

ITHACA CASE STUDY NO.3: Provincie Noord-Brabant

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Contents

1. INTRODUCTION	3
1.1. BACKGROUND TO THE CASE STUDY	3
1.2. METHODOLOGY	3
1.3. STRUCTURE OF THIS CASE STUDY	4
2. STRATEGIC AND POLICY CONTEXT	5
2.1. OVERVIEW	5
2.1.1 GOVERNANCE AGREEMENT 2015-2019	8
2.1.2 BRAINPORT 2020 STRATEGY AND NATIONAL ACTION AGENDA	9
2.1.3 RIS3 SOUTH NETHERLANDS	11
2.2 CHALLENGES FOR POLICY IMPROVEMENT	12
3. ECO-SYSTEM	15
3.1 THE NOORD-BRABANT ECO-SYSTEM CONTEXT	15
3.1.1 SUB-REGIONAL MULTI-STAKEHOLDER ORGANISATIONS	15
3.1.2 BRABANT SMART HEALTH NETWORK	17
3.1.3 INTERNATIONAL STRUCTURES AND PROJECTS	17
4. INTERVENTIONS AND IMPLEMENTATION ACROSS THE INNOVATION CYCLE	19
4.1 THE INNOVATION CYCLE	19
4.2 CAPACITY BUILDING AND IMPLEMENTATION	20
4.2.1. OPEN INNOVATION AND VALORISATION	20
4.2.2 VALIDATION IN A TRANSFORMATION SOCIETY	21
4.2.3 INITIATIVES AND PROJECTS	23
5. PEER EVALUATION PROCESS, FEEDBACK AND RECOMMENDATIONS	28
5.1 PEER EVALUATION PROCESS	28
5.2 PEER EVALUATION FEEDBACK AND RECOMMENDATIONS	29
5.2.1 POLICIES, PRIORITIES, OBJECTIVES AND AIMS	29
5.2.2 ECO-SYSTEMS AND CLUSTERS	31
5.2.3 IMPLEMENTATION ACROSS THE INNOVATION CYCLE	33
5.2.4 INNOVATION IN POLICY AND PRACTICE, DISSEMINATION AND TRANSFERABILITY	34
5.2.5 EVALUATION AND IMPACT	36

1. INTRODUCTION

1.1. Background to the Case Study

Hosted by the Province of Noord-Brabant, Brabant region of Smart health was the setting for the third of nine ITHACA project *Exchange of Experience and Peer Evaluation (EEPE)* events on 25 and 26 October 2017. It comprised a series of talks, demonstrations and site visits to key initiatives designed to inform the visiting delegation of experts¹ about how the region of Noord-Brabant is working to accelerate the scaling up of smart health and care solutions for active and healthy living whilst achieving the triple win of economic growth, more sustainable health and care systems and improved well-being for its citizens. It concluded with an interactive and structured peer evaluation session.

The EEPE was structured around four pillars that are the hallmark of the ITHACA project:

- strategic and policy framework;
- eco-system for scaling up smart health and care solutions;
- experience across the innovation cycle (invention, co-creation, market testing, validation and scaling up).
- policy learning culture and network activities

1.2 Methodology

This case study is informed by and derives from:

- documentation provided by stakeholders before and during the EEPE event – including strategy documents, evaluation reports and promotional materials;
- the information and evidence presented and demonstrated during the event – including PowerPoint presentations;
- peer evaluation feedback from visiting delegates presented during the EEPE's concluding peer evaluation session and in follow-up, written reports.

Stakeholders were briefed to provide information that would help the visiting delegates to understand the Noord-Brabant Region's policy, activity and infrastructure and make informed assessments of their strengths and weaknesses.

¹45 delegates attended the EEPE. They were from 8 ITHACA regions: Zealand (Denmark), Baden-Wurttemberg (Germany), Nouvelle Aquitaine (France), Nord Brabant (Netherlands), Friuli Venezia Giulia (Italy), Slovenia, Basque Country (Spain) and Malopolska Region (Poland).

Equally, the visiting delegates were briefed about the peer evaluation process (see section 5.1). This enabled them to act as an ‘evaluation and feedback team’ and to provide structured feedback to the hosts about what they saw and learnt. In this context, visiting ITHACA delegates brought their own knowledge and experience and, with the benefit of a fresh eye, they provided Noord-Brabant Region stakeholders with an expert critique and recommendations about the region’s approach. It provided a forum to engage in a mutual discussion about visiting delegate perceptions and flagged up implications for policy and practice going forward. The verbal and written insights of visiting delegates emerged through the peer evaluation process and have influenced and added considerable value to the content of this case study.

1.3 Structure of this Case Study

The rest of this report sets out the approach adopted in Noord-Brabant Region in scaling up smart solutions for health, care and well-being along with highlighting the expert feedback from the ITHACA delegation. Section 2 outlines the regional strategies and policies that shape and drive the smart health agenda. Section 3 highlights the ecosystem. Section 4 focuses on the innovation cycle and the range of initiatives and innovations in the Noord-Brabant Region that stakeholders presented at the EEPE event. Section 5 flags up key assessments from the visiting delegates that were fed back during and after the EEPE event, discusses the key findings that have resonance and presents the case study’s recommendations.

2. STRATEGIC AND POLICY CONTEXT

2.1 Overview

The province of Noord-Brabant contains about 2.5 million inhabitants. Noord-Brabant is a Top technology region in the southern part of the Netherlands. The Brainport region plays a dominant role in one of the international top clusters: “HighTech Systems and Materials”. Philips has a long history in our region and has created a fundament by building a strong ecosystem of industrial companies in our region. Although Philips is an international player, the company still plays an important role also in the field of Health care and innovation in our region.



The region of Noord-Brabant is a leading player in Smart Health and innovation field in the Netherlands and internationally. Smart health is one of the key innovation domains of one of the four national Top Clusters “Life Sciences and Health” in the Netherlands. Importantly, Smart health is also part of the identified innovative top cluster Lifesciences and Health of the Smart Specialisation Strategy of South Netherlands and the European Structural Investment Fund (ESIF) agenda and its Operational Plan.



Source: *Innovation Clusters of RIS3 Zuid Nederland*

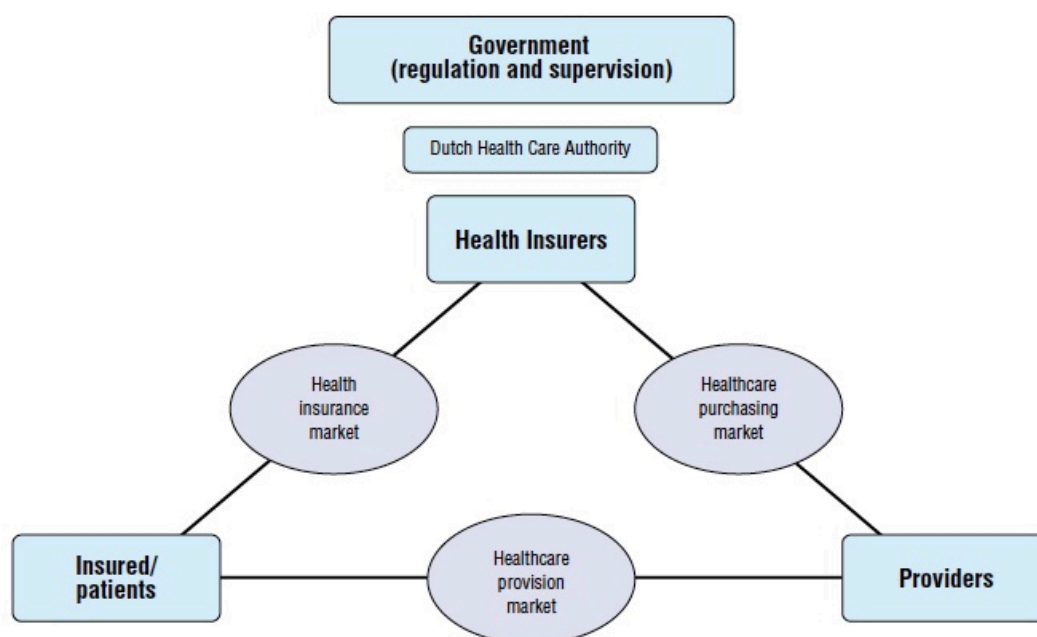
The Dutch healthcare system

The Dutch healthcare system is structured on several levels. Public health is provided by services for occupational medicine, institutions for youth healthcare and municipal health services (*GGDs*). Primary care comprises a broad range of personal curative and preventive services, at the heart of which is general practice in which GPs hold a gatekeeping position. In the general and university hospitals medical specialists provide both inpatient and outpatient specialist care. Long-term care can be institutional, in nursing homes, or community-based as home nursing care.

The 2006 Health Insurance Act (*Zvw*) and the Health Care Market Regulation Act (*Wmg*) introduced managed competition among actors as a new driving mechanism in healthcare. This implied a role change for the government from direct control of volumes and prices to rule-setting and overseeing a proper functioning of the markets. The actual market players – health insurers, insured people and healthcare providers – operate in three markets: (1) for health insurance, (2) for health services provision and (3) for healthcare purchasing (see Fig. 2.1.1). In the health insurance market, health insurers offer the basic insurance package, which is obligatory for all citizens. The healthcare purchasing market is where health insurers can negotiate with providers on price, volume and quality of care. In the health services provision market, providers offer care that patients can choose to use. In their policies, health insurers may impose restrictions on the patients' free choice of provider (usually in return for a lower premium).

Figure 2.1.1

Actors and markets in the Dutch healthcare system since 2006



Source: Authors' compilation.

Without doubt, two major reforms implemented since the mid-2000s are among the main issues today in the Netherlands. The newly implemented long-term care reform will have to realize a transition from publicly provided care to more self-reliance on the part of the citizens and a larger role for municipalities in its organization. A particular point of attention is how the new governance arrangements and responsibilities in long-term care will work together.

To deal with these transformation challenges Brabant region of Smart Health has its focus on a broad spectrum of healthy living instead of mainly on health care. The focus was therefore shifted from smart care to smart health in the past few years in the regional policy. Smart Health covers innovation topics of healthy ageing, vitality, liveability (viability) and health care.

It's aim is to achieve a triple win for increasing the ability of our citizens to stay longer and healthy at home, a radical system change of our health and social care systems and creation of new business opportunities.

Brabant region of Smart Health is closely connected to the European learning ecosystem. It is a 3 star European Reference Site within the European Innovation Partnership for Active and Healthy Ageing (EIP AHA) - giving the region wide recognition as a "go-to" region for good practice. It is one of the co-founders of the Coral (Community of Regions for Assisted Living) network (a strategically prominent

network of 38 European regions) and is a member of the Reference Site Collaborative Network. It has established collaborative links with numerous European regions.

Brabant region of Smart Health is open for mutual learning with other regions also outside Europe to create a more inclusive and sustainable economy that supports what the world is demanding. There is a connection with the global Sustainable Development Goals (SDG's) of the United Nations, the exchange and mutual learning is mainly focused on SDG 3 "Good Health and Well Being". But other SDG's like SDG 8 "Decent work and Economic growth" and SDG 17 "Partnerships for the Goals" play also an important role. These goals together create and demonstrate the social, ecological and economic impact of smart health solutions on a global scale.

Several key documents provide the strategic and policy framework for the agenda for innovation in health, care and well-being:

1. Governance Agreement (Future direction and vision document) of the province of Noord-Brabant 2015-2019
2. The Brainport 2020 strategy and National Action Agenda;
3. RIS3 South Netherlands and Operational Plan
4. Other sources that offer practice based learning insights for the future strategic and policy framework of 2020-2025 are:
 - Implementation and testing grounds agenda's and programmes of multi-helix organisations in the Noord-Brabant sub regions of the Netherlands;
 - The National e-Health policy of the national ministry of health and monitoring and demonstration activities of the created impact by health care organisations and health insurance companies so far.
 - Roadmaps and innovation contracts of the relevant national and international top sectors.

2.1.1 Governance Agreement 2015-2019

In the governance agreement of the province of Noord-Brabant, 7 societal challenges and ambitions are defined. One of these priority assignments is "Strengthening Social resilience of citizens and communities".



The living lab of Smart Health is one of the example projects to realise this ambition in daily life practice. Its goal is focused on the implementation and scaling of smart health solutions that support a longer and healthy stay at home of citizens

The Brabant Healthy living lab project is developed by several stakeholders in the region such as Brainport Development, Philips, Cooperative Slimmer Leven 2020 and other sub- multi-helix networks such as the Care Innovation Centre in the Western part of the province and Midpoint in the central sub-region of Noord-Brabant. The province of Noord-Brabant supports the initiative.

The provincial government fulfils an active partnership role within these collaborative initiatives in the Brabant society of the Smart Health Ecosystem: citizens, entrepreneurs, research and education centres, municipalities and social organisations. The governance of the province of Noord-Brabant requires a responsive and facilitating role to support the movement of mutual learning of different stakeholders of the Smart Health network around implementation challenges of smart health solutions and of system innovation. A budget is allocated for process costs for the period of 2015-2019. Each year a document is made about the progress, results and future direction and discussed in the planning and control cycle that feeds in the policy- and budget planning cycle. Policy goals are organised and realised via de policy cycle.

Other societal challenges identified and described in a long-term agenda that require programming of actions are focused on:

- Vitality of landscapes and improvement of the resilience of nature;
- Sustainable agriculture;
- Smart and sustainable mobility;
- Speed up the energy transition;
- Labour market and Economic Development;
- Circular economy.

2.1.2 Brainport 2020 strategy and National Action Agenda

The Brainport 2020 strategy has been developed in line with the provincial governance agreement. In case of the national Dutch government a national action plan has been formulated for more active involvement and support of the Dutch government related to the strengthening of the Knowledge infrastructure and investment in talent for 21st century entrepreneurial, problemsolving and digital skills

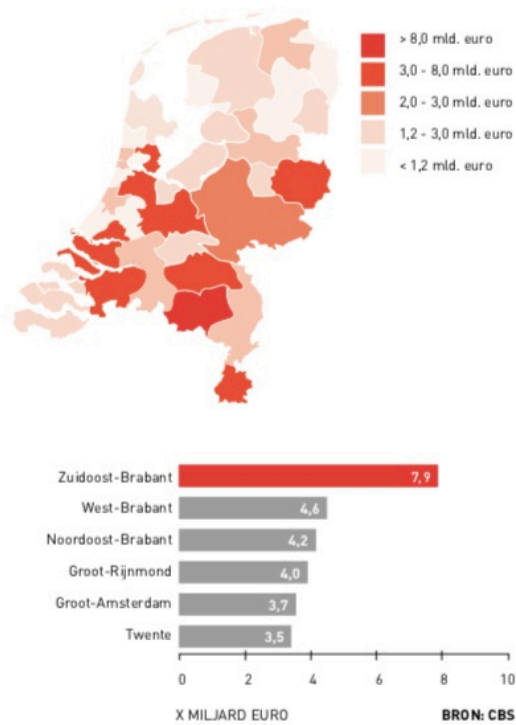


ITHACA Case Study (3): Province of Noord-Brabant

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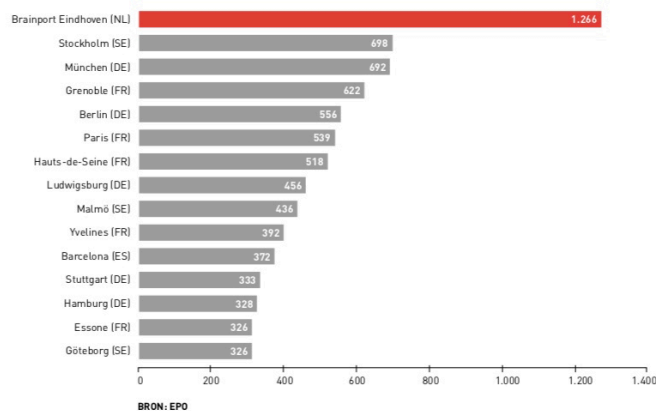
DGP figures show very clearly the added value of the Brainport region as a motor for the economic growth and jobs in the Netherlands. 19% of the Dutch innovation spendings take place in Brainport, yearly more than 2.5 milliard euros.

Figure 2.1.2 DGP of Industry in 2014



Of all Dutch patents 42% is created in the Brainport region.

Figure 2.1.3 Top European regions in amount of registered patents, 2015



2.1.3 RIS3 Zuid-Nederland

The province of Noord-Brabant has developed together with the province of Limburg and the province of Zeeland a smart specialization strategy for Southern-Netherlands. The smart specialisation strategy sheds light on the power of development of the region's economy and put it into perspective. The international Top clusters: High-Tech Systems and Materials (HTSM), Chemistry and Agriculture & Food are extremely important to Zuid-Nederland. Innovative capacity is the connecting thread running through Life Sciences & Health, smart Logistics and the application of smart technologies in the fields of the Bio-based Economy and Maintenance. These are clusters of national importance with international potential. By strengthening and linking them, and seeking synergy and what we call 'cross-overs', we will be enhancing our future competitiveness on the international market.

Despite a large self-organising capacity at regional level, the policy mix of the RIS3 is characterised by a multi-level governance angle. Problems and opportunities must be tackled at the most appropriate scale level, where the policy responsibility lies and suitable instruments are available. For promoting innovation, for example, the regional scale level is the most appropriate as this is the level on which actors cooperate intensively with one another.

It is, furthermore, important that the regions fit in with the central government and EU's policy and instruments. In the case of the EU, these include the functioning of the internal market, the European Research Area, the Horizon 2020 programmes (including the EIT and current and future KICs), COSME and the Structural funds. In the case of the central government, these include policy on education, science, innovation and infrastructure.

At the scale level of the regions in the South of the Netherlands, the emphasis is on the further development of clusters, or the regional innovation ecosystems, and on the relationship between education and the labour market. Societal challenges are the point of departure for further cluster development as areas with growth potential are those that deliver innovative solutions to societal challenges - including health care, mobility, food security and safety, sustainable energy and sustainability in general - circular economy, raw materials efficiency. The policy mix is based on the following five domains:

1. People;
2. Technology;
3. Business;
4. Basics;
5. Governance.

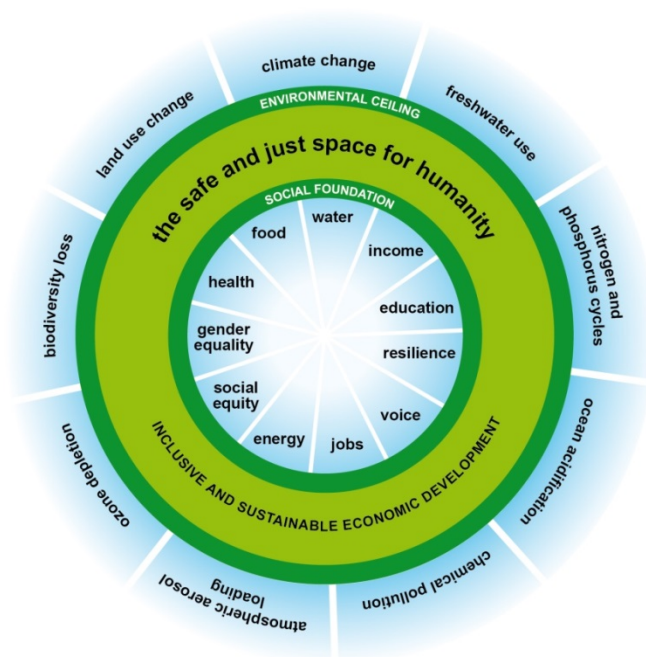
These domains jointly determine the business climate in a competitive environment, global or otherwise. The aims within the domains are to exploit strengths and tackle problem areas. This is all about the creation of maximum innovation and valorisation dynamics in and between established clusters and clusters with growth potential, the retention and growth of employment and, furthermore, the valorisation of knowledge via valorisation programmes and SME valorisation procedures. These aims require a set of preconditions that have to be just right. The mix of actions is geared at:

- An internationally competitive labour market;
- A top international position and open innovation;
- Entrepreneurship and excellent supply chains;
- An internationally attractive business climate;
- Adequate governance.

2.2 Challenges for policy improvement

In the recent yearly progress document of 2017 related to the Governance Agreement of the Province of Noord-Brabant a new perspective on scaling of innovations and economic growth has been introduced by the politicians of the province of Noord-Brabant. Recently Kate Raworth has presented a model that is based on the fact that economic growth cannot be endlessly. The model shows that economic developments are framed within a social basis and ecological ceiling. It is named the Donut Economy.

This model requires for a new mindset about the prosperity of Brabant citizens. The model shows that economic development contributes to the fulfilling of social needs of citizens. At the same time the economy is a potential treat for the ecological system that is inclusive and sustainable. In the most positive condition an economic system will be inclusive and sustainable at the same time and in this case will contribute to the sustainable development goals of the United Nations. These two demands at the same time are not common yet and choices need to be made which can lead to tensions. To avoid this a more innovative



approach is needed. It requires for a cross cutting approach across different sectors and a more integrated policy development process.

The yearly progress document contains also an encouraging text that mentions:

“Sometimes it seems an impossible task to contribute to social, spatial and economic agenda’s within the described borders of the model of Kate Raworth. However, there are good examples in practice that demonstrate that it is possible. These initiatives are part of the purpose economy: an evolving movement of businesses with a mixture of activities within their DNA and operational processes that create impact on commercial, ecological and societal goals at the same time. “.

The provincial government has organised several working sessions with all stakeholders of the Smart Health network to prepare the EEPE. The goal was to identify the policy improvements that are still needed for the future policy period of 2020-2025 for realising the ambition of a longer and healthy stay at home by the means of innovation in health, healthcare and well being. In one of the sessions the model of the Donut economy and the link with the Purpose economy has been shared and facts about the Brabant economy and prosperity of the citizens. Brabant is one of the two provinces of the Netherlands that is recognised as Innovation Leader in the Regional Innovation Score board of Europe with a high rate of patents. Although there is a lot of innovations available and the Brabant economy is growing, there are still big social and ecological challenges. The biodiversity is still decreasing, the water quality is not improved yet, there is a high rate of unemployment of people with a lower level of education, part of the citizens in Noord-Brabant are not feeling resilient and there are still income inequalities. Also the existing programs and instruments have not resulted in the implementation and scaling of innovations for a longer and healthy stay at home yet.

In the RIS3 the ambition is emphasized to innovate no longer based on an industry driven approach but start innovations from an impact driven approach to tackle societal challenges. The development process of the present RIS3 was based on the assumption that innovative Top clusters can contribute to societal challenges. Until now this innovation strategy has not lead to solutions that contribute to an inclusive society and supporting economy. Maybe we need to take the societal challenges as a starting point instead of starting from Top clusters to connect the economic, social and ecological challenges and agenda’s in Noord-Brabant better. We have to find another way to answer the following question: “How to develop a more integrated regional policy to enable all citizens to stay longer and more healthy at home by the means of more integrated innovations in health and care?”.

Three main chances and challenges have been identified to reach a more integrated policy:

- **Citizens involvement**
Active citizens involvement in policy choices and citizens commitment
- **Friction costs**
Friction costs within partnerships have a negative influence on reaching a shared responsibility and share risk taking as regular financing models are not suitable enough
- **Cross overs**
Cross overs between different sectors and clusters are needed to solve complex challenges with integrated solutions. An impact driven approach is needed instead of an approach driven by financial profit.



Within the EEPE these challenges have been key points of attention and further explored with the visiting delegation.

3. ECO-SYSTEM

3.1 The Noord-Brabant Eco-System Context

One of ITHACA's goals is to build capacity on mutual learning and good practices in constructing and strengthening the innovation eco-system. The ecosystem is needed to drive the scaling up of smart solutions for the societal challenge of active and healthy living.

Noord-Brabant has several ecosystems in which different key stakeholders - including Government Bodies, Health and Care providers, industry, academia and civil society collaborate in long-term partnerships. This "Quadruple Helix" arrangement can enable all stakeholders to be more aware of health and care priorities, challenges, needs and economic opportunities, and so enable researchers and industry to focus on more rapidly developing solutions to be tested, to scale up the deployment of innovative solutions and to demonstrate evidence of impact.



In Noord-Brabant the ecosystems that reflect this quadruple helix approach include:

- Sub-regional multi-stakeholder organisations
- Brabant Smart Health network
- International structures and European projects

3.1.1 Sub-regional multi-stakeholder organisations

In the region of Noord-Brabant there are three multi-helix partnerships from different sub-regions actively working together on Innovation in Health and Care and the implementation and scaling of smart health solutions for a longer and healthy stay at home:

- Brainport Development
- Midpoint
- Care Innovation Centre (CIC) West-Brabant

Brainport Development has a long history of building an ecosystem for innovation in the South-East of Noord-Brabant. Brainport is a triple helix partnership organisation of 21 municipalities including the cities of Eindhoven and Helmond of the South-East part of the province, education and knowledge institutes such as the Technical University, Fontys University, Summa College for education on a vocational level and knowledge intensive companies. Citizens, designers, customers and consumers, investors and cooperatives are actively involved in the triple helix collaboration. The Brainport region delivers by the means of her unique collaboration model, living labs and combination of technology and design, smart solutions for big societal challenges in different domains such as creating a healthy society. Investment in talents on all education levels sustaining and increasing knowledge within R&D constantly, attraction of innovative companies and investors and good basic conditions of the living area's are important components for keeping a front running position with added value for society.

Midpoint Brabant is situated in the hart of the province of Noord-Brabant. This area has not a lot technology companies, but has a lot of knowledge in the area of social innovation in health and health care. Midpoint Brabant offers a regional economic collaborative programme in which government –city of Tilburg and surrounding municipalities, entrepreneurs; education and research centres, social partners and citizens collaborate on regional development. The programme focuses on the following innovation areas: Leisure, Logistics, Smart Industry and Care. Sustainability and labour market development are cross cutting themes. There are three themes within Care that partners work on: neuro domain of health, self-management and e-Health. The collaboration takes place in testing ground projects and living labs to create a combination of economic and social value.

The Care Innovation Center West-Brabant is situated in the sub-region West-Brabant. It connects health care related partners of governments such as the city of Roosendaal, education centres and businesses with each other. The aim is to improve the access for a broader public to care innovations and initiatives. For example activities take place during education of health care professionals, but also in the home environment of citizens.

The sub-regional partnerships have added value to the region and can strengthen developments of each other sub-region. The Eindhoven technology area has a lot of R&D and valorization programs because of the intensive knowledge institutes, public and privat R&D centres in the field of hightech systems and smart materials such as

the High Tech Campus, the Innovation Campus of the Technical University of Eindhoven and the Holst Centre. The Central sub-region has less technology companies, but the Tilburg University in that region is specialised in social innovation and there is specific knowledge in the neuro domain within strong partnerships of organisations of health and health care. The Western sub-regional partnership is focused on education of health care professionals and positive health concepts and prevention.

3.1.2 Brabant Smart Health network

The sub-regional strategies and policies of the three sub-regionals multi-helix partnerships feed into the regional policy development of Noord-Brabant and the RIS3 Strategy. The province of Noord-Brabant does not have a direct responsibility in the systems of health and health care. Therefore the multi-stakeholders organisations have asked the regional government to facilitate them in speeding up innovations and its uptake in health and care.

From 2008 the province of Noord-Brabant has build a Smart Health network with the sub-regional supporting ecosystem organisations. A funding project “Smart Care” led to new connections between different stakeholders and more active involvement of end users in the sub-regions and region in 4 years time. After the project a Smart Health Programme has been developed in co-creation with all stakeholders of the regional stakeholder community including the regional government. Learning activities and events have been organised to collaborate on solving barriers for implementation of smart health solutions in concrete domains such as Dementia.

Connecting initiatives and networks

From 2017 the province organises facilitating events and activities to support the mutual learning between stakeholders of the Smart Health network and other stakeholder groups of different programmes and sectors such as the Social Resilience Programme, Impact Investors, network of Green & Health and Social entrepreneurs. Together stakeholders work on the development of more integrated innovative solutions that lead to an inclusive economy to support a longer and healthier stay at home for citizens.

3.1.3 International structures and projects

The province of Noord-Brabant is connecting stakeholders to other international networks and projects.

Districts of Creativity Network

The Districts of Creativity network unites regions around the world to share and develop practices on stimulating creativity in society to foster innovation and prosperity. Creative exchange events are organised in different regions to connect stakeholder networks to potential partners of the creative sector and to open up the minds to come up with new integrated innovative solutions. The province of Noord-Brabant is a member of this network. For Noord-Brabant this has led to a connection with the creative industry sector and social entrepreneurs to deal with the societal challenge of Healthy Living and collaborate around the SDG of *Health and Well being* - and other related SDG's such as 8 "Decent work and Economic growth"- to develop a more impact driven approach.

Cross Care

Cross Care is a cross border European project with Flanders. The Brainport Healthy living lab is collaborating with the living labs of Flanders such as LICALAB. The project offers the opportunity to entrepreneurs to test smart health innovations in a demand driven way in two different markets of Europe. It will help entrepreneurs to scale up their innovations in the end. It has resulted so far in 19 innovations of Noord-Brabant that get funding and support for testing their innovations in both living labs.

Helium

Helium is another Interreg Europe project that gives a follow up to the first exploration results of the other European project Cross Care. The ambition is to organise a cross border network of living labs with Flanders aiming at health and vitality based on the realisation of an effective *Quadruple Helix* ecosystem. For Noord-Brabant there are 9 good practices identified related to 4 different stages: scouting innovation, creating innovation, valorising innovation, uptake of innovation that helps to strengthen the quadruple helix ecosystem related to the Brainport Healthy Living Lab as well as the cross border collaboration with the other Living labs in Flanders. The 9 good practices of Noord-Brabant, but also the other 31 good practices of 4 other regions are of interest to share within the ITHACA consortium. The Helium project helps to learn how to build a cross border interregional ecosystem for growth and building of a European market.

4. INTERVENTIONS AND IMPLEMENTATION ACROSS THE INNOVATION CYCLE

4.1 The Innovation Cycle

The EEPE in Eindhoven introduced visiting delegates a range of instruments that strengthen capacity building and implementation across the different phases of the innovation cycle such as open innovation concepts, campuses, living labs and testing grounds.



Several multi-helix organisations of the region of Noord-Brabant have invested a lot and still do together with businesses and knowledge institutes in strengthening their ecosystems to support R&D and valorisation of knowledge into new business development of start-ups and scale-ups. That's why during the EEPE we did not show much examples in practice of these building blocks of the ecosystems to the visiting delegates. We only presented the story about it in the policy block. To give a complete overview we have inserted different key instruments for open innovation and valorisation in this case study report.

The real challenge for the future is related to the implementation and scaling of innovations to create a real impact on a longer and healthy stay at home. The delegates visited practical initiatives of social innovation, active involvement of the design sector and social inclusive and nature inclusive economic initiatives with cross overs between the health cluster and other clusters related to the creative industry, food sector and smart mobility sector. Especially instruments that strengthen the implementation phase such as new financial instruments, training and education instruments and impact monitoring instruments have been presented.

4.2 Capacity Building and Implementation

4.2.1. Open Innovation and valorisation

In the Brainport region but also the other sub-regions of Midpoint and CIC West-Brabant there are close connections with several multi-helix partnerships of R&D and valorisation initiatives and programmes. In each sub-region an ecosystem exists for start-ups that are focusing on the societal challenge of healthy living. There are a lot of business accelerators and innovation campuses. We mention a few examples of it below.

Bright Move for High Tech Startups is a collaborative initiative of triple helix organisation Brainport Development, Technical University of Eindhoven, Fontys University and the Brabant Development Agency BOM in the sub-regions South-East of Brabant.

Starterslift is another multi-helix collaborative with incubators in Tilburg en Breda business centra of Tilburg University and the other education centers Avans Hogeschool, NHTV Breda and Fontys.

The Care Starters Centre is part of the Care Innovation Center West-Brabant and offers working spots, coaching and support to start-ups in the area of health care technology. It collaborates with the Starters Centre of the City of Roosendaal.

HighTechXL and High Tech Campus Eindhoven offers space to more than 160 companies and institutes, and some 11,000 researchers, developers and entrepreneurs. These organisations are working on developing future technologies and products. The Campus helps start-ups accelerate their innovation by offering easy access to high tech facilities and international networks. Campus high tech global companies such as Philips, NXP, IBM, Intel strategically decide what knowledge, skills and R&D facilities they share in order to achieve faster, better and more customer-oriented innovation in the application fields **Health**, Energy and Smart Environments. There are public and privat R&D research institutes located like Holst Centre, Solliance & EIT Digital. All these players at the campus forms a vibrant network of open innovation minded organizations. Start ups are important partners within the ecosystem. There is a dedicated accelerator program HighTechXL for start-ups and a high level of facilities plus lots of (free) events. This offers a strong startup ecosystem for high tech companies. This dedicated hub for startups and scale ups is the perfect gateway to the open innovation ecosystem of Europe's smartest square kilometer. Over 40 percent of all the patents in the Netherlands are requested and owned by High Tech Campus based companies. A lot of relevant partners and supporting companies (like patent lawyers, VCs, marketing agencies et cetera) are part of the ecosystem of High Tech Campus Eindhoven.

Brabant Start up Programme and Start up Fund is a new programme that will be launched in June 2018. It aims to stimulate cross over between sectors to generate more integrated innovations. Partners are players of ecosystems of several sub-regions: Tilburg University, Technical University of Eindhoven, (TU/e), Fontys University, Avans Hogeschool, NHTV Breda, Higher Agriculture Hogeschool, REWIN, NV BIM, Brabants Development Agency, the Province of Noord-Brabant and 3 sub-regional triple helix organisations: Midpoint Brabant, Brainport Development, Agrifood Capital.

TU/e Campus

TU/e Campus is an open and accessible community for technology education, scientific research and knowledge valorization. It is an attractive and lively hotspot in the Brainport Region Eindhoven that connects students, researchers, entrepreneurs and high-tech companies. It offers state of the art research labs, a technology start-up community and access to a network of the business community, authorities and knowledge institutes.

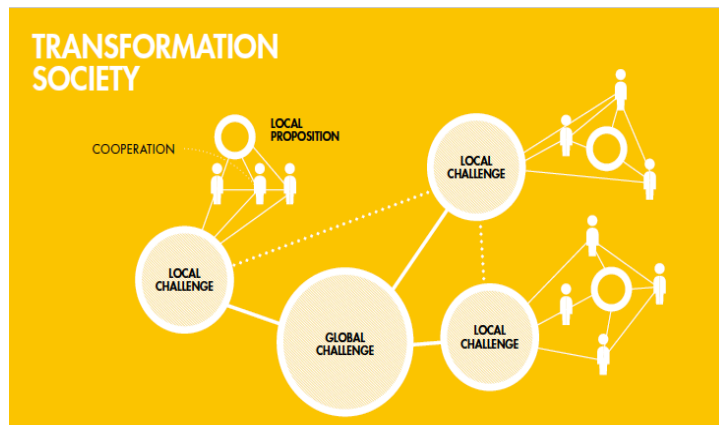
Centres of Expertise & Innovation labs of Fontys University

The Centre of expertise for Health care and Technology (EGT) consists of about 30 partners from education centers, health care organisations and businesses in the Brainport region and North of Limburg. Students of 8 different study department's work on multidisciplinary research projects with businesses and health care organisations. Promising innovative products find their way to the market via the EGT Living Lab.

Fontys University has also an agreement with the Technical University Eindhoven, Summa College and Brainport High Tech companies to collaborate on R&D and valorization of knowledge. The combination of High Tech Systems and Materials research, companies and young innovative engineers determines the future for all involved. Moreover, this group of students, schooled in a way Industry thinks, forms a formidable labour potential. The economy thrives by it.

4.2.2 Validation in a Transformation Society

The multi-helix partnerships of the Smart Health Network collaborate for more than 5 years together on the validation and scaling of smart health solutions. In this matter they anticipate to the paradigm shift in society regarding the shift from an industrial society to a experience society (where either mass consumption or experiences of groups of people are supported from topdown) to a knowledge and network society (in which knowledge platforms support people in their self actualisation), to a transformation society (where multi-stakeholder value networks are meaningful living together and are supporting a sustainable society).



Source: Paradigm shifts, Hummels, 2012, based on Brand & Rocchi, 2011

This shift is a challenge as for decennia the industrial and experience paradigms - based on top down governance - have been internalised in our institutional processes. It requires a radical system change that is complex. We need to go back to the basic needs of people in their living environment and connect to a broader spectrum of what the world is demanding from us. Therefore the input and experiences of a variety of disciplines of different sectors need to be brought together in a process of mutual learning by doing step by step on a long term. The network of Smart Health is approaching this challenge very pragmatically by starting on a small scale in a variety of local networks and build confidence together. Based on the present expertise and needs, technical and other innovations are realised to create impact for the quality of life of the individual in his or her social context and broader in society.

To do this adequately, the creation and actions of networks are high on the regional agenda. The Smart Care programme of the province of Noord-Brabant (2008-2012) has been the first step for the start of the building of the networks. Characteristics of about 20 smart care projects were the small scale of the learning projects and the collaboration of businesses, government, end users, health and social care and housing organisations, hospitals and knowledge institutes. Since 2012 a broad range of health care providers, knowledge institutes, companies and government bodies and end user organisations were formally united in de coöperatie Slimmer Leven. A similar partnership in the hart of Noord-Brabant started to collaborate in a testing ground and living lab in the neuro domain, especially focused on Dementia. Both collaborations have the aim to develop and implement smart health innovations that will lead to a longer and healthy stay at home, a sustainable system for health and care and economic value for the region. Besides that there are lots of small networks working on collaborative actions and projects that can connect very fast to book progress together.

The aim of these innovations in the region is to create health and care improvements in daily life of people and in the end a new sustainable systemic approach. The networks focus not only on health care but also on health and prevention. Health is defined as *'...the ability to adjust and to coordinate your own life, dealing physical, emotional and social challenges of life'* (Huber et al., 2011).

To realise the sustainable and systemic approach we also have targeted the development of new methods and tools. Our approach has several ingredients characterised by hands-on experiments in a daily life setting in a network on a small scale.

- This network is centralised around the quality of life of the individual in her/his social context and contains all relevant stakeholders, especially the patient, end-user or citizens- relatives included- and health care organisations, education and knowledge institutes, industry and government.
- The key starting point of the network is the trias 'shared values', 'shared knowledge' and 'shared risks and savings'.
- We work bottom-up and on location and create on location propositions during divers iterations and part of daily life.
- Besides that interventions and the resulting behaviour are more often monitored on its impact.
- We reflect on results, qua impact of the innovation as well as the used methodology. We are developing a monitoring instrument to monitor the impact that is necessary for an impact driven approach.
- In the end we want to become a regional learning ecosystem of shared knowledge, values and economic improvement that is open for other local initiatives for exchange and use of the practice based knowledge in the region and the rest of the world.
- Learning results and evidence on impact of the learning ecosystem are collected by the sub-regional networks and feed back into the sub-regional and regional policy planning and budget cycles of the multi-helix organisations and the province of Noord-Brabant.

4.2.3 Initiatives and Projects

During the EEPE in Noord-Brabant delegates have learned about and visited several projects and initiatives that are based on the Noord-Brabant approach.

Cooperative Slimmer Leven 2020

Within the cooperative of Slimmer Leven 2020 there is a strong collaboration between healthcare organizations, professional networks, housing corporations, health insurance companies, businesses, knowledge institutions, governments, and

end-users. Currently, there are almost 80 organizations affiliated with the cooperative.

‘Slimmer Leven 2020’ aims to strengthen the control citizens have over their own health, by using eHealth-applications that help patients to become more self-caring during various (chronic) illnesses and to stimulate behavioral change among both citizens and healthcare professionals. Take for example internet platforms like the [ShareCare Zorgsite](#), [Zorg voor Elkaar](#), and [WeHelpen.nl](#). Also the ‘Persoonlijk Gezondheidsdossier (PGD)’ (Personal Health Record; in English) is a technological solution which gives people insight in the healthcare they receive, and so gives them more control over their own health. And with mobile apps, such as [Duimpjes](#) and [CQ Live](#), people can create communities and support each other with living longer self-sufficiently.

The end goal is coming to a successful large-scale implementation of eHealth-applications within healthcare and in peoples’ homes. Brainport Healthy Living Lab is a testing ground developed for scaling up existing smart health solutions on a scale of at least 10.000 inhabitants. The multi-helix organisation Brainport Development, and the Cooperative Slimmer Leven 2020 and the research and education centres and companies such as Philips and a lot of SME’s collaborate in this testing ground.

The partners carry out a lot of projects based on the principles of creating shared values, shared knowledge and shared risks and savings. One of the challenges these partnerships are facing is to overcome friction costs of one of the partners within the partnerships. This often causes a delay in the progress of development. In several projects solutions have been found. By attracting an investor to bring in extra investment in the project one of the partners within the consortium could overcome the friction period before making a profit again as this partner needed to replace much to early its existing ICT platform. Another solution was to arrange a deal between the hospital partner and the health care insurance company. The hospital could already implement the innovative intervention of the project consortium, but still got paid for the regular intervention by the health care insurance company. In the meantime the hospital got more time to adjust its processes and explore new chances for financing the new intervention.

To tackle the friction around shared risks in a more sustainable way in the region new financial models need to be developed for validation and scaling.

Lokaal+

Practice based learning spots for **internship** of students are created in the school building and in public meeting places in several neighbourhoods where elderly people live in about 5 municipalities such as in the city of Eindhoven, the municipalities of

Veldhoven and Bladel. Students offer practical supportive services to elderly people and their family carers at home and in the public meeting places during their internship of their education programme. They are offering support during group activities such as organising workshops about how to use tablets and other digital devices and services and about healthy food. The elderly people offer in return their own living environment as learning space to students to learn in the practice of future proof supporting services delivery for independent living. It is a collaboration between the education centres, elderly people in neighbourhoods, municipalities, local entrepreneurs of digital solutions and health care organisations. All stakeholders benefit from this formula. It helps to improve the adaption of digital services of primary and secondary end users also to professional carers that return to the labour market after a break. It offers life long learning to citizens and for sees in one of the solutions for municipalities to deal with the societal challenge of ageing. For the involved local companies it is a living lab for development and implementation of smart health services. For the involved education centres it gives more insight in new needs of the labour market.

The concept of Lokaal+ can be transferred to other geographic places across Europe and other education programmes. It is an inspiring example for multi-stakeholder collaboration between education partners, local and regional and national government, ICT companies and health care providers to improve the adaptation of existing smart health solutions.

Lokaal+ has been developing a Theory of Change for their initiative to monitor their social and economic impact over several years. This methodology can be transferred to other social business initiatives.

Wasted talents

People with disabilities (physical, mental or psychological) have troubles in finding sustainable and long-term paid jobs in the Netherlands. With the Participation Act the Netherlands aims to create an inclusive labour market. This should reduce the unnecessary use of social security and this should improve the confidence and the self-development of the individuals. Practice shows that employers are willing to take their responsibility in this matter. However, they are struggling with the question how to embed this in their daily practice.

A match point for entrepreneurs and people with disabilities has been established. The social work companies, together with local governments lead the target group to the match point where they are matched to entrepreneurs. The entrepreneurs will be helped to achieve a good, well prepared start together. They are prepared on what to deal with and are educated on what would be able to expect from the target group.

The beneficiaries can be divided into three groups: local government, entrepreneurs and the target group. Local government will benefit because of the fact that there will be a reduction in the use of social security budget and an increase in (more) resilient workers. The entrepreneurs will benefit, as there now is a surplus on jobs, but a lack of people to fulfil such positions. The matching enables the target group to find these jobs. The target group benefits by extra opportunities to take part in and contribute to society. This will lead to an increase in positive perception of their quality of life.

Partners bring in finance and human resources in kind and in cash for the match point and its related services. At this moment 10 persons have been placed at a regular entrepreneur via the full matching system. Additionally, the Waste Factory where the initiative was based on put 25 people with a distance to the labour market to work.

The starting point is entrepreneurs who like to create not only a profit, but also social value for people with a distance to the labour market. The bottom approach is may be not in different, more top down systems, transferable, but the outcomes are inspiring for regional policy makers to reach a more integrated policy.

Purpose driven, more bottom-up approach of social entrepreneurs is transferable, as solutions for a new ecosystem are created for the matching of people. Additionally, Wasted Talent and the Waste Factory show that such entrepreneurs are able to tackle social and societal challenges when stimulated and enabled by government.

The target group can be found in every region and it represents a big potential for the workforce in these regions. The process of connecting the different stakeholders that Wasted Talent has gone through is interesting for all regions. However, translating the exact solution of Wasted Talent to other regions will probably only useful within the Netherlands due to the specific legislation.

Other stakeholders are invited to collaborate and to learn how to achieve a more shared impact on in a concrete practice in the labour market. This learning approach can be transferred.

City Learning Company of the city of Helmond

The City Learning Company aims to increase the social inclusion and personal development of participants. Via diverse programmes it offers tailor made solutions for personal development of each individual. Reciprocity and mutual benefits are important starting points. Personal development and an increased social inclusion contribute and reinforce personal and social resilience and will lead to a more positive experience of people's life and health.

The City Learning Company offers learning spots to citizens who are not able to full fill a job or voluntary work on a short notice. It carries out the programme together with partners who are feeling a strong connection with the city of Helmond. The participants support social organisations or citizens' organisations in their neighbourhood or city. In this way they help for instance older citizens by doing their groceries, offering help in the kitchen of a community centre or assist with activities in nursing homes. The City Learning Company is part of the strategic programme "Social City". The ambition is that all citizens of Helmond can participate in our society and are making progress to reach a higher and more sustainable level in their life.

Learning, developing en meeting other people

The City Learning Company has 100 participants and the number of participants is still increasing every week. A learning space is offered to participants that matches to their preferences and that offers opportunities for further personal development. If necessary we offer support like linguistic coaching. When a participant applies the coach explores with the applicant which learning spot fits the best to the needs. The learning spot offers a learning- and meeting space to gain more experience, new contacts and a certificate in the end. Target groups are for instance ex-homeless/addicted citizens. They can help for instance a concierge of a community centre. They get activated and feel valuable for society again. Another example is refugees with a valid residential status who help elderly people with their ironing. Learning and personal development are the key components of the City Learning Company. The City Learning Company is a cooperation of the municipality of Helmond, LEV group (the welfare organisation), Senzer (organisation for re-integration), UWV (social services) and other social organisations in the city.

"I like to help people to support their independent living at home. I am doing it for them, but also a little bit for my self. I am meeting other people and I can talk with them about all kind of things" Participant City Learning Company.

"It enables me to discuss about interesting subjects with others. This helps to learn the Dutch language, but also to increase my professional network." Participant City Learning Company.

5. PEER EVALUATION PROCESS, FEEDBACK AND RECOMMENDATIONS

5.1 Peer Evaluation Process

The EEPE event involved diverse stakeholders from across the Region's eco-system. It showcased the strategic and policy context, the shape of the eco-system and the range of interventions and innovations across, and to strengthen, the regional innovation cycle for health, care and well-being. This final section of the case study discusses the findings from the exchange of experience and peer evaluation process and sets out recommendations, for Noord-Brabant Region (and particularly the regional ITHACA Stakeholder Group) and for the wider ITHACA partnership, that derive from them.

Visiting delegates to Noord- Brabant Region's EEPE acted as an 'evaluation and feedback team" who observed and provided structured feedback to the hosts about what they saw and learnt at the EEPE. Visiting delegates were asked to provide feedback on one of five themes. All themes were covered by the overall delegation. The key themes were:

- Policies, priorities, objectives and aims;
- Eco-systems and clusters;
- Implementation across the innovation cycle;
- Innovation in policy and practice, dissemination and transferability;
- Evaluation and impact.

For each theme, delegates peer evaluation reviews focused on:

- What the host region has done;
- Strengths, areas for improvement and gaps;
- Good practices - and potential for transferability;
- Lessons learnt and their implications;
- Recommendations for the host region;
- Recommendations for other ITHACA regions.

The final sections of this case study summarise the key comments provided by the delegation. It is structured according to evaluation theme. Recommendations flowing from the peer evaluation - and the EEPE event overall - are flagged up.

5.2 Peer Evaluation Feedback and Recommendations

5.2.1 Policies, priorities, objectives and aims

Delegates highlighted that the regional innovation strategy of Noord-Brabant is to be as inclusive as possible. Investment in networks seems to have a high priority on the regional agenda and sub-regional agenda's of sub-networks. It raises awareness within the ITHACA consortium and clarifies why a multi-helix stakeholder network approach is important for generating more integrated innovative solutions.

Delegates found it inspiring that the EEPE in Noord-Brabant shows that the strategy enables to focus on economic value creation and on creating social benefits and progress at the same time. It is seen as a good example of a strategy that can lead to a better connection between the demand- and supply side. In Noord-Brabant it has resulted in a very well developed regional quadruple helix collaborative ecosystem. Especially the engagement of the citizens in the ecosystem is very high. Also it resulted in a broad-based funding from several programmes and sectors.

Another aim of the regional strategy of the region of Noord-Brabant delegates identified is to point at solving the silo's between sectors by creating space for cross-overs. The visits showed special places where innovations were generated from crossovers between different sectors of food, health, social care and mobility.

The peers mentioned the following areas of improvements:

- The downside of a connective or participative society – which is pro-active and bottom up – is the eventual loss of coordination and efficiency because there are so many actors involved. The request to the region of Noord-Brabant is to clarify how the controlling framework behind the crossovers looks like and how it should be improved in terms of coordination and efficiency.

Recommendations for region of Noord-Brabant I

- Quadruple helix involvement in Noord-Brabant – including citizens - needs to take place from the start from policy development instead of only later on during the implementation process of the policy. The decentralisation of the bottom up approach has a risk of getting the empowerment of citizens only in the policy implementation.

Recommendations for region of Noord-Brabant II

- It is important for the strategy and the policy to cover the region of Noord-Brabant as a whole. Therefore the role that social partners need to play in the social innovation part and the impact it will have for them with regard to the social and economic benefits, needs to be clarified as well as the role that needs to be reserved for small, medium sized and major technological industrial partners and the impact it will have for the technological innovation and economic benefits.
- The deployment of the innovation strategy and regional policy needs to be an organic process in which periodically the results and social and economic outcomes are evaluated and reported.
- Besides a bottom up approach to create crossovers, there is also a need for a strong hand of coordination on the political level.

Recommendations for ITHACA partners

It is recommended that:

- the lessons learned for the region of Noord-Brabant relating to the strategy and policy feed into the development of the Framework strategy of ITHACA;
- ITHACA partners recognise the importance of a combination of top down and bottom up organisation of the development process of the regional strategy and policy improvement.

5.2.2 Eco-systems and clusters

Delegates approved of the high level of active participation of all actors across the ecosystems of the region of Noord-Brabant. Delegates pointed out that the region has applied the theory of making ecosystems and what is important to the quadruple helix. The EEPE showed the delegates a well-structured system of facilitating all kinds of organisations that manage to reach and involve citizens. One of the good practices the delegates pointed out was the City Lab in Helmond that assists citizens with ideas and provide them with tools and consultation. This generates impact with little money.

The City Lab of the city of Helmond is funded by the city of Helmond. It stimulates creativity and entrepreneurship in the city. Within a framework the City Lab has the autonomy to subsidise initiatives that make the city of Helmond more beautiful and social. Every citizen of the city of Helmond who has new ideas for the improvement of his or her neighbourhood, street or city can ask for support of the City Lab. Together with the initiator the idea will be developed further, if necessary with other partners in the city. In collaboration with city lab assistants—who are volunteers- the idea will be developed and translated into concrete actions.

The delegates highlighted the big overview and good mapping as one of the strengths of the region of Noord-Brabant.

Another strength they brought forward is that a lot of activities are organised top down as well as bottom up. Both directions are needed to create impact in the end. On the whole the delegates concluded that there is a political awareness with a clear vision and clear goals. The political activity is large trying to push innovation and to strive for many programmes and projects.

The peer evaluation also revealed areas of potential improvement.

- The region of Noord-Brabant has several ecosystems. Local and sub-regional networks work on a huge variety of initiatives. The ecosystems and clusters could be strengthened with a more systematic approach of mutual learning between the ecosystems to generate practice based knowledge about methodologies and instruments used that work well or the ones that need adjustment.
- Another attention point highlighted is that the future RIS3 strategy could be improved in case the impact created - by the means of successful methodologies used by different ecosystems and clusters - feeds back into the development process of it. Based on this knowledge a refined strategy and more integrated policy can be developed that serves societal challenges.
- Although the present strategy has the ambition to innovate from a societal challenges approach, it is build on the international and national Top Clusters in

which the industry fulfils a dominant role. Besides the sub-regional multi-helix organisations, the Strategic Board Zuid-West Nederland (South-West Netherlands) is involved in the development process. This is also an Industry driven network organisation that focuses on economic spearheading points that places the Industry in the driver seat of innovations. It is worthwhile to explore how the development process of the future innovation strategy could be improved to increase the impact on societal challenges.

Recommendations for the Brabant region

- The region of Noord-Brabant should develop a joined approach with all the partners of the Smart Health network for monitoring the impact of the activities that support the ecosystems and clusters and the interconnection.
- Based on the evidence on impact gathered a practice based theory could be refined and applied to strengthen the ecosystems and clusters.
- The delegates recommend the region of Noord-Brabant to explore which roles should be reserved for the industry and other partners of the quadruple helix for the development process of the future RIS3 and policy improvement to increase the impact on the societal challenge of healthy living.

Recommendations for ITHACA partners

- ITHACA partners recognise the importance and challenge of how to involve citizens from the start in the development of the regional policy instead of only during the implementation of the policy. Besides the citizens' involvement, other stakeholders of the quadruple helix need to be integrated in the entire policy planning and control cycle.
- The lessons learned regarding the importance of defining the impact of the policy improvement in clear terms and monitoring of the achieved impact of activities carried out to achieve the policy aims need to feed into the regional policy planning and control cycle of all ITHACA partners.

5.2.3 Implementation across the innovation cycle

Delegates identified a very strong basis on the social challenges of health in the region of Noord-Brabant. The EEPE showed a lot of collaboration of several multi-helix partnerships – including social businesses -, resulting in creative and integrated innovative solutions. The focus and challenge in the region of Noord-Brabant seems to be on accommodating the needs of SME's to reach the next level of a more inclusive growth.

The scale of actions and innovations within the examples of the Automotive Campus and Brainport Smart District the delegates considered as very impressive, especially the cross-overs and social engagement of citizens.

Brainport Smart District is a testing ground for tomorrow's society with the help of different smart technologies from different innovation clusters. Within this testing ground they work together on a neighbourhood that is smarter, better, more beautiful, safer, more sustainable and more socially aware. Together with future inhabitants of the new district in the city of Helmond the following questions are explored: "What does that look like?", "Who will be living there?", "What kind of homes will we build, how will we move around, how will we live together?". All kind of Smart health solutions will help the new citizens to stay healthy and longer independent at home. With Smart Mobility the aim is to secure excellent accessibility, and with Food Technology it is strived for a healthy city. One thousand new homes that generate their own energy for diverse target groups will: first-time buyers, expats from the Brainport region, older people wanting to move out of the city. Living together and smart sharing are important starting points. In Brandevoort, Brainport Smart District in the city of Helmond all the pieces of the puzzle are falling into place. This is where future living is taking shape.

The Automotive Campus is engaging citizens of several cities that are connected by a high way that now and than during a weekend is closed for regular traffic and used as a testing zone for smart cars and trucks. Citizens are invited to participate in these tests. City policies are integrated in the innovation approach. Politicians are committed to give access to the innovators to the physical and social infrastructure on a larger scale. This mix of top down and bottom up innovation gives a boost to the scaling process of existing technologies in society.

This will help the region in reaching its social purposes and creating impact in daily life of citizens as well as in economic and spatial terms.

Delegates flagged up potential areas for improvement. They indicated that they missed practical experiences of how digital businesses and start-ups feed in the innovation cycle in practice. The Noord-Brabant team realised that this part of the ecosystem is very common for the region and due to this fact it has not been selected to show it as a learning area.

Recommendations for the region of Noord-Brabant

- As a lot of effort is put in start-ups and the early stage of finance for years the Noord-Brabant team is recommended to describe this part of the ecosystem as well in the case study report.

Recommendations for ITHACA partners

- The ITHACA partners could examine what is needed in their own region to build experiential landscapes geographically structured to reach a more integrated approach for validation and scaling of innovations in real society.
- Another recommendation is to explore how mutual learning could be structured between different locally oriented testing grounds for scaling across Europe.

5.2.4 Innovation in policy and practice, dissemination and transferability

This theme provided the opportunity for peer evaluators to highlight the most innovative aspects of the host region's policy, programme, projects and solutions – as well as their specific elements (such as processes or techniques) that are important for successful outcomes. It also focused on the extent of, and peer evaluators' judgement of the potential for meaningful dissemination and transferability to other regions and countries.

The delegates approved of the fact that a lot of development has been reached in regional practice in the area of smart health, connecting technological innovations to health, social care, wellbeing and participation in the labour market, but also linking technological innovations to societal challenges such as smart mobility, sustainable energy and food waste.

Based on the shared experiences of a variety of collaborative programmes and various ways of citizens' involvement presented by the region of Noord-Brabant, it became clear to the delegates that the region has gone through a very conscious and pro-active policy and learning process. A variety of methods and experiences

increase the learning. The years of experiences have resulted in new insights and building of capacity that has led to new policy and approaches of working together in networks and creating space for cross-overs between innovation clusters. The policy is aimed at a conscious use of creativity to achieve a more open mind and change mindsets and find disruptive solutions for system change.

The delegates highlighted the shift in the mindset of policy makers as very innovative and important for creating real impact. Instead of inviting citizens to come over to the policy world, the policy makers are going over to the citizens' world to learn together what will work and will not work to create impact. Based on the learning the policy is improved to facilitate the process of collaboration and creating collective impact together within multi-helix partnerships.

Delegates also pointed out that the use of simple messages and short video messages produced by the province of Noord-Brabant is very helpful to communicate clearly about and offering a quick insight in and overview of the policy development and programmes and projects.

Recommendations for the region of Noord-Brabant

It is recommended that:

- the concept of waste is interesting to take to other parts of the smart health network. Look for other matters such as the waste of health appointments, wasted scans and wasted medication;
- the use of creativity could be used to become more pro-active and innovative in solving barriers such as frictions costs within partnerships;
- use of simple language within ecosystems and use of persona's will lead to a more human centred and personal approach instead of a technical and system related approach for finding integrated solutions. This should be the standard for and commonly accepted communication strategy.

Recommendations ITHACA partners

- ITHACA partners should use creativity as a tool to become more proactive and innovative in solving barriers such as frictions costs within partnerships. Within ITHACA different methodologies for using creativity should be shared and exchanged and need to feed in the framework strategy for policy improvement.
- All ITHACA partners should use simple language, persona's and more video's to disseminate lessons learned and good practices. This will enable to connect on the human and personal level which will make the translation to different regional contexts much more easy.

5.2.5 Evaluation and impact

The first positive element that is mentioned by the delegates is the fact that the province of Noord-Brabant is investing a lot in building the network. This is regarded as important to involve and engage all the stakeholders to address social and economic relevant themes. Based on the evidence from the EEPE Event the region has succeeded in addressing a wide and rich variety of social and economic relevant themes. Another positive element is achieving long-term relationships. Delegates emphasise that this kind of solid networks are a key factor to change things and to obtain practical improvements in the social sector.

The second positive point highlighted by the delegates is that province of Noord-Brabant started a holistic impact assessment in several impact pilots. These impact pilots help organisations to make their added value explicit. The delegates approve the six-step approach that does not only monitor the activities, but also evaluates the output, effects and higher effects. This is found a very important part of the theory of change.

Another positive point that is mentioned is that the region hired experts and started to initiate cooperation with experts on impact assessment. This can be very valuable – not only for assessing the impact itself but also for helping the organisation to make clear what its specific added value is. In other words: employees or managers on different levels of the organisation need to have a common understanding of

what they want to achieve and what their strategy is. This is not always clear from the very beginning.

Related to the strengths of networking is the ability of policy makers in Noord-Brabant to bring together different types of stakeholders on the example of impact assessment. This creates a situation of win-win.

Delegates flagged up potential areas of improvement and difficulties that need to be solved. They indicated that:

- for many organisations it might be difficult to understand the need and value of a holistic impact assessment approach which is not just about counting activities – which is expected – but from a holistic view: “what do activities really mean for the people?”;
- it might be difficult for researcher to carry out the impact assessment in a holistic way as they feel the pressure to show concrete result in numbers and are lacking of examples as innovations often do not have noticeable effects;
- a lot of results were shown during the policy block of the EEPE, but it was not clear what the events leading up to it were and therefore, it is difficult to judge the final impact.

Recommendations for the region of Noord-Brabant

- It would be good to share the evaluation of the Noord-Brabant approach of strengthening the ecosystem and the innovation in regional policy and practice with the other stakeholders and the people the region of Noord-Brabant is working with.
- It is very helpful to present data in an infographic or graph. Furthermore, data help the policymakers and politicians to argue in their counsel about the projects they are acknowledged for and to get future support for the ITHACA program.
- Explore how to address and to overcome the difficulties related to the preferable change of performance of reserachers and awareness raising and acceptance of a more holistic impact assessment approach as mentioned above.
- It is important to share more details of what has been done in particular with the other ITHACA partners, so that they learn how to adopt the methodology.

Recommendations for ITHACA partners

- It is recommended to all ITHACA partners to adopt and adapt the good practice lessons learning concerning the use of the complex holistic impact assessment and monitoring instruments based on the Theory of Change.
- All ITHACA partners are recommended to cooperate with experts on the theme of impact assessment and monitoring .