

## **Leadership, governance and place in the knowledge economy: the case of Brainport Eindhoven in the Netherlands**

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### **ABSTRACT**

Recent discussion on sub-national leadership suggests that (formal) leader practitioners working across local and regional economic development policy are struggling with new and unfamiliar complexities. At the same time, the continuing debate around the effectiveness of sub-national economic development policy for the so-called ‘knowledge era’, shows recognition of the importance of the leadership dimension.

However, causalities between formal leadership and ‘good’ economic development policy outcomes remain largely unproven in the messy setting of urban and regional development – and from an empirical perspective we still know relatively little about the importance of leadership of place in the pursuit, stimulation and generation of entrepreneurial synergies, in the particular context of the knowledge economy.

The central question in this paper is: how can entrepreneurial synergies in places be stimulated by leadership and governance in the context of the knowledge economy? We will pay special attention to experimental leadership practices and investigate the ongoing (re)formation of governance networks in a triple-helix constellation, network cooperation between businesses, governments and knowledge institutions.

The goal of the paper is to analyse what is working and not working from the leadership perspective, and why. Also is considered the extent to which both “universal” and “locally contextualised” characteristics of leadership can be identified in this case – and is assessed to what extent place-based characteristics play a role in enhancing sub-national economic development.

The first section of the paper gives some reflections on the importance of place, the role of leadership in sub-national development and the interplay between knowledge, place and leadership. This paper contributes principally, however, to the development of grounded ideas about leadership of place by empirical learning. The second part of the paper therefore is based on a case study of knowledge leadership ‘in action’ at the sub-national scale, ‘Brainport’ Eindhoven in the Netherlands. This case is especially relevant for analyzing the creation of entrepreneurial synergies and be considered as a typical example of a ‘triple helix constellation’. Data were collected via 20 interviews in 2008 and in 2012, and retrieved from documents and governmental plans.

This paper showed the importance of knowledge leadership in creating entrepreneurial synergies in the region Brainport Eindhoven. Key-persons of the private sector, science, and government took initiative, cooperated, trusted each other and were capable to frame important issues and align people around the agenda of Brainport. The socio-spatial quality of this place, path dependency and the establishment of a regional regime explain the clustering of high-tech firms in a context of pro-active policy support, embedded in a cultural tradition of public-private cooperation.

The paper gives insight how key-persons can enhance entrepreneurial synergies rooted in place-based assets, by using network power, resources, ‘windows of opportunity’ and by linking ideas, inspiration and individuals. The findings offer insight in the importance of place and the leadership dimension in the context of the continuing debate around the effectiveness of sub-national economic development policy for the so-called ‘knowledge era’.

## **INTRODUCTION**

Whilst many variables play through explanations of ‘effective’ territorial development, inquiry into the leadership dimension can provide useful insights into the relational aspects of sub-national territorial development – in other words the study of leadership allows us to uncover aspects of the motivations and contributions of the human entity that are a useful complement to those insights derived from inquiry into structures, regimes and systems. Revealing normative leadership lessons - how leadership is enacted in ‘everyday’ practice - may also allow us to explain, at least to some limited extent, why some localities are able to adapt to the ever changing social and economic conditions of the modern world, and are successful in creating entrepreneurial synergies. Beyond this, deeper critical appreciations (Collinson, 2005; 2011) provide us with insights into the interplay between leadership, power and resources – and shed light on the questions of why and for whom economy and society are ‘organised’, in different places and at different times.

The central question in this paper is: how can entrepreneurial synergies in place be stimulated by leadership and governance in the context of the knowledge economy? The paper is based on a case study of knowledge leadership ‘in action’ at the sub-national scale, ‘Brainport’ Eindhoven in the Netherlands. This case is can be considered as a typical example of a ‘triple helix constellation’. The goal of the paper is to analyse what is working and not working from the leadership perspective, and why. Also is considered the extent to which both “universal” and “locally contextualised” characteristics of leadership can be identified in this case – and is assessed till what extend place-based characteristics play a role in enhancing territorial economic development.

## **THE IMPORTANCE OF PLACE**

This paper adopts a relational approach to place towards on one hand the restructuring forces of globalization and on the other the agency of humans in shaping a place to their needs. This means that places are considered as socially constructed and seen as nodes of interconnections. The qualities of place and space are established in social practices, constituted in and through relations and interactions (Massey, 2004). The distinctiveness of places is not geographically bound but comprised of multiple and spatial differential relations mapped over multiple localities (Woods, 2011).

We would like to argue here that places have especially importance in three ways (Horlings, 2012): first as arenas for conflicting interests, influenced by capital and global forces, where place-based struggles occur as multi-scale, network-oriented subaltern strategies of localization (Escobar, 2001). In these spaces processes of globalization and localization interact leading to new hybrid forms and relations (Woods, 2007). Second, places are constituted by sedimented social structures and cultural practices (Escobar, 2001); they are important as cultural construction, endowed with meaning and the constitution of identities, subjectivities and difference. Third, places are relevant for the more effective intervention of private, public and civic policies and actions. As we will describe in the case of Eindhoven conflicting interests, place-based narratives, and networked politics of place all played a role in creating a triple-helix constellation and enhancing entrepreneurial synergies.

## **LEADERSHIP, PLACE AND KNOWLEDGE**

To understand leadership is to recognise that it is a 'situated' and multi-faceted relational phenomenon. It takes many forms – and leadership approaches reflect their era(s) and setting(s), and the circumstances and contingencies that pervade. According to Uhl-Bien, Marion and McKelvey (2007) in the context of the 'knowledge era' leadership is required that facilitates interactivity among interdependent agents in order to assist creativity and learning. Here leadership often works in the spaces between agents stimulating alliances of people, ideas, technologies and cooperation. This requires knowledge era leadership characterised as a type of complexity leadership and as a dynamic rather than an individual 'heroic' process.

Related to this, and in terms of how leadership is enacted in the everyday sense, Sotarauta, Horlings and Liddle (2012) describe in an overview based on a variety of cases, that regional leaders with entrepreneurial capacity act to translate external stimuli into internal changes by acting as 'animateurs' who bring to life, enliven, spark, create and produce with a commitment to building up social capital and institutional infrastructure. Those in formal leadership roles in regions provide the linkages into localised knowledge clusters of animateurs and entrepreneurs who draw together tangible and intangible resources to stimulate and organise for change. Throughout this interactive learning process taking place between the local, sub-regional and regional spatial levels, leadership enables new knowledge creation by sharing and drawing together explicit and tacit knowledge across scales, between institutional, disciplinary and sectoral boundaries, and by facilitating dialogue between diverse stakeholders (Sotarauta et al, 2012). In all of this, the credibility of the territorial development narrative provided by leadership is critical (Horlings, 2010).

## **METHODOLOGY**

Data were collected in 2 rounds, in 2008 and in 2012. The goal of the second round was to speak to a new generation of leaders in the context of a changed situation after the start of the financial crisis. Data were collected via 20 interviews in 2008 (by prof. T.A.M. Beckers) and 7 face-to-face interviews (by Dr. L.G. Horlings) in 2012 and from documents and governmental plans on Brainport Eindhoven, the Eindhoven Brainport website and information from the development organisations NV Rede and Brainport Development. Two groups of people were interviewed. 'Group 1' interviewees comprised formal public and private leaders chosen as they were either strategic decision-makers or senior managers and also perceived as such by other interviewees in the core organisations in the area.

‘Group 2’, comprised senior executives who were employed in other local partner/stakeholder organisations - and where these organisations were working on local economic development projects with/or alongside Eindhoven Brainport. Not including in this definition are ‘informal leaders’ such as those involved with special issues groups or trade unions. The interviews were semi-structured to allow individuals to express themselves freely and on an ‘anonymised’ basis. The interviews were not audio recorded – but detailed written notes were taken at the interview and then reviewed immediately afterwards to ensure good recall.

## **DEVELOPMENT OF THE REGION SOUTH-EAST BRABANT**

Brainport Eindhoven is located in south-west Brabant in the province of Brabant in The Netherlands. Brainport Eindhoven can be considered as a ‘triple helix cooperation’ between businesses, governments and knowledge institutes, working together with employers and institutes for professional education. The focus in this region lies in the development of ‘value chains’ which have economic potential: high tech systems and new materials, the creative industry, the food industry and life sciences. The heart of Brainport Eindhoven region is the city of Eindhoven. Among the numerous innovative and renowned knowledge and research institutes located in this region are for example: Philips, DAF, ASML, TomTom, Eindhoven University of Technology, TNO Industries and Technique and High Tech Campus Eindhoven. Knowledge industry and manufacturing industry meet each other in the Brainport Eindhoven region. The majority of the technology companies and the research institutes are located within a 40-kilometre radius around this city. Brainport’s geographic boundaries are difficult to define, which is consistent with the relational approach described earlier. The region is characterized by flows of ideas, information and products, a network economy with numerous partnerships across regional boundaries and international frontiers. The triangle Eindhoven - Louvain - Aachen (ELAt) for instance is an important knowledge area.

In 2011 the Intelligent Community Forum (ICF)– an international think tank on economy and social development - declared Eindhoven as ‘the smartest region in the world’. The region was praised by the ICF for creating 55.000 jobs in the technology sector in the last 10 years. In 2011 this strategy became the core of the ambitious project ‘Brainport 2020’ which is considered as one of the economic motors of Dutch economy. The strategy of Brainport Eindhoven is based on 4 pillars: people (human capital and entrepreneurship), business, technology (which includes design) and basics (the facilitation of conditions by governments such as quality of life and location climate). Brainport Eindhoven region belongs now to the three European top regions when it comes to patent density. The region has with 36% the largest share in the overall Dutch private R&D expenditures; 55% of the Dutch patents and 35% of the Dutch export is stemming from this region<sup>1</sup>.

The economic success of Brainport Eindhoven region is the result of cooperation, regionally and internationally, between top scientists from a wide range of disciplines, between knowledge industry and manufacturing industry, between producers, designers and marketers. And also between competitors who allow each other ‘a peak behind the scenes’ and share ideas in the research phase of product development. Brainport Development encourages open innovation.

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<sup>1</sup> Source: [www.brainport.nl](http://www.brainport.nl)

The development of the region south-east Brabant and policy context took place in the following periods (Van der Meer a.o., 2008):

- From 1983-1993: a situation of recession and economic and social dominance of the multinational company Philips and -to a lesser extent- the truck factory DAF. The region develops towards a network economy.
- From 1993 till the millennium: a period of economic recovery, expansion and new impetus; development of the High Tech Campus in Eindhoven.
- From the millennium till 2008: a period of new initiatives and further development of Brainport Eindhoven as network economy and international knowledge metropolis.
- From 2008 till 2013: the period of the financial-economic crisis.

The question can be asked how a 'fertile soil' for innovation and entrepreneurial synergies were created in this region which shaped the conditions for Brainport Eindhoven and how leadership played a role herein. The success-story of Brainport Eindhoven is due to path-dependency, clustering, open innovation, in a context of pro-active policy support and embedded in a cultural tradition of public-private cooperation. Factors such as European support and mobilization of regional organizational capacity played an important role in the development of the south-east part of the Netherlands. However, this tale of cooperation and innovation is only one part of this story. In Porter's cluster theory (1998) a spatial concentration of sectors is associated with an increase of regional-economic growth. In general this assumption is not true in the Netherlands according to Weterings et al (2007). Regional clustering is no guarantee for an increase in employment or productivity in the Dutch context. Specific circumstances explain the success of clusters.

What were these specific circumstances? The transformation of the region can partly be explained by the behavior of people and leaders and institutions who succeeded in renewing the tradition of industrial, technological and governance dynamics. For the period till 2008 in particular three people who contributed to the triple helix constellation of today will be described in the next section, illustrating leadership in this region (based on Beckers, 2008; Horlings and Beckers, 2009). Although the financial and policy context changed after 2008, new leaders, representing the triple helix followed in the same tradition and developed Brainport further. The case shows that the opportunity creates leaders. Sometimes 'serendipity' also helps and chemistry between people based on trust.

## **THE ROLE OF LEADERSHIP TILL 2008**

The families Philips and Van Doorne had a strong influence on the development of Eindhoven as the industrial capital of the Netherlands. In the beginning of the 1990s of the last century the region struggled, not only by the retreat of Philips, the bankruptcy of DAF and the end of the Agglomeration of Eindhoven, but also by budget cuts and decrease in student numbers of the Technical University of Eindhoven (TU/e).

It was a coincidence that leaders from the local council of Eindhoven (the mayor Rein Welschen), the university (Henk de Wilt) and the Chambre of Commerce (Theo Hurks) started at the same time which the same drive, understood each other, had intensive contacts and also felt trust towards each other. Rein Welschen and Theo Hurks decided to build the 'knowledge gate' between the Campus and the

train station, where the Chambre of Commerce located and which encompasses also some university services such as the Patent Office. As a result of his activities, the contacts between businesses and universities intensified, the university for example became a member of the Eindhoven Circle of Manufacturers.

The DAF crisis was the catalyst of the regional transformation. Welschen took the initiative together with the regional Commissioner of the Queen of the province Brabant, Frank Houben, by organizing a round table conference where all the important stakeholders were invited. They agreed to formulate an ambitious economic action plan together. Welschen and Hurks invested in *communication and cooperation* by organizing around 40 meetings with entrepreneurs which till then, had not really cooperated well together. The challenge here was to deal with differences between entrepreneurs. Welschen and Hurks convinced the entrepreneurs of the vulnerability of the region and the necessity of cooperation and retrieving European economic funding. The leaders were successful in *mobilizing European funds* (67 million ECU). The mayor, convinced the municipalities in the region to cooperate and finance economic development. All the 32 local councils in the region donated 11,50 gulden (around 5 euro) per capita in a fund with received a starting capital of 7 million guilders and was used for co-financing of projects. This can be considered as an action of *regional solidarity* of the Brabant councils with exceeded the city boundaries.

Welschen contacted De Wilt of the TU/e and they formed a Commission for Regional Opportunities, who developed the program Horizon, aimed to enhance a 'top-technological region'. Horizon was more a list of projects by the private sector than a plan. Every project was structurally based on the triple helix principle, with participants of the private, public sector and knowledge institutes. The Horizon program was a great success and formed the basis for the start of Brainport Eindhoven. A commission formulated Brainport Navigator 2013 with very ambitious targets for Brainport Eindhoven, which had to become the most innovative region in Europe in 2013.

The leaders created an effective '*vital coalition*' between the city, business and knowledge institutions ('a triple helix') and also resources were available such as money, time and competences. Characteristic of a vital coalition are *informal contacts and 'negotiations behind the scenes'* (Horlings, 2010). Especially important are multi-level governance contacts. An example is the successful lobby of Welschen to locate the technical research organisation TNO in the region. Furthermore, when Philips wanted to relocate its headquarters to Amsterdam, criteria were negotiated for the departure: strengthen Philips R&D in Eindhoven and allow the use of old Philips patents by small businesses. As part of the negotiation process Philips decided to expand their research activities and to build 'Philips High Tech Campus'. The original idea turned out to be crucial and developed into 'an open innovation model' which allowed also other firms to locate at the campus. These actions strengthened the knowledge economy.

Some insiders argue that the *culture in south-east Brabant* of entrepreneurship - which has always been necessary on this poor sandy soils - has also contributed to a resilient basis for development. These poor soils enhanced a 'DNA of cooperation and urge to survive'. So cultural 'soft' factors such as the tradition of cooperation and taking initiatives in Brabant, the hands-on mentality and the eagerness 'to put Eindhoven on the map' were important in this process.

## RESPONSES TO THE CRISIS: LEADERSHIP FROM 2008-2012

The political constellation of left-wing and liberal parties on the local level after 2008 didn't change the regional agenda. Eindhoven shows the characteristics of an urban regime, a political coalition with a long-term agenda (Stoker 1995, Stone 1989). Leaders play an important role in such a regime. The Brainport 2020 programme shows a discourse of Holland as a 'cooperating BV' as the mayor emphasizes. The current Mayor Van Gijssel is considered as a leader who plays an important role in the public-private coalition, standing above but also in front of the parties. He works closely together with other persons representing different strands of the triple helix, such as the director of the Foundation Brainport Eindhoven and of the implementation organisation Brainport Development till 2012.

An important sparring partner of the mayor was Harry Hendriks, CEO of Philips Benelux till May 2012, vice-chairman of the Brainport Eindhoven Foundation. Hendriks aligned the Commissioner of the Queen and the mayor of Eindhoven, around a plan to locate a firm in Eindhoven under Belgian management. In this so called Holst institute firms like Samsung and Panasonic are carrying out research in a pre-competitive phase of innovation.

The knowledge strand of the triple helix is also represented by—among other people— Arno Peels, President Executive Board of the TU/e. He strongly influenced the TU/e's strategy, resulting in a re-focusing on 'market windows': 1) energy 2) health 3) mobility, and thus stimulating the education of students as future employees for the high-tech industry. Peels aims to develop the campus of the TU/e as a sustainable campus of national interest, by attracting other knowledge institutes, business start-ups and amenities/shops.

Leaders have to see 'the next step', especially in times of crisis. The governance model and the intensive connections that were already established between leaders made a *pro-active response* possible in the week of the fall of Lehman Brothers in 2008. Rob van Gijssel brought the captains of industry around the table. He was able to 'deal with differences' of entrepreneurs by stressing the importance of cooperation and aligned them around an agenda. The goals were to maintain the flow of export; to prevent unemployment and to keep the knowledge workers in the area. As a result meetings for entrepreneurs were organised and innovative institutional arrangements were invented, together with TNO and the TU/e. Examples are the 'export-credit-guarantee', the 'knowledge workers arrangement' -which made it possible to maintain people on R&D departments during the crisis- and the 'payment for part-time employment'. The national government played a constructive role by giving subsidies on the costs of wages for employers and also played an important role in supporting Brainport 2020.

Brainport Eindhoven was developed on the basis of *programmes and projects*, flexible adapting to the changing circumstances based on the assumption that in the high-tech economy there is 'a need for speed'. After the Stimulus programme (1994) and Horizon (2002) the Brainport Navigator 2003 was developed and Brainport 2020 (in 2011), all programmes with concrete projects. The organisation became more institutionalized with the development of Brainport Eindhoven since 2005, but informal networks still remain very important.

The 'triple helix' bases was broadened after 2008 -including other knowledge/educational actors- and geographically upscaled to the region of south-east Netherlands including the chemical cluster around the firm DSM and the medical centre in Maastricht. The local government has recently started to apply the triple helix governance model in other sectors. In the care and health sector 67 different actors were brought together in a covenant and a corporation. Brainport Eindhoven aims to develop new

markets such as smart mobility and technology in the care and health sector. An example of the application of technology in the care sector is the programme ‘Clever living’.

## CONCLUSIONS

In the development of Brainport Eindhoven the *combination of economic quality, socio-spatial quality of place and organizational quality* is important (see also Fernández-Maldonado, A.M. & Romein, 2010). The crisis in the eighties created a ‘*sense of urgency*’ for aligning people around a shared agenda and open innovation.

*Path dependancy* and the establishment of a *regional regime* explain the industrial character of the area focusing on the clustering of high-tech firms in a context of pro-active policy support and embedded in a cultural tradition of public-private cooperation. The development of Brainport took not place gradually, but in shocks and steps and as a balance between continuation and renewal.

This paper showed the important of relational aspects and the role of *knowledge leadership* in creating a strong triple helix connection in the region Brainport Eindhoven. Key-persons of industry (Chambre of Commerce, Philips) science (TU/e), government (local majors) took initiative, worked closely together and were capable to *frame important issues and align people around the agenda of Brainport*, by using network power, ‘windows of opportunity’ and linking Ideas, Inspiration and Individuals.

The leaders in Eindhoven contributed to the knowledge economy and entrepreneurial synergies in different ways. They debated, interpreted and combined *different sources of knowledge* into local understanding and awareness, such as the importance of open innovation, cooperation and social cohesion. The used slogans such as ‘Eindhoven leading in technology’ (Welschen) and Brainport Eindhoven ‘the smartest region in the world’ (van Gijzel) to brand the region externally.

The leaders before and after 2008 contributed to *concrete projects and implementation programs* such as Stimulus, Horizon, Brainport Navigator and Brainport 2020 in stead of formulating abstract policy plans. They discussed local plans and decisions as well as plans of individual actors with a variety of actors to generate strategic awareness.

Knowledge leadership requires most of all the stimulation of *open innovation and building partnerships and coalitions* between different types of independant actors. Cooperation within the triple helix was strengthened because of the personal affinity of people with each other, the region and with other key-individuals. Informal networks - not only business networks but also in sport and culture - and *negotiations behind the scenes* played an important role for example in the relation with Philips.

The analysis in this paper showed that effective leadership is *contextualized and embedded in local culture and networks* in order to create trust and cooperation. In the development of Eindhoven Brainport soft cultural factors were important in the sense that the ‘poor sandy soils’ created a bedding for the regional ‘DNA of cooperation’ and regional solidarity, entrepreneurship and the hands-on mentality.

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