The Hague international city of peace, justice and security
urban strategy and design for an innovative knowledge cluster

INTRODUCTION - This document is the summary of my graduation project for the master track Urbanism at the faculty of Architecture, Urbanism and the building sciences at the TU Delft. The full report can be found at repository.tudelft.nl. The project is a combination of academic theoretical research and the elaboration and design of a case. The scientific added value of this project is in discovering the connection between abstract economic theory and the urban design practice. Research and design alternately guided each other in an iterative process: the relevance of the theoretical principles is tested in the case, and elaborating the strategy and design provides understanding about the application of economic theory.

REGIONAL COMPLEMENTARITY - Connecting to a wide diversity of spatial qualities nearby, and a few key interventions at strategic locations to create what is missing.

PROGRAMMATIC CLUSTERS - Areas where a critical mass with a related variety of program is concentrated.

INTERACTION ENVIRONMENTS - Central places in the clusters designed to be diverse urban environments with a mix of functions.

EMBED INTERNATIONAL & LOCAL - integrating international program with the local urban system: typical Dutch urbanism.

CASE & THEORY - The case of the security sector in The Hague is selected because it is an emerging sector which has not yet been studied properly from an urban design perspective. The economic potential of this sector is big, however the sector needs a comprehensive urban strategy and design to be able to exploit this potential. The challenge is to create the specific spatial conditions for development into an innovative knowledge cluster, with a few key interventions. The design principles are to take advantage of regional complementarity, develop programmatic clusters in interaction environments, and to embed the cluster in the current urban structure.

Nienke van der Velde
Graduation project TU Delft - December 2014
1st mentor: Daan Zandbelt, 2nd mentor: Evert Meijers
Urban strategy and design to develop the security sector in The Hague. Interaction environments with clusters of related programs.

**Relevance** - Technological advancement is rapidly changing the society, which causes a whole new range of security challenges. Many of these issues have no regard for borders, which makes it a challenge to solve internationally. Innovations and development of knowledge in this area crucial for peace and security in the global community. The Hague has an established role as an international city of peace and justice, with many international and intergovernmental organizations. This makes it a logical location to tackle also security matters (Meijers, 2013). Developing an innovative technical knowledge cluster will in return benefit the city, since it is an economic opportunity for The Hague to add an innovative sector to a local economy which is currently dominated by the public sector and large established companies (B&A, 2011).

**Challenge** - The Hague has throughout the past century developed a successful urban ecosystem for the public sector, international diplomacy and large commercial parties (B&A, 2011). However, an innovative knowledge cluster in the technical sector demands a slightly different urban environment, since the sector thrives on different activities; the employees are a different kind of people, and for innovation also smaller sized enterprises are crucial. The Hague needs a new urban strategy to add the urban environments in which the security sector can develop into an innovative knowledge cluster.

**Current Situation** - In 2010 The Hague Security Delta was started to be the centroid of the network of commercial and (semi) public parties in the security sector in The Netherlands. Since February 2014 The Hague Security Delta also rents two levels of an office building near The Hague NO train station, to facilitate collaboration. However the potential for the security sector is much bigger, and demands for a more radical and comprehensive spatial strategy.

**Vision** - The security sector in The Hague should be the place where the local and the international community work together to create security innovations and implement them in international policy. The urban fabric should offer the specific urban environments for the various elements of the sector, designed according to their specific location preferences. The most crucial elements to develop in The Hague are a location designed for collaborative tech-innovation, a location to implement those in international policy, and a location to connect to the local community.

**Strategy** - The strength of the aspired security cluster is in the complementarity of various sub-clusters. These sub-clusters offer the specific urban environments for essential elements of the security sector. The design of urban interventions is focused on three locations for these crucial target groups: techies, international policy makers and the local community. A security innovation campus designed after the preferences of techies will increase tech-innovations and enhance collaboration. The further development of the area for international institutions and conferences along the preferences of world peace authorities will increase fast implementation in international policy. The gateway for the local community to be included in the sector is through public accessible functions and specialized education in the city center.

**Design Principles**

- **Interactivity**
  - Flexibility and adaptable workspaces
  - Co-working spaces

- **International allure**
  - New entrance to Park Schevening
  - Facade renewal of World Forum

- **Exclusive park**
  - New entrance to Park Schevening near the World Forum
  - Pavilion and meeting areas

**Gateway to security city**

- Educational & public program
  - International allure
  - Exclusive park

**World peace authorities**

- Intergovernmental institutions & conferences
- Security innovation campus

**Security innovation campus**

- Collaborative tech & R&D behind gates
- Business complex

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THEORETICAL FRAMEWORK: CLUSTER DEVELOPMENT FOR URBAN DESIGNERS

Overview and interpretation of theory, linking economic theory and spatial design

The theoretical research at the basis of the project is set out in a concise overview. The goal is to illustrate the spatial application of economic theory, since much of this theory is aimed at understanding the current situation rather than finding ways to intervene. The selection of literature results from the iterative process of theoretical research and design challenges encountered the elaborated case.

METROPOLITAN SPATIAL STRUCTURE & ECONOMIC PRODUCTIVITY

RELEVANCE - Economic productivity is not equally spread over the globe: people and businesses concentrate in certain successful places, while other areas stay behind (Florida, 2002; Sassen, 1991). A first root of economic success is concentration of a critical mass of economic activities in a location. This enables division of labour, and division of labour is the root of economic success (Smith, 1776). However smaller cities can be very successful when they find a certain specialization, which is relevant in the globally interconnected system (Duranton & Puga, 2000).

ECONOMIC THEORY - AGGLOMERATION ECONOMIES

The productivity of cities increases systematically with the size, for indicators like patents, income, GDP, but also crime (Bettencourt & West, 2010). It is a physical law comparable to Kleiber’s diagram about the metabolism rate of animals: bigger animals need more food than smaller animals. However the efficiency also increases with the size of cities (and animals) increases: with about 15%. This phenomena is explained by the concept of agglomeration economies: the benefits of locating near other firms (Marshall, 1890). The Hague is a quite small city, which is by itself not able to generate the agglomeration benefits to host such an important and large international specialization. However The Hague can benefit from its location in a densely populated urban region: cities near each other can borrow size (Alonso, 1973).

Fig. 1: Urban cores of a polycentric metropolis like districts of a monocentric megacity (own graphics)

Fig. 2: The productivity of cities increases systematically with the size, comparable to Kleiber’s law about the metabolism of animals (Bettencourt & West, 2010)

Fig. 3: Fundamentals in the rise of the network society (Castells, 1996; own graphics)

Fig. 4: Elements of cluster dynamics in the process of knowledge creation (Bathelt, 2004; own graphics)

URBAN THEORY - POLYCENTRIC URBAN NETWORK

The spatial strategy for a polycentric metropolis can resemble a monocentric megacity: the different urban cores functioning like districts in a megacity. The productivity of a polycentric urban area is higher than an equivalent monocentric city (Meijers, 2013). However this requires a regional strategy to avoid competition and copying between cities, and to create strong connections between urban cores. The different cities and towns should develop complementary specializations, that suit the specific characteristics of the place. In view of path dependency developments should be in line with established specializations (Hall, 1998).

CLUSTER DYNAMICS AND KNOWLEDGE CREATION

INTRODUCTION - Clusters are a concentration of related program in a certain area (Porter, 1998). Understanding of the dynamics in a cluster provides insight in how to develop a specialization in a city.

THEORY - CLUSTER DYNAMICS AND KNOWLEDGE CREATION

Theoreticians are establishing a concept about how knowledge is created through the interaction between key people. The concept of the network society distinguishes places and flows (Castells, 1996). These flows can be physical connections between places, or relationships between people. Bathelt (2004) elaborates these elements into local buzz and global pipelines: the dynamics of places where it happens; where people learn from just being there (local buzz), combined with intentional relationships with key people around the world (global pipelines). Conferences are places with a temporary local buzz, where global pipelines are established. Regular conferences enable a community in a certain niche with people from different locations.

Fig. 2: The productivity of cities increases systematically with the size, comparable to Kleiber’s law about the metabolism of animals (Bettencourt & West, 2010)

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CREATING CLUSTER DYNAMICS

INTRODUCTION - In this section theoretical principles about cluster dynamics are linked to spatial design, in order to provide tools to enhance local buzz with urban interventions.

LOCALISATION ECONOMIES
Formation of sub clusters with a critical mass of a related variety of program

URBANISATION ECONOMIES
Design of interaction environments through a lively public space and amenities in the ground floors.

Fig. 5: Two ways to enhance cluster dynamics

UBER DESIGN - ENHANCING CLUSTER DYNAMICS
Interventions to stimulate cluster dynamics can roughly be divided in two types: the first is related to Marshall’s localization economies, the second to Marshall’s urbanization economies (1890). Localization economies refers to a critical mass with a related variety of program near each other. An urban designer can stimulate localization economies by creating an attractive location for a certain mix of program. Urbanization economies refers to a divers mixed-function area stimulating interaction, like promoted by Jane Jacobs (1969). This can be enhanced through design of a lively area with shared facilities and amenities in central places.

LOCATION IN THE URBAN FABRIC

INTRODUCTION - The success of certain urban environments changes with the dynamics of a changing society. The best place to locate a cluster in the urban fabric is affected by these trends.

TRENDS - WORK ENVIRONMENTS AND THE CITY
Inner city locations are becoming increasingly powerful (Sassen, 1991; Raspe, 2014). Even the technical sector is migrating from their traditional location in the suburbs to inner-city districts (Wagner, 2014). In the transition from the industrial society to the knowledge society the importance of face-to-face interaction is increasing, which demands for urban environments that facilitate interaction. This is related to the trend of flexibilized working: people do tasks in a team for a short-term project, then teams are broken up and people work with a different team on another task (Senret, 2010). The demand for flexible office space is increasing, while highway locations near small towns lose attractiveness. Nowadays the lifespan of a building is often longer than the accelerated rhythm of changing work environments, which requires a new real estate strategy.

INTERPRETATION - LIVELY CLUSTERS AND SUPPORTIVE AREAS
With the increased attention for places that stimulate interaction, many areas adopted a strategy to increase liveliness. However not every location has equal potential to become an interaction environment. Clusters require proximity, so they are concentrated in certain locations (de Hoog, 2013). Since many functions require a certain threshold, lively areas should be supported by quieter residential areas.

SPECIFIC LOCATION PREFERENCES

INTRODUCTION - DETERMINANTS OF LOCATION PREFERENCES
Some locations are more successful in attracting economic activities than others. However different businesses and organisations have other location preferences. Firstly the size of the organisation determines which parts of the city are suitable. Large buildings of big organizations do not fit in historic parts of the city. Small innovative businesses depend more on their surroundings, and do not thrive as well isolated at the edge of the city (Sarids & Modder, 2005). Secondly the activity determines the preferred location: organisations increasingly locate their headquarters in Central Business Districts in other cities than for instance their research and development activities (Duranton & Puga, 2005). Thirdly location preferences depend on the personal preferences of different people: this aspect is elaborated next.

THEORY - PEOPLE: ALPHA BETA GAMMA
The preference of the people that work in an organization is determining for the location of the company or institution, in the current knowledge economy (Florida, 2002). Knowledge workers can roughly be divided in three groups: alpha’s (bohemians), beta’s (nerds) and gamma’s (Marlet, 2007; Decisio, 2008). Alpha’s are people who are focussed on symbolic interaction, like artists, designers and writers. Beta’s have very structured activities, like research and development and technology. Gamma’s work in complex organisations and institutions, they work mainly from experiential knowledge, like managers. Figure 9 shows their priorities and preferred location in the city.

Fig. 6: Increased demand for flexible office space

Fig. 7: Concentration of program in complementary clusters

Fig. 8: Three determinants of location preferences

Fig. 9: Specific location preferences of different groups of people

Broader spatial conditions

This page explains flanking policy on broader spatial conditions, aiming to increase the international role of The Hague in the knowledge economy. The urban strategy and design for the security cluster (as explained on the previous page) will be more successful on the soil of these broader conditions. These conditional interventions will vastly benefit the cluster, however the security sector is only one of the many reasons for these interventions. Accessibility, housing and leisure are supportive to the development of a knowledge cluster. Knowledge workers are the main resource of an innovative cluster, and these people are very demanding (Florida, 2002). The starting point is to take advantage of regional complementarity, and connect to spatial qualities in the region.

THE HAGUE IN THE DUTCH METROPOLE - In order to create a knowledge cluster of international importance, both regional and international accessibility are key. Amsterdam and The Hague have complementary international urban environments: those cities are a strong duo. However the city center of Amsterdam is currently just outside the reachable area of one hour commuting distance from the international zone in The Hague. Figure 2 shows how a combination of interventions would improve this connection. The main airport is Schiphol, however a direct train to the airport in Rotterdam could increase the role of this second airport. The seafront location of The Hague causes most regional traffic to come from the east, causing congestion at the Utrechtsebaan. The construction of the Rotterdamsebaan and the A4 will release the pressure on this road.

THE HAGUE INTERNATIONAL CITY IN THE KNOWLEDGE ECONOMY - The region offers many complementary living environments at commuting distance. However supply of some housing typologies should be increased in The Hague. The middle segment of housing for key target groups is missing. This concerns short stay housing for expats (furnished apartments), and affordable housing for starters (rent below €650 / buy below €170,000).

THE HAGUE CITY BY THE SEA - Leisure is a key asset to meet the high standards of knowledge workers and internationals. The international zone is conveniently located between the city center of The Hague and the sea, however currently the seafront boulevard is crammed with low quality developments. Upgrading the area around the Kurhaus will reconnect the international city to the sea, and restore the historical allure of the Kurhaus.

Fig. 2: Interventions to improve the accessibility of The Hague
Fig. 3: Interventions to improve the connection between complementary international urban environments in The Hague and Amsterdam
Fig. 4: Regional complementarity is the starting point
Fig. 5: In The Hague the middle segment is missing for housing of key target groups
Fig. 6: Clean up around the Kurhaus to restore its allure