



Regional Action Plan City of Eindhoven: developing a sustainable Transnational Health Living Lab (THLL)

Project: Helium - Health Innovation Experimental Landscape through Policy Improvement

Part I – General information

Partner organisation: City of Eindhoven (Helium PP3)

Other partner organisations involved: Brainport Development BV (Helium PP1), Thomas More Kempen VZW (LicaLab) (Helium PP2)

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Part II – Policy context

This Action Plan aims to impact the Eindhoven Roadmap Health

Name of the policy instrument addressed: Roadmap Health Eindhoven

- *other regional development policy instrument*

1. Introduction

Eindhoven, often revered to as the ‘city of innovation’, with a population of 230.000 inhabitants (2016) is the fifth-largest municipality in the Netherlands and the largest in the Province North Brabant, which is located in south of the Netherlands.

Eindhoven has grown from a little town to one of the biggest cities in the Netherlands and much of its growth is due to globally known industries such as Philips or DAF Trucks. In the last decades Eindhoven and its region has become the ‘Brainport Top Technology Region’, which is one of the three cornerstones of the Dutch economy, along with Amsterdam Airport and Rotterdam Seaport. This is reflected in the GDP figures as well. As an innovative high-tech region, Brainport is responsible for a quarter of all private investment in R&D. Brainport generates 37 per cent of all patents registered in the Netherlands each year. From renewable energy to safe mobility and smart remote care, Brainport works out solutions to worldwide problems in the areas of energy, mobility and health. High-tech goes hand in hand with design, and in the 2000s decade, Eindhoven emerged as the capital of Dutch industrial design.

The main philosophy behind Brainport is the Triple Helix (nowadays quadruple helix, including the end-user) is a cooperation between local government, business and knowledge institutions to stimulate and boost technology and innovation, which enables the region to accelerate economic, social and individual growth.

The city of Eindhoven is moving in the midst of major social issues of prosperity and welfare, which call for action. The focus is on mobility, energy, health, education and action in public space. On these issues Eindhoven wants to, and can make a difference and be a Smart City.

Core business of the municipality therefore is to address social issues of today and tomorrow with all stakeholders in the city. The municipality is doing this by collaborating with flexible and borderless networks. In addition, she sees the city as a testing ground for companies and universities, so the city and its inhabitants are the first to benefit from innovative solutions. Furthermore, the municipality wants to use the possibilities of technology and ICT in order to give Eindhoven Smart City a practical meaning.

For the last 2 years, the city of Eindhoven is coping with mayor challenges within her social domain. Main challenge is a serious budget deficit (about 40 million in 2017). Looking at solutions for this challenge the city of Eindhoven took the political decision to only focus on core task within the social domain for the coming year and a half (at least till 2020). As a result it was decided to minimize staff availability for “social” European projects. To assure this political decision will not jeopardize the participation of the city of Eindhoven in the Helium project and its results regarding the input for the Eindhoven Roadmap Health the project coordinator decided to change the “route” of the municipal

participation and involve one of her partners within the social Domain into the project; the Cooperative Slimmer Leven 2020. As mentioned in the Application Form, the Eindhoven Roadmap Health was finalised and adopted by the end of 2015. Its keywords are “innovation within our quadruple helix, using a living lab environment for testing and implementation of care and wellbeing related solutions”. In the Brainport region the nearly 75 members of the Cooperative Slimmer Leven 2020 (care organizations, professional networks, housing corporations, health insurers, companies, knowledge institutions, governments and end users) work towards a similar ambition (realizing significant breakthroughs in care, housing and well-being with the use of innovative technology and eHealth applications. One of the flagships of the Cooperation Slimmer Leven 2020 is the development of living labs.) which makes Slimmer Leven a natural partner for the city of Eindhoven in the Helium project.

Involving Slimmer Leven can, at the same time, also operate as a “test case” within the ideas from the city of Eindhoven to set up a The Urban Development Institute (UDI). Human vitality, health & work; the impact of technology to improve the quality of life and services towards our citizens regarding health, healthy lifestyles and work (broader than the services of the municipality) is big. In the Urban Development Institute we aim to address the challenges we face in the costs of healthcare and implementation of human centric e-services for health and vitality, as well as work and health. “The Urban Development Institute is more than an infrastructure to facilitate the Urban Development of cities; it’s a movement which helps cities throughout Europe to move forward in these uncertain times. It’s a label which facilitates living labs to grow towards sustainable implementation; from a multiple helix perspective. Citizens, Business, Knowledge institutes and government go hand in hand to accelerate”. “It’s the instrument and vehicle which helps living labs on certain themes (future health, e-government, urban planning, smart mobility, future of learning f.e.) to start and grow towards solid and sustainable implementation. The infrastructure which is necessary to facilitate (in funding and validation.) the innovation process; from ideation, prototyping towards business and accelerations and implementation at large scales (‘beyond the pilot’). The Institute distinguishes itself by explicitly generating business and economic growth with human centric solutions for urban challenges.

In the greater region of Eindhoven we have already a lot of living labs in place; some small, some big. The energy, potential and knowledge in our region is endless but also vulnerable. If we really want to bring it to a next level it to become sustainable towards the future we need to start professionalizing and accelerate this process; together with all partners in this region and city. We forecast a network of regional innovation ecosystems (interconnected ‘hubs’) that build on a strong smart specialization strategy, where the Eindhoven hub can be considered as the start-up which is replicable within the Netherlands and cities in Europe.

By participating in the Helium project the City of Eindhoven learned that, besides cooperation between living labs on a regional level, there also is a great added value in international cooperation between (regional) Health Living Labs. The City of Eindhoven therefore decided to focus on a feasibility study regarding transnational living labs and the development of a business plan of a sustainable transnational health living lab.

This Regional Action Plan is describing the “Helium route” of the City of Eindhoven, the experience we gained and the actions to be taken to actually set up a sustainable transnational health living lab which will not only “feed” our Eindhoven roadmap Health but also our roadmaps on other themes.

Implementation of this Regional Action Plan will bring the City of Eindhoven to a next level to become sustainable towards the future and will contribute to a network of regional innovation ecosystems (interconnected 'hubs') that build on a strong smart specialization strategy,

Part III – Helium Best Practises

Four good practises created the basis for this Regional Action Plan. These good practises are:

1. *2ndB, Second Base (Netherlands)*
2. *Innovation Scouts (UK)*
3. *Centre for Collaborative Innovation in Dementia (UK)*
4. *CrossCare (Belgium)*

1. 2ndB (read Second Base)

The Eindhoven region is traditionally a smart region with a big amount of research and development. These ingredients are essential for economic success. However, to be able to provide solutions in the future, begin strong and smart is no longer enough. The developments are moving too fast and therefore we must unite and become adaptive to keep the success of the region. It is no longer possible to approach the social issues as housing, care and welfare individually. All parties have to align their collective and individual course, This means searching together for a new path towards the future. The traditional triangle between the public sector, education and businesses is not enough. We must involve citizens, consumers, customers, investors, designers, artists and so on... We need to search for connections between technology, design and social innovation.

On one hand we see the world and organizations changing. This means on the other hand that we as humans and as society are changing too. People are living longer, want to be self-sufficient. The demand for high quality, efficient and affordable care is growing. Technology enables us to develop innovative eHealth concepts that gives people control over their own health, improve the quality of life and make care cheaper. The idea is to create a so called 2ndBase.: a 'No Man's Land' in which the society as a whole can work and learn together, grow and achieve the following changes:



Personally/Citizen	<ol style="list-style-type: none"> 1. I see the need to change, but I do not have a clear view of the possibilities that could be supportive 2. The formal system is unknown to me 3. How can I control/hold my own direction in life? 	<ol style="list-style-type: none"> 1. I have a clear vision of what is ahead of me and I therefore can anticipate with the choices I make 2. I can ask all questions regarding life, specific questions and more philosophical question
Health Care	<ol style="list-style-type: none"> 1. I am an innovative person with limited possibilities as a professional in my unwieldy organisation. 2. How can I involve 'the people'? I am now in my scope limited to my own customers. 3. The cooperation with other organizations is based on projects/ad hoc. 	<ol style="list-style-type: none"> 1. I have people in other organizations with whom I can cooperate and discuss. 2. I have sustainable access to and interaction with the people of Southeast Brabant 3. Cooperation and joint results put innovation in the health care on a higher level
Research	<ol style="list-style-type: none"> 1. For applied, user-driven research I am in need of users. Now this is organized ad hoc. 2. As a research institute you want to be a part of the society and not only involving the society into your research laboratory 3. How can I organize sustainable co-creation with all involved partners? 	<ol style="list-style-type: none"> 1. By creating a location where innovation, research and reality can meet, co-creation can lead to sustainable user-driven designs and research
Businesses	<ol style="list-style-type: none"> 1. How can I connect my services and products to the health care market? 2. I don't have a clear image of how the market for my products looks like? 3. My product or service is reliable on the cooperation within a network, how can I create a shared savings model? 	<ol style="list-style-type: none"> 1. By cooperation between all parties in the quadruple helix new business models are realized and therefore innovative products and services are able to reach the market more easily and can be up scaled
Society	<ol style="list-style-type: none"> 1. Why and what needs to be organized to organize an inclusive society is becoming more clear. 2. The old lines between health care, housing, wellbeing) do not function any longer 3. The world of systems is leading when making decisions and policy 	<ol style="list-style-type: none"> 1. We can experiment on 'how' we can organize an inclusive society 2. How can we organize an adaptive model: borders disappear, abnormal becomes normal, the exceptions becomes the rule 3. The living world and the effects on wellbeing is central when making decisions and policy

Lessons learned from this best practise: It is very useful to bring attention to the topic of 'innovation in healthcare' to be able to improve the health care system for our citizens. By bringing different disciplines together such as citizens, creative industry, businesses etc., a new movement can be launched, knowledge can be easily exchanged and entrepreneurship will be strengthened. The whole idea however should not only be web-based there should be an actual place to meet!

2. Innovation scouts

The Innovation Scout Programme has been up and running for two years and was developed in response to NHS England's 5 Year Forward Plan "creating the conditions and cultural change necessary for proven innovations to be adopted faster and more systematically through the NHS, and to deliver examples into practice for demonstrable patient and population benefit".

The particular challenge for health and care organisations across our region is how to a) increase capabilities and capacity for developing new, innovative ideas and ways of working across the system and b) create opportunities for sharing and learning about all aspects of putting innovation into practice and c) harvest the knowledge and experience of the innovation scouts to develop education, training and support for our people to adopt and spread new innovations. In essence, the Innovation Scout is a vibrant community of practice that gives an opportunity to begin to build a culture of innovation across our system. The scouts meetings are facilitated by the Innovation Agency, the AHSN for the North West Coast, and they come together to share experiences and learning in relation to 'putting innovation into practice'.

The scout role is voluntary and they come from a wide range of health and social care organisations and are nominated by their Chief Executive for possessing the following characteristics:

- Being motivated to bring about improvements to patient outcomes, cost effectiveness and patient experience through the use of new techniques, products or treatment
- Be a member or have access to the Executive team
- Have a comprehensive network throughout and outside of their organisation

The role of an Innovation Scout is to encourage a culture of innovation within their organisation and to proactively promote and encourage adoption of evidence-based innovations, integrating it as a core process and embedding in staff behaviours.

Each Scout attends a programme of training, development and support from the Innovation Agency and cascade information in their organisation. This ranges from bespoke sessions that Scouts request from field trips to guest speakers. The Scouts proactively promote and encourage the adoption of evidence based innovations and early work was done to establish the 'values and behaviours' of the innovation scout community of practice.

The values of the Scouts are as follows:

- Curious-Structured in approach and open to new ideas; seeks information and evidence to develop options and to inform actions.
- Courageous-Does what is right and what is necessary to champion innovation.

- Empowering-Works with, supports and inspires others to make a positive difference to patient safety, outcomes and experiences.
- Valuing people-Engages with and shows appreciation and compassion for the needs and circumstances of others.
- Outcomes focused- Focuses attention and efforts on agreeing and delivering realistic improvements that enhance the work of colleagues and deliver better patient care.

Lessons learned from this best practise is that in the process of developing this community:

- a) there must be active facilitation of the group to maintain motivation;
- b) they must be allowed to self-manage and set direction for topics that interest members;
- c) the community of practice requires a degree of management if it is to be used to support diffusion of innovations, this includes understanding needs and setting up collaborative work.

3. Centre for Collaborative Innovation in Dementia

The Liverpool John Moore's University's Centre for Collaborative Innovation in Dementia is well-established living lab. The main aim of the centre is to facilitate the interaction and engagement between citizens/users, SMEs/Business, academics/researcher and health and social care professionals. Specific objectives of the centre are:

- To design and develop user-centric care in real life setting. Actively engaging with people living with specific health condition through the co-creation process to promote healthy and independent living.
- To develop ways of working (living lab) that ensures that people living with specific health condition are central to the development of new technologies and new solutions.
- To actively collaborate with all interested partners that engaged open and sustainable innovation

The centre is actively working on research-to-innovation activities through facilitating users/citizen to engage in a phased co-creation process. The success of this approach was built on work of the Innovate Dementia project, which was designed to accelerate and enhance NW Europe's capacity to innovate, through facilitating the development, and sharing of knowledge based approaches and best practices for people living with dementia. The programme aimed to develop innovative, transferable dementia care models by exploring how technology and innovation can develop products and ways of living that will improve quality of life for people living with dementia and their families. Since the project completed the centre has widened its activities to encompass different types of health conditions including developing a meta-innovation approach – a city as a living lab. The centre's 'living lab' is accredited through the European Network of Living Labs (ENoLL). The centre has successfully engaged with 5000 people with dementia in Liverpool through a series of media and roadshow events. The centre has also worked directly with over two hundred people living with a health condition. It has worked with six universities, twenty-one SMEs and three multinational businesses, twenty-six commissioners and providers. It has successfully completed

several research projects in dementia and in the wider health innovation field. Using a living lab approach, the centre collaborates on the following:

- Business innovation coaching within the health and social care space
- Memory enabling technologies
- Health and social care service design, delivery and evaluation
- Product testing and evaluation, including apps and online resources

A lesson learned from this best practise is that it is a challenge to bring all partners together due to individual commitments. However, the living lab approach has been successful both in terms of impact and value. The Centre has enabled diverse sets of users the opportunity to collaborate meaningfully within the health innovation field. Working with individuals with multiple health conditions is an additional challenge however the flexibility of pragmatic approach, a living lab, addresses these challenges. The centre is actively engaging users from an early stage of the co-creation process phase, due to the active participation from the initial phase, citizens feel ownership in the development of a product/practice and are more likely to use the product/practice.

4. Cross Care

Primarily, Cross Care contributes to the development and implementation of care innovations (product, service, concept) by offering living lab services and has a fund to financially support the innovation. Secondly, Cross Care contributes to the further development of the 6 living labs in the region and their living lab toolkit.

Cross Care supports the development and implementation of care innovations by offering cross-border living lab infrastructure (always a Dutch and Flemish living lab) and subsidy (between € 15,000 and € 200,000; SMEs up to 50%, large companies up to 40% subsidy). There are seven waves planned between 2016 and 2019 in which companies and healthcare organizations can submit their project.

CrossCare is aiming at accelerating care innovations by supporting entrepreneurs in their experimental development. This should allow new products and services to reach the market sooner. An essential element to this process is the living lab setting which CrossCare is offering to companies and care institutions. These living labs will give entrepreneurs and developers the chance to develop their products or services with a maximum chance of success with their target group(s), by helping them to test new or improved care concepts, services, processes and products with actual end users. Each innovation project will receive tailor-made support from both a Flemish and a Dutch living lab. Through this cross-border approach, CrossCare is offering access to a broad ecosystem able to foster collaborations throughout the entire care and value chain. It also enables entrepreneurs to gain experience in international business more easily, and is opening up a bigger, cross-border market for them. The process starts with promoting the opportunities of CrossCare and initiating project ideas. Promising project ideas are selected based on a short description. After being selected, project ideas are supported to prepare a full proposal, including a description of the living lab support. The progress of awarded projects is monitored and when necessary projects receive support to become successful.

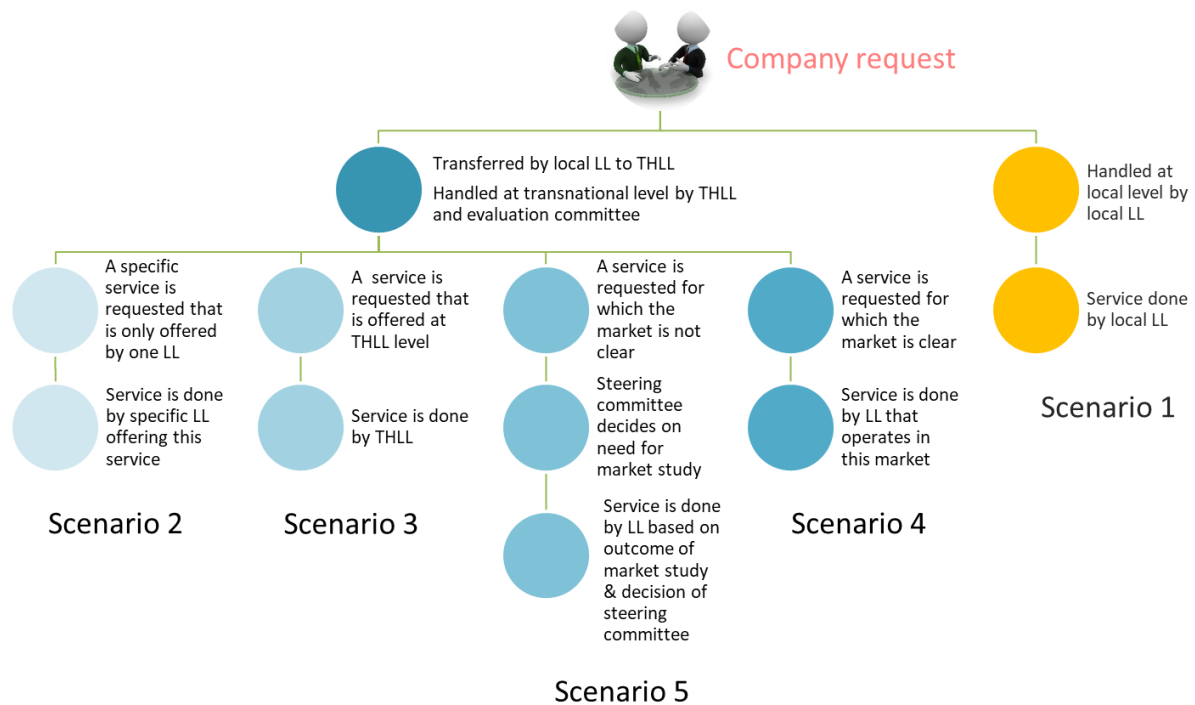
Part IV – Proposed Model of the Transnational Health Living Lab (THLL)

By participating in the Helium project the City of Eindhoven learned that, besides cooperation between living labs on a regional level, there also can be great added value in international cooperation between (regional) Health Living Labs. The healthcare sector is a very nationally oriented sector with different ways of organising health care, regulatory differences, different financial systems and different expectations of people about what the sector should offer. This makes it very difficult for companies to enter the healthcare market in other countries. Because of this, many promising innovations are unable to achieve sufficient economies of scale and eventually do not survive.

Together with Slimmer Leven and (Helium partner) LicaLab we therefore decided as the City of Eindhoven to focus our future participation in the Helium project on the development and implementation of a sustainable transnational living lab. We think the results of this will not only “feed” our Eindhoven roadmap Health but also our roadmaps on other themes.

Both Slimmer Leven and LicaLab already achieved success with the use of a “transnational living lab” within the CrossCare project. CrossCare contributes to the development and implementation of care innovations (product, service, concept) by offering a care testing ground and has a fund to support innovation projects. CrossCare consists of a collaboration of 8 organizations in the Netherlands and in Belgium. In practice, national borders still appear to be major barriers in the market and CrossCare is an opportunity to exceed these limits. Each partner has its own regional network, in which the entire health care system is represented. The innovations of the participating projects are tested in the various testing grounds across the entire border region. In this way, innovations can come into contact with end users within and outside their region, but also with hospitals, care organizations, front-line organizations, knowledge institutes, welfare organizations, various companies and government institutions. Due to the structural use of the cross-border care-testing practice setting, the care test gardens become more sustainable and professional. In this way a menu can be offered with services that exactly meet the needs of companies. Services that can be offered via this menu are for example live tests, panel management and co-creation sessions. All these services are offered from different regions and with different expertise, such as eHealth, preventive care and informal care support. There are six care test gardens that participate in the CrossCare project. In addition, two expertise centre’s (the knowledge partners) are involved in the project. These centre’s support the companies in terms of content with their innovation projects and help the testing grounds to improve the service. As a European Network of Living Labs, ENoLL will also be involved in this process.

Proposed Model for the THLL



The proposed organisation of the THLL can best be explained by presenting 5 scenario's for the handling of a company's request, either through the local LL itself, at the transnational central level or by members of the network.

Handled at local level by local LL

➡ **Scenario 1:** a local company approaches a local living lab with a demand that can be handled at local level

- The project application is handled at local level, and is not transferred to the transnational level
- The service is done in the local LL

Handled at transnational central level by THLL, or by a LL in the transnational network

➡ **Scenario 2:** a local company approaches a local living lab with a specific demand that cannot be addressed by the local living lab and is only offered by one LL

- The project application is handled and evaluated at transnational level
- The central contact point refers the project application to the LL that is offering this specific service (based on the complementarity between the unique set of services)
- The central contact point informs the steering committee, no action by the steering committee is needed
- The service is done in the LL that is offering this specific service

In case a service can be delivered by several LLs, but not by the one in the region of the client, the request will be referred to all LLs. Each LL can present its offer and specific costs for the task, from which the company can choose. The central contact point coordinates this process.

Moreover, several LLs can also offer a joint package proposal to the client. They should do so on their own initiative, and under specific agreements per offer, but the contact point can again play a coordinated role. After the service has been attributed, the formal relationship shifts to the specific (lead) LL, but the THLL can obviously remain in a facilitating role.

The THLL will guard a certain quality standard of services of its member LLs. If the quality of the services delivered to companies is not up to the desired quality, the THLL will have a mediating function to find a suitable solution for all parties.

➡ **Scenario 3:** a local company approaches a local living lab with a demand that is offered at the transnational level

- The project application is handled at transnational level
- The central contact point enables the requested service.
- The central contact point informs the steering committee, no action by the steering committee is needed
- The service is done by the THLL

Certainly in the starting stages of THLL, such services can be subcontracted to external experts, as the contact point will have very limited resources to handle it themselves. In a growth scenario of the THLL, the contact point will attain more operational support, and will be able to deploy more activities.

➡ **Scenario 4:** a local company approaches a local living lab with a demand to enter a new market (market is clear)

- The project application is handled at transnational level
- The central contact refers the project application to the LL (or LLs) that is active in that market. In case of more potential LLs, the same procedure is followed as under Scenario 1
- The central contact point informs the steering committee, no action by the steering committee is needed
- The service is done in the LL that is active in that market

➡ **Scenario 5:** a local company approaches a local living lab with a demand to enter a new market

- The request is handled at transnational level
- The central contact informs the steering committee
- The steering committee decides if the request can be assigned to a particular LL or if a market study is needed.
- In case a market study is needed, the LL that offers this service (or an expert that is part of the ecosystem of that LL) will execute the market study
- Based on the outcome of the market study, the steering committee decides which LL will deliver the service

Organisation of the THLL

- The THLL should have a **central contact point**
 - This should be one neutral person or team that is not part of an individual LL
 - The central contact point decides on the scenario a company request will follow
 - The central contact point only coordinates the projects of scenario 3
 - The respective LL coordinates the projects of scenario 2, 4 and 5, performed under the responsibility of that individual (leading) LL.
 - The central contact point transfers all aspects of the relation to the LL in charge in case of scenario 2, 4 and 5.
- The central THLL should offer following **services**:
 - Intake service (Needs assessment of the company requests)
 - Internal database of projects handled for monitoring purposes, to report to the steering committee, and to have descriptive insight into the type of projects performed and spread of the network
 - The database records projects of scenario 2, 3, 4 and 5
 - The database does not record projects of scenario 1
 - Marketing and communication to create general awareness on the THLL & its activities
- As the THLL can extend its operations, following activities should be organised in a structured way by the THLL:
 - Knowledge sharing activities (like learning networks, trainings for LL, feasibility studies)
 - Standard IPR & confidentiality template to ensure homogeneity across LL, but concrete IPR & confidentiality agreements will be kept to the discretion of individual LL
 - Marketing and communication to actively search for clients

The THLL will also have a steering committee. This steering committee is populated by one representative of each LL that is part of the THLL, and the central contact point of the THLL, each with one vote on the decisions to be taken. The steering committee will meet every two weeks (either physically or virtually) to discuss & decide strategic issues of the THLL, including the inclusion of new members to the network, and more complex company requests requiring the involvement of several LLs (e.g. requests under scenario 5). Also the progress and specific issues of running projects can be discussed here. The LLs will thus report briefly on the running project relevant to the THLL under their management. During these meetings, the central contact point informs the steering committee on the actions taken in scenario 2, 3 and 4.

Decision structure

The company requests that are handled at transnational level are evaluated by the central contact point of the THLL on an ongoing basis. For scenario 2, 3 and 4, the central contact point is authorized to make the decision according to the structure mentioned above. The response time from LLs should be under 7 working days.

The steering committee will have the final say about the attribution and the handling of project applications of scenario 5. The central contact point cannot make a decision on this before receiving a 'go' by the steering committee. For the other scenarios, the contact point takes the decision, and report afterwards to the steering committee.

The steering committee will also, based on unanimity, decide on the inclusion of new members to the THLL, based on criteria listed below. This decision and the evaluation of the criteria will be reported in an evaluation template for internal use. New members will immediately become full members of the steering committee. In a growth scenario beyond 15-20 members, a new reflection about the structure of the committee should be considered, as it will become practically too complex to organise a steering committee every two weeks.

Financial sustainability

In general, public support is essential to create and expand a living lab. At the start, many activities need to be set up to ensure an efficient functioning of the living lab. Funding from the private sector may contribute to the living lab's budget once it is able to offer specific services to its customers.

Private funding can be obtained for other services like co-creation workshops, focus groups, life test with real users, etc. Companies interested in these services are often willing to pay for it. Also for the participation to matchmaking events and specific network events, private funding can be acquired by means of membership fee or event-based fees. Specific services should be sustained through a pay-per-use and membership or event-based fees, depending on their (marginal) cost per use. Services that can be offered on a continuous and rather standardised way can be part of a membership package for companies. Individual tailored services should be directly charged to the client.

For building up and maintaining a regional panel, public funding is and will remain to be needed. Public funding is also essential to acquire, install and upgrade specific infrastructure.

The management and coordination tasks that will be executed at transnational level, as outlined throughout this document, will need to be permanently public financed. Public funding is an important means to ensure the neutrality of the THLL. If it is solely relying on private contributions, the focus might shift towards the needs of the financial contributors, and not necessarily to SMEs, while the need for support might be highest for SMEs.

The individual living labs that are part of the THLL will have to function and sustain themselves financially on a regional basis. If the THLL reaches a certain degree of maturity, the individual living labs could potentially contribute to the THLL by means of a fee to reduce its dependence on public funding and to increase the services offered by the THLL.

Part V – Actions and the way forward

Action: To set up a Transnational Health Living Lab (THLL)

Sub action A: Define and describe the required basic set of services offered by the THLL.

Sub action B: Develop a standardised description of each of the basic services offered.

Sub action C: Define and describe the desired unique set of services, offered by the LL itself or outsourced to a direct (scientific) partner.

Sub action D: develop evaluation criteria to select Living Labs becoming a member of the THLL.

Sub action E: develop selection criteria to handle company requests.

Sub action F: Define the exact budget and financial mix of the THLL.

Exchange of Experience during the Helium project

The main goal of this regional action plan is to set up a THLL together with Helium partners Brainport Development BV (Helium PP1), Thomas More Kempen VZW (LicaLab) (Helium PP2) and stakeholders Cooperation Slimmer Leven, ENoLL, EIT Health and IMEC. The sub actions described below are necessary to achieve this goal. The idea to set up a THLL is the result of the exchange of experience during the Helium project. As mentioned in Part III – Helium Best Practises, four good practises created the basis for this Regional Action Plan. These good practises are:

1. 2ndB, Second Base (Netherlands)
2. Innovation Scouts (UK)
3. Centre for Collaborative Innovation in Dementia (UK)
4. CrossCare (Belgium)

Of course these good practises cannot be implemented one-on-one so during study visits organised along with the transnational meetings in the Netherlands and Belgium, the good practise 2ndB and CrossCare were further explored with project partners and regional stakeholders from Belgium and the Netherlands and translated into the Eindhoven regional situation.

2ndB (Second Base) seems to be a good way of bringing attention to the topic of ‘innovation in healthcare’ in order to improve the health care system and services for our citizens. Especially the fact that, by bringing together the quadruple helix partners, knowledge can be easily exchanged and entrepreneurship will be strengthened is an attractive concept for our Brainport Region. As mentioned before the main philosophy behind Brainport is the Triple Helix (nowadays quadruple helix, including the end-user) is a cooperation between local government, business and knowledge institutions to stimulate and boost technology and innovation, which enables the region to accelerate economic, social and individual growth. Core business of the municipality therefore is to address social issues of today and tomorrow with all stakeholders in the city. The municipality is doing this by collaborating with flexible and borderless networks. In addition, she sees the city as a testing ground for companies and universities, so the city and its inhabitants are the first to benefit from innovative solutions. Creating an actual meeting place (not only a web-based solution as described in 2ndB) where quadruple helix partners can exchange knowledge therefor is an added value for the Brainport region.

However, the Brainport Region has a lot of living labs in place; some small, some big. The energy, potential and knowledge in our region is endless but also vulnerable. If we really want to bring it to a next level it to become sustainable towards the future we need to start professionalizing and accelerate this process. A strong network of regional innovation ecosystems (interconnected 'hubs') that build on a strong smart specialization strategy is in place and a 2ndB like meeting place can be an added value this is not sufficient.

CrossCare shows that, besides cooperation between living labs on a regional level, there also can be great added value in international cooperation between (regional) Health Living Labs. The healthcare sector is a very nationally oriented sector with different ways of organising health care, regulatory differences, different financial systems and different expectations of people about what the sector should offer. This makes it very difficult for companies to enter the healthcare market in other countries. Because of this, many promising innovations are unable to achieve sufficient economies of scale and eventually do not survive. National borders still appear to be major barriers in the market and CrossCare shows an opportunity to exceed these limits. Each partner has its own regional network, in which the entire health care system is represented. The innovations of the participating projects are tested in various testing grounds across the entire Netherlands/ Belgium border region. In this way, innovations can come into contact with end users within and outside their region, but also with hospitals, care organizations, front-line organizations, knowledge institutes, welfare organizations, various companies and government institutions. Due to the structural use of the cross-border care-testing practice setting, the care test gardens become more sustainable and professional. For the Brainport Region however a cooperation between only 2 countries is too small and should be extended across Europe. In other words, a transnational health living lab should be developed.

During the intensive "Let's-Blend-It" and "Let's-Polish-It" sessions in Porto and Budapest the good practises Innovation Scouts and Centre for Collaborative Innovation in Dementia were discussed with the project partner and stakeholders from the UK and translated into the idea of creating a 2NDB like meeting place and a transnational health living lab. During these sessions it became clear that 1) the role of an Innovation Scout (*to encourage a culture of innovation within their organisation and to proactively promote and encourage adoption of evidence-based innovations, integrating it as a core process and embedding in staff behaviours*) can be compared with the attitude expected from the regional living labs taking part in a future transnational living lab this; and 2) the main aim of the Centre for Collaborative Innovation in Dementia (*to facilitate the interaction and engagement between citizens/users, SMEs/Business, academics/researcher and health and social care professionals*) is similar to the idea of creating a 2NDB like meeting place. Although we could only see comparisons the lessons learned from these good practises seemed to be too valuable not to take into account. These sessions therefore resulted in a "checklist" of points of attention in realising both a 2NDB like meeting place and a transnational health living lab:

- It is a challenge to bring all stakeholders together due to individual commitments;
- There must be active facilitation to maintain motivation;
- Self-management must be allowed to set direction for topics that interest stakeholders;
- The flexibility of using a pragmatic approach, a living lab, can help to address challenges

- The community of practice requires a degree of management if it is to be used to support diffusion of innovations, this includes understanding needs and setting up collaborative work;

To translate the idea to develop a sustainable transnational health living lab into concrete actions the City of Eindhoven participated in the staff exchange in Turnhout and Eindhoven. As mentioned before, both Slimmer Leven and LicaLab, already achieved success with the use of a “transnational living lab” within the CrossCare project. Therefore LicaLab, as an advising partner in the Helium project, was intensively involved in defining the below mentioned actions.

As a European Network of Living Labs who has access to regional health living labs, ENoLL also was involved in this process. During the ENoLL Open Living Lab Days a workshop was dedicated to the development and implementation of a transnational living lab to get input from existing health living labs. This workshop consisted of 4 parts:

1. Fill in a short questionnaire
2. Validate services offered by THLL (regional & transnational)
3. Discuss and develop inclusion criteria (living labs & SME projects)
4. Exploration of a governance model

The first part had the purpose of clarifying the background of the attendees. The second part aimed to validate THLL’s previously formulated future services. The third part aimed to take the attendees in the importance of inclusion criteria and the further development of these. The last part aimed to explore the governance model. Results from this workshop were used writing this action plan.

Both LicaLab and ENoLL will also be involved in implementation. To ensure a sustainable and European based development of the transnational health living lab also EIT Health and IMEC will be involved in implementation.

Although the sub actions described below are described as separate (sub) actions, all (sub) actions will be implemented in one general package. Implementation will be done within the consortium of mentioned partners and stakeholders on an equal level.

Partners and stakeholders involved in implementation: City of Eindhoven (PP3), Brainport Development BV (PP1), Thomas More Kempen VZW (LicaLab) (PP2), Cooperation Slimmer Leven, ENoLL, EIT Health, IMEC

Time frame: January 2019 – June 2020

Cost: EUR 25.000

Funding sources: regular budget City of Eindhoven

- **Action: To set up a Transnational Health Living Lab (THLL)**

Output: A working Transnational Health Living Lab

Timeframe: January 2019 – June 2020

- **Sub action A: Define and describe the required basic set of services offered by the THLL.**

For example.

- Support for a full development trajectory (or TRL stages), each time in light of validation and feasibility check from an end user's perspective
 - Exploration
 - Design & development
 - Evaluation/feasibility
 - Validation
- Co-creation workshops and focus groups
- Life test with real users (including integration in care procedures, project-management, medical-ethical issues, institutional context)
- Surveys, questionnaires and polls
- Availability of regional panels, to be able to reach out to test persons in a short time / responsiveness of the LL
- Regional mobilisation
 - Matchmaking between partners
 - Stakeholder mapping
 - Mobilising network of actors

Output: An overview of the basic set of services offered by the THLL

Timeframe: January – March 2019

- **Sub action B: Develop a standardised description of each of the basic services offered.**

Translating the outcomes of sub action A into a standardised description.

Output: A toolkit with services of the THLL to be used by “customers” of the THLL

Timeframe: March – June 2019

- **Sub action C: Define and describe the desired unique set of services, offered by the LL itself or outsourced to a direct (scientific) partner.**

For example:

- Business modelling (can be outsourced on transnational level, with input from local living labs)
- Market study e.g. examine the best country to go to market, market insights

- Lab testing (technical testing)
- Human factor studies
- Prototyping
- Clinical trials
- Professional, tailored advice like:
 - Information on reimbursement procedures
 - Legal services
 - Expertise on CE certification
 - Medical/ethical approval
 - Project management
 - IPR (all LLs need to have some basic knowledge on this, but this can also be specialized domain of expertise for one or a few LLs)
 - Access to funding

Output: A toolkit with services of regional LL to be used by “customers” of the THLL

Timeframe: July – November 2019

- **Sub action D: develop evaluation criteria to select Labs becoming a member of the THLL.**

To set up the THLL living labs should be selected that are able to offer a basic set of services and that are located in different countries. All living labs should operate on an equal basis in the THLL. All living labs should ensure a high quality in delivering the basic set of services and maintain a timely deliverable to the client. They should have sufficient maturity to enter the THLL.

Output: A set of criteria to determine which regional Living labs can become a member of the THLL

Timeframe: November 2019 – January 2020

- **Sub action E: develop selection criteria to handle company requests.**

The company requests that are handled at transnational level by the THLL should be assessed according to a clear and predetermined set of criteria. For example:

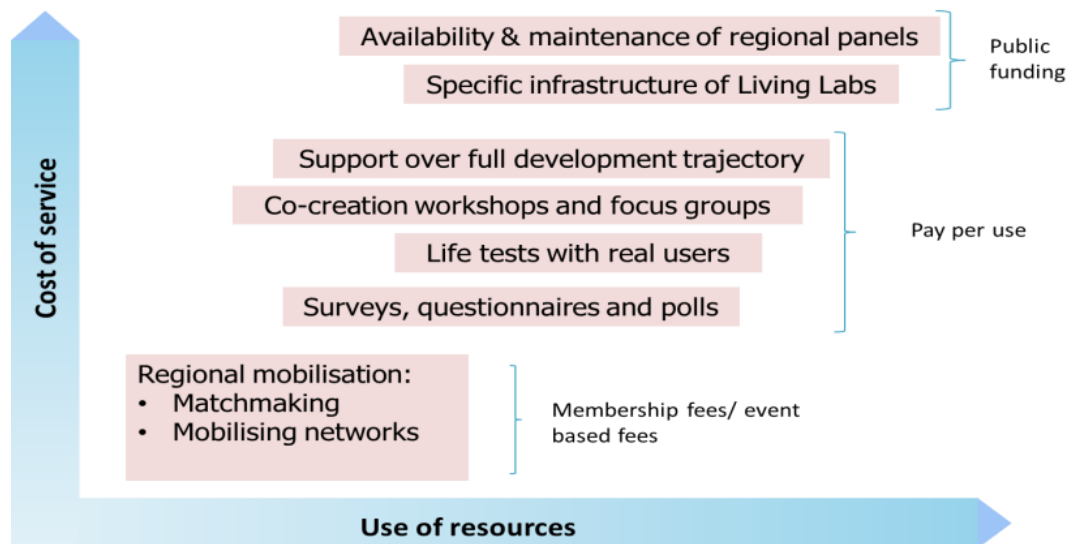
- Legal status of the company, and proof of non-bankruptcy
- Commitment of the company (allocated manpower, level of financial commitment)
- Quality of project team (are they well positioned to carry out the developments?)
- Quality of project plan (are the resources, timing and deliverables well justified?)
- Added value for the company (what is the value proposition, what is the targeted market)
- Innovative character of the project versus maturity of technology for testing in real life conditions

Output: A set of criteria to determine which company request will be implemented by the THLL

Timeframe: November 2019 – January 2020

- **Sub action F: Define the exact budget and financial mix of the THLL.**

To decide the exact budget and financial mix of the THLL, sub actions A to E and the scheme below will be analysed and the most sustainable financial mix will be defined.



Output: An overview of the needed budget and most sustainable financial mix for the THLL

Timeframe: January – April 2020