in educational regional networks, network management can be established to fill gaps in accountability. This new type of management demands a high level of personal mastery and a cooperative mind-set. Thus, a change in underlying mental models of how the world functions and where the limits are is likely to be obtained on-the-job.
In summary the findings point to three different kinds of conscious "network knowledge" that can be obtained here: Firstly, the knowledge about one's own knowledge and worldview as being limited, secondly, clarity on one's own goals and resources and thirdly, relational knowledge about other core players and the ties between them. This network knowledge turns out to be a necessary condition for professional networking so that autonomy can be maintained while cooperation is pursued.
The awareness about one's own relative position in a larger system enables network members to see their achievements and contributions in relation to those of the other members and as a part of a chain of activities (systems thinking, Senge et al. 2007). This in turn is a precondition for multi-stakeholder approaches and collective action.
In addition, an existing system has limited learning options that are determined by its own structure (see for example Deiser 1995). Thus, the potential resources that are inherent in a system can be used only to the point where the limit given by the existing structure is reached. Consequently, in order to enhance the potentiality of a system, its structures need to be changed.

By initiating new interactions between stakeholders originating in different relational areas or communities of practice, novel potentials were created. This process is mediated by a variety of factors such as path dependencies, the complexity of the situation, the network managers capacity for bridging ties, for being aware of the tie structures and for structuring and organising the network and its knowledge flows.
The following paragraphs combine the theoretical elaborations from chapters 3 and 4 with the findings of the data analysis from chapter 6. These combinations of theory and empiric results are presented according to their procedural structure alon the "U-Process" within the analytical framework, each illustrated by a figure.

*Tasks and Challenges*

At the first stage of network development, the network manager is presented with a highly complex situation filled with widely undefined tasks and challenges that he or she needs to see and understand. These refer to the multitude of stakeholders, the network managers own institutional background and dilemmas. Within this complex situation, his or her core task is to create a network. Figure 27 illustrates the network manager's (NWM) structural position in between organisations. As shown in the findings two options are possible here: the network manager as employee of own network member organisation or a neutral network agency in between. For all following figures the exemplary case of networks with a neutral network management agency in between is chosen.

*Figure 27: Simplified Model of the Situation at the Start of the Networking Activities*



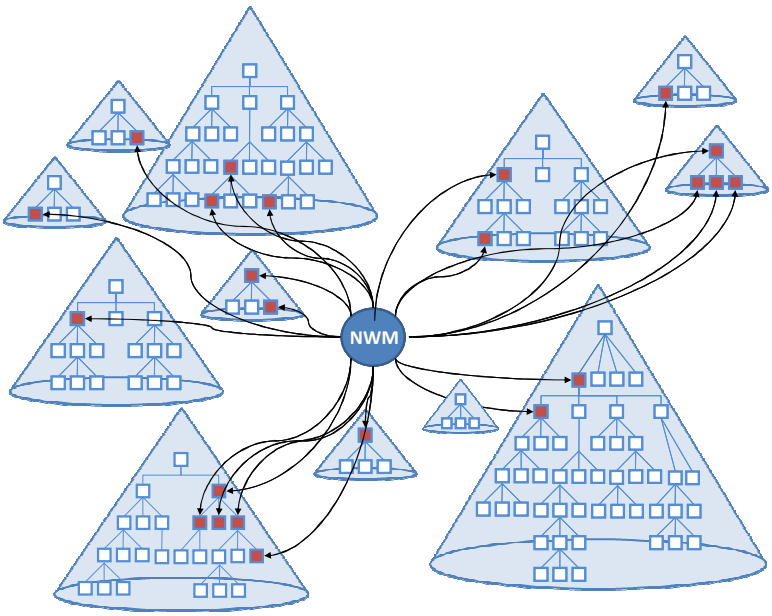

In order to master this stage successfully, a multitude of data has to be gathered, combined and reflected upon. In Scharmer's (2007) terms an intense sensing phase is needed, in which the situation is perceived by talking to the stakeholders, taking their perspective and by going to the places of highest interest concerning the networks goal. This "sensing-phase" is confirmed to produce better learning results the more regions of

the cortex within a human's brain is used. According to Zull (2006) "(…) learning experiences should be designed to use the four major areas of neocortex (sensory, back-integrative, front-integrative, and motor). This leads to the identification of four fundamental pillars of learning: gathering, reflecting, creating and testing." (p. 5). Thus, the desired change requires the network managers to search and choose relevant information and people first. But the network managers also need to know that gathering information does not automatically lead to understanding. Thus, learning is not the same as data collection; a common phase of reflection should follow in order to give the collected data shared meaning.

*Bridging Capacity*

At the second stage, the organisation's employees who are proactive, committed and identify with the network's goal need to be identified (see the red squares in fig. 28). After this the different stakeholder's core competencies and interests have to be identified and possible new connections among them according to common goals and complementing resources must be found.

*Figure 28: Simplified Model of the Second Stage of Network Creation*

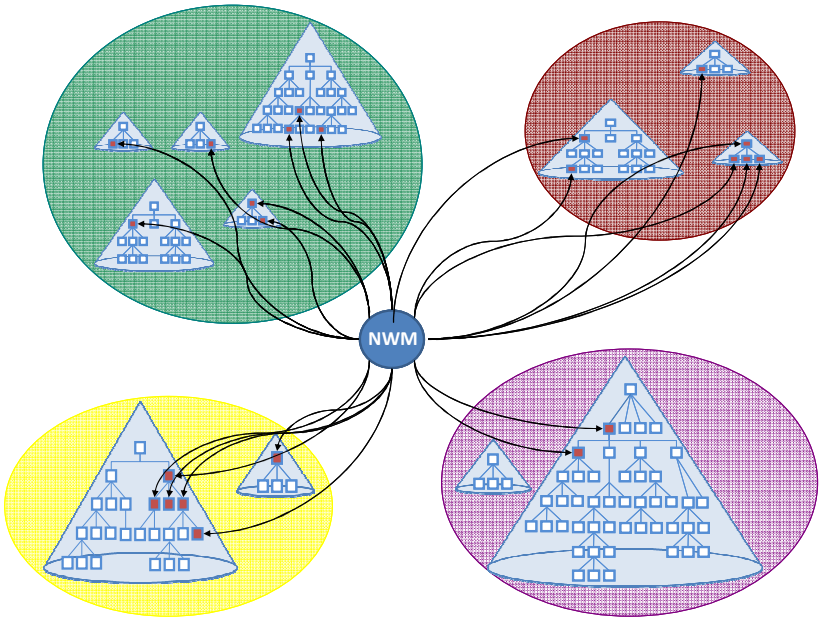



In order to fulfil his or her tasks concerning network creation, he or she needs a "bridging capacity". In general, the argument here is that the more variety of relational fields and stakeholders, the more complex and difficult the network manager's task of bridging these areas and finding common interest becomes. This is also the stage for which Scharmer (2007) has identified a "debating" style where divergent views are exchanged and honest and "tough talking" happens.

*Perception and Awareness of Tie Structures*

At this third level which would be at the bottom of the "U", the network managers who try to create a network are required to perceive the social structural patterns, be aware of the perception of others and consciously direct attention. While figure 29 only illustrates the network manager's ties, he or she also needs to take the other stakeholders ties between each other into account.

*Figure 29: Simplified Model of the Third Stage of Network Creation*



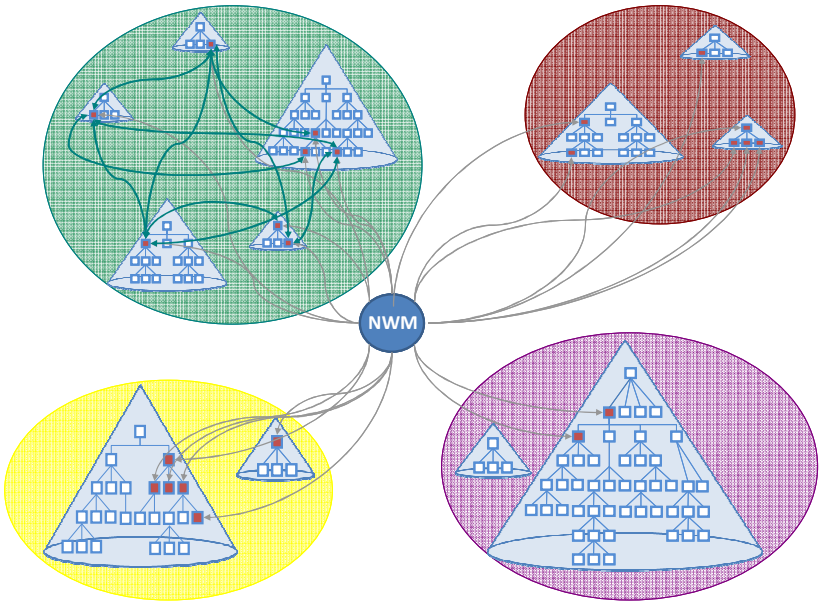

In this phase in which reflection and "letting go" becomes important because the network manager needs to let the stakeholders come together and engage in one of the exchange processes in network creation. Here, the network managers need to sense where "something cumulates" in terms of shared interests or complementary resources etc. and facilitate the cooperative processes. Scharmer (2007) states that the way for arriving at the point where there are not selfish interests involved and something completely new can emerge is difficult because "three inner enemies" or "voices of resistance" (Scharmer 2007, p. 42) must be overcome first: In overcoming the "Voice of Judgement", real creativity and also *others* creativity can be accessed. It provides the ground for the field of "ba" (Nonaka/Takeuchi 1995). The second inner enemy, the voice of cynicism is overcome if taking emotional distance is avoided. Now, this results in a very vulnerable state of being and it is certainly not always applicable. But if a new idea should come up that connects all members creativity, being anxious prevents that deeper creativity as also stated by Cozolino and Sprokay (2006). And the third inner enemy according to Scharmer (2007) is the voice of fear that prevents a "letting go of what we have and who we are" (p. 43). A new definition of tasks, responsibilities, structures and functions requires a very deep willingness to let go of what was known and even successful so far (see also Nonaka/Takeuchi 1995).

In terms of neurological findings Zull (2006) stresses that new data flows in the association regions in the brain and while it does that tiny bits of data are merged into new arrangements that result in a grown and more meaningful image: "Thus comprehension depends on the associations between new events and past events. (…) On the positive side, assignments that encourage students to use negative experiences as a basis for thoughtful reflection and further analysis may help students 'reframe' (find new meaning in) those experiences." (Zull 2006, p. 6) Since network management is a completely new task with quite unique experiences, network managers need to reframe part of their mental models, also cross some inner limits and start to perceive the world as changeable (Frey et al. 2006).

*Leadership and Management*

At the fourth level, network managers who have so far been more in a chair's or facilitator's role; if they succeeded in being accepted they now have the tendency to take on their roles as network leaders. Here, they reflected and defined their own role, oftentimes supported the creation of a common vision and very important: gave the network a meaningful structure in terms of knowledge management. Here they succeeded in not just perceiving "cumulative" interests they also created cooperative business relationships between the other stakeholders so that they can implement common projects without the network manager being a necessary "bridge" in between (fig. 30).

*Figure 30: Simplified Model of the Fourth Stage of Network Creation*




Here the neurological learning findings refer to the processes required in order to develop deep understanding. According to Zull (2006) ascribing meaning and relevance to certain concepts, fact and other information is still part of the association processes where this information is manipulated so that a new solution to a problem arises. This solution is not just an idea of some kind, it is an abstraction and a theory:

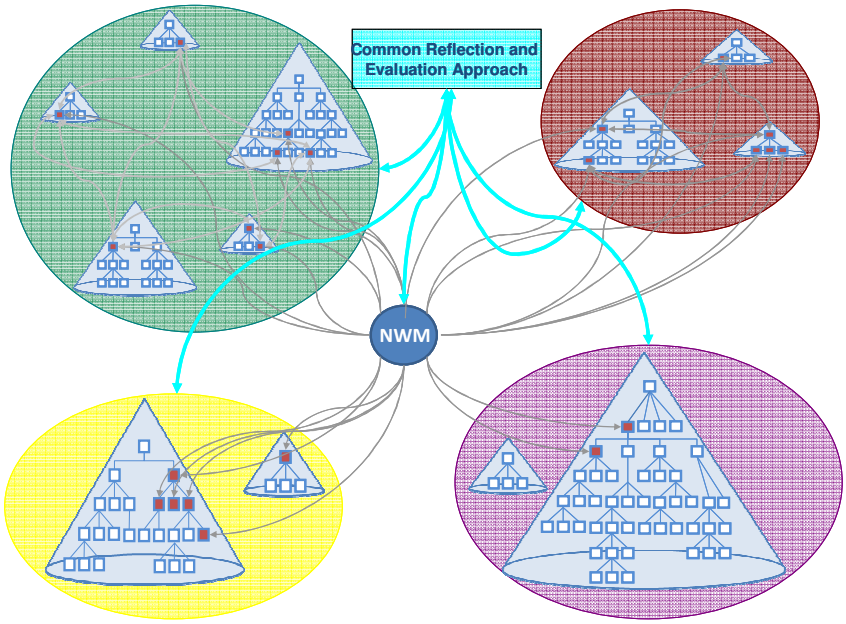
> Such plans, theories, and abstractions consist of a combination of images and language. They are the result of intentional associations, selected and manipulated for a purpose. This is the function of the front association cortex, and it represents perhaps the most elevated aspect of learning. It involves intent, recall, feelings, decisions, and judgements. They are all required for development of deep understanding. (Zull 2006, p. 6)

*Performance and Results*

In the last and fifth stage, network managers start to evaluate their own activities and the ones of the network as a whole. The active testing phase for the "prototypes" is over now and the products and services that proved to be suitable for the given situation need to be identified and kept. The same counts for the rules and structures within the network and the network manager's job.

In the testing phase the conceptions and ideas of the sub-groups within the network were tested in order to discover how well the common understanding matches reality. Now the common evaluation of the network activities begins, for example in using the instruments presented in section 6.5. Figure 31 illustrates this fifth phase, in which a possible network member's exchange pattern is depicted. This active testing, talking and writing down the results change a mental idea into a physical event and thus continues the learning cycle (Zull 2006).

*Figure 31: Simplified Model of the Fifth Stage of Network Creation*




Thus, a network manager's direction of attention should be exactly as indicated by Frey et al. (2006) in that they see what needs to be changed, become aware of where the limits are now and find out how to step into a newly emerging future. Attention must be paid to the positive aspects of building a future: resources, like-minded people and vision and hence to create the tension (Senge et al. 2007) between the present state and the envisioned future, to go for a multi-stakeholder approach, to help people out of their comfort zones by engaging them in an inspiring process.

In considering the theoretical developments and this thesis' empirical contributions there are some more aspects to be identified that should be considered by further research endeavours. These aspects are presented in the following section.

## *7.2. Research Desiderata*

In this thesis a connection of qualitative data with structural and quantitative data concerning professional networks and their management was achieved. The resulting findings were connected to the concept of learning organisations, individual learning processes and change management. These findings illustrated the complexity and variety of tasks, challenges and the necessary capacities of network management. The tension between structure and human agency was a core aspect in the findings and here is also where some further research should be conducted. But moreover since this thesis is based on a re-analysis of mostly existing data, the richness and specification of the available data could be enhanced in a further study. In the following paragraphs research desiderata that refer to these three aspects (network structures, human agency or interactions and the relevant data) are formulated whereby the aspect of the necessary data is linked to the other two and thus explained in connection.

*Analysis of Network Structures*

In my thesis, I concentrated mainly on the institutional range within the network and on the tie perceptions (cognitive tie structures) of the core network team to a certain point in time. Here my data were limited to those network members who answered the questionnaire while in reality the network consists of much more "nodes" and thus interests and perceptions. Moreover, I could not refer to one single network and analyse this network according to all my research questions because the available data did not represent the necessary information for that single network, i.e. either the interview was missing or parts of the quantitative data were missing.
Thus, for further studies, it would be interesting to take a perspective that includes a timely dimension and the whole network, i.e. data from all involved stakeholders. This would enable the researcher to do a social network analysis and, for example, find out on the basis of quantitative data, how communication flows, which nodes take what positions and who has what power in the network etc. Moreover, a developmental viewpoint from the researcher could also apply and test the analytical framework I provided. Moreover, in concentrating more on the organisational dimension than on the societal areas, network specific organisational dynamics and membership dynamics could be derived.

*Analysis of Interactions*

Since the most important aspect of network are the people as my findings confirm, a closer analysis of the people who tend to get involved in network is worthwhile. One possible argument could be that certain personality types fit better into particular positions and thus be more successful in interaction with the other network members. Organisations could identify their representatives for the networking activities by such an analysis. It

could also be rewarding to find out which personality types do not participate in professional networks and identify the barriers and reasons for that.
Moreover the instruments that are thought of bringing consensual benefits (such as a stakeholder analysis) and are applied in network could be tested according to their validity and over quality. As an instrument for network management it needs to foster phases of reflection and evaluation. Here the question would be, if these instruments really do that and how it could be enhanced (see also Endres 2006, Endres 2007).
A very important aspect regarding the analysis of interactions, are the real interactions themselves, so asking questions like: what do interorganisational learning processes look like? How can they be measured? And what exactly is learned there. Thus a deeper analysis of the communication processes is suggested here.

## *7.3. Pedagogical Consequences – the Learning Aspect*

The European Roundtable of Industrialists pointed out in 1995: "In turbulent times, learning organisations need a spirit of enterprise at all levels. That means increasing alertness to change and creativity, self-reliance and self-motivation, initiative and risk taking, ability to perform in ill-defined and fast changing environments." (Cochinaux/De Woot 1995, p. 31). The involvements of organisations in regional networks that do not support this core idea of a learning organisation pose a danger to the whole network's endeavour. This is because in such a complex environment change and looking out for new possibilities needs to become a habit rather than a one-time occasional event. Moreover, in networks the ties between organisations tend to be fluid rather than fixed and rarely part of any formal contract. Thus, a flexibility and general openness to change are preconditions for professional networking too. Apart from that this is as well the basis for constant innovation processes.
The balancing of economic interests with social value, a political dimension and educational tasks is a core challenge in regional networks in education. Even more so, since this also indicates the breadth of the stakeholders core interests. Thus, network management turned out in some of the networks to apply economic principles to social matters and hence qualify for a social entrepreneurship approach.
Furthermore, network managers could also be regarded societal change agents since they initiate that deep change in a larger regional system Scharmer (2007) stresses.
But the findings also clearly point to the necessity of a structural and organisational framework that gives orientation concerning the general goal, but also concerning the definition of priorities and processes and an evaluation that does include external and internal aspects. This framework ensures the network's efficiency which is needed if the network is to be an attractive option for resourceful stakeholders. And moreover, professional networks also need to clarify internally questions of quality, liability, sanctions etc. to ensure a safe working environment.
These findings provide a basis for pedagogic activities in terms of educating the network managers but also the employees involved in their organisation's networking. As shown, network managers are dependent on other persons but must also be equipped with a variety of skills and capacities in order to be successful. Examples for these skills are

facilitation, negotiation, organisational skills but also skills in reflecting on their own reactions and personalities within a given situation. Scharmer (2007) refers to the "inner work", whereas Senge et al. (2007) call that working on one's own "mental models" and developing "personal mastery". My findings clearly point to a person who can endure highly complex situations that are characterised by high levels of uncertainty and open-endedness. This is what Bienzle et al. (2007) argue is an almost impossible state of being, whereas other authors claim that "conscious capitalism" (Aburdene 2005, Scharmer 2007) is on its way and with it a new mental model or paradigm of how the world works and of what is possible and what is not is needed.

In order to help people become able to deal with complementarity, leading without trying to be "the great man" and still produce good results, a novel additional approach to education is needed. While there is certainly lots of knowledge necessary on an explicit and content-wise level, for example concerning legal issues and economic procedures this additional educational approach has to be focused on the social or "inner" development of the learners. They need to be pedagogically skilled but also be able to deal for example with Scharmers (2007) three inner enemies that might prevent effective communication and cooperation. This inner work should be regarded as a key qualification for the network society because it enables successful action in inter-dependent structures such as networks.

If this is the defined educational output a measurement problem will most likely arise here. As Senge et al. (2004) stress, not measurement per se is the problem, the difficulty here is rather the "(…) loss of balance between valuing what can be measured and what cannot, and becoming so dependent on quantitative measures that they displace judgement and learning." (p. 192). Thus, the pedagogical challenge here is to define this new capacity or skill and then to find ways of how to teach it so that societal developments are paralleled by suitable individual learning processes and developments.

In any case, these results clearly point to the fact that network management is not merely describable with a list of tasks but should rather be regarded as a process with different very specific tasks coming up as the network evolves (as also suggested by Riemer and Klein 2006). And as Peat (2007) points out Bohr's term of *complementarity* suits our post-modern world well in that it illustrates that

> (…) the world is so genuinely complex that we must always be willing to entertain more than one version of a truth, even to the point that, when placed side by side, these truths appear paradoxical or even opposed. If this spirit of complementarity could be brought to the debate between groups, cultures, faiths and the issues that face our world it may open up new possibilities for dialogue. (p. 928).

Thus, as societal change agents, network managers could support the stakeholder's re- and un-learning processes concerning accountabilities, responsibilities, mind-sets and a general direction of attention. A shift from reactive patterns caused by the behaviour of others and more stimuli of the outside world to creative patterns that are at the very bottom of one's own direction and location of attention is to be achieved this way. A process of initiating conscious co-evolution while balancing the essential needs and interests of all involved stakeholders could emerge this way.

# List of Figures

## List of Tables

## Literature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## Attachments

***Attachment 1: Network Manager Questionnaire***

***Attachment 2: Network Partner Questionnaire***

***Attachment 3: Ego-Sheet***

***Attachment 4: Guideline for Expert Interviews***

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# Fragebogen „Lernende Regionen“
# - Netzwerkmanager –

**Ludwig-Maximilians-Universität, München / Prof. Tippelt (Federführung)**

**in Kooperation mit**
**Institut für Strukturpolitik und Wirtschaftsförderung gGmbH (isw) und**
**Helmut Kuwan – Sozialwissenschaftliche Forschung und Beratung München**

**Im Auftrag des Bundesministeriums für Bildung und Forschung**
**und des PT-DLR**

**Juni 2006**

## Themenbereiche des Fragebogens

***1. Wirkungen in der Region***

***2: Einschätzungen zur Netzwerkarbeit***

***3. Innovationen***

***4. Hindernisse***

***5. Nachhaltigkeit***

***6. Statistik***

***7. Unterstützungsbedarf***

# *1. Wirkungen in der Region*

*1.) Wie schätzen Sie die Bekanntheit Ihres Netzwerks bei folgenden regionalen Akteuren ein?*

| . | Sehr gut | eher gut | eher schlecht | sehr schlecht | weiß nicht |
|---|---|---|---|---|---|
| Bevölkerung..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Betriebe ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Kommunalpolitiker ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Öffentliche Verwaltung..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Lokale Medien (Presse, Rundfunk, etc.) | ( ) | ( ) | ( ) | ( ) | ( ) |

*2.) Wovon hängt die Bekanntheit Ihres Netzwerks bei diesen Akteuren Ihrer Ansicht nach in erster Linie ab: von Teilprojekten des Netzwerks oder von übergreifenden Aktivitäten wie z.B. Lernfesten, Aktionstagen, Bildungsportalen, usw.?*

| Die Bekanntheit hängt ab.... | in erster Linie von Teilprojekten | in erster Linie von übergreifenden Aktivitäten | weiß nicht |
|---|---|---|---|
| Bevölkerung | ( ) | ( ) | ( ) |
| Betriebe | ( ) | ( ) | ( ) |
| Kommunalpolitiker | ( ) | ( ) | ( ) |
| Öffentliche Verwaltung | ( ) | ( ) | ( ) |
| Lokalen Medien (Presse, Rundfunk, etc.) | ( ) | ( ) | ( ) |

*3.) Sind die derzeitigen Kooperationsbeziehungen zwischen den im folgenden genannten Akteuren in Ihrer Region eher intensiv, eher punktuell, oder gibt es keine Kooperation zwischen den genannten Akteuren?*

| ... - Kooperation | eher intensiv | eher punktuell | es gibt keine Kooperation | weiß nicht |
|---|---|---|---|---|
| zwischen Weiterbildungseinrichtungen | ( ) | ( ) | ( ) | ( ) |
| zwischen Akteuren aus verschiedenen Bildungsbereichen | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Wirtschaft | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Regionalentwicklung | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Kommunalpolitik | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und Arbeitsverwaltung. | ( ) | ( ) | ( ) | ( ) |
| zwischen Wirtschaft und Arbeitsverwaltung ..... | ( ) | ( ) | ( ) | ( ) |

| | | | | |
|---|---|---|---|---|
| zwischen Wirtschaft und Regionalentwicklung..... | ( ) | ( ) | ( ) | ( ) |

*4.) Welche der folgenden Aussagen trifft auf die Ausgangssituation Ihres Netzwerks beim Start des Programms „Lernende Regionen“ eher zu?*
*Nur eine Nennung!*

Zwischen der Mehrheit der Akteure im Netzwerk bestanden bereits gute Kooperationsbeziehungen. ( )

Zwischen der Mehrheit der Akteure im Netzwerk wurden Kooperationsbeziehungen erst im Rahmen des Programms „Lernende Regionen“ aufgebaut..... ( )

*5.) Wenn Sie die derzeitigen Kooperationsbeziehungen zwischen den im folgenden genannten Akteuren mit der Situation vor Beginn des Programms „Lernende Regionen“ vergleichen:*
*Haben die Kooperationsbeziehungen zugenommen, sind sie etwa gleich geblieben, haben sie abgenommen, oder gab es diese vorher nicht?*

| ..... ..... | zuge-nommen | etwa gleich | abge-nommen | gab es vorher nicht | weiß nicht |
|---|---|---|---|---|---|
| zwischen Weiterbildungseinrichtungen | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Akteuren aus verschiedenen Bildungsbereichen | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Wirtschaft..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Regionalentwicklung | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Kommunalpolitik ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und Arbeitsverwaltung ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Wirtschaft und Arbeitsverwaltung ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Wirtschaft und Regionalentwicklung..... | ( ) | ( ) | ( ) | ( ) | ( ) |

*6 A) Sind Ihrer Ansicht nach alle wichtigen (potenziellen) Partner aus der Region in Ihrem Netzwerk hinreichend vertreten?*

Ja ..... ( )
Nein ..... ( )

*Wenn ja, weiter mit Frage 7*
*Wenn nein, weiter mit Frage 6 B*

*6B): Welche Partner sollten Ihrer Ansicht nach stärker im Netzwerk vertreten sein?*
*Mehrfachnennungen möglich!*

| | |
|---|---|
| Kommunen (z.B. Städte, Gemeinden, Landkreise, Kreisfreie Städte) ..... | ( ) |
| Universitäten und Fachhochschulen | ( ) |
| Außeruniversitäre Forschungseinrichtungen | ( ) |
| Wirtschafts-/Unternehmensverbände/Kammern | ( ) |
| Regionale/lokale Initiativen (z.B. aus den Bereichen Arbeit, Soziales, Umwelt) | ( ) |
| Kulturvereine/Migrantenverbände | ( ) |
| Gewerkschaften..... | ( ) |
| Wirtschaftsförderung ..... | ( ) |
| Beschäftigungsgesellschaft | ( ) |
| Agentur für Arbeit ..... | ( ) |
| Zeitarbeitsfirmen und private Arbeitsvermittlung | ( ) |
| Ämter/Behörden (z.B. Sozialamt, Schulamt/Amt für Bildung, Ausländeramt) ..... | ( ) |
| Allgemeinbildende Schulen | ( ) |
| Berufsbildende Schulen | ( ) |
| Weiterbildungseinrichtungen/Verbund regionaler Bildungseinrichtungen | ( ) |
| Kindergärten/Kindertagesstätten | ( ) |
| Unternehmen (außer Bildungsträger) | ( ) |
| Sonstiger Partner, und zwar: _____ | ( ) |

*7 A) In welchem Umfang haben in Ihrem Netzwerk erarbeitete Ansätze oder Lernprodukte in den folgenden Bereichen Breitenwirkung in der Region erzielt?*

| | **Regionale Breitenwirkung erzielt** | | | | |
|---|---|---|---|---|---|
| **Bereich…** | in sehr großem Umfang | in eher großem Umfang | in eher geringem Umfang | überhaupt nicht | trifft nicht zu, kein Angebot im Bereich |
| Bildungsmarketing | ( ) | ( ) | ( ) | ( ) | ( ) |
| Beratungsdienstleistungen . | ( ) | ( ) | ( ) | ( ) | ( ) |
| Übergänge in Lern- und Bildungsphasen ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Neue Lernwelten ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Qualitätsmanagement ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Curricula-/Konzeptentwicklung | ( ) | ( ) | ( ) | ( ) | ( ) |
| Lehrgänge, Kurse, Seminare | ( ) | ( ) | ( ) | ( ) | ( ) |
| Sonstiger Bereich, ..... bitte angeben: _____ | ( ) | ( ) | ( ) | ( ) | ( ) |

*7 B) In welchem Bereich haben in Ihrem Netzwerk erarbeitete Ansätze oder Lernprodukte <u>die größte Breitenwirkung</u> in der Region erzielt?*

***Nur eine Nennung!***

Bildungsmarketing ..... ( )
Beratungsdienstleistungen . ( )
Übergänge in Lern- und
Bildungsphasen ..... ( )
Neue Lernwelten ..... ( )
Qualitätsmanagement ..... ( )
Curricula-/Konzeptentwicklung ( )
Lehrgänge, Kurse, Seminare ( )
Sonstiger Bereich,
bitte angeben:..... ( )

_____

Weiß nicht..... ( )

*8 A) In welchem Umfang beteiligen sich Akteure aus Ihrem Netzwerk an folgenden Aktivitäten?*

| ..... ..... ..... | In sehr großem Umfang | in eher großem Umfang | in eher geringem Umfang | überhaupt nicht | weiß nicht |
|---|---|---|---|---|---|
| Erstellung genereller Dokumente zur Regionalplanung bzw. Regionalentwicklung ... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Übernahme von Moderationsfunktionen in der Regionalpolitik ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Bildung / Lebenslanges Lernen | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Arbeitsmarktpolitik ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Wirtschaftspolitik bzw. Wirtschaftsförderung .... | ( ) | ( ) | ( ) | ( ) | ( ) |

*8 B) Wie hat sich seit Beginn des Programms „Lernende Regionen“ die Beteiligung von Akteuren aus Ihrem Netzwerk an den folgenden Aktivitäten verändert?*

| | .....Stark .....zuge- .....nommen | etwas zuge- nommen | etwa gleich geblieben | etwas abge- nommen | stark abge- nommen | kommt nicht vor |
|---|---|---|---|---|---|---|
| Erstellung genereller Dokumente zur Regionalplanung bzw. Regionalentwicklung..... | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Übernahme von Moderationsfunktionen in der Regionalpolitik .... | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Bildung / Lebenslanges Lernen ..... | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Arbeitsmarktpolitik ..... | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Wirtschaftspolitik bzw. Wirtschaftsförderung .. | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) |

*9.) In welchem Umfang hat Ihr Netzwerk folgende Effekte bewirkt?*

| | ..... ..... ..... In sehr großem Umfang | in eher großem Umfang | in eher geringem Umfang | überhaupt nicht | weiß nicht |
|---|---|---|---|---|---|
| Stärkere Berücksichtigung des Lebenslangen Lernens in der Regionalplanung ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Initiierung neuer bildungs-bereichsübergreifender Kontakte regionaler Akteure ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Intensivierung vorhandener bildungsbereichsübergreifender Kontakte regionaler Akteure | ( ) | ( ) | ( ) | ( ) | ( ) |
| Initiierung politikfeldübergreifender Kontakte regionaler Akteure | ( ) | ( ) | ( ) | ( ) | ( ) |
| Verbesserung der Transparenz des regionalen Bildungsmarktes | ( ) | ( ) | ( ) | ( ) | ( ) |
| Erhöhung der Weiterbildungs-beteiligung der Bevölkerung in der Region ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Erhöhung der Weiterbildungs-beteiligung benachteiligter Gruppen in der Region ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Entwicklung innovativer Lernprodukte ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Stärkung der regionalen Identität der | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Bevölkerung in der Region | ( ) | ( ) | ( ) | ( ) | ( ) |
| Verbesserung der Fähigkeit zum selbstgesteuerten Lernen | ( ) | ( ) | ( ) | ( ) | ( ) |

*10.) In welchem Umfang hat Ihr Netzwerk zur Verbesserung von folgenden beschäftigungsbezogenen Aspekten in der Region beigetragen?*

| ..... ..... ..... | In sehr großem Umfang | in eher großem Umfang | in eher geringem Umfang | überhaupt nicht | weiß nicht |
|---|---|---|---|---|---|
| Verbesserung der Vermittlung in Arbeit | ( ) | ( ) | ( ) | ( ) | ( ) |
| Verbesserung der berufsrelevanten Beratung | ( ) | ( ) | ( ) | ( ) | ( ) |
| Stärkere Orientierung berufsbezogener Qualifizierungsmaßnahmen am Bedarf der Teilnehmenden | ( ) | ( ) | ( ) | ( ) | ( ) |
| Stärkere Orientierung berufsbezogener Qualifizierungsmaßnahmen am Bedarf der Betriebe | ( ) | ( ) | ( ) | ( ) | ( ) |
| Sensibilisierung regionaler Unternehmen für betriebliche Weiterbildungserfordernisse | ( ) | ( ) | ( ) | ( ) | ( ) |
| Stärkere Orientierung berufsbezogener Qualifizierungsmaßnahmen an regionalen Entwicklungsstrategien..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Verbesserung der Beschäftigungsfähigkeit in der Region | ( ) | ( ) | ( ) | ( ) | ( ) |

## *2. Einschätzungen zur Netzwerkarbeit*

*11 A) Wie zufrieden sind Sie mit Blick auf Ihr Netzwerk im Rahmen des Programms „Lernende Regionen“ mit folgenden Aspekten?*

| ..... ..... ..... | sehr zufrieden | eher zufrieden | eher nicht zufrieden | überhaupt nicht zufrieden | weiß nicht |
|---|---|---|---|---|---|
| Vertrauen zwischen den Netzwerkpartnern ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Informationsaustausch zwischen den Netzwerkpartnern ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Überregionaler Informationsaustausch mit anderen Netzwerken... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Ausgangsdiagnose des Bedarfs bei Beginn der Netzwerkarbeiten | ( ) | ( ) | ( ) | ( ) | ( ) |
| Gemeinsame Zielfindung im Netzwerk | ( ) | ( ) | ( ) | ( ) | ( ) |
| Interne Weiterqualifizierung von Akteuren im Netzwerk ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Kompetenz des Netzwerkmanagements | ( ) | ( ) | ( ) | ( ) | ( ) |
| Kontaktnetz des Netzwerkmanagements | ( ) | ( ) | ( ) | ( ) | ( ) |
| Unterstützung durch die Kommunalpolitik | ( ) | ( ) | ( ) | ( ) | ( ) |
| Unterstützung durch andere politische Stellen (Bundesland, BMBF) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Flexibles Reagieren auf veränderte Rahmenbedingungen ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Öffentlichkeitsarbeit des Netzwerks | ( ) | ( ) | ( ) | ( ) | ( ) |
| Öffentlichkeitsarbeit des Gesamt-Programms „Lernende Regionen“ | ( ) | ( ) | ( ) | ( ) | ( ) |
| Balance zwischen Aufwand und Nutzen der Netzwerkpartner..... | ( ) | ( ) | ( ) | ( ) | ( ) |

*11 B) Was ist nach Ihren bisherigen Erfahrungen – von der finanziellen Förderung einmal abgesehen - die wichtigste Erfolgsbedingung für das Erreichen der Ziele Ihres Netzwerks im Rahmen des Programms „Lernende Regionen“?*

*Wichtigste Erfolgsbedingung:*

_____

Es ist nicht möglich, eine wichtigste Erfolgsbedingung zu benennen. ( )

*12) Worin besteht die Hauptfunktion des Netzwerkmanagements in Ihrem Netzwerk?*

***Nur eine Nennung!***

Eher in der Administration ( )
Eher in der Moderation .. ( )
Eher im Kontaktnetz ..... ( )
Sonstiges ..... ( )
Was genau? _____
Weiß nicht ..... ( )

*13 A) Lassen sich in Ihrem Netzwerkpartner identifizieren, die mit überdurchschnittlich vielen Partnern vernetzt sind?*

Ja **( )**
Nein, es gibt keine auffälligen Unterschiede
in den Vernetzungsbeziehungen **( )**
Weiß nicht **( )**

*Wenn ja: Weiter mit Frage 13 B.*
*Wenn nein oder weiß nicht: Weiter mit Frage 14.*

*13 B) Welche Partner verfügen über überdurchschnittlich viele Netzwerkbeziehungen mit anderen?*

Kommunen (z.B. Städte, Gemeinden, Landkreise, Kreisfreie Städte) **( )**
Universitäten und Fachhochschulen **( )**
Außeruniversitäre Forschungseinrichtungen **( )**
Wirtschafts-/Unternehmensverbände/Kammern **( )**
Regionale/lokale Initiativen (z.B. aus den Bereichen Arbeit,
Soziales, Umwelt) **( )**
Kulturvereine/Migrantenverbände **( )**
Gewerkschaften **( )**
Wirtschaftsförderung **( )**
Beschäftigungsgesellschaft **( )**
Agentur für Arbeit **( )**
Zeitarbeitsfirmen und private Arbeitsvermittlung **( )**
Ämter/Behörden (z.B. Sozialamt, Schulamt/Amt für Bildung,
Ausländeramt) **( )**
Allgemeinbildende Schulen **( )**
Berufsbildende Schulen **( )**
Weiterbildungseinrichtungen/Verbund regionaler Bildungseinrichtungen **( )**
Kindergärten/Kindertagesstätten **( )**
Sonstige große Unternehmen über 249 Mitarbeiter **( )**
Sonstige mittlere Unternehmen 10-249 Mitarbeiter **( )**
Sonstige kleine Unternehmen unter 10 Mitarbeiter **( )**
Sonstiger Partner, **( )**
und zwar _____

*14.) Bitte beschreiben Sie das Engagement beteiligter Unternehmen in Bezug auf die folgenden Aspekte der Netzwerkarbeit auf der folgenden Skala (1= sehr hohes Engagement; 5= sehr niedriges Engagement; 6= kein Engagement, 7 = trifft nicht zu, kein Unternehmen im Netzwerk beteiligt, 8 = weiß nicht)*

| | |
|---|---|
| … im Beirat | **( )** |
| … in der Steuerungsgruppe | **( )** |
| … bei der internen Netzwerkarbeit | **( )** |
| … bei der Produktentwicklung | **( )** |
| … bei der Produktumsetzung | **( )** |
| … bei der Produktvermarktung | **( )** |

## *3. Innovationen*

*15.) Wurden während der Laufzeit des Programms „Lernende Regionen“ in Ihrem Netzwerk in den folgenden Bereichen Innovationen entwickelt?*

*Als „Innovation“ gelten Angebote, die es vor Beginn des Programms „Lernende Regionen“ in Ihrer Region nicht gab.*

| | **Innovation(en) entwickelt** | | | |
|---|---|---|---|---|
| ***Bereich…*** | Ja, eine Innovation | ja, mehrere Innovationen | nein | weiß nicht |
| Bildungsmarketing ..... | ( ) | ( ) | ( ) | ( ) |
| Beratungsdienstleistungen . | ( ) | ( ) | ( ) | ( ) |
| Übergänge in Lern- und Bildungsphasen ..... | ( ) | ( ) | ( ) | ( ) |
| Neue Lernwelten ..... | ( ) | ( ) | ( ) | ( ) |
| Qualitätsmanagement ..... | ( ) | ( ) | ( ) | ( ) |
| Curricula-/Konzeptentwicklung | ( ) | ( ) | ( ) | ( ) |
| Lehrgänge, Kurse, Seminare | ( ) | ( ) | ( ) | ( ) |
| Sonstiger Bereich, ..... | ( ) | ( ) | ( ) | ( ) |

Was genau?

_____

*16 A) Wären diese Innovationen auch ohne die Netzwerkbildung im Rahmen des Programms „Lernende Regionen“ zustande gekommen?*

*Nur eine Nennung!*

Ja, in gleichem Umfang ..... ( )
Ja, aber in etwas geringerem Umfang ( )
Ja, aber in weit geringerem Umfang ( )
Nein, überhaupt nicht ..... ( )
Weiß nicht..... ( )

*16 B) Wie wäre diese Innovation dann zustande gekommen?*

_____

_____

*17 A) In welchem Bereich gab es die aus Ihrer Sicht wichtigste Innovation?*
*Nur eine Nennung!*

***Bereich…***

Bildungsmarketing ..... ( )
Beratungsdienstleistungen . ( )
Übergänge in Lern- und
Bildungsphasen ..... ( )
Neue Lernwelten ..... ( )
Qualitätsmanagement ..... ( )
Curricula-/Konzeptentwicklung ( )
Lehrgänge, Kurse, Seminare ( )
Sonstiger Bereich,
Was genau? ..... ( )
Zuordnung zu Einzelbereich ist
nicht möglich..... ( )

*17 B) Bitte beschreiben Sie, worin aus Ihrer Sicht die entscheidende Neuerung bei dieser Innovation bestand.*

_____

_____

_____

## 4. Hindernisse

*18 A) Haben die folgenden Aspekte den Erfolg der Netzwerkarbeit erschwert?*

| | ***Ja*** | ***nein*** | ***weiß nicht*** |
|---|---|---|---|
| Interessenskonflikte zwischen Teilprojekten und dem Gesamtnetzwerk . | (….) | (….) | (….) |
| Konkurrenz mit Angeboten außerhalb des Programms „Lernende Regionen“ . | (….) | (….) | (….) |
| Nachlassende Bindung an eine gemeinsame Leitidee im Netzwerk | (….) | (….) | (….) |
| Wechsel bei „Schlüsselpersonen“ im Netzwerk .. . | (….) | (….) | (….) |
| Wechsel bei „Schlüsselpersonen“ außerhalb des Netzwerks, z.B. in der Verwaltung, Kommunalpolitik, etc.. | (….) | (….) | (….) |
| Konkurrenz zwischen Netzwerkpartnern. | (….) | (….) | (….) |
| Vorurteile einzelner Netzwerkpartner | (….) | (….) | (….) |
| Geringes Interesse regionaler Gebietskörperschaften an der Arbeit des Netzwerks . | (….) | (….) | (….) |
| Geringes Interesse regionaler Betriebe an der Arbeit des Netzwerks | (….) | (….) | (….) |
| Langwierige Entscheidungsprozesse an Schulen . | (….) | (….) | (….) |
| Veränderte Rahmenbedingungen der Weiterbildung in Deutschland z.B. Hartz IV, usw. ..... | (….) | (….) | (….) |
| Hohe Arbeitslosigkeit in der Region | (….) | (….) | (….) |

*18 B) Welcher Aspekt hat den Erfolg Ihrer Netzwerkarbeit am meisten erschwert? Nur eine Nennung!*

Interessenskonflikte zwischen Teilprojekten und dem Gesamtnetzwerk . (….)

Konkurrenz mit Angeboten außerhalb des Programms „Lernende Regionen“ . (….)

Nachlassende Bindung an eine gemeinsame Leitidee im Netzwerk . . (….)

Wechsel bei „Schlüsselpersonen“ im Netzwerk..... . (….)

Wechsel bei „Schlüsselpersonen“ außerhalb des Netzwerks, z.B. in der Verwaltung ..... . (….)

Konkurrenz zwischen Netzwerkpartnern. (….)

Geringes Interesse regionaler Gebietskörperschaften an der Arbeit des Netzwerks ..... . (….)

Geringes Interesse regionaler Betriebe an der Arbeit des Netzwerks . (….)

Langwierige Entscheidungsprozesse an Schulen..... . (….)

Veränderte Rahmenbedingungen der Weiterbildung in Deutschland z.B. Hartz IV, AZWV, usw. (….)

Hohe Arbeitslosigkeit in der Region (….)

Sonstiges, was genau? .. (….)

_____

_____

Weiß nicht (….)

## *5. Nachhaltigkeit*

*19 A) Wie beurteilen Sie in den folgenden Bereichen die Chancen, dass in Ihrem Netzwerk entwickelte Lernprodukte marktfähig sind, also auch ohne finanzielle Förderung erfolgreich sein werden?*

| | sehr gut | eher gut | eher schlecht | sehr schlecht | trifft nicht zu, kein Angebot in diesem Bereich |
|---|---|---|---|---|---|
| Bildungsmarketing ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Beratungsdienstleistungen .. | ( ) | ( ) | ( ) | ( ) | ( ) |
| Übergänge in Lern- und Bildungsphasen ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Neue Lernwelten ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Qualitätsmanagement..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Curricula-/Konzeptentwicklung | ( ) | ( ) | ( ) | ( ) | ( ) |
| Lehrgänge, Kurse, Seminare | ( ) | ( ) | ( ) | ( ) | ( ) |
| Sonstiger Bereich | ( ) | ( ) | ( ) | ( ) | ( ) |
| Was genau? | | | | | |

_____

*19 B) In welchem Bereich sind Ihrer Ansicht nach die Chancen auf Marktfähigkeit der in Ihrem Netzwerk entwickelten Lernprodukte am Größten?*
*Nur eine Nennung!*

***Bereich...***

| | |
|---|---|
| Bildungsmarketing ..... | ( ) |
| Beratungsdienstleistungen . | ( ) |
| Übergänge in Lern- und Bildungsphasen ..... | ( ) |
| Neue Lernwelten ..... | ( ) |
| Qualitätsmanagement ..... | ( ) |
| Curricula-/Konzeptentwicklung | ( ) |
| Lehrgänge, Kurse, Seminare | ( ) |
| Sonstiger Bereich, ..... | ( ) |
| Was genau? | |

_____

| | |
|---|---|
| Zuordnung zu Einzelbereich ist nicht möglich..... | ( ) |

*20 A) Wie beurteilen Sie für die folgenden Produktarten die Chancen, dass in Ihrem Netzwerk entwickelte Lernprodukte marktfähig sein werden?*

| ..... ..... ..... | sehr gut | eher gut | eher schlecht | sehr schlecht | trifft nicht zu, kein Angebot in diesem Bereich |
|---|---|---|---|---|---|
| Aufbau von Bildungsdatenbank(en) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Blended-Learning-Kurs mit Online- und Präsenzphasen | ( ) | ( ) | ( ) | ( ) | ( ) |
| Individuelles Coaching..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Kompetenzbilanzierung ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Onlineberatung, Telecoaching | ( ) | ( ) | ( ) | ( ) | ( ) |
| Lernladen..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Lernsoftware, Lern-CDs..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Netzwerkmanagement..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Sonstiges Lernprodukt, ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Was genau? .....( ) | ( ) | ( ) | ( ) | ( ) | |

_____

*20 B) Bei welcher Produktart sind Ihrer Ansicht nach die Chancen auf Marktfähigkeit der in Ihrem Netzwerk entwickelten Lernprodukte am Größten?*

*Nur eine Nennung!*

Aufbau von Bildungsdatenbank(en) ( )
Blended-Learning-Kurs mit
Online- und Präsenzphasen ( )
Individuelles Coaching.... ( )
Kompetenzbilanzierung.. ( )
Onlineberatung, Telecoaching ( )
Lernladen..... ( )
Lernsoftware, Lern-CDs . ( )
Netzwerkmanagement.... ( )
Sonstiges Lernprodukt.... ( )
Weiß nicht..... ( )

*21) Wo liegt Ihr strategischer Schwerpunkt zur Weiterführung der Netzwerkarbeit nach Ablauf der Förderung durch das Programm „Lernende Regionen“?*

in der Akquisition anderer Fördermittel,
z.B. von Kommunen, dem Bundesland oder Europa ( )
Finanzierung von Angeboten am Bildungsmarkt ( )
Sonstiger Schwerpunkt. Was genau? ( )

_____

Trifft nicht zu, die Netzwerkarbeit wird nicht weitergeführt ( )

*22 A) Liegt für Ihr Netzwerk ein Businessplan vor?*
*Nur eine Nennung!*

Ja, ein integrierter Businessplan für das Gesamtnetzwerk liegt vor. **( )** (weiter Frage 22 B)
Ja, separate Businesspläne für **alle** Teilprojekte liegen vor. **( )** (weiter Frage 22 B)
Ja, separate Businesspläne für **einzelne** Teilprojekte liegen vor. **( )** (weiter Frage 22 B)
Nein, es liegt kein Businessplan vor. **( )** (weiter Frage 22 D)

22 B) Zu welchem Zeitpunkt erwarten Sie laut Businessplan das Erreichen der Kostendeckung?

Monat:___ Jahr:____

*22 C) Wie verteilt sich die Finanzierung Ihres Netzwerks laut Businessplan auf die folgenden Quellen, zum aktuellen Zeitpunkt und ein Jahr nach Auslaufen der Förderung (Bitte teilen Sie jeweils 100 Prozent auf)?*

| Quelle | Aktuell in % | Prognose: Ein Jahr nach Beendigung der Förderung in %) |
|---|---|---|
| Programmförderung (Förderung bezüglich des Programms „Lernende Regionen“) | | |
| Institutionelle Förderung | | |
| Projektförderung | | |
| Aus Vermarktung der Netzwerkprodukte | | |
| Eigenbeteiligung der einzelnen Netzwerkpartner | | |
| Sponsoren | | |
| Sonstige, welche_____ | | |

*22 D) Wie hoch sind die Einnahmen, die Sie durch die Vermarktung Ihrer Netzwerkprodukte erwirtschaftet haben? Wenn Sie es nicht genau wissen, schätzen Sie bitte.*

… in 2005 _____Euro, (…) weiß nicht
… seit Beginn der Umsetzungsphase _____Euro (…) weiß nicht

22 E.) Ist diese Zahl exakt oder geschätzt?

Exakt ..... ( )
Geschätzt..... ( )

## *6. Statistik*

*23 A) Liegt der regionale Schwerpunkt Ihres Netzwerks in den alten Bundesländern oder in den neuen Bundesländern (einschließlich Berlin)?*

In den alten Bundesländern ( )
in den neuen Bundesländern (einschl. Berlin) ( )

*24 B) Bitte vergleichen Sie bei den folgenden Fragen die Situation in Ihrer Lernenden Region mit dem Durchschnitt der <u>alten Bundesländer.</u>*
*Bitte vergleichen Sie bei den folgenden Fragen die Situation in Ihrer Lernenden Region mit dem Durchschnitt der <u>neuen Bundesländer.</u>*

| | Über-durchschnittlich | etwa durchschnittlich | unter-durchschnittlich | weiß nicht |
|---|---|---|---|---|
| Arbeitslosenquote in der Region? | ( ) | ( ) | ( ) | ( ) |
| Bruttosozialprodukt in der Region? | ( ) | ( ) | ( ) | ( ) |
| Anteil der Großbetriebe in der Region? | ( ) | ( ) | ( ) | ( ) |

*25) Ist die Struktur der Region, auf die sich Ihr Netzwerk bezieht, eher großstädtisch, eher mittelstädtisch oder eher kleinstädtisch bzw. ländlich?*

Eher großstädtisch (einschl. Einzugsbereich von Großstädten) ( )
Eher mittelstädtisch (einschl. Einzugsbereich von Mittelstädten) ( )
Eher kleinstädtisch bzw. ländlich ( )

*26) Seit wann arbeiten Sie hier im Netzwerk?*

Von Anfang an..... ( )
Seit mehr als 2 Jahren, aber nicht
von Anfang an ..... ( )
Seit weniger als 2 Jahren ( )

*27) Wie viele Kooperationspartner sind formal in Ihr Netzwerk eingebunden?*

1 - 20 ..... ( )
21 – 39 ..... ( )
40 – 99 ..... ( )
100 oder mehr ..... ( )

Die gleichen Vorfilter gelten vor F28B.

*28 A) Liegen Ihnen konkrete Zahlen vor, wie viele Teilnehmer/Nutzer insgesamt seit Beginn Ihrer Netzwerkarbeit Ihre Netzwerkprodukte genutzt, bzw. daran teilgenommen haben? Wenn ja, geben Sie bitte jeweils die Summe der Teilnehmer/Nutzer pro Produktklasse an.*

| | nein | ja | Zahl |
|---|---|---|---|
| Bildungsberatung (Beratene) | ( ) | ( ) | _____ |
| Curriculum/Konzept (Konzeptnutzer) | ( ) | ( ) | _____ |
| Einzelvortrag/Vortragsreihe (Vortragsbesucher) | ( ) | ( ) | _____ |
| E-Learning/Lernsoftware (E-Lerner) | ( ) | ( ) | _____ |
| Kompetenzbilanzierung (Bilanzierungsnutzer) | ( ) | ( ) | _____ |
| Lehrgang/Kurs/Seminar (Teilnehmende) | ( ) | ( ) | _____ |
| Marketing (Erreichte Öffentlichkeit in Personen – geschätzt anhand der Auflage der Marketingprodukte) | ( ) | ( ) | _____ |
| Netzwerkmanagement/Koordination (Nachfragende Institutionen außerhalb des Netzwerks) | ( ) | ( ) | _____ |
| Webportale und Bildungsdatenbank(en) (Klicks auf den Server) | ( ) | ( ) | _____ |
| Zertifizierung/Qualitätsmanagement (Nachfragende Institutionen) | ( ) | ( ) | _____ |
| Lernladen (Besucher) | ( ) | ( ) | _____ |
| Coaching (Teilnehmende) | ( ) | ( ) | _____ |

*28 B) Wie haben sich die Zahlen der Teilnehmer/Nutzer insgesamt seit Beginn Ihrer Netzwerkarbeit verändert?*

Bitte tragen Sie den Skalenwert ein. 1 = stark zugenommen, 2 = etwas zugenommen, 3 = etwa gleich geblieben, 4 = etwas abgenommen, 5 = stark abgenommen, 6 = wurde beendet, 7 = weiß nicht.

| Bereich | Skalenwert |
|---|---|
| Bildungsberatung (Beratene) | _____ |
| Curriculum/Konzept (Konzeptnutzer) | _____ |
| Einzelvortrag/Vortragsreihe (Vortragsbesucher) | _____ |
| E-Learning/Lernsoftware (E-Lerner) | _____ |
| Kompetenzbilanzierung (Bilanzierungsnutzer) | _____ |
| Lehrgang/Kurs/Seminar (Teilnehmende) | _____ |
| Marketing (Erreichte Öffentlichkeit in Personen – geschätzt anhand der Auflage der Marketingprodukte) | _____ |
| Netzwerkmanagement/Koordination (Nachfragende Institutionen außerhalb des Netzwerks) | _____ |
| Webportale und Bildungsdatenbank(en) (Klicks auf den Server) | _____ |
| Zertifizierung/Qualitätsmanagement (Nachfragende Institutionen) | _____ |
| Lernladen (Besucher) | _____ |
| Coaching (Teilnehmende) | _____ |

*29 A) Liegen Ihnen Daten zur Weiterbildungsbeteiligung in den Jahren 2003 und 2005 für die von Ihrem Netzwerk betreute Region vor?*

Ja .....( )
Nein .....( )

*Filter: Wenn ja:*
*29 B) Bitte tragen Sie die Zahlen der Weiterbildungsteilnehmer in den beiden Jahren ein.*

2003 _____ 2005_____

30) *Welche Organisations- bzw. und Rechtsform hat Ihr Netzwerk zum jetzigen Zeitpunkt?*

Verein ..... ( )
Gmbh ..... ( )
Genossenschaft ..... ( )
Sonstige, ..... ( )
welche?_____

*31 A) Ist es geplant, für das Netzwerk eine neue Organisation zu gründen?*

Ja ..... ( ) *Weiter mit Frage 31 B*
Nein ..... ( ) *weiter mit Frage 32*

*31 B) Welche Organisation bzw. Rechtsform ist geplant?*

Verein ..... ( )
Gmbh ..... ( )
Genossenschaft ..... ( )
Sonstige, ..... ( )

welche?_____

## *7. Unterstützungsbedarf*

*32) Wie schwierig war für Sie die Bewältigung der folgenden Arbeiten im Rahmen des Programms „Lernende Regionen“?*

| ..... ..... | sehr schwierig | eher schwierig | eher einfach | sehr einfach |
|---|---|---|---|---|
| Antragstellung..... | ( ) | ( ) | ( ) | (.. ) |
| Abrechnung ..... | ( ) | ( ) | ( ) | (..) |
| Laufende Administration | ( ) | ( ) | ( ) | (.. ) |
| Berichterstattung ..... | ( ) | ( ) | ( ) | (.. ) |
| Businessplan ..... | ( ) | ( ) | ( ) | (.. ) |
| Verwaltungsaufgaben insgesamt | ( ) | ( ) | ( ) | (. .) |

*33 A) Gibt es aus Ihrer Sicht wichtige Punkte, bei denen Sie sich im Rahmen des Programms „Lernende Regionen“ mehr Unterstützung gewünscht hätten?*

Ja ..... ( ) Weiter mit Frage 33 A
Nein ..... ( ) Weiter mit Frage 34

*33 B) Wenn ja:*

*Bitte skizzieren Sie den gewünschten Unterstützungsbedarf:*

_____

_____

*34) Worin bestand aus Ihrer Sicht der wichtigste Erfolg Ihres Netzwerks?*

_____

_____

_____

_____

***Vielen Dank für Ihre Mitarbeit!***

Ludwig Maximilians Universität München

Helmut Kuwan · Sozialwissenschaftliche Forschung und Beratung, München

# Fragebogen „Lernende Regionen“
# - Netzwerkpartner –

**Ludwig-Maximilians-Universität, München / Prof. Tippelt (Federführung)**

**in Kooperation mit**
**Institut für Strukturpolitik und Wirtschaftsförderung gGmbH (isw) und**
**Helmut Kuwan – Sozialwissenschaftliche Forschung und Beratung München**

**Im Auftrag des Bundesministeriums für Bildung und Forschung**
**und des PT-DLR**

**Juni 2006**

Ludwig Maximilians Universität München

Helmut Kuwan · Sozialwissenschaftliche Forschung und Beratung, München

## Themenbereiche des Fragebogens

1. *Wirkungen in der Region*

2: *Einschätzungen zur Netzwerkarbeit*

3. *Innovationen*

4. *Hindernisse*

5. *Nachhaltigkeit*

6. *Statistik*

7. *Unterstützungsbedarf*

Ludwig Maximilians Universität München

Helmut Kuwan · Sozialwissenschaftliche Forschung und Beratung, München

# Fragebogen Netzwerkpartner

## *1. Wirkungen in der Region*

*1.) Wie schätzen Sie die Bekanntheit Ihres Netzwerks bei folgenden regionalen Akteuren ein?*

| | Sehr gut | eher gut | eher schlecht | sehr schlecht | weiß nicht |
|---|---|---|---|---|---|
| Bevölkerung..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Betriebe ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Kommunalpolitiker ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Öffentliche Verwaltung..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Lokale Medien (Presse, Rundfunk, etc.) | ( ) | ( ) | ( ) | ( ) | ( ) |

*2.) Wovon hängt die Bekanntheit Ihres Netzwerks bei diesen Akteuren Ihrer Ansicht nach in erster Linie ab: von Teilprojekten des Netzwerks oder von übergreifenden Aktivitäten wie z.B. Lernfesten, Aktionstagen, Bildungsportalen, usw.?*

| Die Bekanntheit hängt ab.... | in erster Linie von Teilprojekten | in erster Linie von übergreifenden Aktivitäten | weiß nicht |
|---|---|---|---|
| Bevölkerung | ( ) | ( ) | ( ) |
| Betriebe | ( ) | ( ) | ( ) |
| Kommunalpolitiker | ( ) | ( ) | ( ) |
| Öffentliche Verwaltung | ( ) | ( ) | ( ) |
| Lokalen Medien (Presse, Rundfunk, etc.) | ( ) | ( ) | ( ) |

*3.) Sind die derzeitigen Kooperationsbeziehungen zwischen den im folgenden genannten Akteuren in Ihrer Region eher intensiv, eher punktuell, oder gibt es keine Kooperation zwischen den genannten Akteuren?*

| Kooperation - | eher intensiv | eher punktuell | es gibt keine Kooperation | weiß nicht |
|---|---|---|---|---|
| zwischen Weiterbildungseinrichtungen | ( ) | ( ) | ( ) | ( ) |
| zwischen Akteuren aus verschiedenen Bildungsbereichen | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Wirtschaft..... | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Regionalentwicklung | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Kommunalpolitik ..... | ( ) | ( ) | ( ) | ( ) |

| | | | | | |
|---|---|---|---|---|---|
| zwischen Bildungseinrichtungen und Arbeitsverwaltung. | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Wirtschaft und Arbeitsverwaltung ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Wirtschaft und Regionalentwicklung..... | ( ) | ( ) | ( ) | ( ) | ( ) |

*4.) Welche der folgenden Aussagen trifft auf die Ausgangssituation Ihrer Einrichtung beim Start des Programms „Lernende Regionen“ eher zu?*
*Nur eine Nennung!*

Zwischen der Mehrheit der Akteure im Netzwerk und unserer Einrichtung bestanden bereits gute Kooperationsbeziehungen. ( )

Zwischen der Mehrheit der Akteure im Netzwerk und unserer Einrichtung wurden Kooperationsbeziehungen erst im Rahmen des Programms „Lernende Regionen“ aufgebaut. ( )

*5.) Wenn Sie die derzeitigen Kooperationsbeziehungen zwischen den im folgenden genannten Akteuren mit der Situation vor Beginn des Programms „Lernende Regionen“ vergleichen:*
*Haben die Kooperationsbeziehungen zugenommen, sind sie etwa gleich geblieben, haben sie abgenommen, oder gab es diese vorher nicht?*

| ..... ..... | zuge-nommen | etwa gleich | abge-nommen | gab es vorher nicht | weiß nicht |
|---|---|---|---|---|---|
| zwischen Weiterbildungseinrichtungen | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Akteuren aus verschiedenen Bildungsbereichen | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Wirtschaft..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Regionalentwicklung | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und der Kommunalpolitik ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Bildungseinrichtungen und Arbeitsverwaltung ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Wirtschaft und Arbeitsverwaltung ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| zwischen Wirtschaft und Regionalentwicklung..... | ( ) | ( ) | ( ) | ( ) | ( ) |

*6 A) Sind Ihrer Ansicht nach alle wichtigen (potenziellen) Partner aus der Region in Ihrem Netzwerk hinreichend vertreten?*

Ja ..... ( )
Nein ..... ( )

*6 B) Wenn nein:*
*Welche Partner sollten Ihrer Ansicht nach stärker im Netzwerk vertreten sein?*
*Mehrfachnennungen möglich!*

Kommunen (z.B. Städte, Gemeinden, Landkreise, Kreisfreie Städte) ..... ( )
Universitäten und Fachhochschulen ( )
Außeruniversitäre Forschungseinrichtungen ( )
Wirtschafts-/Unternehmensverbände/Kammern ( )
Regionale/lokale Initiativen (z.B. aus den Bereichen Arbeit, Soziales, Umwelt) ( )
Kulturvereine/Migrantenverbände ( )
Gewerkschaften..... ( )
Wirtschaftsförderung ..... ( )
Beschäftigungsgesellschaft ( )
Agentur für Arbeit ..... ( )
Zeitarbeitsfirmen und private Arbeitsvermittlung ( )
Ämter/Behörden (z.B. Sozialamt, Schulamt/Amt für Bildung, Ausländeramt) ..... ( )
Allgemeinbildende Schulen ( )
Berufsbildende Schulen ( )
Weiterbildungseinrichtungen/Verbund regionaler Bildungseinrichtungen ( )
Kindergärten/Kindertagesstätten ( )
Unternehmen (außer Bildungsträger) ( )
Sonstiger Partner, ( )
und zwar _____

*7 A) In welchem Umfang haben in Ihrem Netzwerk erarbeitete Ansätze oder Lernprodukte in den folgenden Bereichen Breitenwirkung in der Region erzielt?*

**Regionale Breitenwirkung erzielt**

| ..... ..... ..... **Bereich…** | in sehr großem Umfang | in eher großem Umfang | in eher geringem Umfang | überhaupt nicht | trifft nicht zu, kein Angebot im Bereich |
|---|---|---|---|---|---|
| Bildungsmarketing ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Beratungsdienstleistungen . | ( ) | ( ) | ( ) | ( ) | ( ) |
| Übergänge in Lern- und Bildungsphasen ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Neue Lernwelten ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Qualitätsmanagement ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Curricula-/Konzeptentwicklung | ( ) | ( ) | ( ) | ( ) | ( ) |
| Lehrgänge, Kurse, Seminare | ( ) | ( ) | ( ) | ( ) | ( ) |
| Sonstiger Bereich, bitte angeben: _____ ..... | ( ) | ( ) | ( ) | ( ) | ( ) |

*7 B) In welchem Bereich haben in Ihrem Netzwerk erarbeitete Ansätze oder Lernprodukte <u>die größte Breitenwirkung</u> in der Region erzielt?*

***Nur eine Nennung!***

| | |
|---|---|
| Bildungsmarketing ..... | ( ) |
| Beratungsdienstleistungen . | ( ) |
| Übergänge in Lern- und Bildungsphasen ..... | ( ) |
| Neue Lernwelten ..... | ( ) |
| Qualitätsmanagement ..... | ( ) |
| Curricula-/Konzeptentwicklung | ( ) |
| Lehrgänge, Kurse, Seminare | ( ) |
| Sonstiger Bereich, bitte angeben:..... | ( ) |

Weiß nicht..... ( )

*8 A) In welchem Umfang beteiligt sich Ihre Einrichtung an folgenden Aktivitäten?*

| ..... ..... ..... | In sehr großem Umfang | in eher großem Umfang | in eher geringem Umfang | überhaupt nicht | weiß nicht |
|---|---|---|---|---|---|
| Erstellung genereller Dokumente zur Regionalplanung bzw. Regionalentwicklung ... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Übernahme von Moderationsfunktionen in der Regionalpolitik ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Bildung / Lebenslanges Lernen | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Arbeitsmarktpolitik ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Wirtschaftspolitik bzw. Wirtschaftsförderung .... | ( ) | ( ) | ( ) | ( ) | ( ) |

*8 B) Wie hat sich seit Beginn des Programms „Lernende Regionen“ die Beteiligung Ihrer Einrichtung an den folgenden Aktivitäten verändert?*

| .....Stark .....zuge- .....nommen | etwas zuge- nommen | etwa gleich geblieben | etwas abge- nommen | stark abge- nommen | kommt nicht vor |
|---|---|---|---|---|---|
| Erstellung genereller Dokumente zur Regionalplanung bzw. Regionalentwicklung.....( ) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Übernahme von Moderationsfunktionen in der Regionalpolitik .... ( ) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Bildung / Lebenslanges Lernen .....( ) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Arbeitsmarktpolitik .....( ) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Regionalplanung im Bereich Wirtschaftspolitik bzw. Wirtschaftsförderung .. ( ) | ( ) | ( ) | ( ) | ( ) | ( ) |

*9.) In welchem Umfang hat Ihr Netzwerk folgende Effekte bewirkt?*

| ..... ..... ..... | In sehr großem Umfang | in eher großem Umfang | in eher geringem Umfang | überhaupt nicht | weiß nicht |
|---|---|---|---|---|---|
| Stärkere Berücksichtigung des Lebenslangen Lernens in der Regionalplanung ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Initiierung neuer bildungsbereichsübergreifender Kontakte regionaler Akteure ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Intensivierung vorhandener bildungsbereichsübergreifender Kontakte regionaler Akteure | ( ) | ( ) | ( ) | ( ) | ( ) |
| Initiierung politikfeldübergreifender Kontakte regionaler Akteure | ( ) | ( ) | ( ) | ( ) | ( ) |
| Verbesserung der Transparenz des regionalen Bildungsmarktes | ( ) | ( ) | ( ) | ( ) | ( ) |
| Erhöhung der Weiterbildungsbeteiligung der Bevölkerung in der Region ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Erhöhung der Weiterbildungsbeteiligung benachteiligter Gruppen in der Region ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Entwicklung innovativer Lernprodukte | ( ) | ( ) | ( ) | ( ) | ( ) |
| Stärkung der regionalen Identität der Bevölkerung in der Region | ( ) | ( ) | ( ) | ( ) | ( ) |
| Verbesserung der Fähigkeit zum selbstgesteuerten Lernen | ( ) | ( ) | ( ) | ( ) | ( ) |

*10.) In welchem Umfang hat Ihr Netzwerk zur Verbesserung von folgenden beschäftigungsbezogenen Aspekten in der Region beigetragen?*

| ..... ..... ..... | In sehr großem Umfang | in eher großem Umfang | in eher geringem Umfang | überhaupt nicht | weiß nicht |
|---|---|---|---|---|---|
| Verbesserung der Vermittlung in Arbeit..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Verbesserung der berufsrelevanten Beratung | ( ) | ( ) | ( ) | ( ) | ( ) |
| Stärkere Orientierung berufsbezogener Qualifizierungsmaßnahmen am Bedarf der Teilnehmenden | ( ) | ( ) | ( ) | ( ) | ( ) |
| Stärkere Orientierung berufsbezogener Qualifizierungsmaßnahmen am Bedarf der Betriebe . | ( ) | ( ) | ( ) | ( ) | ( ) |
| Sensibilisierung regionaler Unternehmen für betriebliche Weiterbildungserfordernisse | ( ) | ( ) | ( ) | ( ) | ( ) |
| Stärkere Orientierung berufsbezogener Qualifizierungsmaßnahmen an regionalen Entwicklungs-strategien..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Verbesserung der Beschäftigungs-fähigkeit in der Region ... | ( ) | ( ) | ( ) | ( ) | ( ) |

## 2. Einschätzungen zur Netzwerkarbeit

*11) Wie zufrieden sind Sie mit Blick auf Ihr Netzwerk im Rahmen des Programms „Lernende Regionen“ mit folgenden Aspekten?*

| ..... ..... ..... | sehr zufrieden | eher zufrieden | eher nicht zufrieden | überhaupt nicht zufrieden | weiß nicht |
|---|---|---|---|---|---|
| Vertrauen zwischen den Netzwerkpartnern ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Informationsaustausch zwischen den Netzwerkpartnern ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Überregionaler Informationsaustausch mit anderen Netzwerken... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Ausgangsdiagnose des Bedarfs bei Beginn der Netzwerkarbeiten | ( ) | ( ) | ( ) | ( ) | ( ) |
| Gemeinsame Zielfindung im Netzwerk | ( ) | ( ) | ( ) | ( ) | ( ) |
| Interne Weiterqualifizierung von Akteuren im Netzwerk ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Kompetenz des Netzwerkmanagements | ( ) | ( ) | ( ) | ( ) | ( ) |
| Kontaktnetz des Netzwerkmanagements | ( ) | ( ) | ( ) | ( ) | ( ) |
| Unterstützung durch die Kommunalpolitik | ( ) | ( ) | ( ) | ( ) | ( ) |
| Unterstützung durch andere politische Stellen (Bundesland, BMBF) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Flexibles Reagieren auf veränderte Rahmenbedingungen ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Öffentlichkeitsarbeit des Netzwerks | ( ) | ( ) | ( ) | ( ) | ( ) |
| Öffentlichkeitsarbeit des Gesamt-Programms „Lernende Regionen“ | ( ) | ( ) | ( ) | ( ) | ( ) |
| Balance zwischen Aufwand und Nutzen der Netzwerkpartner ..... | ( ) | ( ) | ( ) | ( ) | ( ) |

*12) Worin besteht die Hauptfunktion des Netzwerkmanagements in Ihrem Netzwerk?*

***Nur eine Nennung!***

Eher in der Administration ( )
Eher in der Moderation .. ( )
Eher im Kontaktnetz ..... ( )
Sonstiges, ..... ( )
was genau? _____
Weiß nicht..... ( )

*13) Im Folgenden würden wir gerne von Ihnen erfahren, inwieweit Unternehmen (außer Bildungsträger) in der Region vom Netzwerk erreicht werden. Bitte geben Sie auf einer Skala an, inwieweit Sie den folgenden Aussagen zustimmen. (Skala: 1= trifft voll und ganz zu; 5= trifft überhaupt nicht zu, 6 = weiß nicht).*

| | Skalenwert |
|---|---|
| Unternehmen in der Region kennen das Netzwerk. | _____ |
| Unternehmen sind indirekt mit dem Netzwerk über andere Netzwerke (z.B. AGV) verbunden. | _____ |
| Unternehmen beteiligen sich an Gremien des Netzwerks. | _____ |
| Unternehmen beteiligen sich an der Erstellung von Netzwerkprodukten. | _____ |
| Unternehmen beteiligen sich an der Umsetzung von Netzwerkprodukten. | _____ |

*14) Bitte geben Sie auf der gleichen Skala an, inwieweit Sie den folgenden Aussagen zustimmen. (Skala: 1= trifft voll und ganz zu; 5= trifft überhaupt nicht zu, 6 = weiß nicht).*

| | Skalenwert |
|---|---|
| Unternehmen werden erfolgreich in das Netzwerk eingebunden, wenn … | |
| das Gesamtnetzwerk in der Region profiliert ist | _____ |
| die Teilprojekte inhaltlich auf Unternehmensthemen ausgerichtet sind | _____ |
| das Marketing sich auf die Akquisition von Unternehmen konzentriert | _____ |
| Unternehmen einen Marketingvorteil durch die Netzwerkbeteiligung erwarten | _____ |
| Unternehmen die Bedingungen für lebenslanges Lernen im eigenen Haus verbessern | _____ |
| Unternehmen regionale Verantwortung übernehmen wollen | _____ |

## 3. Innovationen

*15.) Wurden während der Laufzeit des Programms „Lernende Regionen“ von Ihrer Einrichtung in den folgenden Bereichen Innovationen entwickelt?*

*Als „Innovation“ gelten Angebote, die es vor Beginn des Programms „Lernende Regionen“ in Ihrer Region nicht gab.*

| | **Innovation(en) entwickelt** | | | |
|---|---|---|---|---|
| ..... ..... ..... | Ja, eine Innovation | ja, mehrere Innovationen | nein | weiß nicht |
| ***Bereich…*** | | | | |
| Bildungsmarketing ..... | ( ) | ( ) | ( ) | ( ) |
| Beratungsdienstleistungen . | ( ) | ( ) | ( ) | ( ) |
| Übergänge in Lern- und Bildungsphasen ..... | ( ) | ( ) | ( ) | ( ) |

| | | | | |
|---|---|---|---|---|
| Neue Lernwelten ..... | ( ) | ( ) | ( ) | ( ) |
| Qualitätsmanagement ..... | ( ) | ( ) | ( ) | ( ) |
| Curricula-/Konzeptentwicklung | ( ) | ( ) | ( ) | ( ) |
| Lehrgänge, Kurse, Seminare | ( ) | ( ) | ( ) | ( ) |
| Sonstiger Bereich, was genau? ..... | ( ) | ( ) | ( ) | ( ) |

---

*16 A) Wären diese Innovationen auch ohne die Netzwerkbildung im Rahmen des Programms „Lernende Regionen“ zustande gekommen?*

*Nur eine Nennung!*

| | |
|---|---|
| Ja, in gleichem Umfang ..... | ( ) |
| Ja, aber in etwas geringerem Umfang | ( ) |
| Ja, aber in weit geringerem Umfang | ( ) |
| Nein, überhaupt nicht ..... | ( ) |
| Weiß nicht..... | ( ) |

*Wenn Nennung „Ja, in gleichem Umfang“ in Frage 16 A weiter mit Frage 16 B.*
*Alle anderen weiter mit Frage 17A.*

*16 B) Wie wäre diese Innovation dann zustande gekommen?*

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*17 A) In welchem Bereich gab es die aus Ihrer Sicht wichtigste Innovation?*
*Nur eine Nennung!*

***Bereich…***

| | |
|---|---|
| Bildungsmarketing ..... | ( ) |
| Beratungsdienstleistungen . | ( ) |
| Übergänge in Lern- und Bildungsphasen ..... | ( ) |
| Neue Lernwelten ..... | ( ) |
| Qualitätsmanagement ..... | ( ) |
| Curricula-/Konzeptentwicklung | ( ) |
| Lehrgänge, Kurse, Seminare | ( ) |
| Sonstiger Bereich, was genau? ..... | ( ) |
| Zuordnung zu Einzelbereich ist nicht möglich..... | ( ) |

*17 B) Bitte beschreiben Sie, worin aus Ihrer Sicht die entscheidende Neuerung bei dieser Innovation bestand.*

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## 4. Hindernisse

*18 A) Haben die folgenden Aspekte den Erfolg der Netzwerkarbeit erschwert?*

| ..... ..... | ***Ja*** | ***nein*** | ***weiß nicht*** |
|---|---|---|---|
| Interessenskonflikte zwischen Teilprojekten und dem Gesamtnetzwerk | (….) | (….) | (….) |
| Konkurrenz mit Angeboten außerhalb des Programms „Lernende Regionen“ | (….) | (….) | (….) |
| Nachlassende Bindung an eine gemeinsame Leitidee im Netzwerk. | (….) | (….) | (….) |
| Wechsel bei „Schlüsselpersonen“ im Netzwerk..... | (….) | (….) | (….) |
| Wechsel bei „Schlüsselpersonen“ außerhalb des Netzwerks, z.B. in der Verwaltung, Kommunalpolitik, etc. | (….) | (….) | (….) |
| Konkurrenz zwischen Netzwerkpartnern | (….) | (….) | (….) |
| Vorurteile der einzelnen Netzwerkpartner | (….) | (….) | (….) |
| Geringes Interesse regionaler Gebietskörperschaften an der Arbeit des Netzwerks ..... . | (….) | (….) | (….) |
| Geringes Interesse regionaler Betriebe an der Arbeit des Netzwerks | (….) | (….) | (….) |
| Langwierige Entscheidungsprozesse an Schulen . | (….) | (….) | (….) |
| Veränderte Rahmenbedingungen der Weiterbildung in Deutschland z.B. Hartz IV, usw. ..... | (….) | (….) | (….) |
| Hohe Arbeitslosigkeit in der Region | (….) | (….) | (….) |

*18 B) Welcher Aspekt hat den Erfolg Ihrer Netzwerkarbeit am meisten erschwert? Nur eine Nennung!*

| | |
|---|---|
| Interessenskonflikte zwischen Teilprojekten und dem Gesamtnetzwerk . | (….) |
| Konkurrenz mit Angeboten außerhalb des Programms „Lernende Regionen“ . | (….) |

Nachlassende Bindung an eine gemeinsame Leitidee im Netzwerk . . (….)

Wechsel bei „Schlüsselpersonen“ im Netzwerk..... . (….)

Wechsel bei „Schlüsselpersonen“ außerhalb des Netzwerks, z.B. in der Verwaltung ..... . (….)

Konkurrenz zwischen Netzwerkpartnern. (….)

Geringes Interesse regionaler Gebietskörperschaften an der Arbeit des Netzwerks ..... . (….)

Geringes Interesse regionaler Betriebe an der Arbeit des Netzwerks . (….)

Langwierige Entscheidungsprozesse an Schulen..... . (….)

Veränderte Rahmenbedingungen der Weiterbildung in Deutschland z.B. Hartz IV, AZWV, usw. (….)

Hohe Arbeitslosigkeit in der Region (….)

Sonstiges, was genau? .. (….)

---

Weiß nicht (….)

## 5. Nachhaltigkeit

*19 A) Wie beurteilen Sie in den folgenden Bereichen die Chancen, dass in Ihrem Netzwerk entwickelte Lernprodukte marktfähig sind, also auch ohne finanzielle Förderung erfolgreich sein werden?*

| ..... ..... ..... | sehr gut | eher gut | eher schlecht | sehr schlecht | trifft nicht zu, kein Angebot in diesem Bereich |
|---|---|---|---|---|---|
| Bildungsmarketing ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Beratungsdienstleistungen .. | ( ) | ( ) | ( ) | ( ) | ( ) |
| Übergänge in Lern- und Bildungsphasen ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Neue Lernwelten ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Qualitätsmanagement..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Curricula-/Konzeptentwicklung | ( ) | ( ) | ( ) | ( ) | ( ) |
| Lehrgänge, Kurse, Seminare | ( ) | ( ) | ( ) | ( ) | ( ) |
| Sonstiger Bereich Was genau? _____ | ( ) | ( ) | ( ) | ( ) | ( ) |

*19 B) In welchem Bereich sind Ihrer Ansicht nach die Chancen auf Marktfähigkeit der in Ihrem Netzwerk entwickelten Lernprodukte am Größten?*
*Nur eine Nennung!*

***Bereich...***

| | |
|---|---|
| Bildungsmarketing ..... | ( ) |
| Beratungsdienstleistungen . | ( ) |
| Übergänge in Lern- und Bildungsphasen ..... | ( ) |
| Neue Lernwelten ..... | ( ) |
| Qualitätsmanagement ..... | ( ) |
| Curricula-/Konzeptentwicklung | ( ) |
| Lehrgänge, Kurse, Seminare | ( ) |
| Sonstiger Bereich ..... | ( ) |
| Zuordnung zu Einzelbereich ist nicht möglich..... | ( ) |

*20 A) Wie beurteilen Sie für die folgenden <u>Produktarten</u> die Chancen, dass in Ihrem Netzwerk entwickelte Lernprodukte marktfähig sein werden?*

| ..... ..... ..... | sehr gut | eher gut | eher schlecht | sehr schlecht | trifft nicht zu, kein Angebot in diesem Bereich |
|---|---|---|---|---|---|
| Aufbau von Bildungsdatenbank(en) | ( ) | ( ) | ( ) | ( ) | ( ) |
| Blended-Learning-Kurs mit Online- und Präsenzphasen | ( ) | ( ) | ( ) | ( ) | ( ) |
| Individuelles Coaching..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Kompetenzbilanzierung ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Onlineberatung, Telecoaching | ( ) | ( ) | ( ) | ( ) | ( ) |
| Lernladen..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Lernsoftware, Lern-CDs..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Netzwerkmanagement..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Sonstiges Lernprodukt, ..... | ( ) | ( ) | ( ) | ( ) | ( ) |
| Was genau? ..... | ( ) | ( ) | ( ) | ( ) | ( ) |

_____

*20 B) Bei welcher Produktart sind Ihrer Ansicht nach die Chancen auf Marktfähigkeit der in Ihrem Netzwerk entwickelten Lernprodukte am Größten?*

*Nur eine Nennung!*

| | |
|---|---|
| Aufbau von Bildungsdatenbank(en) | ( ) |
| Blended-Learning-Kurs mit Online- und Präsenzphasen | ( ) |
| Individuelles Coaching.... | ( ) |
| Kompetenzbilanzierung.. | ( ) |
| Onlineberatung, Telecoaching | ( ) |
| Lernladen..... | ( ) |
| Lernsoftware, Lern-CDs . | ( ) |
| Netzwerkmanagement.... | ( ) |
| Sonstiges Lernprodukt.... | ( ) |
| Weiß nicht..... | ( ) |

*21) Werden Sie sich nach Ablauf der Förderung finanziell am Netzwerk beteiligen?*

| | | |
|---|---|---|
| Ja | ..... ( ) | weiter mit Frage 22 |
| Nein | ..... ( ) | weiter mit Frage 23 |

*22) Sind die Einkünfte und Ausgaben für den Netzwerkbetrieb in dem Budget Ihrer Institution ausgewiesen und festgelegt? (Bezugszeitraum 1. Jahr nach der Förderung)*

Ja, die Netzwerk-bezogenen finanziellen Ressourcen sind für das erste Jahr nach Beendigung der Förderung in Teilkosten *differenziert schriftlich festgehalten*. ( )
Ja, die Netzwerk-bezogenen finanziellen Ressourcen sind für das erste Jahr nach Beendigung der Förderung *als Gesamtsumme schriftlich festgehalten* . ( )
Ja, die Netzwerk-bezogenen finanziellen Ressourcen sind für das erste Jahr nach Beendigung der Förderung *eingeplant, aber nicht konkret benannt*. ( )
Nein, die Netzwerk-bezogenen finanziellen Ressourcen sind nicht für das erste Jahr nach Beendigung der Förderung berücksichtigt. ( )
Weiß nicht ( )

## 6. Statistik

*23) Seit wann ist Ihre Einrichtung Mitglied im Netzwerk?*

Von Anfang an..... ( )
Seit mehr als 2 Jahren, aber nicht von Anfang an ..... ( )
Seit weniger als 2 Jahren ( )

*24) Bitte geben Sie an, zu welcher der folgenden Organisation bzw. Institution Sie gehören.*

Kommunen (z.B. Städte, Gemeinden, Landkreise, Kreisfreie Städte) ..... ( )
Universitäten und Fachhochschulen ( )
Außeruniversitäre Forschungseinrichtungen ( )
Wirtschafts-/Unternehmensverbände/Kammern ( )
Regionale/lokale Initiativen (z.B. aus den Bereichen Arbeit, Soziales, Umwelt) ( )
Kulturvereine/Migrantenverbände ( )
Gewerkschaften..... ( )
Wirtschaftsförderung ..... ( )
Beschäftigungsgesellschaft ( )
Agentur für Arbeit ..... ( )
Zeitarbeitsfirmen und private Arbeitsvermittlung ( )
Ämter/Behörden (z.B. Sozialamt, Schulamt/Amt für Bildung, Ausländeramt) ..... ( )
Allgemeinbildende Schulen ( )
Berufsbildende Schulen ( )
Weiterbildungseinrichtungen/Verbund regionaler Bildungseinrichtungen ( )
Kindergärten/Kindertagesstätten ( )
Unternehmen (außer Bildungsträger) ( )
Sonstiger Partner, ( )
und zwar _____

*Filter: falls die vorletzte Kategorie „Unternehmen (außer Bildungsträger)“ in F 24) genannt wurde:*

*25) Welchen Nutzen zieht Ihr Unternehmen aus der Mitarbeit im Netzwerk?*

| | Trifft zu | trifft nicht zu | weiß nicht |
|---|---|---|---|
| ..... | | | |
| ..... | | | |
| Realisierung von Vorhaben, die sonst nicht möglich waren | ( ) | ( ) | ( ) |
| Erschließung neuer Informationsquellen | ( ) | ( ) | ( ) |
| Mehr Transparenz über den Bildungsmarkt | ( ) | ( ) | ( ) |
| Lerndienstleistungen aus einer Hand | ( ) | ( ) | ( ) |
| Verbesserung der organisatorischen Strukturen und Abläufe | ( ) | ( ) | ( ) |
| Verbesserung der Qualifikation des Personals | ( ) | ( ) | ( ) |
| Erschließung neuer Lernorte | ( ) | ( ) | ( ) |
| Zugang zu Ressourcen anderer Einrichtungen | ( ) | ( ) | ( ) |
| Gewinnung neuer Kunden | ( ) | ( ) | ( ) |
| Finden neuer Anbieter.... | ( ) | ( ) | ( ) |
| Erschließung neuer Arbeitsschwerpunkte/Themenfelder | ( ) | ( ) | ( ) |
| Senkung der eigenen Kosten | ( ) | ( ) | ( ) |
| Steigerung der eigenen Einnahmen | ( ) | ( ) | ( ) |
| Erschließung neuer Finanzierungsquellen | ( ) | ( ) | ( ) |
| Erhöhung der Mitarbeiterzahl | ( ) | ( ) | ( ) |
| Verbesserung der Konkurrenzfähigkeit des Unternehmens | ( ) | ( ) | ( ) |
| Verbesserung des Images des Unternehmens | ( ) | ( ) | ( ) |
| Aufbau neuer Kontakte... | ( ) | ( ) | ( ) |

26 A) Liegen Ihrer Einrichtung zur Weiterbildungsbeteiligung in den Jahren 2003 und 2005 für die von Ihrem Netzwerk betreute Region vor?

| | | |
|---|---|---|
| Ja | .....( ) | weiter mit F 26B |
| Nein | .....( ) | weiter mit F 27A |

*26 B) Bitte tragen Sie die Zahlen der Weiterbildungsteilnehmer in den beiden Jahren ein.*

2003 _____ 2005_____

## *7. Unterstützungsbedarf*

*27 A) Gibt es aus Ihrer Sicht wichtige Punkte, bei denen Sie sich im Rahmen des Programms „Lernende Regionen“ mehr Unterstützung gewünscht hätten?*

| | | | |
|---|---|---|---|
| Ja | ..... | ( ) | weiter mit F 27B |
| Nein | ..... | ( ) | Ende |

*27 B) Wenn ja:*

*Bitte skizzieren Sie den gewünschten Unterstützungsbedarf:*

_____

_____

***Vielen Dank für Ihre Mitarbeit!***

**Bitte nennen Sie Ihre 5 wichtigsten regionalen Ansprechpartner (und deren Organisation) in Bezug auf das Lernende Regionen Projekt**

| | Name des Kontakts/ Funktion und Organisation | Hatten Sie schon *vor der Gründung des NWs* Kontakt? | | *Wie lange* besteht dieser Kontakt bereits? | | | | Ist dieser Kontakt überwiegend formell oder informell? | | *Wie häufig* haben Sie Kontakt zu dieser Person (pro Woche)? | | | Worauf bezieht sich der Kontakt? In welchem Kontext? | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Ja | Nein | <1J | 1-3J | 3-5J | >5J | Rein beruflich | (zudem) privat | <1x | 1-3 x | > 3 x | Rein NW-bez. | andere berufl. Kontexte | zudem priv. Kontakt. |
| 1 | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2 | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3 | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4 | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5 | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

Konnten Sie sich von diesen genannten Kontakten etwas „abschauen"?

Konnten Sie über diese Person ihr eigenes Kontaktnetz erweitern?

Sind das für Sie schon zum Teil wichtige Kontakte?

Sehen Sie manche Dinge seit dieser Kooperation im Netzwerk anders? Welche? Und Warum?

**Leitfaden für die Fallanalysen und Intensivuntersuchungen in den Lernenden Regionen**

Leitfaden für Netzwerkmanager/-innen und Vertreter/-innen aus dem Vertiefungsbereich

Lernende Region _____
Interview mit _____
am _____

**Folgende Bereiche sollen bei allen Feldern/Fragen berücksichtigt werden:**
**Veränderungen (was hat sich verändert, warum hat es sich verändert?)**
**Ursachen (warum funktioniert etwas, warum funktioniert etwas nicht?)**

## 1. Funktion und Aufgaben des Gesprächspartners innerhalb des Netzwerks

**** Beschreiben Sie bitte die Rolle, die Sie im Netzwerk / Vertiefungsprojekt ausüben!***

** Seit wann üben Sie diese Rolle aus?*

## 2. Informationen zum Netzwerk (NWM)

*Was sind die zentralen Merkmale bzw. Besonderheiten des Konzepts des Netzwerks? Wer war an der Entwicklung dieses Konzepts maßgeblich beteiligt?*

** Worauf haben Sie bei der Gründung des Netzwerks besonders geachtet?*

*Hat Ihr Netzwerk eine Rechtsform? Welche?*

*(*) Gibt es in der Vertiefungsphase Veränderungen in der Netzwerkstruktur/-organisation? Welche Veränderungen gibt es?*

*Was ist aus den anderen Teilprojekten geworden?*

*(*) Welche sind die wichtigsten Partner im Netzwerk? Warum? Mit welchen Partnern arbeiten Sie zusammen? Gibt es darüber hinaus auch noch andere wichtige Partner?*

*Gibt es Netzwerkpartner, die besonders stark in das Netzwerk eingebunden sind? Warum ist das so?*

*Sind die Partner an maßgeblichen Aktivitäten, wie z. B. bei der strategischen Planung auf der Netzwerkebene beteiligt? Welche Partner sind das vor allem?*

*Gibt es Partner, die Sie gerne im Netzwerk gehabt hätten? Wenn ja, welche? Warum?*

*Welche Veränderungen haben sich im Laufe der Zeit bzgl. der Netzwerkpartner ergeben?*

*War die Einbeziehung von Betrieben oder Kommunen ein vorrangiges Ziel im Netzwerk? Wie gut ist dies bisher gelungen? Was sind die Gründe dafür?*

*Wie sind Betriebe in das Netzwerk eingebunden?*

## 3. Ziele der Netzwerkarbeit

**(NWM) Welche inhaltlichen Ziele des Netzwerks gibt es?*

*(NWM) Haben sich die Ziele des Netzwerks im Zusammenhang mit dem Vertiefungsprojekt verändert? Wie?*

** Welche inhaltlichen Ziele des Vertiefungsprojektes gibt es?*

** Welche der angestrebten Ziele konnten (bis jetzt) realisiert werden? Welche konnten nicht realisiert werden?*

*Gelingt die Umsetzung Ihrer Vorhaben im gesamten Zielgebiet? Wo besteht Ihrer Meinung nach noch Weiterentwicklungsbedarf?*

## 4. Zielgruppen

** Welche (Haupt-) Zielgruppen werden im Netzwerk angesprochen? Warum gerade diese? Haben sich die Zielgruppen in der Vertiefung verändert? Wie?*

*Zielt Ihr Netzwerk vorrangig auf Endnutzer oder auf Institutionen und Organisationen? Inwiefern?*

*A + B: Welche Rolle spielt das Lernzentrum / die Bildungsberatungsagentur bei der Gewinnung neuer Zielgruppen?*

*Welche Zielgruppen konnten bisher nicht erreicht werden? Woran liegt das?*

*Liegen konkrete Zahlen zu Teilnehmern oder Nutzern von Angeboten im Netzwerk / Vertiefungsprojekt vor? Wenn ja, für welche Angebote? Liegen auch Trendzahlen zur Entwicklung im Zeitverlauf vor? Zahlen bitte geben lassen!*

*Durch wen lernen die Teilnehmer das Angebot kennen? Wer schickt die Teilnehmer in die Einrichtung? Spielen Betriebe oder die Kommune(n) dabei eine Rolle?*

*Glauben Sie, dass Schwellenängste bei den Zielgruppen vorhanden sind? Wie können Schwellenängste gesenkt werden? Spielt die Beratung hierbei eine besondere Rolle?*

## 5. Produkte / Angebote (NWM)

**** Beschreiben Sie bitte kurz die Angebote in Ihrem Netzwerk. Wie wurden diese Angebote entwickelt?***

***Welches Angebot war, alles in allem, aus Ihrer Sicht die erfolgreichste Neuentwicklung im Netzwerk? Warum?***

*Was trifft für das Netzwerk eher zu: Die Entwicklung von Produkten und Angeboten oder die Entwicklung von Strukturen und Bildungsinfrastrukturen? (Produkte: z.B. Lernkoffer, Kraut und Rüben (ungelernte Kräfte erwerben Kompetenzen / Strukturen: Schaffung von Übergangsmöglichkeiten)*

## 6. Organisationsstruktur und innere Rahmenbedingungen im Vertiefungsprojekt (NWM)

*Beschreiben Sie bitte kurz das Vertiefungsprojekt. Wie ist es entstanden? Wie sind Sie bei der Entwicklung des Vertiefungsprojektes vorgegangen?*

*Welche Rolle spielt das Netzwerk für das Vertiefungsprojekt?*

*Was sind die Besonderheiten des Vertiefungsprojektes? Wer war an der Entwicklung dieses Konzepts maßgeblich beteiligt?*

*Aus welchen Gründen haben Sie sich für diesen Vertiefungsschwerpunkt entschieden?*

*Wo ist das Vertiefungsprojekt angesiedelt?*

*Wie ist das Vertiefungsprojekt aufgebaut? Welche Aufgabenbereiche, Zuständigkeiten und Stellen gibt es? Wie sieht die zeitliche und räumliche Struktur von Vorgängen und Prozessen aus? Entwicklungen? (Größe, Angebot, Teilnehmer, Trägerschaft / Gesellschafter, Unternehmenskultur) auch (Öffnungszeiten, Räume, Raumausstattung)*

*Wie viel Personal ist im Vertiefungsprojekt eingestellt?*
*Welche Qualifikation haben sie (die Lehrkräfte / Lernberater und das anwesende Personal)? a) Ausbildung/Abschlüsse, b) Weiterbildung/Zertifikate*
*Wer stellt das Personal? Wie wird es finanziert?*

** Stellen Sie sich vor, Sie sollen jemandem erklären, wie man ein/-e BBA, LZ gründet / Projekt im Übergangsmanagement / mit KMU initiiert / Kommunen in das Netzwerk einbindet. Was ist zu beachten? Wer ist einzubeziehen? (förderliche / hemmende Bedingungen/Faktoren) Bei bisher noch nicht befragten NWen: die Frage auch auf das Netzwerk beziehen.*

*Wenn Sie an die förderlichen und hinderlichen Bedingungen in der Netzwerkarbeit denken, was war besonders förderlich bzw. hinderlich?*

## 7. A. Bildungsberatungsagenturen (NWA)

** Beschreiben Sie bitte kurz Ihre Bildungsberatungsagentur. Wie sind Sie bei der Entwicklung der Bildungsberatungsagentur vorgegangen? (Öffnungszeiten, Räume, Raumausstattung)*

*Wie ist die Bildungsberatungsagentur aufgebaut? Welche Aufgabenbereiche, Zuständigkeiten, Stellen, Abteilungen... gibt es? Wie sieht die zeitliche und räumliche Struktur von Vorgängen und Prozessen aus? Entwicklungen? (auch: Größe, Angebot, Teilnehmer, Trägerschaft / Gesellschafter, Unternehmenskultur)*

*Wo ist die Bildungsberatungsagentur angesiedelt?*

*Gibt es Modelle zur Institutionalisierung der Bildungsberatungsagentur? Wie ist die Idee entstanden, aus einem Projekt eine Institution zu gründen? Warum? Wie hat es sich entwickelt?*

*Wie viel Personal ist in der Bildungsberatungsagentur eingestellt?*

*Welche Qualifikation haben sie (die Lehrkräfte / Lernberater und das anwesende Personal)? a) Ausbildung / Abschlüsse, b) Weiterbildung / Zertifikate*
*Wer stellt das Personal? Wie wird es finanziert?*

*Welche Formen der (Bildungs-) Beratung werden angeboten? (Berufsbildungsberatung, Schullaufbahnberatung, Beratung und Lehrerbildung, individualpsychologische Beratung...)*

*Gibt es Beratungskonzepte, wonach Sie sich richten? Wenn ja, welche? Haben Sie diese selbst entwickelt?*

*Auf welche Art und Weise wird die Beratung durchgeführt? (Einzel-, Gruppenberatung, telefonische Beratung, Internet, Datenbank, Informationsmaterial, ...)*

*Werden Beratungsziele vereinbart? Werden diese Ziele operationalisiert? Vereinbarung von nächsten Schritten? (Oder sind es nur Einzelberatungen?)*

*Gibt es in den Bildungsberatungsagenturen die Möglichkeit, selbstorganisiertes und informelles Lernen zu zertifizieren oder zu bilanzieren? Wie, warum, warum nicht? (Profilpass, Kompetenzbilanzierung)*

*Wie geben Sie den Teilnehmern einen Überblick über verfügbare Bildungsangebote? (z.B. durch eine Datenbank?)*

> *Wird speziell für die Beratung eine Datenbank oder ein anderes technisches Hilfsmittel genutzt?*

*Was kosten die Angebote für den einzelnen Nutzer?*

## 7. B. Lernzentren (NWA)

*Beschreiben Sie bitte kurz Ihr Lernzentrum. Wie sind Sie bei der Entwicklung des Lernzentrums vorgegangen? (Öffnungszeiten, Räume, Raumausstattung)*

*Wie ist das Lernzentrum aufgebaut? Welche Aufgabenbereiche, Zuständigkeiten, Stellen, Abteilungen... gibt es? Wie sieht die zeitliche und räumliche Struktur von Vorgängen und Prozessen aus? Entwicklungen? (auch: Größe, Angebot, Teilnehmer, Trägerschaft / Gesellschafter, Unternehmenskultur)*

*Haben Sie ein ganz neues Konzept entwickelt, oder ein bereits vorhandenes übernommen bzw. weiterentwickelt?*

*Wo ist das Lernzentrum angesiedelt?*

*Gibt es Modelle zur Institutionalisierung des Lernzentrums? Wie ist die Idee entstanden, aus einem Projekt eine Institution zu gründen? Warum? Wie hat es sich entwickelt?*

*Wie viel Personal ist im Lernzentrum eingestellt?*
*Welche Qualifikation haben sie (die Lehrkräfte / Lernberater und das anwesende Personal)? a) Ausbildung/Abschlüsse, b) Weiterbildung/Zertifikate*
*Wer stellt das Personal? Wie wird es finanziert?*

*Welche konkreten Lernangebote gibt es im Lernzentrum? (eher formal-organisiertes oder informelles Lernen)*

*Liegt der Angebotsschwerpunkt im Lernzentrum eher bei Information und Beratung oder bei Lernangeboten?*

*Wie geben Sie den Teilnehmern einen Überblick über verfügbare Bildungsangebote? (z.B. durch eine Datenbank?)*

*Welche Art von Selbstlernangeboten können die Besucher in Ihrem Lernzentrum nutzen?*

*Welche Voraussetzungen muss der Lernende mitbringen, um Ihre Angebote nutzen zu können? (Vorerfahrungen mit selbstorganisiertem Lernen, Computerkenntnisse, usw.)*

*Welche Ressourcen stellt Ihr Lernzentrum den Lernenden zur Verfügung?*

- *Arbeits-/Lernräume*
- *Arbeitsinstrumente: PC, Kopierer, Drucker…*
- *Medien: Lernmaterialien/Lernsoftware, Bücher, Skripte, CD/DVD, Netzzugang*
- *Lehrkräfte, Tutoren, Lernberater, ggf. externe Experten*
- *Möglichkeiten der Kommunikation mit anderen Lernenden: Diskussionsforen, Workshops, ggf. virtuelle Räume (Chatraum)...*
- *andere Ressourcen*

*Bitte beschreiben Sie den normalen Vorgang bei der Betreuung eines neuen Nutzers:*

- *Gibt es eine Standortbestimmung?*
- *Werden Lernziele vereinbart? Gibt es eine Einführung in die gewählte technische Arbeitsform?*
- *Wie wird der Lernende bei der Planung und Organisation des Lernprozesses unterstützt / betreut?*
- *Werden die Lernfortschritte dokumentiert / die Lernziele überprüft?*
- *Werden Evaluationsinstrumente vereinbart?*
- *Wie helfen Sie Nutzern, die Lernergebnisse anzuwenden / zu verwerten?*
- *Wie reagieren Sie bei Lern- und Motivationsproblemen?*
- *Gibt es eine Möglichkeit, selbstorganisiertes und informelles Lernen zu zertifizieren / bilanzieren? Wie? Warum / Warum nicht?*

*Was kosten die Angebote für den einzelnen Nutzer?*

*Können Kunden bei der Entwicklung / Veränderung von Angeboten mitwirken? Wie?*

## 7. C. Übergangsmanagement (NWA)

** Beschreiben Sie bitte kurz Ihr Vertiefungsprojekt. Wie sind Sie bei der Entwicklung des Projekts vorgegangen?*

*Wie ist das Vertiefungsprojekt aufgebaut? Welche Aufgabenbereiche, Zuständigkeiten, Stellen, Abteilungen... gibt es? Wie sieht die zeitliche und räumliche Struktur von Vorgängen und Prozessen aus? Entwicklungen? (auch: Größe, Angebot/ Module, Teilnehmer, Trägerschaft / Gesellschafter, Unternehmenskultur)*

*Wo ist das Vertiefungsprojekt institutionell angesiedelt?*

*Wie viel Personal ist im Vertiefungsprojekt eingestellt?*
*Welche Qualifikation haben sie (die Lehrkräfte / Lernberater und das anwesende Personal)?*

*a) Ausbildung/Abschlüsse, b) Weiterbildung / Zertifikate*
*Wer stellt das Personal? Wie wird es finanziert?*

*Welche Übergangssituationen werden in Ihrem Netzwerk bearbeitet? Welche Dienstleistungen/ Module innerhalb des Gesamtdienstleistungspakets werden konkret angeboten?*

*Wie geben Sie den Teilnehmern einen Überblick über verfügbare Bildungsangebote? (z.B. durch eine Datenbank?)*

*Haben Sie ein ganz neues Konzept entwickelt, oder ein bereits vorhandenes übernommen bzw. weiterentwickelt?*

*Welche Institutionen im Netzwerk sind daran beteiligt und wie sind diese vernetzt? Spielen Betriebe eine besondere Rolle?*

*War die Einbeziehung von Betrieben ein vorrangiges Ziel im Netzwerk? Wie gut ist dies bisher gelungen? Was sind die Gründe dafür?*

*Welche Erfolge werden erzielt? Was, glauben Sie, war förderlich für diese Erfolge?*

*(Inwieweit arbeiten Sie im Netzwerk mit bereits existierenden Projekten und Maßnahmen aus der Region zusammen?)*

*Was kosten die kompletten Dienstleistungen für den einzelnen Nutzer?*

## 7. D. Aus- und Weiterbildung in KMU (NWA)

*Beschreiben Sie bitte kurz Ihr Vertiefungsprojekt und Ihr komplettes Dienstleistungsportfolio. Wie sind Sie bei der Entwicklung des Projekts vorgegangen?*

*Haben Sie ein ganz neues Konzept entwickelt, oder ein bereits vorhandenes übernommen bzw. weiterentwickelt?*

*Wo ist das Vertiefungsprojekt institutionell angesiedelt?*

*Wie ist das Vertiefungsprojekt aufgebaut? Welche Aufgabenbereiche, Zuständigkeiten, Stellen, Abteilungen... gibt es? Wie sieht die zeitliche und räumliche Struktur von Vorgängen und Prozessen aus? Entwicklungen? (auch: Größe, Angebot/ Module, Teilnehmer, Trägerschaft / Gesellschafter, Unternehmenskultur)*

*Wie viel Personal ist im Vertiefungsprojekt eingestellt?*
*Welche Qualifikation haben sie (die Lehrkräfte / Lernberater und das anwesende Personal)?*
*a) Ausbildung/Abschlüsse, b) Weiterbildung/Zertifikate*
*Wer stellt das Personal? Wie wird es finanziert?*

*Wie geben Sie den Teilnehmern einen Überblick über verfügbare Bildungsangebote? (z.B. durch eine Datenbank?)*

*Stellen Sie sich vor, Sie müssten jemandem erklären, wie man ein Projekt mit KMU initiiert? Was ist zu beachten? Wer ist einzubeziehen? (wichtige Voraussetzungen, Kooperationsstrukturen, Kommunikationsstrukturen)*

*Wie gelang / gelingt es Ihnen, die KMU als Adressaten der Netzwerkaktivitäten in die Lernenden Regionen einzubeziehen?*

*War die Einbeziehung von Betrieben ein vorrangiges Ziel im Netzwerk? Wie gut ist dies bisher gelungen? Was sind die Gründe dafür?*

*Wie ist der Betrieb / sind die Betriebe in das Netzwerk eingebunden?*

*Welche Anforderungen haben KMU an Aus- und Weiterbildung? Wie haben Sie den Bedarf festgestellt? Wie haben Sie auf den Bedarf reagiert?*

*Gibt es ein Spannungsfeld zwischen den individuellen Vorstellungen der Teilnehmer / Mitarbeiter und der Ansprüche der Geschäftsleitungen? Wie kommt das Angebot bei den Mitarbeitern an? Haben Sie hierzu Rückmeldungen bekommen?*

*Was kostet das komplette Dienstleistungsportfolio für den einzelnen Nutzer / Betrieb?*

**8. Marketing**

*Welche Marketingaktivitäten gibt es für das Netzwerk / das Vertiefungsprojekt? Welche Marketingstrategie wird dabei verfolgt? Wie viel investieren Sie in Marketing?*

*Wer wird über das Marketing für das Netzwerk / Vertiefungsprojekt angesprochen? Welche Wirkung zeichnet sich ab?*

*Wie schätzen Sie die Bekanntheit des Netzwerks bei folgenden Akteuren ein? Bevölkerung; Betriebe; Kommunalpolitik; Kommunalverwaltung; in lokalen Medien (Presse, Rundfunk).*

*Ist eher das Netzwerk (Lernende Region)an sich, oder das Vertiefungsprojekt (Name, mit dem an die Öffentlichkeit gegangen wurde) bekannt? Profitiert das eine von der Bekanntheit des anderen?*

*Sind die Lernenden Regionen auf der kommunalen Webseite zu finden? Wenn ja, wo? Was erwarten Sie sich davon? Wenn nein, warum nicht?*

**9. Qualitätssicherung**

*Wie wird die Qualität der Angebote im Netzwerk / in Ihrem Vertiefungsprojekt sichergestellt? Gibt es besondere Strategien, die verfolgt werden, wie z.B. ein Qualitätsmanagement-system?*

*Gibt es Überlegungen zur Weiterbildung / -qualifizierung des beschäftigten Personals? Welche? (z.B. im Bereich Methodenkompetenz, kommunikative Kompetenz, gruppendynamischer Prozesse, Moderationsfähigkeit, Teamsitzungen / Supervision (als Form der Fortbildung))*

## 9. Regionaler Bezug und kommunale Einbindung (NWM)

### 9.1 Kommunale Einbindung

*Unbekanntes Netzwerk: Wie ist die Lernende Region regional abgegrenzt? Hat sich diese Abgrenzung im Laufe des Projekts verändert?*

*Wurde die regionale Bildungsbedarfslage erhoben? In welcher Form? Was genau wurde im Rahmen dieser Bedarfsanalyse untersucht? Von wem? Wann, zu welchem Zeitpunkt?*

*Wird der Bedarf kontinuierlich oder punktuell erhoben?*

*Wie verbindlich sind die daraus abgeleiteten Aufgaben? Werden Zielvorgaben daraus ermittelt? Wie wird die Zielerreichung überprüft? Welche Konsequenzen folgen daraus?*

*Ist eine Kommune im Netzwerk eingebunden?*

*Wenn ja, in welcher Form? Eher auf breiter Basis oder eher einzelne Aktivisten? Seit wann?*

*Wenn nein, warum nicht?*

*Konnten die Kommunen in gewünschtem Umfang mit in die Netzwerkarbeit einbezogen werden? Woran liegt dies vor allem?*

*Welche Rolle spielt die Kommune für das Netzwerk / Vertiefungsprojekt? Welche Rolle spielt das Netzwerk / Vertiefungsprojekt für die Kommune?*

*Gelingt es dem Netzwerk / Vertiefungsprojekt, sich in der Kommune zu etablieren? Wie?*

*Wird Ihr Netzwerk / das Vertiefungsprojekt durch kommunale oder Landesressourcen unterstützt?*

*Welche Akteure aus der Kommune sind noch an den Lernenden Regionen interessiert? Welche kommunalen Akteure fehlen aus Ihrer Sicht im Netzwerk?*

*Erhalten Sie von anderer Stelle Unterstützung in Form von materieller und immaterieller Förderung? Von welchen Institutionen?*

### 9.2 Regionale Wirkungen

*Was sind aus Ihrer Sicht die wichtigsten Wirkungen der Netzwerkarbeit in der Region insbesondere mit Blick auf die Regionalplanung?*

- *Stärkere Berücksichtigung des Lebenslangen Lernens in der Regionalplanung;*
- *Initiierung politikfeldübergreifender Kontakte;*
- *Erhöhung der Weiterbildungsbeteiligung der Bevölkerung in der Region;*
- *Entwicklung innovativer Lernprodukte, Lerndienstleistungen.*

*Worauf sind diese Wirkungen zurückzuführen? Spielen dabei Ihrer Meinung nach Marketingaktivitäten eine besondere Rolle?*

*Inwieweit leistet das Netzwerk Beiträge zur Regionalentwicklung?*

- *Erstellung von Dokumenten zur Regionalplanung bzw. Regionalentwicklung?*
- *Übernahme von Moderationsfunktionen in der Regionalpolitik? Regionalplanung im Bereich Bildung / Lebenslanges Lernen?*
- *Regionalplanung im Bereich Arbeitsmarktpolitik, Wirtschaftspolitik, Wirtschaftsförderung, etc.?*

*Hat Ihr Netzwerk Ihrer Einschätzung nach zur Verbesserung beschäftigungsbezogener Aspekte in der Region beigetragen? Wenn ja, inwiefern? (Ziele, Ansätze / Konzepte, erreichte Wirkungen)*

## 10. Kommunikation und Kooperation mit Interessenspartnern im Netzwerk

*Wie erfolgt die Kommunikation zwischen dem Netzwerk und dem Vertiefungsprojekt? Welche Kommunikationsstrukturen gibt es (formal organisierte & informelle Arbeitstreffen)?*

*Wie gestaltet sich die Zusammenarbeit mit den Netzwerkpartnern? (interne Kommunikation; Kooperation; Partnerbeziehungen)*

*Gibt es Ansätze, um Vernetzung auszubauen / aufrechtzuerhalten?*

*Zwischen welchen Partnern gibt es aus Ihrer Sicht die intensivste Kooperation? Warum? Mit welchen Partnern kooperieren Sie am engsten? (zw. Weiterbildungseinrichtungen, zw. Akteuren aus verschiedenen Bildungsbereichen, zw. Bildungseinrichtungen und der Kommunalpolitik / Arbeitsverwaltung)*

*Gibt es Konkurrenzdenken zwischen den Partnern? Wie wird damit umgegangen? Kommt es vor, dass wegen Konkurrenzdenken, Einrichtungen nicht kooperieren?*

** Gibt es Verbindungen mit anderen Projekten außerhalb des Netzwerks? Welche? Wie lange schon, welche zukünftigen Pläne haben Sie diesbezüglich? Welche positiven / negativen Erfahrungen haben Sie dabei gemacht?*

## 11. Mehrwert

*Kann die Bildungsbeteiligung durch die Netzwerkarbeit verbessert werden? Welche Voraussetzungen müssen dafür gegeben sein?*

*Inwiefern profitieren die einzelnen Partner von der Vernetzung?*

*Welchen spezifischen Mehrwert schafft Ihrer Meinung nach Ihr Gesamtkonzept für die Lernende Region XY?*

** Welcher Mehrwert entsteht durch das Netzwerk? Wie können Synergien durch das Netzwerk geschaffen werden? (im Vergleich zu einem einzelnen Anbieter oder einem anderen Projekt)*

## 12. Nachhaltigkeit

** Welche Strategien können zum erfolgreichen Weiterbestehen des Netzwerks / des Vertiefungsprojekts beitragen?*

** Welche Möglichkeiten der nachhaltigen Finanzierung gibt es? Was wurde in diese Richtung bereits initiiert? Was ist aus Ihrer Sicht besonders sinnvoll?*

***Wenn Sie nach vorne blicken, wo werden Sie mit Ihrem Netzwerk / Vertiefungsprojekt in 3 Jahren stehen? Was KANN / MUSS aus Ihrer Sicht weitergehen?***

## 13. Sonstiges

*Was haben Sie für sich in der Laufzeit des Projektes gelernt?*

*Was haben Ihrer Meinung nach die anderen Netzwerkakteure in der Laufzeit des Projektes gelernt?*

*Was ist in der Netzwerkarbeit aktuell noch zu verbessern?*

** Zusätzliche Aussagen der Interviewpartner: Möchten Sie gerne noch etwas anfügen, das im bisherigen Gespräch noch nicht zur Sprache kam?*

**Andrea Reupold**
E-mail: andrea.reupold@freenet.de
DOB: 11th July 1977,
Nationality: German

## Education

**Ludwig-Maximilians-University in Munich (LMU) and University of Twente (NL)**

Phd thesis completed in July 2009 on "Learning Network Management" with summa cum laude

Masters Degree in Further Education, Organizational Psychology and Intercultural Communication (July 2002) at the LMU, Master Thesis: Evaluation of an intercultural training for the U.S. at Siemens AG

Scholarship of the European Union for a semester study programme in the Netherlands (Courses: Analysis and Design of Audiovisual Messages and Tele-Learning)

A-Levels in English, Art, Chemistry and Geography (July 1997)

## Professional Experience

**Ludwig-Maximilians-University of Munich, Institute of Pedagogy and Educational Research (Prof. Dr. R. Tippelt),**

09/2004 – to present day

University Lecturer Lecturing in pedagogy and in a master programme called "Psychology of Excellence"

- Development and conducting Seminars in English (Promoting Excellence, Competency Based Training, Organisational Development) for the international master students, supervising and guiding the students as well as, writing and presenting papers.

04/2009 – to present day

Research Associate at the Institute for adult education and educational research at the LMU Munich in different projects, such as "Pedagogical employment within the system of lifelong learning", in collaboration with the Goethe University in Frankfurt and financed by the German Research Foundation

- Conducting of research: survey design, implementation and analysis/interpretation of scientific data
- Development of instruments for group discussions and a quantitative survey
- Financial management
- Leading a team of 2 student research assistants

09/2002 - 10/2008

Research Associate "Learning Regions – Providing Support for Networks", initiated and financed by the German Ministry of Education and Research (BMBF) and the European Union (ESF).

- Monitoring & Evaluation of the national programme
- Leading a team of 2 colleagues and 10 student research assistants,

- Supervision of contractual partners,
- Organisation and moderation of workshops, meetings and seminars
- Face-to-face interviews,
- Conducting surveys and analysis/ interpretation of scientific data,
- Financial management,
- Presenting the findings to the group of contractors,
- Organising, planning and conducting workshops and conference presentations
- Publishing the results

02/2005 – 07/2006

**German Youth Institute (Deutsches Jugendinstitut)**

Research Associate, "Validation of informal learning outcomes" initiated and financed by the German Ministry of Education and Research (BMBF)

- Development of an instrument for the assessment and validation of informal learning activities,
- Face-to-face interviews with staff executives and managers,
- Development of questionnaires,
- Conducting surveys and analysis/ interpretation of scientific data.

08/2001 to present day

**Helmut Kuwan, Scientific Research and Consulting, Munich**

Freelance Research Associate, sample projects:

- Development of an international Continuing Education and Training Module, OECD (in English)
- Further Education worldwide, BMBFand bfz
- Social and regional differentiation in continuing education in Germany, LMU Munich and BMBF
- National Report on Continuing Education, bmb+f

11/2000 – 03/2002

**Siemens Qualification and Training, Intercultural Cooperation and Communication, Munich**

- Organisation of the conference (ENCoDe): "Internationalizing Business: Best Practice in International Communication Training"
- Participation and evaluation of an intercultural training for the U.S. (master thesis)
- Administration and organisation of workshops and training classes
- Analysis and Evaluation of financial data, presenting the results, creating financial reports

## Other

| | |
|---|---|
| Computer Skills | - MS Office,<br>- Internet applications,<br>- UCINET, SPSS, Max QDA. |
| Technical skills | - Statistics: Probability Distribution, Statistical Quality Research |
| Languages | - Native German<br>- Fluent English,<br>- Basic Knowledge in French, Swedish and Italian. |
| Hobbies | - Outdoor sports, Travelling, Dancing. |

Munich, 12th August 2009 Andrea Reupold