Self-Organizing Urbanism in Europe;

Informal & formal networking and urban transformation within the triangle Eindhoven, Leuven, Aachen.

Tentative research proposal

By Ir. Jelle Rijpma & Dr. Ir. Stephanie Geertman, *DHV* Consultancy & Engineering, The Netherlands
Co-referent and partner Prof. Paul Drewe, Delft University of Technology, The Nethlands

During our work at *DHV* we experience that spatial development develops more efficient and is more successful when there has been a phase of informal networking before jumping into formal structures. As discussed at the conference, most Gordian knots, if not all, have to do with borders. Geographic borders are well known and always good for tensions and worse. Other borders are the borders of institutions and companies. They have their own goals and values and try to realize their goals. The goals have to be realized in a formal setting. There is the legislation, the power and money to realize goals. In our daily practice we notice that we deal with a lot of borders in a formal setting. It is a very complex situation in which solutions are not easy to be reached. It takes a long time to build a road, but it takes five times longer to decide. In our practice we have accepted that in almost every situation we deal with complex problems. We learn more and more that we have to respect this, because of the under laying goals and values of the many involved individuals, companies, governments and institutions. So, in the south of the Netherlands, we are experimenting with the possibilities and chances informal networks offer. In this text we introduce our experiences with informal networks after which we give an outline of a starting theoretical framework capturing the issues.

Every society has its informal networks in which deals are setup. We experience that these informal networks are extremely good for innovation because there is a lack of rules giving more freedom to operate with each other. An informal network functions well if the participants behave respectfully towards each other. The negative site of informal networks is the fact that they are not very visible, they tend to be “almost secret”. As a result they are sometimes not trusted by those who are not involved. Another weakness of informal networks is that there is no, or little, power to execute new ideas and solutions. That is the strength of a formal network. So, the question is: how to organize an informal network to solve a complex problem (ore to reach innovation= out of the box thinking) in a transparent way. The second question is: how to relate the informal solution to the formal networks to execute the idea. The company ***DHV*** started three experiments.

In 2007 DHV took the initiative to initiate a network with an informal character concerning innovation of infrastructure in the region Eindhoven. We asked the regional government to join and a knowledge institute to participate in an informal network. We called it the *Triple Helix*. All the partners, our company, the government and the knowledge institute, exchanged agenda’s and ideas. Soon we reached commitment about how to organize this network in an informal way, we called it an *Innovative Program Mobility and Technology*. We organized about 150 individuals representing around 50 different institutions in a range of workshops. Question raised were: what is the state of the art of technology, what does the customer wants, what will the politicians do with the ideas, and how will the manager realize the ideas. The program has in 2008, and today, found its way in the policies of the regional and local government and even effects national government policy.
The second experiment started in the year 2000, the year the Fifth National Policy was established. The contained the proposal of a network for the five bigger cities in the Noord-Brabant region. This network is now named *Brabantstad* and is functioning as an informal innovative network. Now after 8 years the cities and the regional government also agreed on a joint program for investments in infrastructure and related urban transformation.

The third experiment is questions how to make a success of complex urban problems using informal networking. The experiment resulted in the development of an urban zone of 7 kilometers in Eindhoven. It started with an informal process to define the project, and the way the project has to be executed. This resulted in a global vision which gave the possibility to cope with changes when they occur. The project is in full **swing. So, there is a first success of making informal networks or better using the characteristics of informal networks in solving complex problems.**

For us the next step is to join in the cooperation between cities. We choose for the cities of Leuven (Belgium), Aachen (Germany) and Eindhoven (The Netherlands). A Cross-border situation. The three cities form together the 'Technology-triangle' which is a term given to the agreement signed by the mayors of the three cities in 2004. This agreement contains the ambition to – together with knowledge institutions, businesses, and governments – develop before 2010 into an absolute top-technology region in Europe and worldwide. Projects and strategies will be developed together with public and private partners. Thus this region is now formally chooses 'to develop'. However, we think this region is not chosen as such without a reason. We see it as a challenge to study what kind of informal socio-economic networks already exist within this region and how this influences urban development.

We want to start a research and development program which leads to a governmental agenda and practice on the subject the *Future European* or *Multinational Region Eindhoven-Aachen-Leuven*. A few years ago the local and regional governments of the three urban regions have produced a first understanding of cooperation, but are looking forward to make a more and specified commitment. A specific research and development program should be able to generate a political and governmental agenda for this future European region based on technology. The first contacts In Leuven en Eindhoven show that a research en development program for the region Eindhoven-Aachen-Leuven is welcome. We are also looking for other regions to join in, so we can learn from each other. The idea can be worked out within the progress of the Warchau conference which leads hopefully to a European program. In Warschau we have met a reasonable amount of people who reacted enthousiastic on this idea.

The program should contain at least the following aspects.

1. The Future European Region will be organized through a good balance of formal and transparent informal networks of people and institutions.
2. The Future European Region will have to deal with a good balance of informal and formal change and development of the Urban Areas.
3. The Future European Region will organize sustainable urban and regional development by process, vision, scenarios and projects rather than by blue-print-planning behavior. This aspect should be worked out in the methodology as pointed out bij Professor Paul Drewe.
4. The Future European Region will search for connection with other Urban Areas and Regions in Europe or on a global scale in order to learn from each other and to exchange services, products and knowledge.
5. In the Future European region their will be a close en transparent connection between the private sector, the public sector and the knowledge sector.
6. What can we learn from other regions and cities? Lessons can be learned form the urban region of Eindhoven: the working of the Triple Helix in Brainport as well as Brabantstad; an innovative urban network.

In January 2009 we will set up an approach, which contains the methodology of Paul Drewe. In the remaining part we give an overview of the theoretical framework to start with. The above sketched cases will be used to make this framework more concrete. This will lead to more knowledge and insight in how to establish networks with an informal character and how these will work. We will do this in order to create a

successful technologic region, the ELAT region. The aim is that this will lead to a governmental agenda and execution of investments and innovations.

Theoretical Frame

There are seven aspects which form the starters of the theoretical frame: globalization (1); complexity and self-organization (2); informal and formal networking; (3) complexity, self-organization and the role of planners, architects, policymakers and other professionals (4); Tentative research Questions (5); Research Approach (6); and Research Relevance (7).

1. Globalization

The world is in the midst of the phase of globalization, triggering a whole set of changes; social-cultural, economic, and political. Due to these changes at an astonishing speed, new "urban regions" and "million cities" are developing and existing urbanisms experience immense transformations: urbanization rates are reaching records and issues as sustainability have become of highest concern. In the early phase of globalization, the notion was that the socio-economic transformation eventually would coalesce into a single model of information society (Friedmann 1986, Sassen 1991). This very much resembles the predominant theories of modern times where a single development trajectory was advocated and widely accepted despite "exceptions" that persisted throughout the world. While cities are transforming, an intellectually rethinking of urbanism is taking place. In our increasingly globalizing world we are witnessing more than ever before that our world and thus our urbanisms are complex systems.

The problems and agendas of the Club of Rome and the OECD are directly related to this. This needs to be translated in the regional problematic where it has to connect with the local economies and culture. The integral approach, which we have seen at the conference in European Regions, in particular the Italian cases.

2. Complexity & Self-Organization

In the theory of complexity, system changes occur in many ways. Transformations can be triggered from *within* the system (local influences) – tiny, random changes in the system that can cumulatively result in major modifications. "Because the nodes are networked in non-linear and complex ways, a slight change in one area can trigger another small change, which triggers another until there are disproportionately large disruptions in the relationships and patterns. As a small part of the pattern changes, relationships and rules between the nodes change, and eventually a new pattern emerges – the system is different" (Morgan, 1997). At the same time, transformations can also be triggered from *outside* the system (global influences). These triggers from outside the system are defined as "environmental influences that the people in the system pay attention to" (Morgan, 1997). The relationship between the influences in and outside a system (local-global fusions) and transformations can be explained with the term self-organization.

Complex systems are *self-organized*, exhibiting a structure that *emerges* from the interactions of the constituent elements. The evolution of systems over time is *path-dependent* so that the next stage in the development of a system is not trivially predictable from its current state, but is instead a product of a whole non-linear history (see Manson 2001; O'Sullivan 2004). Within this view urbanism is understood as a complex system, which is self-organizing, elsewhere called *the self-organizing city* (Portugali 1999, Geertman 2007). "Complex systems *self-organize*, that is to say *interpret* the information that comes from the environment" (Portugali 1999). It is presumed that actors in a complex system as a city are *reflexive* (Storper 1997). This means that individuals are critically responding to their environment and develop themselves through learning from external influences. At the same time the built and non-built environments influence actions of the various actors. Within these new views it is understood that the process of globalization is proved to be passed on (informal and formal) *networks*, which leads to the

increasing questioning of fixed 'national' cultures and the understanding that cultures are not hermetic (Storper 1997, Castells 2000, Urry 2003).

We will translate this in the degree in which cities and regions are administrated from a central role of regions and governance. In relation to the degree in which individuals, business and institutions are given the freedom to work, organize and take responsibilities by themselves .

3. Informal and formal networking

Within the understanding that our world is complex we have become more aware that data is past through networks which are increasingly informal. But, formal and informal networking can't be seen separate from one another: formal structures influences informal ones and visa versa. At the same time informal structures can evolve into formal ones and formal structures can evolve into informal ones. To get more insight in the character of urban complexity and self-organization in urban development we are going to research the relationship formal and informal networking related to physical urban transformations.

This is about how you decide which problems you handle in innovations in informal networks: how and which roles you will define in informal networks and transfer to a formal frame.

4. Complexity, Self-Organization and the role of planners, architects, policymakers

The more traditional planning methods use the blueprint planning like master planning as a tool to develop cities. The new understanding that our world is complex, in which various actors influence spatial development, demands for new ways to approach urban development. We don't think the role of planners, architects, policy makers and other professionals will disappear, but the roles will change. We think both informal and formal networking, are important, and interwoven. Since the last decennia of the previous century formal processes in urban development has been at the forefront. We challenge to investigate the possibilities to bring informal networks, informal spatial and urban development to the forefront. With the aim to find ways to create more urban development more in tune with socio-economic processes, and as such is more long term and beneficial both for the market as environment – and thus more sustainable.

5. Tentative General Research questions:

For us, this is a tentative proposal, a few questions that are of primary concern. We invite everyone to name their own subjects and questions.

1) What are the different socio-economic (formal and informal) networks active among the three cities, Aken, Leuven and Eindhoven.
2) How is the relation informal and formal within these networks; when are informal processes turning into formal ones and when do formal ones become informal.
3) What is the relation of the socio-economic networks with the physical urban transformations; how do physical transformation influence socio-economic networks and visa versa?
4) Where and how can we make use of our new insights about informal and formal networking and urban development?
5) Towards what agenda and method leads this: how can we execute this. We are looking forwarth to other questions.

6. Research Approach

This research draws out the emerging discourses discussing networking, informal and formal networking, and regional development throughout several disciplines. At the same time new insights, and thus new theory, is developed by analyzing these themes in the region Eindhoven, Leuven, Aken. The dynamics of the informal and formal networks related to the transformation of urban form is the main focus. More

specific research should detect the dynamics between formal/informal elements and formal/informal processes and the consequent transformation of the built environment. Within this approach, there are four focal points:

First, this research is supposed to develop within a research program in which businesses, universities and governments will work together on different aspects. This is based on the first ideas about clustering knowledge as mentioned in paragraph 5. We are start our research program from the idea that working together creates more innovative research, which is scientific and directly of practical use for all partners. Within this partnership it is of paramount importance that knowledge is shared openly: fences of knowledge.

Second, this research approaches urbanism as a complex and self-organizing system, which is understood as a system part of a creative world. As described by Capra and others (2007), the methodological challenge in the investigation of complexity of this creative world is that "we should take into consideration not only the 'focus level' we are interested in characterizing", but they say "we should also consider two other levels that they call "the underlying level", which is the interacting dynamical components of the complex system and the "overlying level", which is the environment of the complex system. The focused level they say is always "nested" or embedded between the levels of the components and the environment. This means that any investigation of (urban) complexity has to bring to the forefront specific facts and derivations to describe the environment and the components of the context of the system under study.

Third, in this research urban space is seen as the result of actions by multiple political, economic, and social decision-makers and by citizens. "Motivated by a range of interests, these urban actors function in a balance of power, which is generally unequal. All of them develop strategies of appropriation of space to empower space. Proposing and opposing forces mesh with and confront each other, and alternatives are put forward. The territorial mosaic serves as a frame of these actors and is at the same time shaped by these actors' action strategies. To study urban complexity as the relation of processes and built environment, the actors in a specific territory need to be identified and their urban strategies analyzed" (Nasr and Volait 2003:xiv). Thus, the study of formal/informal networking in urban complexity demands an analysis involving realities and imageries of the various actors – not just the big architects and planners and their strategies but even the small stories and actions of local citizens, local authorities, and the relation between them.

Fourth, studying the dynamics between the mutual influences of form and process – urban complexity requires an interdisciplinary approach. The study of the processes of change is the core study of the social sciences. The study of the built environment is the core study of architecture, design, and urban planning. Geography studies both the influence of processes on the built environment as the influence of the built environment on processes of change. From the perspectives of sociology, anthropology, and economy, space has been theorized as a component of activities of people. They explain how social, cultural, and economic processes are influenced by spatial changes. The research approach of the economic discipline differs from the others, while it uses these insights to intervene in
and explain space to maximize economic profits. In architecture, design and planning space is the main subject for study, both explanatory and as a means for interventions. For the proposed research it is assumes that moving back and forth in between these different approaches will broaden the understanding of complexity of space in both realities as theory.

7. Research Relevance

Scientific relevance
Recent theories examining globalization and the dynamics of form and process focus on process *or* form. In addition, they often remain abstract and captured within the boundaries of theory itself. The examining

of networks in the region Eindhoven, Leuven, Aken is presupposed as a potential to revise contemporary urban theory: it investigates the *relation* between form and process with specific attention to the interaction of informal and formal structures.

Social Relevance
The research will deepen knowledge exchange between businesses, governments and educational institutes. As such it is presumed this program can generate more innovations than conventional research, and will be a spin of for new knowledge development. The (informal) and trustworthy relationships among the different partners is supposed to generate more innovative developments and long term relationships in the near future.

Practical Relevance
Urban professionals, businesses and governments are searching for new modes to understand urban complexity and the fast changes of contemporary cities. The research presumes it can provide new insights into the role of practitioners and authorities. The study gives new insights for intervention in the dynamics between processes and built environment with sensitivity to informal and formal networking.

This text is a first sketch of the research proposal, we are open for any ideas, remarks and interests.

Do not hesitate to contact us at: stephanie.geertman@dhv.com / jelle.rijpma@dhv.com

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CV Jelle Rijpma

Ir. D.H. Rijpma
Born 28-04-1953 Amsterdam
(MSc) Urban and regional planning University of Technology Delft

Work

2006 –	DHV BV Strategic Advisor Urban and Regional Planning
2001-2006	TNO (National Institute for Applied Sciences of the Netherlands), Institute for Building Environment and Urban Planning.
1990-2000	Ministry of VROM in the Netherlands (Housing, Environment, Urban and Regional Planning)
1976-1990	University of Technology; study, board of University, research and eductation.

CV Stephanie Geertman

Dr. ir. S.J.L. Geertman
Born 08-02-1973
(PhD) 2007 Spatial Development: The Self-Organizing City in Vietnam. University of Technology Eindhoven
(MSc) 1999 Architecture and Urban Planning. University of Technology Eindhoven.

Work

2008 -	DHV BV Researcher Spatial Development
1999 – 2008	Researcher and Lecturer University of Technology, Urban Planning.