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Leadership and Management in the Development of Regional Innovation Environments[1]

Abstract

In this paper, we bring forth the need to better understand the role of management and leadership in the development of RIEs of the Information Age. Our main emphasis is not so much to define and conceptualise management or leadership as such but to frame the roles and ways of leading regional development. We first examine what kind of challenges are emerging from the network society development, secondly, we identify and elaborate the key factors of regional development from the leadership and management point of view and thirdly we raise some points of departure for understanding leadership in the context of promoting regional innovation environments.

1 Introduction

Studies focusing on innovation systems have increased our understanding of the interaction between the main actors who participate in the innovation activities and the systemic nature of these interdependent relationships. In addition to that the roles and functions of various organizations are now better identified and understood than earlier. It has also been observed that the regional innovation environment (RIE) affects the innovation activities in firms. As Aydalot states: "The firm is no heaven-sent agent free to "choose" an environment; it is secreted by its environment … the firm is not an isolated innovative agent; it is part of the milieu which makes it act. The territories' past, their

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[1] This article is linked to the following research projects: a) Local Innovation Project [LIP] funded by the Finnish Technology Agency and carried out in co-operation with MIT/IPC, HUT/IMI; Univ. of Cambridge and Univ. of Tokyo, b) The Invisible Dynamics of the Urban Development Processes: Emerging Patterns of Networks, Knowledge, Images and Power [ID-UD], funded by the Academy of Finland (No 78071).

organisation, their collective behaviour, the consensus structuring them, are the major components of innovation." (quoted in Bramanti & Ratti 1997.)

The environment supports the creation of new products, processes and practices. In innovation environments the innovation processes are, more or less, based on the interaction between the local milieux and the firms, and so new synergy between actors and collective learning have possibilities to emerge. Co-operation is often organized in networks that are based on proximity, shared culture, reciprocity and trust. Because of their dynamic and open nature, the local and regional innovation environments support the ability of the firms to adapt to the rapidly changing markets.

The importance of leadership has always been central in the development of RIEs, but the point of departure here is that in the future the ability to lead the birth and development of regional innovation environments will become even more important. In the network society the nature of power and influence are changing and therefore the nature of leadership is changing too (see Sotarauta 2001) and hence a need to understand the dynamic nature of different innovation environments, management and leadership may turn out to be crucial in the development of RIEs as the structures and visible elements do not always have significant differences between regions (see Sotarauta & Bruun 2002).

Leadership and management in the creation and development of RIE differ in nature from conventional modes of leadership developed for the corporate world, because the means to influence are mainly indirect. In practice, influence builds on different forms of power, but first and foremost, on interaction and social skills. In order to be able to influence events, leaders have to act in the riptide of several different interests and aims, and find a totally new range of means that can be applied in different events. It should also be noted that in regional development leadership is not a straightforward question of leaders and followers, leaders lead some issues but often they are followers in some other, and some of the followers may in some other occasion be leaders. In this kind of context leadership may be seen as the effect of actors on one another and it may be that in the promotion of regional development there are several leaders having different qualities, and at all events leadership in regional development is more or less a collaborative process. No one can lead the development of regional innovation environments alone since it is not possible to control the activities of the other actors.

All in all, in order to develop the regional innovation environment, policy-makers and managers are required to become more skilled in managing dynamic transition and

processes, not only in administrating resources, programs and formulating development programs. In this paper, we bring forth the need to better understand the role of management and leadership in the development of RIEs of the Information Age. Our main emphasis is not so much to define and conceptualise management or leadership as such but to frame the roles and ways of leading regional development. We first examine what kind of challenges are emerging from the network society development, secondly, we identify and elaborate key factors of regional development from the leadership and management point of view and thirdly we raise some points of departure for understanding leadership in the context of promoting regional innovation environments. We are aware that regional innovation environments remain in the background and their basic features are only loosely referred to, but our aim is to frame the issue of leadership for the future and ongoing studies. In the paper some of the issues are highlighted by using the observations of the case studies that focused on the development of regional innovation environments in the Nordic Countries, mainly in Finland (See Bruun 2002a and 2002b; Linnamaa 2001; Kostiainen & Sotarauta forth.)

2   Network society is challenging the managers

As early as in the 1980s and especially in the 1990s, many prominent commentators greatly stressed the role of regions. It became almost habitual to point out that the regional level is better suited for the promotion of regional development than the state level and that the rhetoric and practices of "Europe of Regions" became common in many policy spheres. However, our notion of the places and regions is not based on "border-oriented", administrative view but on the networks and processes that "flow through and in the city-regions". Our rather Castellian (see Castells 1996) understanding of the place, and thus of city-regions, is based on the Network Society thinking, that stresses such issues as speed, flexibility, information, and networks, and therefore network society challenges leaders engaged in regional development to learn new skills.

A central determinant of the network society is dynamics, activities and processes are increasingly organised in networks and participation in the networks and network dynamics are critical sources of power. Paradoxically, at the same time, it would appear that the sources of global competitiveness are increasingly dependent on local economic, political and social institutions, processes and networks. A strong case indeed has been made today for the idea that regional agglomeration is growing in importance as a mode of economic co-ordination (Cooke & Morgan 1998). The main supporting

argument is that regional agglomeration provides that best context for an innovation-based economy (Asheim & Isaksen 1997). In many studies, innovation is argued to be one of the most crucial elements in the developing knowledge economy. It has led to an increasing interest in national systems of innovation and regional innovation systems (see e.g. Lundvall 1992; Braczyk et al. 1998; Kautonen & Sotarauta 1999.)

Achieving regional-innovation-focused competitive advantage is based upon the ability to access and generate knowledge, and of particular importance to securing competitive advantage is access to knowledge networks. It is quite generally believed that the countries and cities that are successful in the knowledge-based, fast-evolving flows are those who are able to keep their feelers out constantly, those who are able to adapt, learn and innovate – who are able to constantly create knowledge in an interactive process. This means that mainly those who have participated in the creation of information will be capable of utilising it in time. Indeed, many commentators (e.g. Florida 1995; Lundvall 1992; Simmie 2001a; Kostiainen & Sotarauta 2000) have studied the role of viable cities as pools of knowledge, where business especially and other organisations can benefit from knowledge created in the city-region and from knowledge that has been attracted to the city-regions from various knowledge networks.

Cities are the places where knowledge as a 'strategic resource' is created and achieved; throughout history, cities have indeed in one way or another been centres of knowledge activities (e.g. in the form of universities, entrepreneurial networks, or the knowledge centres of firms). Business performance will be enhanced by the knowledge base of the city, its knowledge infrastructure and the institutions and conventions that support interaction and collective learning. Cities can hence be seen as nodes and hubs of knowledge networks, and contemporary RIE-policies often focus on rebuilding the learning capacity in the cities; much of this relates to research and development, institutional development, and inter-firm networking.

The concept of embeddedness, according to Simmie (2001b, 25), is a key feature that distinguishes the analyses of both new industrial districts and innovative milieux from neo-classical agglomeration theory. Granovetter, in his often quoted article of 1985, argued that, far from being a separate detached activity with its own independent forms of behaviour, economic activity is also a social phenomenon where such social characteristics of economic activity as habits, conventions and norms of behaviour may be developed by the social interactions of actors 'embedded' within a regional context. The significance of the spatial context is based on the notion of the importance of trust that is

built up through repeated personal contacts. These, on the other hand, are to be facilitated by geographic proximity and hence the easier possibilities for multiple face-to-face contacts. (Simmie 2001b, 25.) This also explains why companies join networks and form alliances with the aim of developing new technology and why these networks are quite often local by nature (Lundvall & Borras 1997, Kostiainen 1999). Firms are not isolated innovative agents but parts of the milieu that makes them act.

To summarise, it can be simplified that individuals and firms are more and more locating themselves in those urban regions, where new knowledge is created and where the future options seem to be. Thus the importance of regional innovation environments (RIE) is increasing.

RIE consists of the set of political, industrial and academic institutions that, by design or unintended consequence, work to improve the local conditions for innovation. RIE also includes the systemic connections between the producers of knowledge (universities, research institutes, training institutions), intermediate organisations (standard-setting bodies, local trade associations, regulatory agencies, technology transfer agencies, business associations, relevant government agencies and departments, et al) and firms (including specialised suppliers of equipment and services and customers). (Cooke et al 1996.) The institutional set-up of RIEs is, on general level, based on those organizations whose mission is to create and apply new knowledge for innovation and on interaction between those organizations. However, the regional innovation environment consists not only from formal structures and different organizations but also of different innovation networks between firms and support organizations and policy networks between actors who have interests to improve the RIE.

In many cases the development of RIEs is a complex network of public and private organisations trying to improve their competitive position by participating in the development process. Naturally there is no central authority orchestrating this process but a network of actors who try to steer it. The question is therefore not only about the measures and policy objectives but also about how to lead a complex, ambiguous and muddled process of regional development outlined above and especially of the birth and development of regional innovation environments?

According to Webster's dictionary *to lead* is…

- to go before or to show the way
- to influence or to induce
- to go head of or in advance of
- to have the advantage over
- to act as leader
- to go through or pass
- to act as guide

Even though the answer provided by the dictionary gives us a point of departure, we still face such questions as how to go before or to induce or to act as a guide if one does not have formal power to do it? How to go ahead of, if one has a formal position but is not respected? Consequently the basic question in this article is, what is leadership like in regional development and giving birth to RIE?

There is definitely no lack of management models developed for the corporate world. Numerous different models to support leadership have been developed. In studies focusing on regional development and in the world of regional policy-making the significance of leadership is not fully understood, or at least appreciated although the significance of leadership is in a central position in the creation of new strategies and in the implementation of new models. According to our studies regional development needs new kinds of leaders who possess the skills required by the network society and who have an understanding of a new kind of power. (see e.g. Sotarauta 2002; Sotarauta & Bruun 2002.) In the knowledge-based and continuously changing world, leadership requires continuous use of one's "feelers", in other words, probing of the reactions and intentions of other people, continuous learning, innovating, and adapting to changing situations. At the same time, it still has to make sure that change will not get control over organisations and that networks will not start having a life of their own; one has to be both dynamic and persistent simultaneously.

Next, we pay attention to the role of leadership as a way to affect the different key factors that frame the development of RIEs.

3 A general framework for managing the development of regional innovation environment

In all its manifestations, regional development is an extremely diverse entity, its practices are varied and institutional set-ups usually quite complex. Next, we elaborate key factors of regional development from the leadership and management point of view by using the framework presented in the Figure 1 (Sotarauta & Bruun 2002).
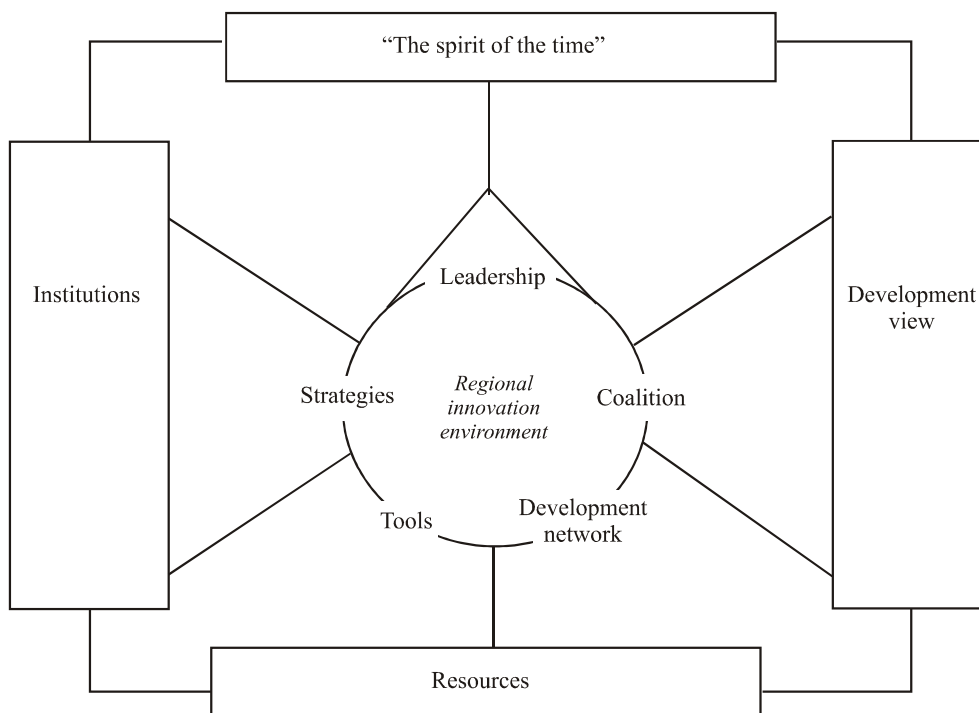
FIGURE 1. Key factors in the promotion of regional development (Sotarauta et al. 2002)

3.1 The spirit of the time

The spirit of the time[2] refers to contemporary values, attitudes etc., that is, the way various issues are generally seen and discussed in a society. It is not an exact set of details but rather a general atmosphere that emerges from the general societal communication that is continuously ongoing in various forums and media. The spirit of the time gives meaning to various policies as well; often it has a decisive influence both on what policies are seen important in the society and on how they are expected to be carried out. However, the relationship between the spirit of the time and the contemporary way of playing the policy game is not a static relationship; there may always be a saturation point hidden in the midst of the processes and thus the spirit of the time will change, sooner or later.

In Jyväskylä, Turku, Trondheim and North Denmark it has been easier to mobilize actors to participate in collective regional development efforts when the topic has reflected the spirit of the time, namely, it has been discussed in the media, conferences, literature, etc. (see Linnamaa 1999; Bruun 2002a and 2002b). Local leaders, "inspirers", the champions of development efforts, have been able to utilize general societal dis-

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[2] Inspired by the Hegelian term *zeitgeist*, literally "time-spirit"

course in their own argumentation. The spirit of the time is one of the key resources in launching development projects. However, if there is an uncritical outlook on the spirit of the time, the promotion of regional development may end up being hollow development rhetoric with some fashionable catchwords. Consequently, many actors may lose their faith in the development process and the momentum may be lost. (Sotarauta et al 2002.)

The spirit of time acts as a valuable tool but also as a framework for leading and mobilising a development process. Most good initiatives, despite all data and analysis, must resonate with the desires and visions of the participants. These strategic visions are based on the narratives, culture and range of concepts that operate very much within the spirit of time. To be successful a development initiative must be within this 'framework' in order to get support and inspire people. A good leader is able to use the spirit of time as a tool for creating visions, shared development view, activate resources and people and frame the process. The stories and concepts that reflect the spirit of time are not themselves enough to produce concrete action, though.

The spirit of the time has, at least, a twofold significance for leadership; firstly it stresses the fact that it is very difficult to promote development against the tide and thus leaders are supposed to be able to strategically adjust to the prevailing spirit of the time, but not uncritically. Leaders are also supposed to tell their own story and thus the spirit of the time enhances the worth of story telling as powerful means to lead large and complex networks.

3.2   Development view

If the spirit of the time refers to the general atmosphere, the development view refers to the thinking patterns of individuals and groups. It may be seen to be a more or less detailed system of beliefs and values. Its parts are worldview (what the world is like) and knowledge (how knowledge of the world is acquired and justified) and values (what the world ought to be like). The development view does not therefore refer directly to the nature of the development as an absolute phenomenon, but it emerges from experiences, education, expectations and communication with other actors engaged in the promotion of regional development. The development view directs an actor's way of comprehending the course of development, and the general forces and actors influencing this. It leads an individual to see some things and not to see others. (Niiniluoto 1989; Sotarauta 1996) Here the spirit of the time is a general level collective phenomenon and the de-

velopment view is more a cognitive phenomenon at the level of small groups and individuals. In this sense, it can be understood as a shared belief system that for example creates tighter communities instead of more loose issue networks in a certain policy field.

The development view strongly influences what institutions are created and/or reorganized. Even though the spirit of the time is here seen as a more general and thus stronger force than the development view, the development view of influential actors affects the spirit of the time as well. The dominant development view of key policymakers together with the spirit of the time greatly influences how the resources are directed and thus also the tools made available, it also affects such issues as who are relevant partners to each other, that is, how networks take shape and what kind of power and influence leaders have.

In the creation of regional innovation environments, the development view may have a major influence on practical work, as it guides, among other things, the directing of resources and various networks. It may also cause tensions and even conflicts, as it is not necessarily the same for all actors. This may cause the perceptions of the regional development network itself and the roles of its members but also the objectives and strategies to be very different from each other. In such a case how knowledge is acquired and generated (or what is even paid attention to) may have a major influence not only from the viewpoint of the contents of regional development policies but also from the viewpoint of the functionality and dynamics of the development processes.

For example, in the 1990s, in the Finnish cities of Jyväskylä, Turku and Tampere, the development view of many of the key actors has become increasingly parallel and it has had a significant effect on the promotion of regional development; it has become more effective and development networks have become more integrated, connected and dense (see Linnamaa 1999; Bruun 2002a; Kostiainen & Sotarauta forth.). In one sense a certain kind of 'community spirit' has evolved around the issues of development. (Sotarauta et al 2002).

In the city-regions mentioned above, the development views and the strategic consciousness of the key actors is becoming more parallel than before which has led to a situation where it has been difficult for people to see and think differently when entering the development discourse. Strategic consciousness may make development work more effective, but it may also lead to a phenomenon called group think (Janitch 1982). Group think may hinder learning and thus prevent key actors from being able to reshape

their development view. In this case, the dominant coalition does not listen to any critical arguments and does not see how changes in the environment are changing the base of the strategies. Consequently, the dominant coalition focuses on defending selected strategies and it may cognitively lock into the past path. DiMaggio and Powell (1991) call this kind of situation institutional isomorphism. Drawing information, concepts, 'best practises', rules, norms etc. from the same resources make different and divergent organisations behave and think in the same way.

The role of leadership and management in relation to development view is many sided. A development view needs information, monitoring and visionary thinking which means that there has to be a capacity to gather knowledge and transform it to the local setting. There is also a need to develop interaction between agents and in many cases management of interaction means acting as a gatekeeper between organisations and people. A good leader is also capable of improving the absorptive capacity of the network to learn and unlearn new ways of thinking and acting.

Both the spirit of the time and development view raises management of perceptions crucial as actors generally have different perceptions of problems, other actors, dependency relations and the benefits and drawbacks of working together. Such perceptions are hard to change, but in joint activity they gradually reform and are reconstructed. Actors are not even always willing or able to modify their perceptions. In such situations there is a risk that the development process will become a "dialogue of the deaf", with the same arguments reiterated ritualistically with nobody willing to have his/her view put in an unfavourable light. Management of perceptions seeks to prevent such deadlocks or to resolve them by maintaining/creating conditions for open debate. In such discussions, an effort should be made to accept that there is no "best" perception as such, and that for successful cooperation the existence of differing perceptions is more use than the elimination of differences in interpretations (Termeer & Koppenjan 1997) and thus also the development views of various actors have chances to undergo a transformation.

Management by perceptions does not therefore aim at consensus but at creating a common base for joint decisions while accepting and respecting the positions and perceptions of other actors.

3.3 Resources

Key questions in the development of regional innovation environments are: a) what kind of resources are there in the region; b) are the regions capable of identifying re-

gional resources and are they capable of creating new resources and of networking to external resources; and c) what is the capability of regional development network to utilize resources?

In this context, resources are seen as inputs directed at the regional development work. The spirit of the time usually shapes the development view that concomitantly influences actors to see some things as resources and not see some others. Among the most important resources in an industrialized society were raw materials, sources of energy, and logistical location. In an information society, a highly skilled labour force, universities, and expertise are usually seen as the most important resources. On a general level, resources can be grouped as follows.

- Physical resources – infrastructure, location, logistical connections, etc.
- Firms – their expertise, resources, contacts, etc.
- Human resources – highly skilled people in the firms and other organizations, research and educational institutes, etc.
- Living environment based resources – natural environment, built environment, private and public services, etc.
- Financial and material resources – funds for regional development work
- Connections – good networks, high-level social capital, etc.
  (revised from Sotarauta & Lähteenmäki 2001)

In regional development it is important to have actual resources on which to build development strategies. At the same time, it is crucial that key actors are able to see various things as resources and are able to utilize them. In Jyväskylä and Turku, the key actors have been able to see and effectively utilize university education and research, among other things, as inputs in wider development processes. (Linnamaa 1999; Bruun 2002a.)

In Finland, a common strategy for almost all the public development agencies is to build networks for policy making. The idea is that communication and collaboration result in better policies as well as more efficient implementation. However, those authorities that themselves invest financial resources in the development processes have had more success as network builders. The other actors perceived them as serious players. In contrast, authorities that entered network building without such investments have faced considerable scepticism and will probably have small chances to make the most of the network strategy. (Sotarauta et al. 2002.)

In addition to utilizing local resources the ability to locate and utilize external resources is of utmost importance. Hence through skilful lobbying of external financiers

and decision-makers and creative utilization of external funding (national, EU) it is possible to increase the resources to build on. In the economically successful cases of Finland, the development network has been able to join internal and external resources together in the implementation of their own development strategy. (See Linnamaa 1999; Bruun 2002a; Kostiainen & Sotarauta forth.)

In many cases the problem in the development of RIEs has been the inability to identify the different resources correctly, which has lead to unrealistic expectations or problems in the dynamics of the process. Especially the capabilities and motivation of different actors and their ability to work together has been a problem. What is important in the process of development is not only to identify but also to mobilise different resources. From the management point of view this means especially the ability to realistically identify the capabilities, resources and objectives of each important organisation.

3.4   Institutions

Case studies on the regional development networks and processes of Tampere, Jyväskylä, Turku, Trondheim and North Denmark raise, in one way or another, the significance of institutions in framing and directing development processes. This general level observation supports the conclusions of many studies focusing on the regional economy stressing the importance of institutions in economic success (see e.g. North 1992; Amin & Thrift 1995; Maskell 1996; Morgan 1997). For example Tampere, Turku and Jyväskylä can be seen as institutionally thick city-regions and they have also been able to increase thickness in strategically important sectors through the creation of new institutions and increasing interaction between institutions.

Drawing on Linnamaa (1999), institutions can generally be seen as a framework for actions and choices. Therefore institutions refer to the relatively permanent modes of operation, rules and resources and the organizational field, which gives the development actions and various networks their basic form. In contemporary regional economy research, special importance is attached to informal institutions and regularly recurring behaviour generated by culture – habits, customs and routines. Formal institutions are also significant for development activities. They are presented in the form of a law, statute or written contract, or are realized through some specific organization. (See e.g. Maskell 1996; Morgan 1997; Klijn & Teisman 1997.)

Institutions frame the development policies and processes and give various networks their context, which means that they on the one hand have a major directing effect on

development activities. Therefore, consistency and clarity of the institutional set-up is important. In a blurred and rapidly changing network society, uncertainty is not to be increased by unconsidered institutional transformations; institutions should reduce uncertainty, not to increase it. Institutions, however, may have either positive or negative influence. On the one hand, they may represent continuity in a rapidly changing world and provide actors with a clear and supportive playground. On the other hand, institutions may lock regions in past development paths politically, functionally and/or cognitively (see Schienstock 1999; North 1992; Hukkinen 1999) and thus the question of path dependence and the negative effects of institutions are also realised in practical development activities. Turku, Jyväskylä, and Tampere have consciously made efforts to free themselves, at least in some parts, from the past path and to create a new one by creating new institutions, by seeking out new resources to build on and by creating a new perception of the respective city-region, its current state and future prospects.

The importance of institutions is also reflected in the fact that the management of a rapidly growing regional development network is both difficult and risky, as observed in the Turku and Jyväskylä cases (Linnamaa 2001; Bruun 2002a). A tension exists in the public sector's efforts to combine the need for political support and control with its desire to promote dynamic, competitive and economically successful new industries. This tension needs to be addressed not only to safeguard the interests of taxpayers, but also to ensure the long-term involvement of the city and the consistence of public policies.

One of the reasons why the development work in many city-regions has proceeded well is the fact that in the earlier phases of development new institutions and resources have either emerged or been designed that could be utilized later by a more systematic strategic development approach. However, there are also examples, in Turku as well as in Trondheim, of failed attempts and a closing-down of organisations that did not work. The challenge lies in making these failures a strength by admitting them, and learning from them. A learning region is a region that makes its failures a resource for the future. (Sotarauta et al. 2002.)

From a management point of view institutions are usually a hard nut to crack. Institutions are persistent by nature and therefore slow to change. Therefore in short term institutions usually frame the development work and shape the ways in which the development process can be managed and led. The other challenge of institutions is that they are in many cases deeply rooted in the ways of thinking, norms and values. Therefore the

impact of institutions is often hard to recognise in the development process. This kind of challenge can be seen especially when a new participant enters an established development network and tries to take a leading role. The importance of elements like experience, social capital and persistence is therefore very important.

3.5   Development networks and coalition

In this paper the significance of networks has been stressed and development processes are indeed nowadays more often than not organized in networks. Process features such as informality, connectivity, integration and goal consistency enhance performance in certain areas, like education, research, entrepreneurship, while at the same time being problematic for other kinds of performances, most notably broad participation in decision-making, political legitimacy, and critical discourse. Transparency and consistency are important process features for attracting external actors into the regional development network. (Bruun 2002a.)

In development networks, a sense of mutual empowerment is important and there have been conscious efforts to create and actualise this. In this endeavour it has been essential to understand that mutual dependency should be realized - it could be simply said that no single organization is capable of such effective development work alone as that which can be achieved in cooperation with other development organizations. Also the nature of network like cooperation should be understood, namely, the importance of reciprocity, trust, solidarity and confidence ought to be accepted and internalised in order to have a truly functional network. In networks shared power and leadership should be accepted - no single development organization could easily take precedence over others in issues of regional development (this may be possible in individual issues). Thus power is the ability to promote shared and/or separate objectives in interaction. In the absence of formal hierarchies and shared understandings the role of information and leadership is stressed.

Even though the promotion of regional development is organized in networks, often a dominant coalition assumes a central role in development activities. Logan and Molotch (1987) have labelled these kinds of groups as growth coalitions or growth machines. We use the term 'coalition' when referring to these kinds of dense core groupings. Usually the interests that bring people together to form a coalition are based on the pursuit of economic benefit (Harding 1997, 42.) Coalitions are not composed of all pos-

sible interest groups relevant to the regional development, sometimes actors outside of a coalition may question the objectives coalitions sees as self-evident.

A coalition may be a strategic node of wider development networks, an engine for mobilizing resources and directing of development efforts. However, it may also become a separate and introspective entity distinct from the development network, which strives purely for its own benefit without paying any attention to the interests of the region and development of RIE. Coalitions may therefore be either the main source of leadership in regional development or inward looking "old boy" networks. If it becomes an old boy network, discussions on development strategies may end up being the sole property of a local elite. However, if there is not a dominant coalition in some region, there is the danger that region becomes locked into the past path. The role and activities of coalitions have been important in the mobilization of resources, people and in the creation of mutual empowerment, often coalitions create many of the new initiatives in informal forums and legitimise them in the formal forums.

In Finland pragmatism dominates regional development. This means that many processes of decision-making take place outside formal structures, and across activity domains (local authorities, business, and (state) universities). Informality is one of the key sources of dynamism and it has also provided actors with opportunities to discuss difficult matters without the fear of losing their face. In Finland, there was a clear need for a pragmatic and more informal development mode when the recession was at its deepest in the 1990s. It seems that also politicians were ready to delegate more power to professional development (Sotarauta et al. 2002.)

3.6   Strategic planning and programming as a tool of regional development

In order to gain complete control over development or change in a given region it would be necessary for all actors to be of one mind with regard to issues and strategies and their solutions. Furthermore, they would need to implement regional strategies through their own actions. Efforts have been made to unify the actions of members of development networks with the help of regional strategies. In other words, it is hoped that regional strategies will guide a maximum number of actors either directly or indirectly. Thus, some of the questions people engaged in regional development are interested in are: how is it possible to be flexible and fast to react (as is nowadays often stressed) and at the same time enable the widest possible participation in strategic planning, how is it possible to create strategies focusing on the future needs of the region as a whole in a

negotiation process of compromise and conflict comprising numerous actors? Until now the dilemma has been solved by an approach based mainly on classical strategic planning. *Partnership is therefore often assumed to occur within the regional strategy.*

The basic idea of regional strategies, nowadays often focusing on the development of RIE, that the organizations operating in the region should realize shared strategies based on a shared vision, is very tempting. It would make things more manageable. It is, however, more likely that different organizations would nevertheless seek first to realize their own ambitions and strategies, which are usually stronger than regional strategies. This may mean that the intended regional developmental strategies appear to be everybody's but belong to nobody and never become part of what the organizations are doing.

With reference to the thoughts so far expressed, and raised in the case studies, it may be stated that partnership and classical strategy do not go particularly well together. The ideal of classical strategy does not enable us to make a long-term, enduring combination of different action logic and the differing strategies and objectives emerging from these and therefore strategies are to be seen more as long-term interactive processes than only strategic plans.

Thus the assumption here is that partnership is not achieved *within* regional strategies; partnership is achieved *between* strategies. If a definition of regional strategy is sought on this basis, it may be defined to be a communicative process, in which different aims and strategies of many actors are *reconciled,* various interests *balanced,* and touching points and concrete means between the many objectives are constantly sought out and *coordinated.* During this continuous process, the various goals and strategies of individual organizations are made as parallel as possible by communication, negotiation, strategic plans, programs, etc. (Sotarauta & Linnamaa 1998.).

This changes our understanding on regional strategies and development programmes too, they are more many-sided tools for leaders than usually thought. Development programs are not only a formalised way to plan and implement development measures but they can also be seen as central tools for leading and managing the development process. Programmes are usually commonly agreed forums for exchanging information, creating and managing networks, building trust and shared vision. Development programs have at least following functions:

- The program is a plan, in which a vision, strategies and adequate measures are presented in order to channel and direct the use of resources.

- The program is a legitimate forum for cooperation.
- The program is a way of making sense together, to learn common language and new concepts, to create shared lines of action and thought patterns, and way of seeing the development and the role of various actors in it.
- The program is a means of communication, that is, messages from one group of actors to another group.
- The program is a trigger for new processes
- The program is a tool in making better sense of the ongoing open social discourse in a region from the point of view of regional development.
- The program is a tool in concretising "noble sentiments" or turning a crisis into something constructive.

One of the core tasks of strategic planning is the creation of common vision. The ability to bring to fore a vision of a different future is important, as well as the ability to embody this vision in a functioning organization. However, it is usually created outside the formal planning procedure but often legitimised in them. By the means of visions a sufficient creative tension between present and the future has been created and thus it has raised new discussions, made key actors interested in development efforts and also guided them. Quite often visions created in strategic planning are so uninteresting that they remain self-evident lists of "everything nice and beautiful". To be truly functional in the development networks vision should be communicable, challenging and appealing. In this sense, the planning process is a valuable tool for managing the process of collective sense making.

3.7 Leadership and individuals

In leadership, the ability to speed up, boost, and change the course of action when the environment changes has become crucial. Leadership and management in the promotion of regional development differ in nature from conventional modes of leadership because the means to influence are mainly indirect; to be able to influence events, leaders have to act in the riptide of several different interests and aims, and find a totally new range of means that can be applied in different events. It is also worth noting to see that despite differences in power and resources the main empowerment in network management is based on information rather than authority (Agranoff & McGuire, 1999). Despite numerous different models and leadership styles, the most efficient leaders trust themselves and their own sense of assessment of the situation and use a combination of several different models and styles. Whatever the leadership model or range of combinations, the basic tasks of the managers can in most simple terms be summarized around the following management and leadership approaches and abilities:

- *Strategic and visionary management/leadership*
  - The ability to define strategies and visions for the regional development together with other actors; the ability to promote development activities persistently, consistently and comprehensively; the ability to create the future; the ability to bring to fore visions of different futures and the ability to transform these visions into focused strategies and action; the ability to transform crisis situations into something constructive; the ability to launch processes right and manage and lead them differently in different phases; the ability to find correct timing for development work and seize the competitive advantage by being a pioneer; the ability to bring forth big objectives so that they seem credible and attractive for the other actors, etc.
- *Network management/leadership*
  - The ability to involve people and empower them to act as a network; the ability to make people work to reach joint and separate goals and renew them in an ongoing process, namely, the ability to promote interactive processes serving as an intermediary in interaction between actors and steering activities towards seeking goals and enabling cooperation; the ability to connect various actors to the cluster from their own starting points; the ability to create and utilize creative tension in development work and to create the sense of drama (presenting issues so that people become enthusiastic and excited); the ability to get short-term success in order to sustain motivation; the ability to network competently and efficiently utilize informal relations, etc.
- *Resource management*
  - The abilities to utilize existing resources and to find new ones in the promotion of regional development; the ability to direct resources according to regional strategies and in that way influence the strategies and operations of various organizations; the ability to skilfully lobby to external financiers and decision-makers and to creatively utilize of external funding; the ability to see different things as resources in regional development and to utilize them, etc.
- *Knowledge management*
  - The ability to create and apply new knowledge in development network; the ability to create such an environment that supports the knowledge management of different organizations; the ability to openly grasp to initiatives via informal decision-making channels and the ability to channel these initiatives into formal structures of decision-making; the ability to understand and mobilize image and atmosphere, etc.
- *Institutional management*
  - The ability to create and maintain a flexible but at them same time persistent institutional set-up that supports networking and the fluidity of development processes, that is, the ability to create institutions that provide organizations with as good and supportive national, regional and local development and innovation environment as possible.

The cases we have studied, and briefly referred to in this paper, demonstrate that all these different approaches are in use in planning, steering and mobilising regional development. In the economically successful cases, the ability of the key actors to perform fast and proactive collective action was of great importance in guaranteeing external (national and EU) funding and raising interest in the region and mobilizing both people and resources. In the proactive development work, as Bruun (2002b) states, an active campaign, where regionally well-known and respected people put their authority behind the program, and by the ability of these people to transmit a positive and regionally anchored picture of the project, is one of the key factors in a dynamic promotion of regional development. At the same time, as Linnamaa (2001) and Bruun (2002a) have shown us, the ability of the network to influence policies across a broad range of sectors is dependent on the degree to which the network managers can claim themselves to be

spokesmen for the network. Thus a certain degree of concentration of representative authority will be needed.

4   Conclusion

In the creation and development of regional innovation environments, leadership may often remain at the level of mechanic administration with the emphasis on control, plans, and supervision, among other things. It has rather diminished creative tension and people's enthusiasm than generated them. The old managerial traits are lagging behind as the ways of influencing and organising regional development activities have moved to a new era. It can be seen more and more clearly that in network society such abilities as creating shared meaning, managing interaction, creating and distributing information, activating and mobilising resources and building trust are becoming the core functions of leadership

Even though the practise of regional development can be seen to need new ways of leading and management there are, however, indeed great differences in development cultures among regions. In any case, the capability to improvise is essential in relation to a region's established modes of action and rules, and within the setting they have created. On the one hand, these are followed without questioning; on the other hand, modes of action and rules are bent and tested in order to find their limits. Sometimes the limits are broken deliberately in order to free the processes of change. The continuous stretching, testing, and breaking of institutional settings renew the leadership settings and prevent excessive lock-ins into the prevailing structure and thought patterns. At the same time it should be noted that there are no simple solutions or tricks of trade for managing regional development, changes are needed both in the context in which the actors participate in the development process and the capabilities of individuals.

The institutions and thought patterns of development officers should evolve so that a mechanical planning and development culture could be left behind and regional development policies would be able to enable and empower the activities of small groups and individuals without loosing open and transparent critical societal discussion.

The key actors in the regional development network are supposed to include visionary individuals capable of fostering consensus upon a common vision for the development process. The key actors should also be regionally well-known and respected individuals, because the combination of enthusiasm and authority that they embody is likely to transmit a positive and regionally anchored view of the project to the general public.

In practice this means that, in the promotion of regional development, the organisational institutions responsible for development work should also pay more attention in creation of challenging working environments and recruitment of active, highly skilled and respected individuals. Although we do not see leadership to be only a personal trait or characteristic, the experience, capabilities and personal contacts etc. of individuals are very important and at the same time rare resources in the development process.

The greatest challenge may lie in the need to balance visionary leadership and concentration of representative authority with openness, transparency and goal consistency to guarantee the credibility and educational self-renewal of the development networks. We believe that leaders can gain influence by collective sense making, i.e. looking together with other actors for the meanings of events, by creating new knowledge as well as by recognising, renewing, and creating perceptions. Essential to this is that various problems and challenges are looked at from many different angles and therefore living with uncertainty and management of ambiguity are emphasised. In leadership, also the ability to visualise thinking, to use metaphors and narratives to get the message across, to create completely new combinations, to utilise polarities in generating creative tension, and to read signs, message and meanings become essential.

All in all, leaders and managers engaged in regional development need a many-sided set of skills and abilities. Perhaps leadership is also better to see as teamwork, where skills and abilities of different leaders ought to be better exploited as well as to create opportunities for leaders to develop and invest in their own expertise.

References

AGRANOFF, R. & MCGUIRE, M. 1999. Big Questions in Public Network Management Research. Paper delivered in the Fifth National Public Management Research Conference, Texas A&M University, College Station, TX, George Bush Presidential Conference Center, December 3-4, 1999.

AMIN, A. & THRIFT, N. 1995. Globalisation, Institutional "Thickness" and the Local Economy. In Healey, P. & Cameron, S. & Davoudi, S. & Grahm, S. & Madani-Pour, A. (eds.) Managing Cities: The New Urban Context. pp. 91-108. John Wiley & Sons Ltd.

ASHEIM, B. & ISAKSEN, A. 1997. Location, agglomeration and innovation: Towards regional innovation system in Norway. European Planning Studies, Vol. 5 Nro 3. 2999-330.

BRACZYK, H-J. & COOKE, P. & HEIDENREICH, M. 1998. Regional innovation systems: The role of governances in a globalized world. UCL Press. London.

BRAMANTI, A. & RATTI, R. 1997. The Multi-Faced Dimension of Lo-cal Development. In Ratti, R. & Bramanti, A. & Gordon, R. (eds.) The Dynamics of Innovative Regions. The GREMI Approach. Ashgate.

BRUUN, H. 2002a. The Emergence of a Regional Innovation Network: A Process Analysis of the Local Bio Grouping in Turku, Finland. In Sotarauta, M. & Bruun, H. 2001. (eds.) Nordic Perspectives on Process-Based Regional Development Policy. Nordregio.

BRUUN, H. 2002b. Mobilising A Regional Lighthouse: A Study of the Digital North Denmark Programme. In Sotarauta, M. & Bruun, H. 2001. (eds.) Nordic Perspectives on Process-Based Regional Development Policy. Nordregio.

CASTELLS, M. 1996. The rise of the Network Society - The Information Age: Economy, Society and Culture. Blackwell Publishers..

COOKE, P. & MORGAN, K. 1998. The associational economy: firms, regions, and innovation. Oxford University Press.

COOKE, P. & BOEKHOLT, P. & SCHALL, N. & SCHIENSTOCK, G. 1996. Regional Innovation Systems: Concepts, Analysis and Typol-ogy. Paper prepared for EU-RESTPOR conference Global Compari-son of Regional RTD and Innovation Strategies for Development and Cohesion Brussels 19-21 September.

DIMAGGIO, P. & POWELL, W.W. 1983. 'Theironcage revisited: institutional isomorphism and collective rationality in organizational fields', American Sociological Review, 48, 1983.

FLORIDA, R. 1995. Towards the learning region, Futures, 27, 527-536.

GRANOVETTER, M. 1985. Economic Action and Social Structure: The Problem of Embeddedness. American Journal of Sociology 91, 481-510.

HARDING, A. 1997. Elite Theory and Urban Politics: Who Controls? Who Benefits. In Judge, D. & Stoker, G. & Wolman, H. (eds.) Theo-ries of Urban Politics. s. 35-53. Sage Publications.

HUKKINEN, J. 1999. Institutions in Environmental Management: Constructing Mental Models and Sustainability. London: Routledge.

JANIS, I. L. 1982. Groupthink: Psychological Studies of Policy Decisions and Fiascoes. Houghton Mifflin.

KAUTONEN, M. & SOTARAUTA, M. 1999. Ei-yliopistokaupunki ja alueellinen innovaatiojärjestelmä: Näkemyksiä Seinäjoen innovaatiokyvykkyydestä [Non-university town and regional innovation system: Notions on innovation capacity of Seinäjoki town]. In Sotarauta, M. (eds.) Kaupunkiseutujen kilpailukyky ja johtaminen tietoyhteiskun-nassa. Suomen Kuntaliitto, Acta-sarja 106. Helsinki.

KLIJN, E-H. & TEISMAN, G. R. 1997. Strategies and Games in Net-works. In Kickert, W. & Klijn, E-H. & Koppenjan, J. (eds.) Managing Complex Networks. Strategies for the Public Sector. s. 98 - 118. Sage Publications Ltd. London.

KOSTIAINEN, J. & SOTARAUTA, M. (eds.) 2000. Kaupungit innova-tiivisina toimintaympäristöinä [Cities as innovative environments]. Tekniikan akateemisten liitto. Helsinki.

KOSTIAINEN, J. & SOTARAUTA, M. [forthcoming]. Great leap or long march to knowledge economy: Institutions, actors and resources in the development of Tampere, Finland.

LINNAMAA, R. 1999. Kaupunkiseudun kilpailukyvyn rakenteelliset ja dynaamiset elementit [The structural and dynamic elements of urban competitiveness]. In Sotarauta, M. (ed.) Kaupunkiseutujen kilpailu-kyky ja johtaminen tietoyhteiskunnassa. Suomen Kuntaliitto, Acta-sarja 106. Helsinki.

LINNAMAA, R. 2001. Development Process of the ICT Cluster in Jy-väskylä Urban Region. Manuscript. Tampere, University of Tampere, Research Unit for Urban and Regional Development Studies.

LOGAN, J & MOLOTCH, H. 1987. Urban Fortunes. University of California Press.

LUNDVALL, B.-Å. 1992. User-producer Relationships, National Sys-tems of Innovation and Internationalization. In Lundvall, B.-Å. (ed.) National system of innovation and interactive learning. New York: Pinter.

MASKELL, P. 1996. Learning in the village economy of Denmark. The role of institutions and policy in sustaining competitiveness. Danish Reserch Unit on Industrial Dynamics (DRUID), Working Paper No. 96-6.

MORGAN, K. 1997. The Learning Region: Institutions, Innovation and Regional Renewal. Regional Studies, Vol 31, s. 491-503.

NIINILUOTO, I. 1989. Informaatio, tieto ja yhteiskunta: filosofinen analyysi [Information, knowledge and society: Philosphical analysis]. Valtion painatuskeskus. Helsinki.

NORTH, D.C. 1992. Institutions, Institutional Change and Economic Performance. Cambridge University Press, Cambridge, MA.

PORTER, M. 1991. The competitive advantage of nations. Macmillan, London.

SCHIENSTOCK, G. 1999. From Direct Technology Policy Towards Conditions-Enabling Innovation Policy. In Schienstock, G. & Kuusi, O. (Eds.): Transformation Towards a Learning Economy. Challenges for the Finnish Innovation System. Sitra. Helsinki.

SIMMIE, J. 2001a. Innovative Cities. Spon Press. Taylor & Francis group.

SIMMIE, J. 2001b. Innovation and agglomeration theory. In Simmie, J. (ed.) Innovative Cities. Spon Press. Taylor & Francis group.

SOTARAUTA, M. & BRUUN, H. 2001. (eds.) Nordic Perspectives on Process-Based Regional Development Policy. Nordregio.

SOTARAUTA, M. & LINNAMAA, R. 1998. The Finnish Multi-Level Policy-Making and the Quality of Local Development Policy Process: The Cases of Oulu and Seinänaapurit Sub-regions. European Planning Studies. Vol. 6, No 5. p. 505-524.

SOTARAUTA, M. & LÄHTEENMÄKI, T. 2001. Onko strategiatyön musta aukko mahdollista välttää? Kohti ydinkompetenssiajattelua alueellisessa kehittämisessä [Is it possible to avoit the black-hole of strategywork? Towards core competence thinking in regional development]. In Alueiden kilpailukyvyn kahdeksan elementtiä. Suomen Kuntaliitto, Acta-sarja 137. Helsinki.

SOTARAUTA, M. 1996a. Kohti epäselvyyden hallintaa: Pehmeä strate-gia 2000-luvun alun suunnittelun lähtökohtana [Towards governance of ambiguity: Soft strategy as a point of departure for policy-making in the 21st century] . Acta Futura Fennica 6. Finnpublishers. Jyväskylä.

SOTARAUTA, M. 2001. Urban Competitiveness and the Management of Urban Policy Networks. Some Reflections from Tampere and Oulu. *Technology, Society, Environment* (3). Espoo, Finland, Helsinki University of Technology Laboratory of Environmental Protection: 35-52.

SOTARAUTA, M. & HUKKINEN, J. & BRUUN, H. & LINNAMAA, R. (2002). Observations and Policy Recommendations. Nordic Regional Development Policy in Search of New Modes of Action. In Sotarauta, M. & Bruun, H. 2001. (eds.) Nordic Perspectives on Process-Based Regional Development Policy. Nordregio.

TERMEER, C.J.A.M. & KOPPENJAN, J.F.M. 1997. Managing Perceptions in Networks. In Kickert, W.J.M. & Klijn, E-H. & Koppenjan, J.M.F. (toim.) Managing Complex Networks: Strategies for Public Sector, s. 79-97. Sage Publications.