

# SPINNING PILOTS







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# SPINNING PILOTS



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## INTRODUCTION


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The strategic objectives of the Uusimaa region include strengthening the region's position as an innovative hub for enterprises and supporting the growth entrepreneurship of high competence, in particular. The Spinning Pilots project supports these objectives with a focus on entrepreneurship in the health and well-being sector. Health sector SMEs that have both growth potential and adequate flexibility to achieve genuine benefits in the experimental project work were selected as the target group of cooperation.

Health and well-being technology is a globally growing market. Start-up companies in the sector need agile and cost-effective ways to examine the needs of customers and business opportunities in foreign markets.

Living Labs can provide companies with support in their innovation activities. Typical features in the activities of Living Labs include the application of several methods, engagement of users and other stakeholders, operating in an authentic operating environment and co-creation. Living Labs have been described as being intermediary organisations which build and strengthen the open innovation ecosystem in Europe, which supports the





internationalisation of small and medium-sized enterprises while enabling the validation of products and services in other markets through cooperation with and consultation of Living Labs (The Living Lab Methodology Handbook 2017). However, this role is new and still taking shape, and Living Labs need to promote international cooperation and the commercial provision of their services.

The objective of the Spinning Pilots project has been to create better opportunities and effective approaches or action models for internationalisation for start-ups in the health and well-being sector by adhering to the Lean Startup principles.

The project was executed between the years 2017-2018 as an alliance of four organisations. The key stakeholders in the project were the multidisciplinary Laurea and Metropolia Universities of Applied Sciences, which brought their extensive offering and both substance competence and experience in corporate partnerships to the table. The other stakeholders involved in running the project were Upgraded, the organisation for start-ups in the health and well-being sector, and Helsinki Think Company, the entrepreneurship society of the University of Helsinki, which has led several voluntary accelerators and programmes for students. In addition, the European Network of Living Labs and Forum Virium Helsinki provided support for the project. The project was funded by the Helsinki-Uusimaa Regional Council.

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# WHAT KIND OF COOPERATION WITH HIGHER EDUCATION INSTITUTIONS INTERESTS STARTUP COMPANIES?



*Raisamiina Rimpelä*

*Sara Härmälä*

- UPGRADED -

**C**ooperation between startup companies in the health sector and higher education institutions creates wealth of new opportunities for developing innovative solutions. Startup companies can develop their own products or services and receive help in solving related challenges. For students, the cooperation offers an opportunity to learn about entrepreneurship and receive an overview of new innovative solutions in the health sector. Cooperation also functions as a good recruitment channel – a motivated student may find employment at the very startup company where they completed a placement period or their thesis.

Higher education institutions are constantly looking for new cooperation models with startup companies specifically in order to promote health sector innovations and increase the awareness of the innovations. For the cooperation to progress smoothly and to produce the desired outcome, it is important to understand the different parties' requirements and expectations of cooperation.

At Upgraded, an organisation of health sector startups, one of our most important tasks is to bring health sector startups together with other sector stakeholders, including higher education institutions and students. In the Spinning Pilots project, we have worked as a liaison with startup companies. In order to determine potential cooperation models between startups and higher education institutions, it was important for us to first understand what the startups expected of the cooperation. At the beginning of the project in spring 2017, we interviewed 22 health sector startups on their experiences in and wishes concerning cooperation with higher education institutions.



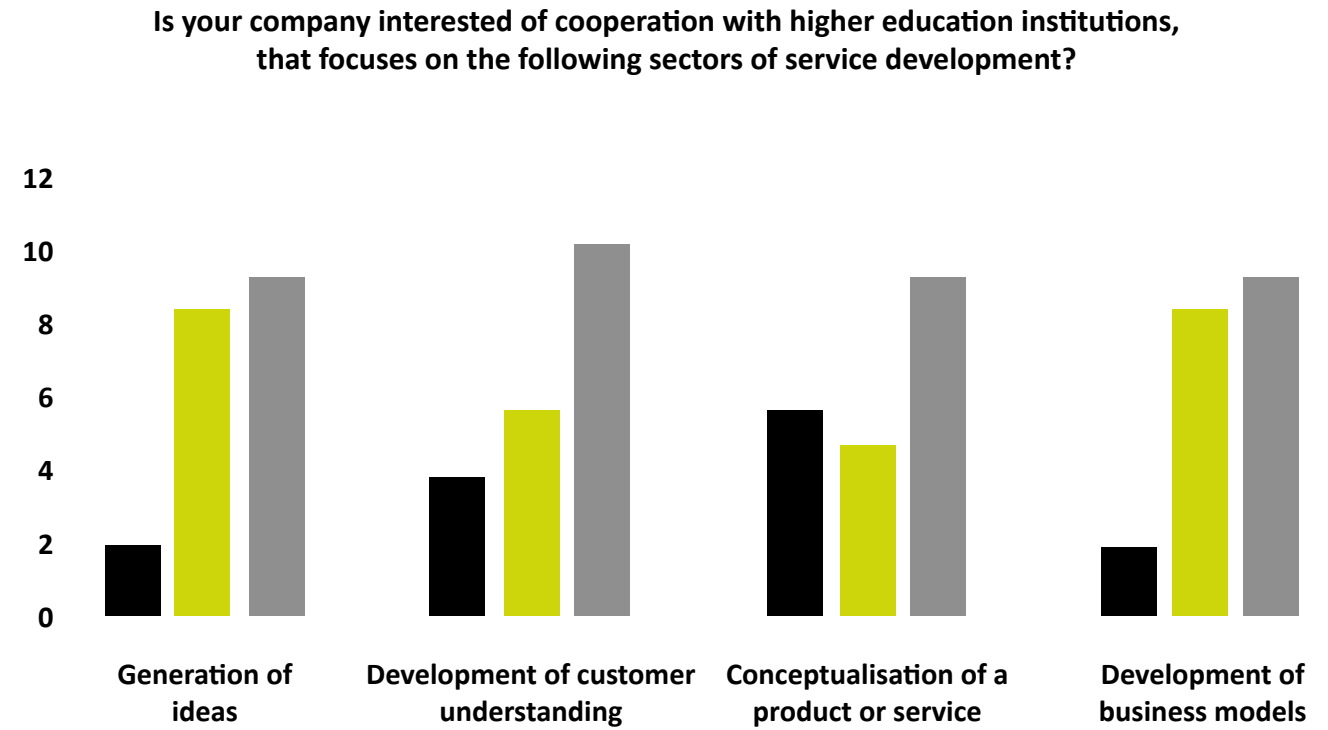
## **DESPITE THE INTEREST IN COOPERATION, OPPORTUNITIES ARE SEIZED SELECTIVELY**

Cooperation with higher education institutions and students is not a new thing for startup companies. Many have been working together with higher education institutions for a long time and expect the institutions to offer them interesting cooperation opportunities in the future as well. Based on the responses, it seems that higher education institutions and startups located outside the Uusimaa region engage in closer cooperation with each other. The reason for this is not clear,



but it can be seen in the health sector that startup companies are often established in cities with a university hospital.

As a rule, startup companies are interested in hearing about different available opportunities, but, at the same time, are very selective about which one of them to seize. Time and money – the most important resources of a startup company – create obstacles for cooperation, but the ambiguity and abstract nature of cooperation proposals may also prevent the cooperation from getting started. Startup companies do not have ready answers concerning which part of their operations would be most suitable as a basis of cooperation. In our survey, we asked startup companies to assess four areas from the viewpoint of cooperation: the generation of ideas, development of customer understanding, conceptualisation of a product or service, and development of business models. The development of customer understanding and conceptualisation of a product or service received the highest number of positive answers; in other words, these would seem to be fruitful themes for developing the cooperation.



The generation of ideas and development of business models received the highest number of negative answers. The main reason for why these areas are not suitable for students to tackle is that students do not yet have sufficient competence in the health sector, which itself is very complex. According to one startup entrepreneur, “students have lots of ideas, but most of the time, they are not new ideas that our team would not already have discussed and processed”. However, this cooperation pitfall can be avoided through prolonged cooperation, during which startups provide support and guidance for their students on the health sector in general and their own business operations. However, this will also require more resources from the startup company, and this creates challenges for cooperation.

On the other hand, health sector startups value long-term cooperation with students specifically for the reason that the challenges are complex and often require plenty of induction. Common forms of cooperation, which have also proven functioning, include offering thesis topics or placement opportunities for students. According to startup companies, it is easier to allocate resources for these even if the resources were scarce, since their assignment descriptions are very clear. In longer-term cooperation like this, startup companies are happy to invest in the induction of students. Writing a thesis was considered to be one of the best forms of cooperation, because it also provided visibility to the company, in addition to the long-term commitment.

In short-term cooperation, startups like to give students precisely defined assignments and support them in finding solutions. In this kind of cooperation it is often useful that teachers also participate in supporting students and provide different models for completing the assignment. The same applies to cooperation carried out as group work. Concrete and defined assignments that do not require much explaining work the best.



## **THE GREATEST BENEFITS AND CHALLENGES IN COOPERATION**

From the startup companies’ perspective, one of the greatest benefits of cooperation with higher education institutions is to involve enthusiastic students in startup activities. Students may surprise the companies with their new, innovative points of view. *“Enthusiastic students who come to*



*learn new things and question everything and propose new ideas. This is very healthy for our company and team and may change the way we think*”, the managing director of one startup commented. Enthusiastic students like this may be future employees of the startup company. Startup companies also value the visibility that cooperation brings, which can be achieved through a completed thesis or word of mouth when students talk with others.

As we stated before, time is one of the most challenging resources in cooperation. Often time is the most valuable resource of the startup companies and a lot of thought is put into time management. Coordinating the schedules of higher education institutions and companies may be difficult, since the schedules of the institutions are not always flexible. Startup companies feel that higher education institutions may lack understanding of the fact that the main task of the startups is to conduct business operations, and this requires managing time as efficiently as possible. “Higher education institutions are very good at doing research, but do not necessarily always understand business. Higher education institutions are very theory-oriented, but as a startup company, I want to focus on business operations”, the managing director of a startup company commented.

The financial position of the startup company may also create challenges. There may not be a budget for cooperation, and not all startups can afford to pay students for writing a thesis or for a placement position.

It is also difficult for startups to estimate the workload of cooperation. There have been situations in which the student’s motivation has not been aligned with the objectives of the startup, and in cases like this, it is difficult to estimate the outcome of work. The expectations of startup companies may also be higher than the final outcome of work. Other obstacles to cooperation include the ambiguity and abstract nature of cooperation proposals.



## **STARTUP COMPANIES’ EXPECTATIONS OF COOPERATION**

Generally speaking, startup companies are interested in cooperating with higher education institutions but expect very tangible cooperation proposals. The objectives of cooperation must be defined clearly by both parties and the level of expectations must be appropriate. Startup companies



must also understand the limited possibilities of students to find solutions to challenges.

Startup companies are prepared for both long- and short-term cooperation arrangements, depending on their resources and needs. Greater flexibility of higher education institutions in terms of schedules would offer startup companies more opportunities to participate in cooperation. Startup companies also proposed testing their own products or services with the assistance of students as a new form of cooperation. This would help the companies to modify their products to better suit the target group's needs and to understand the problem areas of the product or service. In addition to cooperation focusing on students, startup companies are also interested in research collaboration with higher education institutions. They might also be interested in shorter-term cooperation, for example, being a mentor for an individual student or by giving a lecture as part of a course if their expertise is deemed suitable and the schedules allow.



# ACTION MODELS FOR COOPERATION BETWEEN COMPANIES AND STUDENTS OF HIGHER EDUCATION INSTITUTIONS



*Ifeoma Kulmala  
Päivi Haho  
Mikael Soini*

**T**wo different models of cooperation were tested during the project to bring together companies and students: based on the higher education institution and the other based on the community.

Startup companies in the health technology sector that have both growth potential and adequate flexibility to achieve genuine benefits through student cooperation were selected as the target group of cooperation. The target group in the higher education institutions included motivated students from different fields, for whom developing and deploying their personal competence, networking and mapping new career paths were factors attracting them to participate in the cooperation with companies.



## **THE HIGHER EDUCATION INSTITUTION BASED MODEL (HEI)**

The first trial, the Minno innovation project, was implemented based on the higher education institution as a 7-week study unit worth 10 credits at the Metropolia University of Applied Sciences. Participants of this project also included students from the other higher education institution involved in the project. The Minno innovation project is a project utilising service design with students from different fields, which is carried out as an intensive implementation in order to complete assignments and solve challenges of companies and other cooperation partners in the working life, and also as longer-term implementations during the semester. The project outcome is ideas, concepts and prototypes of solution.

The starting point of the HEI-based model is the needs of students, and it is closely aligned with the processes of the higher education institution. Companies are the clients of the challenges examined in the project. A multidisciplinary team of teachers is responsible for the process, and the team's role includes guidance during the project, substance expertise as well as course planning, company recruitment and coordination of the contents together with the companies. The HEI-based model is primarily executed at the facilities of the institution. The financial resources for



the project are provided by the educational institution that organises the study unit or educational institutions together.

The outcomes of the Minno innovation projects for companies include fresh ideas and concepts for solving challenges, and students gain experience and build a network of contacts for their upcoming assignments. Cooperation that starts with students in the project may well generate thesis work, placement opportunities or employment for them later on.



## **COMMUNITY-BASED MODEL**

Another trial, the AIKO health workshop, was carried out as an intensive weekend-long workshop. The workshops were designed with a focus on the community by first mapping the needs of companies and by organising the cooperation accordingly. The health sector companies presented students with challenges topical in their sector, and students from different fields of study worked on them in cooperation with the companies for one weekend.

The starting point of the community-based model is the needs of companies, but the students' perspective is also included: companies receive fresh viewpoints and ideas from students for problems they consider to be essential, and students have the opportunity to work in a genuinely influential, interesting working life project in close cooperation with the client, learn new things and network in a multi-sector environment. The organiser's role is to ensure that the challenges are presented in a functional manner in cooperation with the companies and to facilitate the joint activities during the weekend, but not to directly supervise the work. The companies have a powerful role during the workshop, and cooperation that starts in the project may well generate thesis work, placement opportunities or employment for students later on.

The most natural place of implementation for company cooperation with a focus on the community is a thematic co-working space, meeting space or hub, such as the Terkko Health Hub used in this project. In terms of successful communication, it is beneficial that the role of the participating companies is not one of a paying client but a role of a cooperation partner and that the participants are recruited from several different higher education institutions. Therefore, the client in the project can, for example, be a stakeholder who wants to promote the regional business life

(such as the Helsinki-Uusimaa Regional Council in this pilot), several higher education institutions together, or another party benefitting from the project. Company cooperation with a focus on the community can be implemented at reasonable costs and cost-effectively when the project duration is short and the action model is clear and planned in advance.



## **DIFFERENCES AND BENEFITS OF THE MODELS**

The HEI-based model enables long-term projects and, subsequently, careful familiarisation by students with the topic and in-depth learning. The challenges have been adapted to promote learning and develop the students' skills. Companies are able to bring up more extensive problems and also trust the substance competence of the teachers of the higher education institution in student guidance. However, the long timespan that makes such a meticulous approach possible also means that the companies may not have sufficient resources for involved participation.

Correspondingly, due to the fairly short duration of projects in the community-based model, students have limited opportunities to in-depth involvement in the project, and the tight schedule also calls for clearly defined challenges. A stricter definition of the challenges means that it is not possible for students to participate in very diverse projects. On the other hand, a tight timespan also enables companies to participate in the project closely.

Whereas the HEI-based model highlights the role of teachers, a central aspect in the community-based model is the interaction between the company and the students. The primary role of the event organiser is to help companies select and formulate challenges with an appropriate scope and to facilitate cooperation during the weekend. The client's presence will put positive pressure on the students' work.

From the student's perspective, cooperation in the HEI-based model is part of the study units offered and it contributes to their degree and accumulates credits. Credits can also be earned in the community-based model, but as a rule, participation in it is voluntary, which emphasises the students' own motivation and interest in the challenges and companies.





## OPPORTUNITIES: SCALING OF MODELS

Both action models – one based on the higher education institution and one based on the community – are scalable and can be implemented as continuous annual cooperation between health-tech companies and students of higher education institutions and also as activities between different sectors and students. The scaling of the model based on the higher education institution highlights close cooperation between the key institutions, whereas the model based on the community requires that the event organiser is familiar with the ecosystem of health-tech companies.

The scaling of both forms of operation calls for communication with and marketing to the stakeholders in the health-tech ecosystem. Different channels should be utilised diversely for communication in order to reach corporate partners and attract new companies. The challenges companies face should be collected and transformed into clear assignments in cooperation with the companies. Collecting the challenges requires ongoing cooperation and outlining the assignments jointly with the companies. The role of facilitation is central during the implementation of the assignments, regardless of the action model. The organisers of the event and/or the instructors of the students are responsible for facilitating the event for the students, and the company representatives answer the questions students pose concerning the challenges. Accumulating credits through different forms of cooperation is important for students.

It is important to find a central venue, organiser and sponsor for implementing the community-based model. A short event could also be part of another event, such as the Upgraded Life Festival.

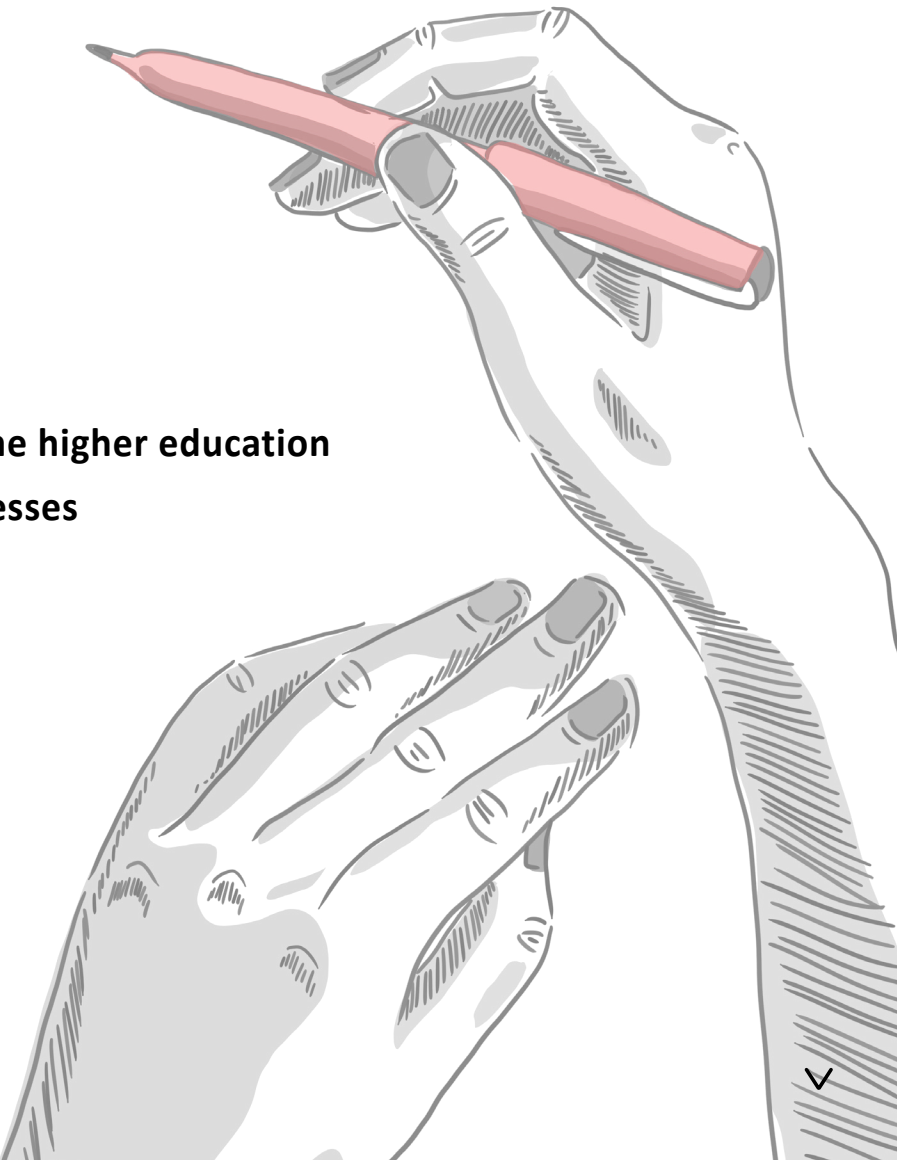
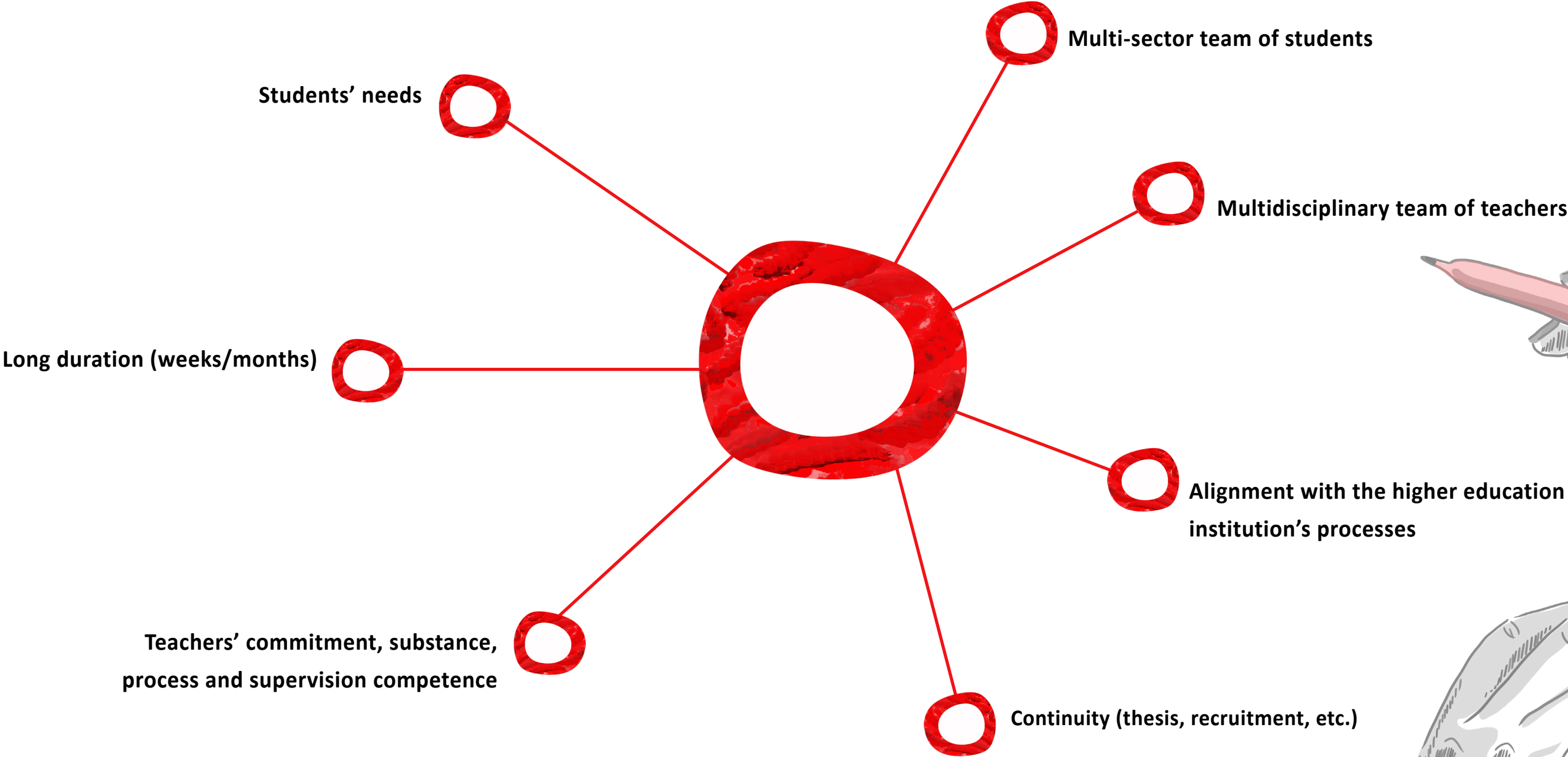


## CONCLUSION

There is plenty of potential in the cooperation between health-technology companies and students. Companies often face challenges that, primarily, require fresh perspectives and ideas, discussion, conceptualising and testing. For small startup companies, in particular, the fresh viewpoints offered by students are more than welcome. Practical cooperation is also a safe and informative starting point of recruitment.

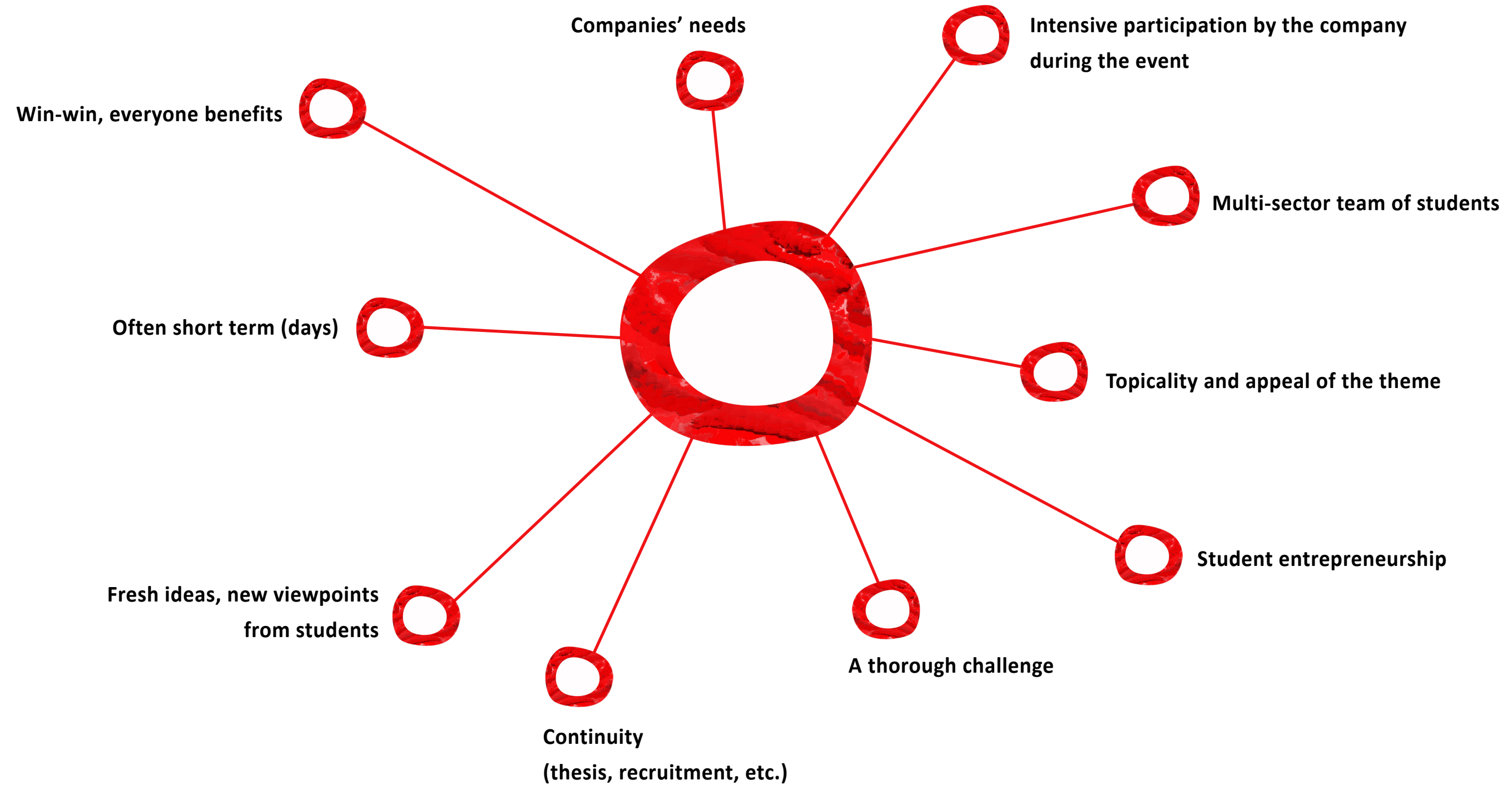
In the fast-growing and developing sectors, students have both interest in and need for finding real-life contact points and networks with new, interesting stakeholders. Getting to know companies and challenges in the sector supports the development of one's own competence and facilitate finding employment as well as strengthens one's interest in being an entrepreneur.

THE HEI-BASED MODEL

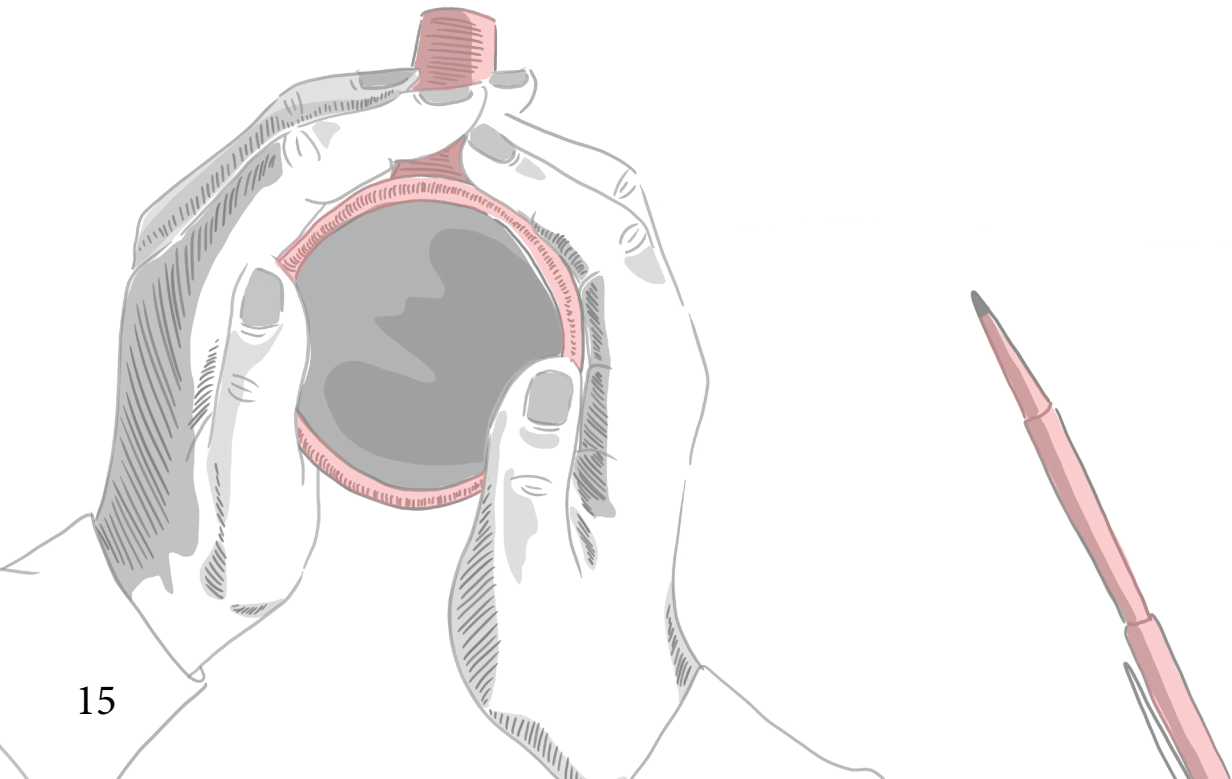
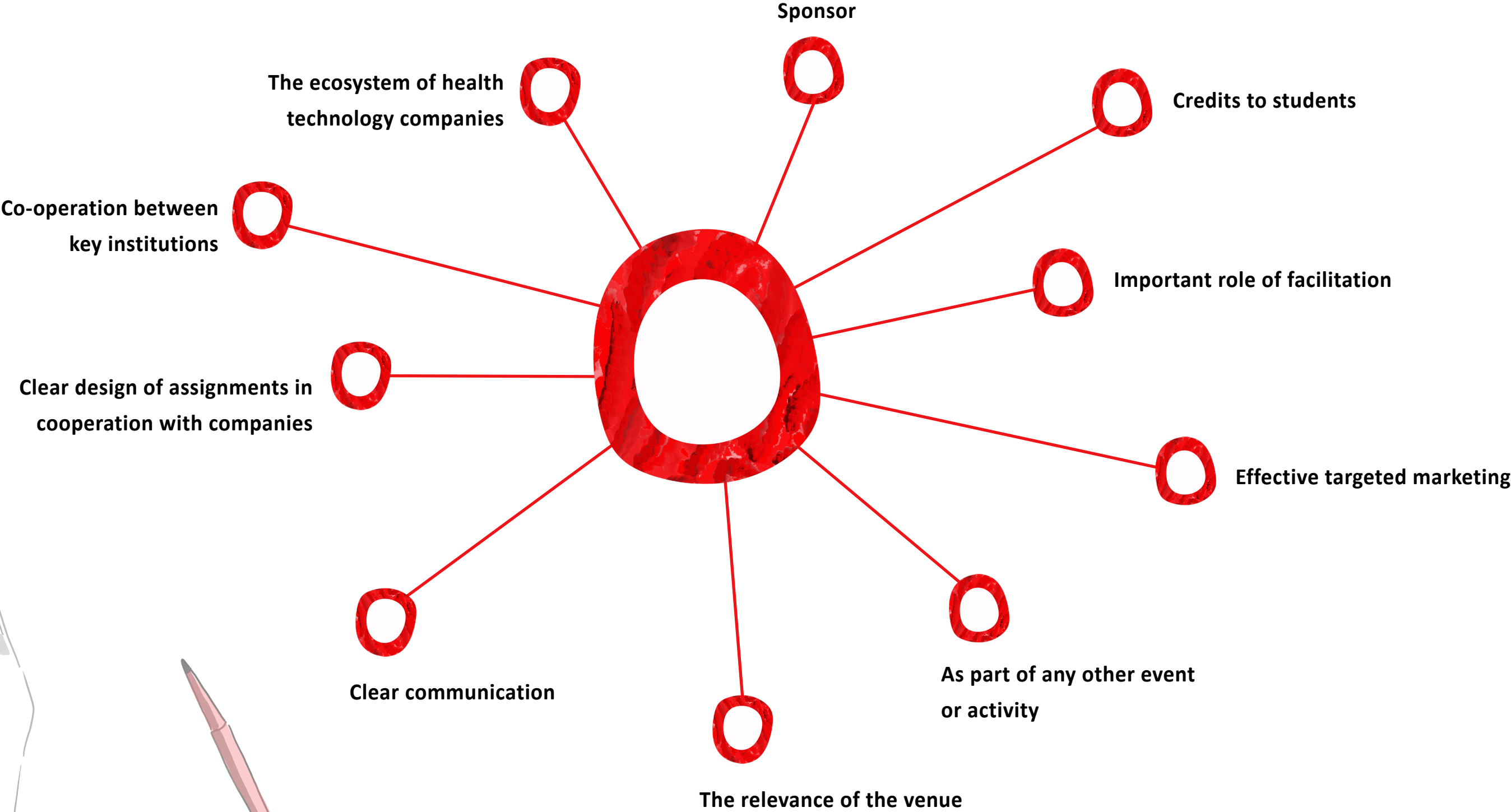




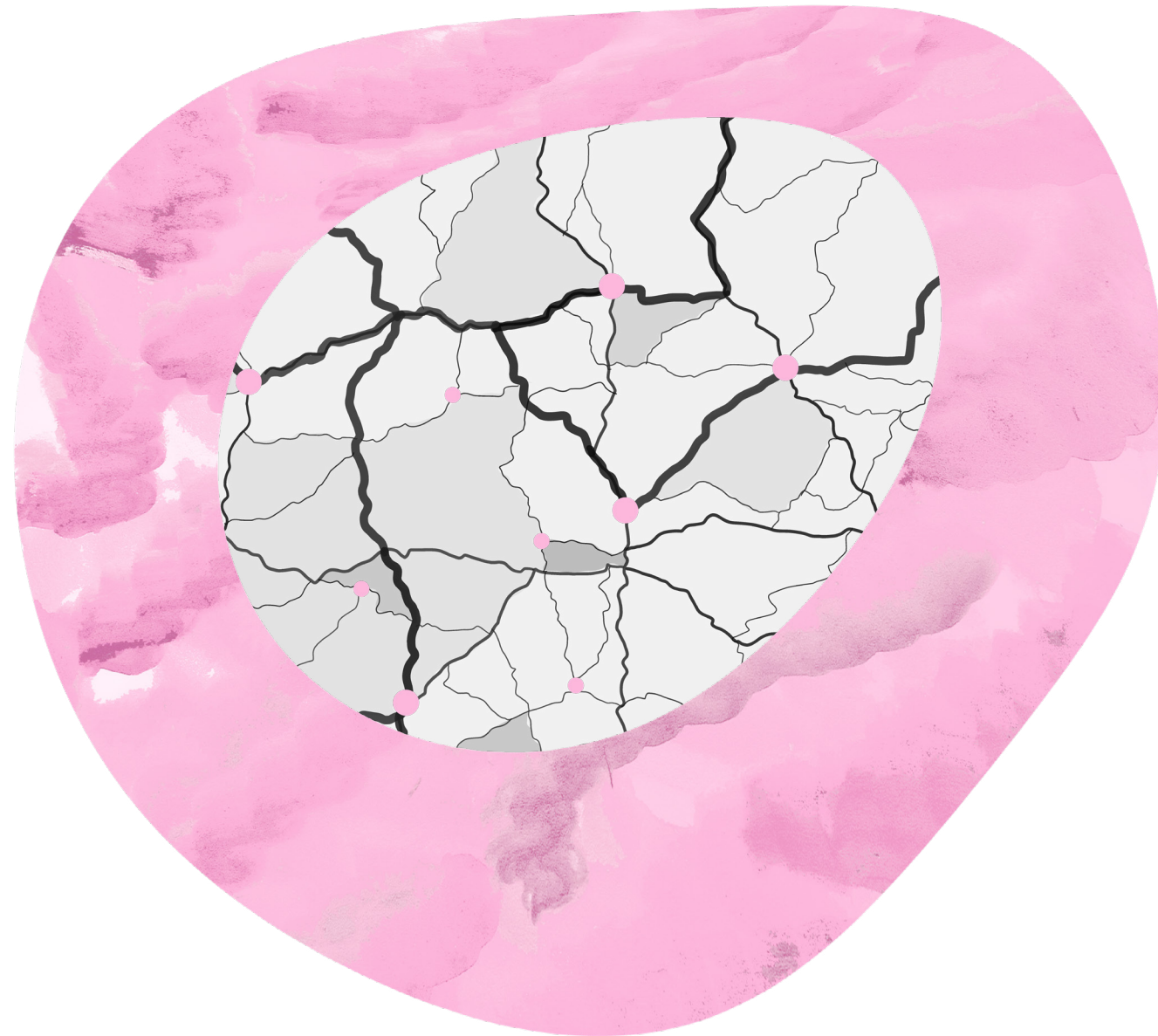
# THE COMMUNITY-BASED MODEL



SCALABILITY OF THE MODEL



**THEORETICAL PERSPECTIVES:  
INTERNATIONALISATION OF HEALTH  
SECTOR STARTUPS AND LIVING LABS**



*Päivi Haho  
Virpi Kaartti*



**T**his article presents perspectives collected from literature concerning how startup companies in the health and well-being sector could make use of the international Living Lab network in internationalisation.

‘Lean startup’ and ‘lean innovation’ are terms borrowed from lean manufacturing and refer to the elimination of everything that is unnecessary and does not create value (Rasmussen & Tanev, 2015). The term ‘lean’ has also been later used in similar contexts, such as in software development, lean development and lean companies (e.g. Ojasalo & Ojasalo, 2018).

In addition to using the Lean Startup method in the development of business operations, it can be used in the internationalisation of startup companies (Rasmussen & Tanev, 2015). Living Labs as a local, agile and networked stakeholder in the targeted market can support internationalising startups in validating their business models, learning from customers’ experiences and cultural viewpoints as well as in recognising the right partners and channels in the market.



## **SERVICE INNOVATIONS IN INTERNATIONAL MARKETS**

In their article, Ojasalo and Ojasalo (2018) define how the lean approach and process of service innovations can solve the needs for early identification of the customer’s value, including identifying the business potential, especially when it comes to new customers who utilise latent needs in their service innovations.

Their article is based on the lean innovation concept (Blank, 2007, 2013; Ries, 2011), and they borrow this concept and use it to complement research into service innovations. In addition, the article proposes how the service dominant logic functions in practice. Ojasalo and Ojasalo (2018) claim that the current lean development models focus on the early understanding of the customers’ needs and values and, thus, the lean approach has plenty to offer into service logic research. They stress that in order to conduct profitable business operations, one must understand a lot more than just the elements of the customer’s value. They emphasise a scalable and profitable business model.

In the model proposed by the Ojasalos, the model of lean service innovation throughout the service process is applied, and development methods applicable to the cases are used to develop, test and pilot solutions.



## INTERNATIONALISATION OF STARTUPS

Digital and technological solutions are increasing in the global health and well-being market. Startups will need cost-effective methods in order to find, create and test the needs of and opportunities provided by the international markets.

The Lean Startup method (Blank, 2007, 2013, Ries, 2011, Maurya, 2012) has been recognised as a structured and effective process, which may help startups to achieve their strategic and business objectives in terms of internationalisation (Neubert, 2017). Many startups seek to go international at an early stage and fast in order to be profitable and, therefore, they look for markets that are easy and fast to access. According to Johanson and Vahlne (2009), the Uppsala model can be applied to companies that begin their internationalisation soon after they have been established if they seek a low-risk and affordable access to the market, such as export. In many cases, this is not sufficient or not even an option, and the business model must be adapted to the culture in question and the local market conditions. On the other hand, early-stage and fast internationalisation is very challenging for startups and entrepreneurs, since it requires specific preparedness, networks, special preparations, experience, and willingness and readiness to enter international markets (Neubert, 2016, 2017).

Rasmussen and Tanev (2015) combined two lines of research: Lean Startups and Born-Global Firms and proposed a new concept of a Lean Global Startup, which is typically a high-tech startup that seeks to create a new innovative product for a specific market segment. In Lean Global Startups, the internationalisation strategy is already incorporated in the preliminary business plan (Neubert, 2017).

The Lean Startup methodology can also be applied in internationalisation by using incremental and iterative product development cycles in order to develop minimum viable products (MVP) and to test them in the market to receive quick feedback (Tanev, 2017, Coviello & Tanev, 2017, Neubert, 2017, Blank, 2013).

According to Neuber (2017) and Johanson and Vahlne (2009), learning in small, iterative cycles defines the speed of internationalisation at the early stage. In literature, social networks and the ability to network and learn have been identified as the most important factors in internationalisation (Coviello, 2015, Neubert, 2017). According to Ciravegna, Lopez and Kundu (2014), the social networks of an entrepreneur are of utmost importance as the controller of the speed of internationalisation. For Lean Startups, networking in an internationalisation environment, in particular, is a capability that enables building market opportunities by obtaining new customers and distribution partners from local networks.



## **LIVING LABS AND THEIR INTERNATIONAL NETWORK**

Living Labs provide an international network for developing and testing business models for service products and the service products themselves. In accordance with their basic task, Living Labs are intermediaries of innovation. There can be characterised in a number of ways and they serve many different purposes.

In the Living Lab Methodology Handbook, Anna Ståhlbröst (2017) says: “A Living Lab is an orchestrator of open innovation processes focusing on co-creation of innovations in real-world contexts by involving multiple stakeholders with the objective to generate sustainable value for all stakeholders focusing in particular on the end-users”. According to Westerlund and Leminen (2011), Living Labs are physical or virtual manifestations, interaction spaces, where the stakeholders of companies, public institutions, universities, institutions, users and other partners jointly adhere to the principles of open user innovation in the development of services, products and systems and the design, validation and testing of prototypes by using existing or new techniques, services, products and systems in the real world context.

Regardless of the variety of definitions and implementations, Living Labs share common characteristics that are decisive for the approach: 1) approaches with multiple methods, 2) user commitment, 3) participation by several stakeholders, 4) the real world, and 5) cooperation (Malmberg & Vaittinen, 2017). In addition, Living Labs strive to achieve results that have been





mutually agreed by all stakeholders.

Schuurman (2017) describes how it is possible to distinguish three key areas in Living Lab projects on the basis of the stages of innovation development: 1) generation of with ideas; becoming acquainted with the current situation and planning a potential future situation, 2) piloting; testing of one or more scenarios in a real-life situation, and 3) assessment; assessment of the impact of piloting compared to the current situation in order to iterate the scenario.

In the Living Lab Methodology Handbook (2017), Living Labs are described as having the role of intermediaries of building and strengthening an open European innovation ecosystem, which enable the internationalisation of SMEs by supporting the validation of products and services in other markets through the cooperation with and consultation of Living Labs. However, this role of Living Labs is still new and only just evolving, and Living Labs must develop international cooperation and their commercial offering to serve SMEs and startups.

Startups and SMEs, in particular, have used Living Labs as these offer a structured approach to open innovation (Schuurman, 2015) in the user innovation paradigm (von Hippel, 2009). Schuurman et al. (2016) have examined the value of the Living Labs’ approach to SMEs by means of a comparative case study in 27 SME projects. Based on the results, they claim that a multi-method real world intervention will increase the opportunities to produce functioning user shares in the innovation being developed.

In this article, the term ‘international Living Lab’ refers to a Living Lab that serves companies or other institutions internationally, in other words, at least in two countries. In literature, the terms used in similar contexts include cross-border or interregional Living Labs.

An international network of Living Labs is needed for the internationalisation of startup companies and SMEs and for the localisation of their service products and business models. International testing partners are expected to operate on commercial grounds as experts and to be familiar with modern and effective methods for developing startups.

**This article is based on the following conference paper:**

*Haho, P. & Kaartti, V. (2018) Transnational piloting for smooth internationalization of health-tech start-ups.*

*Research and Innovation Conference Proceedings 2018. ENoLL - European Network of Living Labs. ISBN (e-book): 9789082102789*

*The article “International Living Lab cooperation in the health and well-being sector” describes how to conduct international living lab co-operation. In addition, the article “Participating in the Living Lab cooperation” describes two practical examples of how the startup company has tested its service offering with the support of Living Labs on the international markets.*

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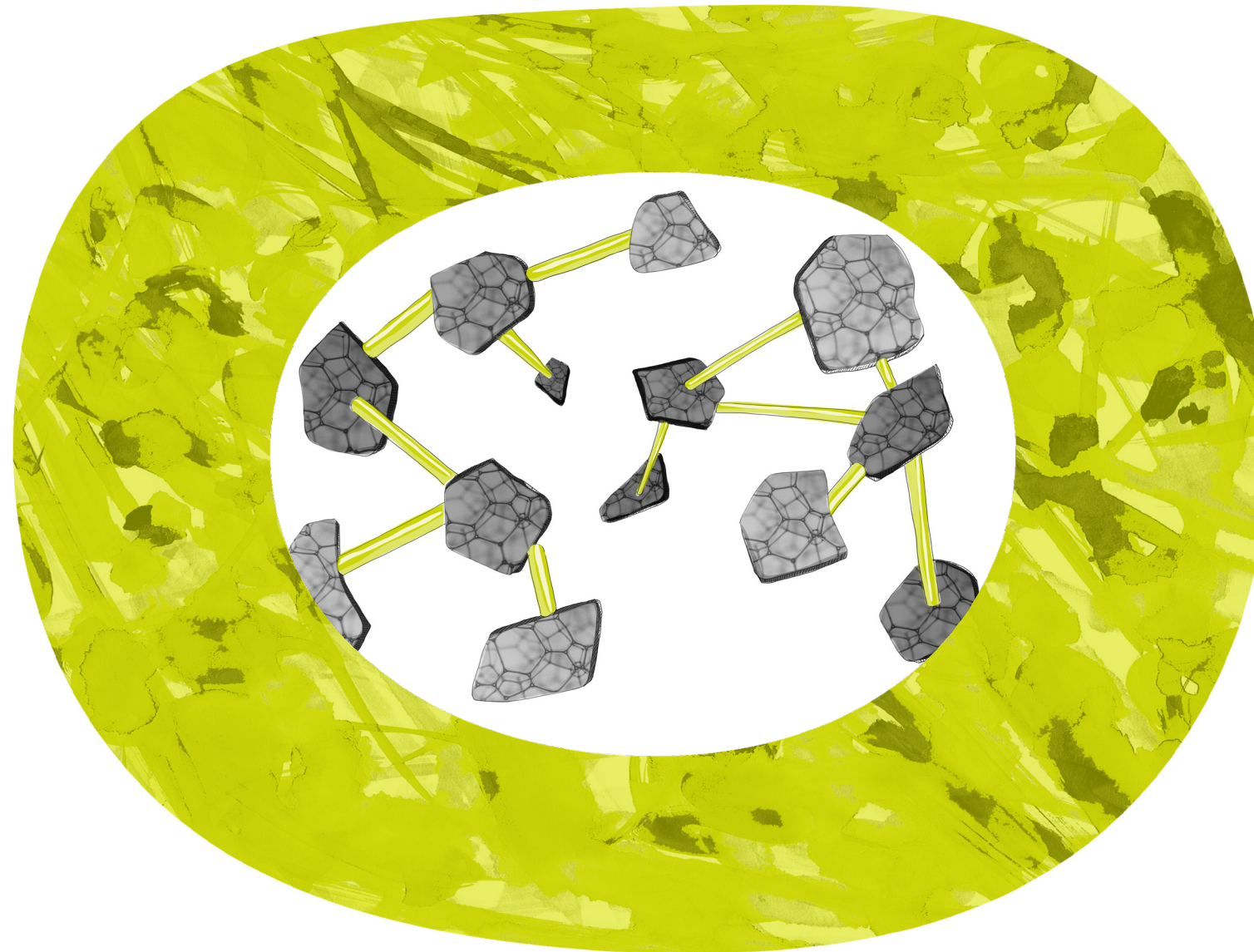
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# INTERNATIONAL LIVING LAB COOPERATION IN THE HEALTH AND WELL-BEING SECTOR



*Virpi Kaartti*  
*Päivi Haho*



**I**nternational Living Lab cooperation takes place in networks of multiple stakeholders from several sectors. The European Network of Living Labs brings together several stakeholders and supports the generation of international cooperation, as well as, through its actions, promotes the access of small and medium-sized companies to international markets. In the Spinning Pilots project, different roles of Living Labs were identified , such as a Living Lab supplying international services and a Living lab in charge of testing in the targeted market. Other stakeholders in cooperation are a company needing a testing/piloting service, end users of a product/service, and other stakeholders as well as, potentially, the organisation that funds testing. Living Labs often operate in connection with a public sector stakeholder: as part of the operations of the city or municipality, as part of a university or higher education institution, or they can be third sector stakeholders. In some cases, the Living Lab can be a purely commercial company. Stakeholders in the public or third sector, in particular, often have strong regional, national or possibly even international networks, which can be tapped into in cooperation.

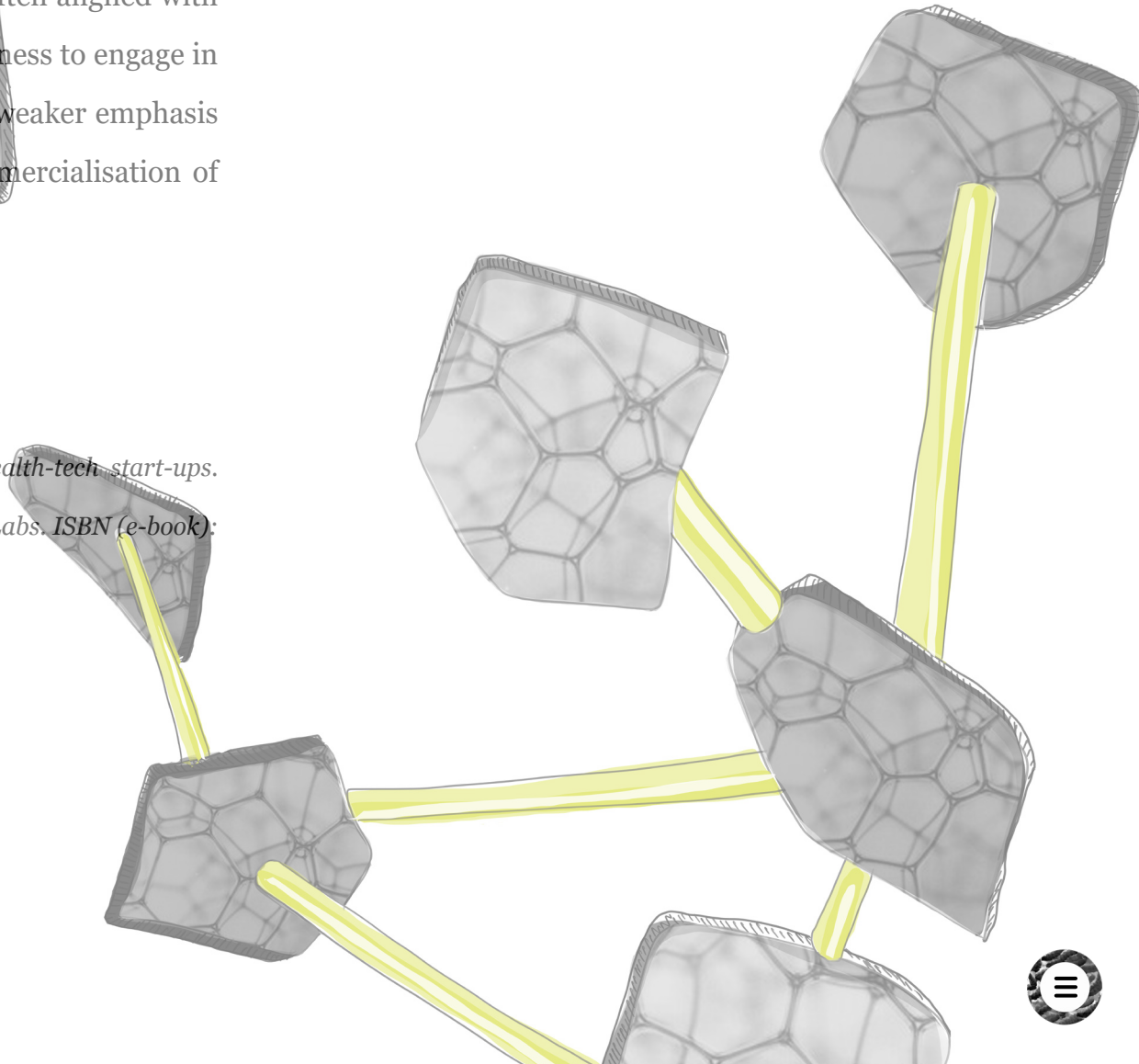
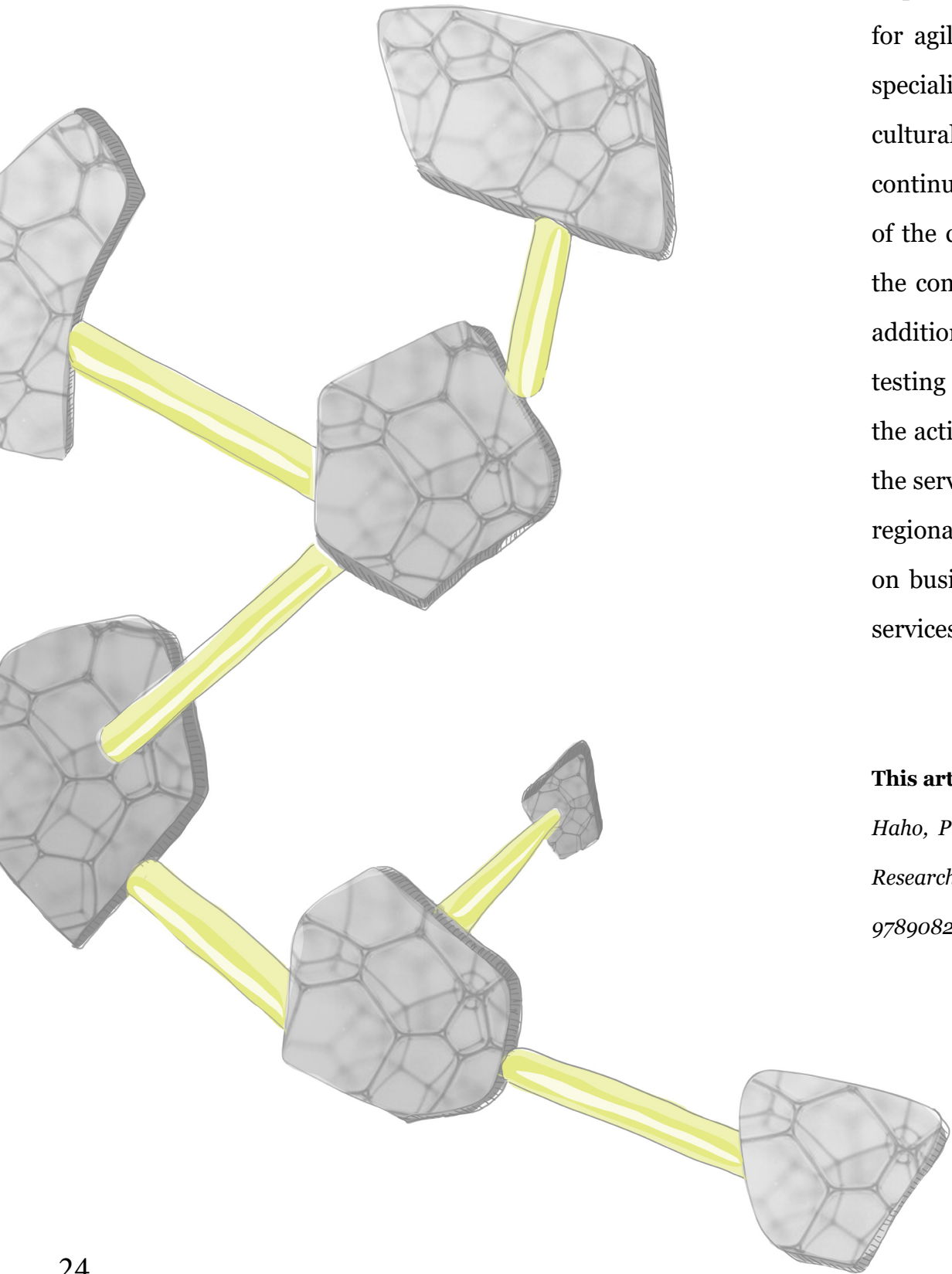
The cooperation steps are typically as follows: identification of the company in need of service, clarifying the company's brief, preparation of a preliminary testing plan, preparation of an invitation to tender, identification of Living Labs suitable for the assignment, submission of the invitation to tender, analysis of offers, negotiations, selection of the Living Lab, signing the agreement, updating the testing plan together with the party implementing it, orientation of the Living Lab to the use of the product/service, implementation of testing, monitoring of testing and quality monitoring, presentation and reporting of the results, planning of further measures.

An established international model of cooperation would benefit several stakeholders. Small and medium-sized companies would reach the organisations offering the international Living Lab network's service, would know how to seek support from the local Living Lab, and could utilise an easy and agile way to implement a pilot in the targeted international market. At the same time, Living Labs would obtain new customers and cooperation opportunities with other Living Labs, which would provide opportunities to learn from others and expand their networks.

The international cooperation model of Living Labs highlights the structure of the ecosystems and different roles, operating processes and methods of living labs. A Living Lab may be part of an ecosystem that consists of regional, national and international stakeholders and it may focus on a specific sector. Long cooperation partnerships guarantee that the operations have a foundation for agile testing and validation. Sector-specific, regional and international ecosystems provide specialist knowledge in a specific area of expertise or sector, but also competence for analysing cultural impacts. They also help eliminate any language barriers between stakeholders. In the continuously changing operating environment, knowing laws and regulations is an essential aspect of the competence portfolio of the Living Labs. The role of the Living Labs includes supporting the company carrying out the piloting, facilitating the testing process and the actual testing. In addition, they are often required to assume the role of a developer of business operations. The testing process can be divided into activities to be carried out before testing, the testing itself and the activities to be carried out after the testing. The methods to be applied are often aligned with the service design and the Lean Startup methodology. The interest in and willingness to engage in regional development are strong among the Living Labs. By contrast, there is a weaker emphasis on business orientation. The creation of sustainable business models and commercialisation of services still require development measures.

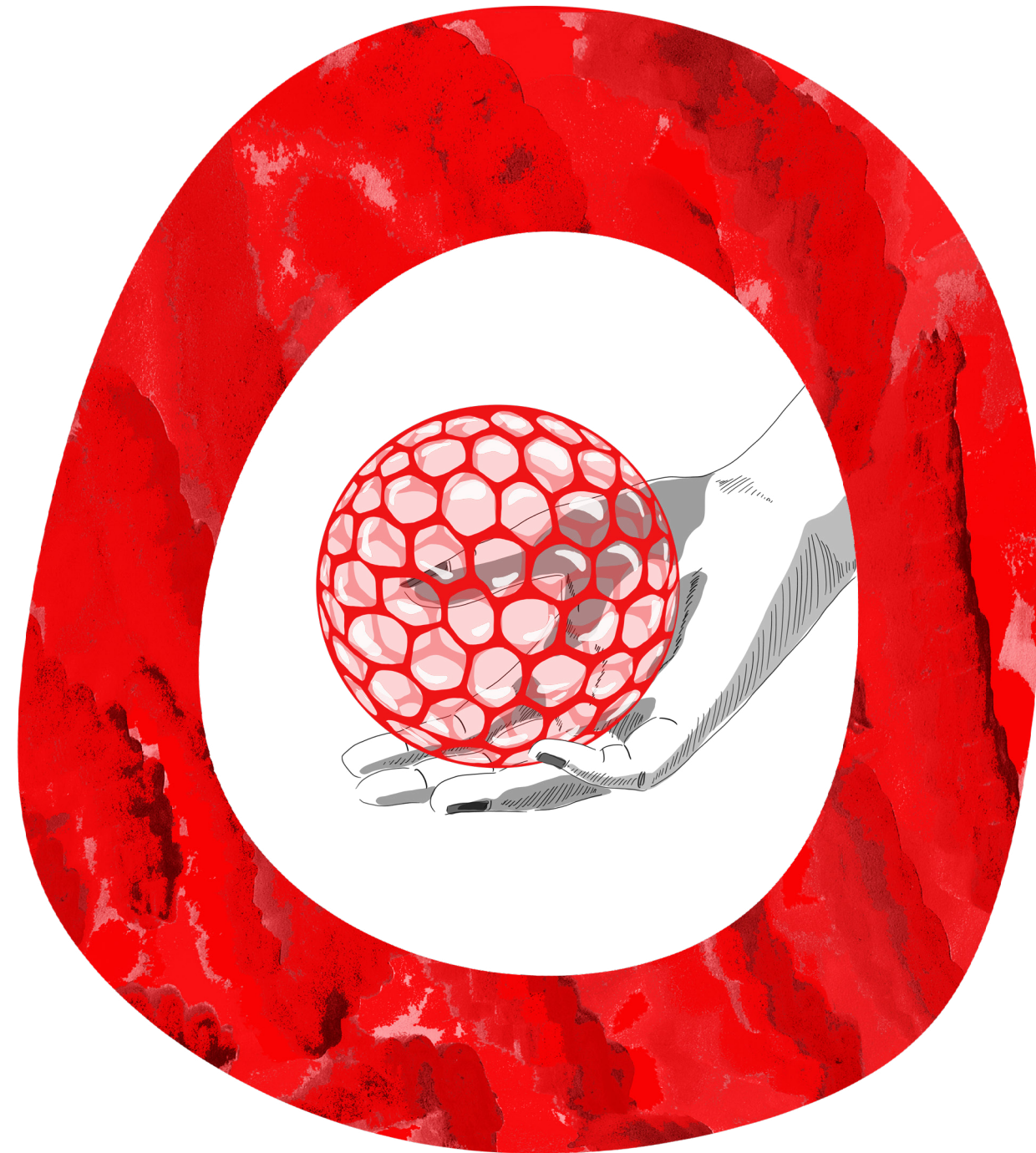
**This article is based on the following conference paper:**

*Haho, P. & Kaartti, V. (2018) Transnational piloting for smooth internationalization of health-tech start-ups. Research and Innovation Conference Proceedings 2018. ENoLL - European Network of Living Labs. ISBN (e-book): 9789082102789*





**PARTICIPATING IN THE LIVING  
LAB COOPERATION**



*Virpi Kaartti  
Harri Haapaniemi*



**L**iving Labs are user-driven ecosystems of open innovation, which combine research and innovation activities in real-life environments. Living Labs are based on the principle of open innovation and shared partnership, which combine the ideas, information and resources of different parties. Typically, the stakeholders have complementing roles and interests. Companies develop new competitive services and products, whereas public sector stakeholders make a variety of resources possible and support development activities in order to promote their goals and political objectives. Research organisations – in this case universities of applied sciences – are responsible for shared generation of information and offer methods and their innovative competence to others. Users represent citizens and consumers, who want to develop and test new products and services in their daily lives.

Thus, the key viewpoint of a Living Lab is the joint development and agile testing of products or services in a real-time environment, which offers an opportunity to product or service validation, practical feedback and customer inputs in product or service development.

The purpose of the international Living Lab cooperation is to promote the piloting of the companies' products and services in an international environment in the form of cooperation between several Living Labs. In that case, a Finnish Living Lab and a company together plan, for example, the piloting of a product, and the international testing environment is sought in the Living Lab network. In this way, the Living Lab encourages companies to market themselves quickly and to expand their innovations and products to the global market, in addition to piloting.



## COMPANIES' EXPERIENCES

During the past year, two companies from the Uusimaa region received the opportunity to test their service in the international Living Lab cooperation. Laurea University of Applied Sciences helped find a suitable partner in the targeted market and ensured that the testing process progressed according to the objectives. A Living Lab abroad was in charge of the testing, that was done together with end users and other stakeholders.

## CASE 1 : SMARTIFIER

Smartifier sought partners from abroad in order to jointly develop technologies, services and products related to rehabilitation and well-being further and collect feedback from local users. They wanted to develop their service design further by means of this testing.

One of their products is the Standout Balance wirelessly connected balance board, intended for active athletes, rehabilitation and prevention of ankle injuries as well as for the maintenance of the working ability and functioning of people in the working age and seniors. The smart balance board can be used to test one's balance and perform exercises and rehabilitation programmes at home or under the supervision of a professional. The use of the balance board is supported by an application that includes exercises and tests designed by professionals, provides feedback on performance and helps monitor progress.

The balance board was tested in northern Spain and southern France. The testing was carried out by GAIA - Ocean Living Labs. Representatives of different user groups used the balance board independently or in a supervised setting several times and information was collected on their user experiences. Feedback was also received from several experts and stakeholder representatives.

**"TESTING WAS A POSITIVE EXPERIENCE; WE WERE ABLE TO TEST OUR PRODUCT DIVERSELY WITH DIFFERENT USER GROUPS. IN ADDITION TO USER TESTS AND FEEDBACK, WE ALSO MADE VALUABLE CONNECTIONS WITH LOCAL COMPANIES AND RECEIVED NEW IDEAS FOR PRODUCT MARKETING AND TARGETING. THE BASQUE COUNTRY, IN PARTICULAR, WAS GOOD SINCE WE COULD TEST OUR PRODUCT IN BOTH SPAIN AND FRANCE. A NEW OPPORTUNITY FOR US WAS TO LEARN ABOUT THE SURFING AND SKATEBOARDING MARKETS WITH LOCAL EXPERTS AND COMPANIES."**

**- Smartifier's Managing Director Petteri Saarinen**

Currently, 75% of health care expenses are caused by health problems that could be prevented. AlvinOne is the world's first application that is capable of predicting future illnesses. It analyses ten different areas of health, motivates users to promote their health and creates a well-being ecosystem which focuses on health promotion instead of on treating illnesses. Based on the results, the analytics connects the user (anonymously) to the correct services provided by the employer. AlvinOne is the future innovative way to approach and promote health.

The company is currently targeting the international markets with AlvinOne and wanted to pilot the products with the personnel of a company in Germany. They wanted to learn whether internationalisation requires considerable changes to the product and how the product works outside of Finland. A goal was also to obtain test data from a few hundred users, so that the company could, when needed, fine-tune the algorithm used by the application for the country in question.

The AlvinOne application was tested in southern Germany. The testing in Germany was carried out by Digital Concepts with Greater Value. The testing included translating the application into the language of the target country, testing preparations, usability test, interviews and results reporting. Since the application needed to be tested in a B2B company, recruiting a suitable company took more time than expected. Finally, the testing was carried out in the HR unit of a company. In addition, usability tests were conducted with individual users working in large companies.

**“OUR EXPERIENCE OF THE PROJECT WAS POSITIVE. THE LOCAL LIVING LAB PARTNER IN FREIBURG WAS ABLE TO FIND BOTTLENECKS THAT WE OURSELVES COULD NOT HAVE ANTICIPATED IN A NEW MARKET. ALTHOUGH PLANS HAD TO BE CHANGED FROM TIME TO TIME, COOPERATION WENT SMOOTHLY AND WAS SOLUTION-ORIENTED. WE RECEIVED VALUABLE INFORMATION ABOUT THE PRODUCT’S USER EXPERIENCE AND TARGET GROUP IN GERMANY. NOW WE HAVE AN OPPORTUNITY TO FIND SOLUTIONS TO THESE CHALLENGES BEFORE ACTUALLY ENTERING THE MARKET”,**

**-AlvinOne’s Marketing Director Johanna Varje**





## **TAKEAWAYS FROM COOPERATION**

Introducing a service in a new use environment provides experiences and often surprising, unexpected results. Testing may open up completely new opportunities for product development or new markets through the networks of different stakeholders.

Everybody's input is always needed in this kind of activity, but the extent of one's role may vary if the company has a local Living Lab supporting the testing. When the company has a clear goal for the testing, it is possible to prepare a testing plan together smoothly. Assistance can be provided in finding a foreign partner, as well as in providing instructions for the partner. Providing orientation to the functionalities related to the product or service requires the company's expertise, and this orientation step should be taken into consideration in scheduling.

If the assignment is highly specific, finding an international testing partner may take longer, or if the schedule is too tight, finding a partner may turn out to be impossible in accordance with the original goal. However, even then valuable experience can be gained on the market by adjusting the activities accordingly.

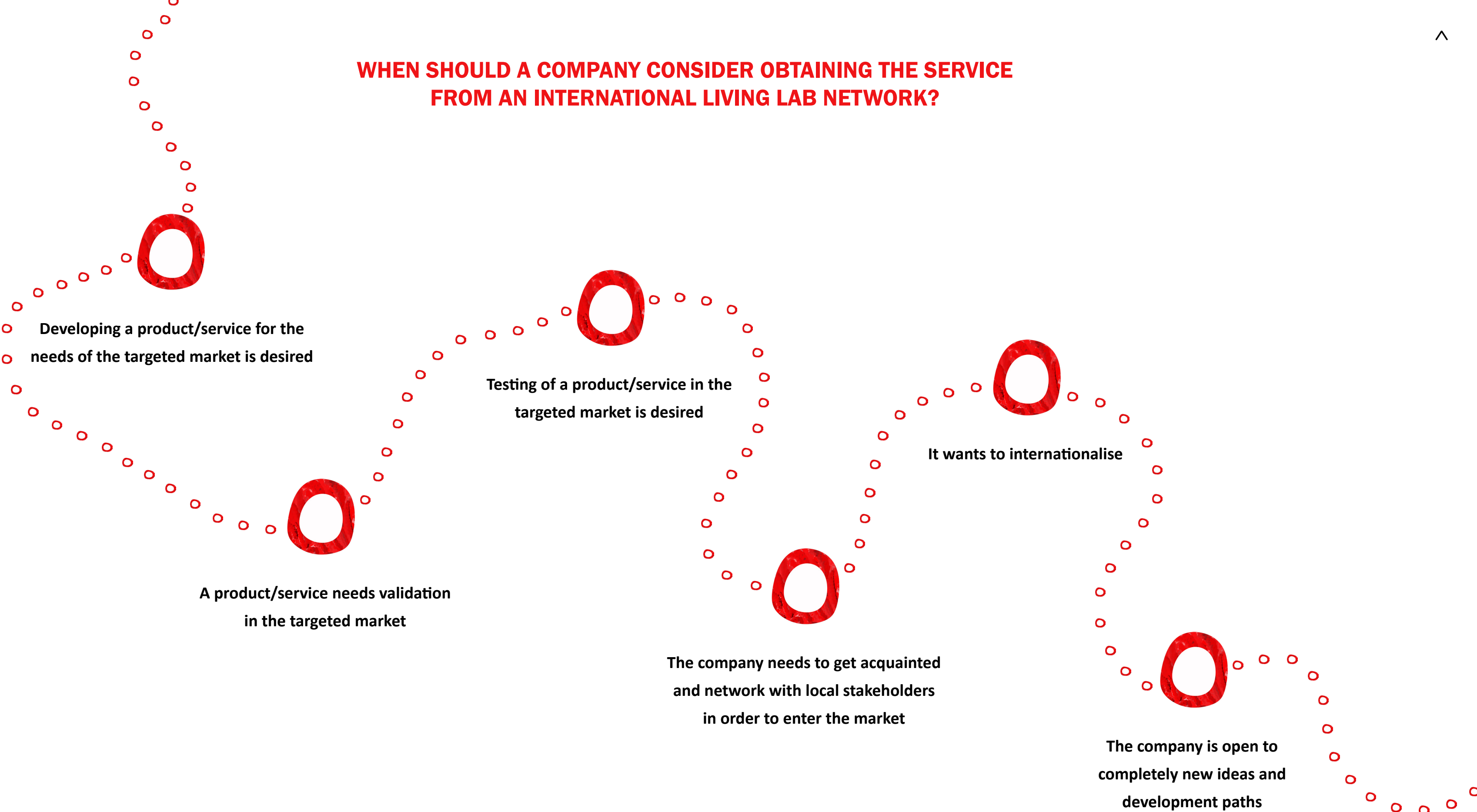
Living Labs operate in a real-life use environment and in accordance with the principles of open innovation, and from this perspective, it should be taken into consideration that the information on the service or product are accessible to others as well. Naturally, it can be agreed that the actual testing results will be reported to the client only.



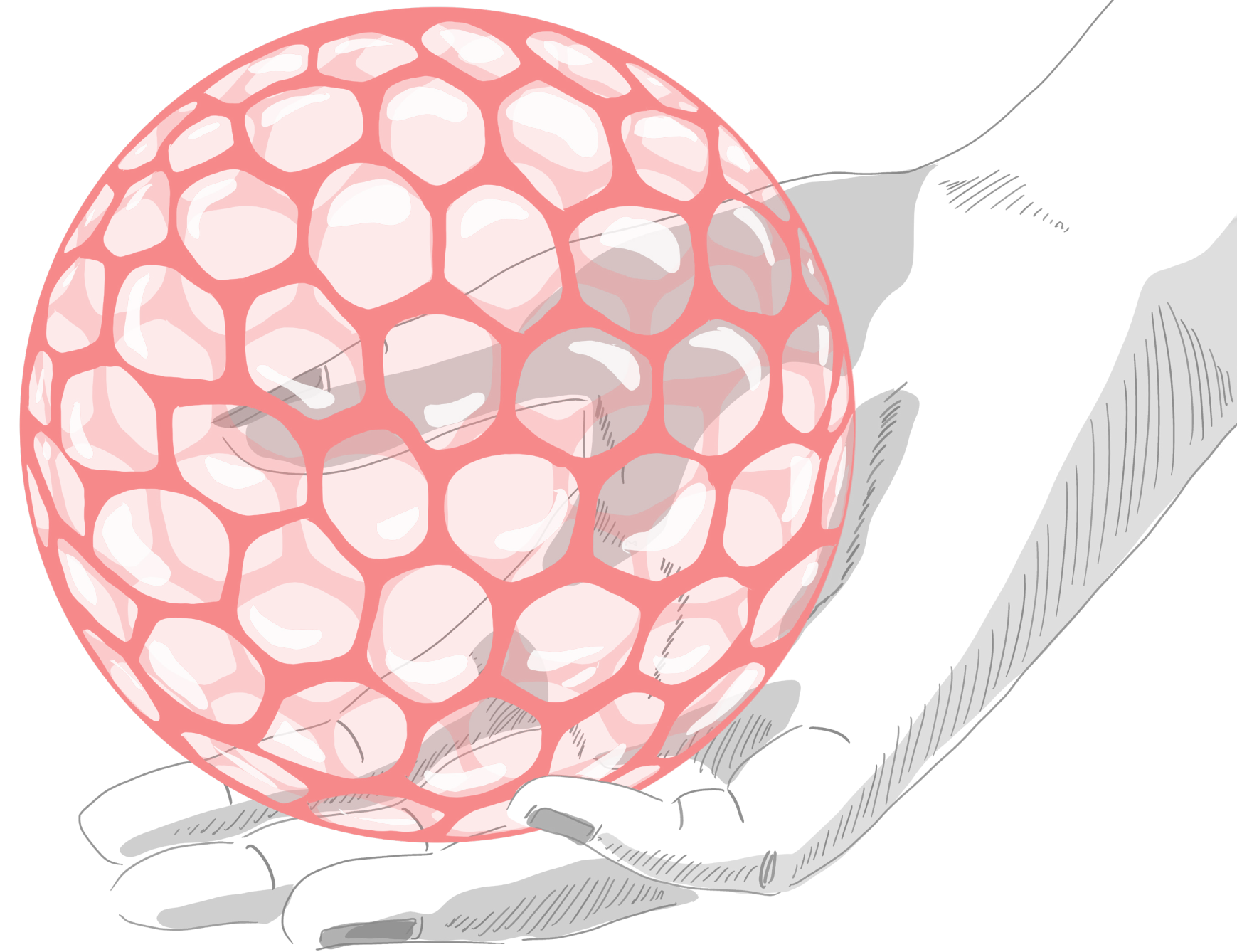
## **CONCLUSION**

When the piloting of a company's products and services is carried out in an international environment as cooperation between several Living Labs, companies are provided with a new kind of opportunity to proceed with internationalisation. However, this requires that the Living Labs and their services are known and that they are easily accessible.

**WHEN SHOULD A COMPANY CONSIDER OBTAINING THE SERVICE  
FROM AN INTERNATIONAL LIVING LAB NETWORK?**



Petteri Saarinen from Smartifier recommends this kind of piloting for companies that are in the early stages of internationalisation and want to test the suitability of a new product in different operating environments and with different users. Living Lab testing can also provide valuable new ideas and viewpoints for marketing and using the product, since the network includes different kinds of companies and stakeholders.







# SPINNING PILOTS