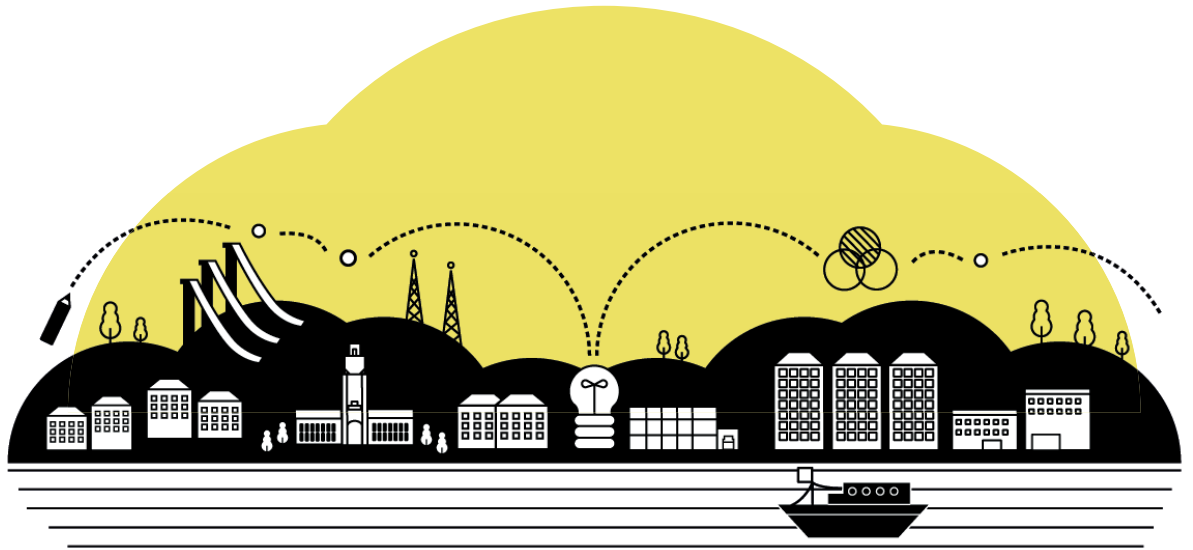


# Lahti Design Annual Review 2018

Kristiina Soini-Salomaa (ed.)

The Publication Series of  
Lahti University of Applied Sciences, part 43



User-driven industrial design ◦ Design of services and operating environments ◦ Proactive development of design expertise and entrepreneurship ◦ Information visualisation and user interface design



# Lahti UAS Design Annual Review 2018

The Publication Series of Lahti University of Applied Sciences, part 43

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# About the Authors

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**Kristiina Soini-Salomaa**, PhD (Educ.) is a Research, Development & Innovation (RDI) Director for design focus area in Lahti University of Applied Sciences. Her main research and professional interests are strategic development of RDI activities, design research, design thinking methodologies, future studies and forecasting.

**Marianne Valola** (Master of Culture and Arts) is interested in product design and designing organizations, processes and working life. She has studied, among other themes, revenue logic in the field of design.



# Kristiina Soini-Salomaa

## Foreword

This is the second review of the publication series named the Lahti Design Annual Review, which presents the latest research, development and innovation activities in the context of design education and business written by experts from Lahti University of Applied Sciences (Lahti UAS).

Smart specialization themes in Päijät-Häme region are circular economy and design together with sports and experiences. The regional competitiveness strategy highlights the significance of design education and design-intensive industry. To reach these goals Lahti UAS helps to promote economic competitiveness, the circular economy and well-being through design-led development and innovations. The key themes in the design focus area are: user-driven industrial design, design of services and operating environments, development of design expertise and entrepreneurship and information visualisation and user interface design. This review presents some of the significant actions that have been carried out as part of our projects to reach the set goals.

In the first article “Collaborative Writing as a Tool for Design Education”, Marion Robinson portrays co-creation process in using collaborative writing methods. This article aims to discuss the benefits which collaborative writing can bring to design education and RDI communication and to outline a future pedagogical model.

The article by Minna Cheung and Kirsti Cura describes design educator’s experiences on experiments and courses, and changes in

students’ thinking concerning design approaches towards fashion and textiles. In Finland the ecological and ethical issues regarding fashion and textile production have been a part of the design process and its outcome for several years. Eco-efficient design has been included in the curriculum of Fashion and Clothing Design since 2010. The Faculty of Technology has also been studying recycled materials and their processing technologies for a long time. Recently textiles and their reuse and recycling have become subjects of interest. The article presents examples of the past and present courses, projects and individual works executed at Lahti University of Applied Sciences.

The Design or Die – Creative Value Creation and Competitiveness project (ESF) has addressed the changes in working life and their effect on both the profession and professional identity of the designer. The article by Anu Raappana and Marianne Valola examines especially the relationship of sales competence to the professional identity of the designer. The article is based on material collected during the Design or Die project. According to the results, sales competence in particular is viewed as a challenging new area in the work and profession of the designer and have brought requirements for the development of pedagogical solutions.

The next article continues exploring the professional role of the designer. What is the New Brand Model (NBM)? How does it work? These are questions Daria Ivanova and Noora Nylander were eager to find answers to. To

achieve this goal, they explored a new way of brand building depicted by Marty Neumeier. Following Neumeier's theory, they implemented the NBM in a real-life branding case for a local lifestyle store in Lahti. An important part of the brand building process was customer engagement, which in the end was achieved through voting, interviews and workshops. Customers built the life style store's new brand while the designers were assisting and documenting the process.

It is possible to apply design thinking to the challenge of decreasing the impact of everyday consumption. The project called The City as a Service for Young Citizens revealed environmental concerns and worries from a mosaic of explorative, participatory and design-based user research activities with 16–30-year-old citizens. The article by Mirja Kälviäinen, Kati Kumpulainen and Paula Mäkinen specifies the main workshop process experimented with in three different schools in the Lahti region. The process consisted of a quiz designed to make the students think about the state of ecological deprivation; calculating the impacts of consumption, getting to know the areas where consumption impact could be reduced and documenting and depicting the possible changes of behaviour. The findings of the experiments led to process and material development.

Cooperation projects with companies have already for years served as authentic learning environments that develop working life skills at the Lahti UAS Institute of Design. The practical nature and working life orientation of the training have been considered important. However, previous approaches of cooperation with companies were observed to involve issues, and conscious effort has been made to resolve them. In Ari Känkänen's

and Anu Raappana's article three university-business cooperation platforms are described. The platforms promote students' design skills, entrepreneurship skills and build designer's professional identity. This article describes the piloted models for cooperation and the factors behind their development. The article is based on previous experiences and observations from the Lahti Design Centre (ERDF 2015–2017) and Design or Die (ESF 2016–2018) projects.

Business environments have become more difficult to predict. To prepare for changes, SMEs must constantly navigate the future and reform their business operations. The Tuleva project coaches SMEs to take advantage of information about the future and markets in product development and to boost sales and marketing through marketing automation methods. The coaching creates new competence in SMEs for understanding the consumption patterns of their customers. Mika Kylänen, Heidi Freundlich and Jari Hautamäki picture how to collect and analyse information about changes in consumption patterns and the customer experience from distributed digital data (big data) so that it can be utilised in developing the products and services of SMEs. Furthermore, the project creates new mechanisms to enable mutual learning between enterprises and the engagement of students in the development of business operations.

In the regional strategy for Päijät-Häme 2018–2021 (Regional Council of Päijät-Häme 2018), creating economic growth through research and development activities is identified as one of the crucial opportunities. This requires effort in building hubs for know-how, centres of excellence and reference environments that strengthen interaction between research,

education and business life, as well as open innovation activities. Jari Hautamäki and Kati Peltonen highlight the development work to be carried out in the LAMK Startup Accelerator project. The business accelerator will support the development of start-ups and existing SMEs in Päijät-Häme. A particular development target is student entrepreneurship originating from higher education.

I warmly thank all the authors who made it possible to publish this review. I hope that this review gives you some new insights and further ideas in multidisciplinary and interdisciplinary design education, research and development.

Lahti, 4 December, 2018

**Dr. Kristiina Soini-Salomaa**

RDI Director, Design

Lahti UAS



# Marion Robinson

## Collaborative Writing As a Tool for Design Education

### Abstract

Together with students at the Building brands course at the Institute of Design, we created “Building a travel brand – a little book of branding for the rural tourism and hospitality industry” using a collaborative writing method. The publication is a series of 20 articles. This article aims to discuss the benefits that collaborative writing can bring to design education and RDI communication and to outline a future pedagogical model.

The resulting work was done particularly for PALMA – Developing New Business in Rural Areas through Service Design RDI project, jointly run by Lahti University of Applied Sciences, Institute of Design and ProAgria Southern Finland. The articles are specifically targeted to benefit companies involved in PALMA project. The branding publication provides readers with tools for creating a new brand or find inspiration and insight into managing and growing an existing one.

Collaborative writing fosters group interaction and generates new knowledge. From a pedagogical point of view, writing with a team drives better learning results. Students worked towards a cohesive publication so that all articles reference each other. This was achieved through a collaborative writing process. The publication is also an example of how RDI activities can be integrated into the curriculum.

**Keywords:** Branding, pedagogy, collaborative writing, collaboration, RDI

### Introduction

Together with students at the Building brands course at the Institute of Design, we created ‘Building a travel brand – a little book of branding for the rural tourism and hospitality industry’. The publication is a series of 20 articles. The course is a theoretical look into what branding is; how influence plays a part in all aspects of branding and communication, how to build trust with your audience, how to build and govern a brand, and how to engage and build a loyal audience. We targeted these topics specifically to rural areas, as the beauty and serenity of rural areas is a real branding opportunity.

This article aims to outline the benefits that collaborative writing can bring to design education and the research, development and innovation (RDI) communication, but also talk about the pedagogical issues that need to be considered. This is based on one of the first prototypes of this pedagogical method, applied in teaching branding. A stronger collaborative element will be built in the next course.

Through research into Finnish and European brands in the rural areas tourism and hospitality sector, we started to find common denominators among the brands and identify best practices. The following article collection was a natural outcome to present discussions and findings.

The resulting work was done particularly for PALMA – Developing New Business in Rural Areas through Service Design RDI project, jointly run by Lahti University of Applied Sciences (LAMK),

Institute of Design and ProAgra Southern Finland. The project aims to help rural entrepreneurs to understand the potential of service design and knowledge in customer behavior when developing new business models.

### **Writing as part of design practice and branding**

These days decisions are driven by our values more than ever. Our feelings and emotions shape our decisions about where to travel; how to be inspired; or why to consume certain products or services. Connecting with the surrounding nature and terrain is a very strong brand building tool regarding the tourism industry. This aspect is a special ingredient in building authenticity and story for the brand, especially in the rural areas tourism industry. The articles the branding students created tap into these themes. The publication provides readers with tools for creating a new brand or find inspiration and insight into managing and growing an existing one.

In any complex design work, one designer is not necessarily doing the whole assignment alone. Teams are a natural way of working in the industry. Collaborative writing is also a staple in many industries in research; think in science, engineering or medicine where articles are being prepared and published by teams of professionals. Collaborative writing thus fosters group interaction and generates new knowledge.

The students worked towards a cohesive publication so that all articles reference each other and intertextuality is natural. This was achieved through a collaborative writing process where each author provides a single article which is aware of a bigger body of work; where the work process is influenced by the neighboring articles, and where writing process

is supported by peer-review methods. The articles were also presented as mini lectures to road test their content before publication.

### **Using collaborative design as a pedagogical method**

The benefit of using collaborative writing in education is to allow the students to work towards a shared goal. There is, however, a distinction to be made with term **collaboration** and **co-operation**. Co-operation is defined by the division of work between students who are faced with a joint activity, while collaboration involves the “mutual engagement of participants in a coordinated effort to solve the problem” (Dillenbourg, Baker, Blaye , & Malley 1996, cited in Judd, Kennedy & Cropper 2010). Co-operation means that subtasks are either solved individually or the work is split up between participants. The results are then combined into a final product. In contrast, collaboration is working to solve a problem or create an end-product together. This might mean dividing the labour efforts on some aspects of the bigger body of work.

In the Building brands course, the method is a hybrid between collaboration and co-operation. It has the elements of co-operation in that the majority of the work tasks are divided between students, i.e. each student is responsible for writing and finishing one article. This supports the designers’ need for individual work. However, much of the writing work is utilising peer-review techniques to help students review their work and deepen their thinking. Also the overall planning of content and intertextuality is performed as a collaboration that the method leans more towards that realm. Hence why it’s called collaborative writing. Co-operative writing would be, for example, creating a set of individually written articles for an anthology or magazine.

Digital tools, such as Google Docs, Google Drive and Microsoft Word Online are useful tools. They allow students to see real-time progress of each others work. This enriches the content, makes sure there is less repetition between articles, but rather transforms them to natural overlaps and intertextual references. The writing tool, or online platform has to be selected so that it is available to all students. This supports equality. It cannot be exclusive as that would also hinder and even violate the idea of collaboration. Should the students write in complete isolation, this natural, even somewhat unrecognised power of collaboration is missing. And that is the beauty of collaborative writing.

There is a need for a systemic approach in order to create true collaboration and to achieve educational goals. In the short span of a course, the students need, or will create together, the boundaries for the assignment, in this case a publication. Collaboration doesn't just happen, students don't just automatically become active and participatory. As Hadjerrouit (2011) states: collaborative writing is demanding in terms of cognitive efforts. It is an activity that transforms an initial document by more than one student into a collective text (Trentin 2009). Collaborative writing requires students not only to practice literature review, academic reading and writing, but also group reflection, collaboration, knowledge sharing, and critical thinking (Kim, Hong, Bonk & Lim, 2009 cited in Hadjerrouit 2011). Contextual factors (psychological, pedagogical and even institutional) can also affect the writing process.

## Conclusions

Whereas collaborative writing can foster group activity and interaction, it can also come in various levels of commitment, thus resulting in mixed end products. From a pedagogical point of

view, writing with a team drives better learning results – especially among the students who have less experience in writing. Introducing writing as a more integrated tool in the design pedagogy tool bag, can open students' minds in complex thinking, and aid them in furthering their academic and professional communication skills.

Tynjälä (1999) writes that contemporary work is often not so much about concrete objects but rather a combination of different source material, verbal and visual information. Therefore, a future design professional needs to be able to draw conclusions and generalisations from vast sources of information and process them into understandable and relatable concepts. This requires high level of abstract thinking. Writing is an excellent tool for developing these abstract skills needed today.

In terms of the RDI activities carried out in LAMK, this method offers one organic way to link the curriculum to RDI projects. The aim of PALMA project is to create a service design tool, the PALMA model, for entrepreneurs in the rural tourism and hospitality industry. The information and insight from students were utilised in the PALMA model, and in resulting workshops with companies enrolled in the PALMA mentoring program. The article collection is published as a series of informative blog posts over the course of two semesters. The online platform was chosen to engage with companies affiliated with PALMA and to develop the RDI communications at LAMK.

Publication can be an integral part of the art and design practice. Developing a method that brings theory into practice in a fairly novel way for design students – who are used to creating visual or tangible objects – is a starting point for future explorations. User-centered design approaches, which are integral to the pedagogy of Institute of Design, can also include writing as a navigation tool for guiding readers and users through complicated worlds.

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# Minna Cheung, Kirsti Cura

## Sustainable Finnish Fashion: As Seen by A Design Educator

### Abstract

This paper presents a design educator's experience of experiments, courses and changes in students' thinking and design approaches towards fashion and textiles. In Finland, as in other Nordic countries, the ecological and ethical issues of fashion and textile production have been a part of the design process and its outcome for several years. Eco-efficient design has been included in the curriculum of Fashion and Clothing Design in LAMK Institute of Design since 2010. The first course was carried out through a workshop called Zero Waste (Koski 2017). A course called "The ethical and ecological issues of textiles" accompanied the topic and included themes such as ethical and ecological production, and closed loop methodology. From 2011, the curriculum has had a project where students are guided in creating concepts for fashion collections based on their own values.

The circular economy is one of the focus areas at LAMK. The Faculty of Technology has been studying recycled materials, mainly plastics, and their processing technologies for a long time. Recently textiles and their reuse and recycling have become subjects of interest. The first driver was when the European Union's landfill ban for organic waste came into effect in 2016 in Finland. Textile waste is classed as organic waste. The latest driver came at the end of 2017 when it was stated that the Member States of the European Union will have to comply with the obligation to set by separate collection of textile waste by 2025.

The following will present examples of the past and present courses, projects and individual works done in LAMK.

**Keywords:** sustainable fashion, fashion design, circular economy, circular fashion design, closed loop, eco-efficient fashion design, eco-efficient design education, zero waste, textile technology

### Introduction

There have been ongoing discussions about the state of the fashion business, especially about the conditions of manufacture and the ways in which it has been conducted for a long time. Fashion business, however, is not different from other businesses where the main target has been growing bigger in terms of size, production volumes, profit etc. To achieve the ambitious goal of continuous growth, the ways in which fashion has been produced and consumed have reached the level of fashion being one of the most polluting industries (Hasanbeigi & Price 2015).

### Textiles, fashion and disasters

There have been warnings about the consequences of the growth. The first global wave that shook the fashion scene happened at the end of the 1980s with alarming news from Russia (the former Soviet Union). The Aral Sea in Central Asia, once the world's fourth largest lake, had lost about one third of its size. Especially between 1987 and 1999, the change has been dramatic

and finally, in 2014, satellite imagery by NASA showed that the eastern basin of the freshwater body was completely dry (Howard 2014). As stated by Gaybullaev, Chen and Gaybullaev, the initial reason for the Aral Sea's decline was the fact that Soviet planners diverted water from the Aral Sea's two big feeding rivers (the Amu Darya and the Syr Darya) into cotton fields in the territory of Uzbekistan (Gaybullaev, Chen & Gaybullaev 2012). The Aral Sea crisis is still today listed as one of the world's largest environmental disasters. The second shock happened April 25th in 2013 with the news from Bangladesh about the collapse of the Rana Plaza clothing factory. The world of fashion was changed for good. The act of designing clothes for the sake of designing and selling more to the same consumers who consume the majority of fashion seems to be in a struggle. H&M reported its lowest first-quarter profit in 16 years (Bloomberg 2018).

### **Studying sustainable fashion design**

Early on, some designers and design students were already aware of these issues. For example, Riikamaria Paakkunainen discussed the environmental disadvantages of clothes and how the designer can affect to this matter in her Master's thesis in 1995 (Paakkunainen 1995). At the same time, some commercial fashion brands started to use hemp in their collections. However, the products did not sell in big volumes as the appeal of the apparel was mostly dull coloured with no shape. At the same time the use of elastane became more popular and the fit started to get narrower, more body conscious and flattering.

The nature of fashion design is future oriented, but the design research has been merely focused on the past or the present. Academic research has concentrated on the historical

approach to fashion styles or on the sociological approach to fashion phenomena. Research carried out by fashion design students has been interpreted as studying inspirational material as part of the design process (while sketching the products or looking for ideas for the materials). During the last decade, fashion design students have begun to explore new perspectives and meanings that explain why we produce more new ideas for fashion products when we have more than enough of them in general.

Anniina Nurmi studied sustainable fashion product development in her Bachelor's thesis. She focused on her own design process and its relation to sustainable development in the fashion industry. She also drew up principles of how she as a designer could make the clothes long-lasting and ecological (Nurmi 2007). Nurmi has been a pioneer in informing consumers about ecological and ethical principles in her blog called "Vihreät vaatteet", as well as testing the principles with her label NURMI (Nurmi 2018a). The latest development in her label is that she stopped manufacturing the collection as the procedure still follows the traditional process of designing, sampling, selling and producing, even though the values and concept behind the collection emphasise sustainability. Currently she is developing a concept called Clothing as a Service ([www.anniinanurmi.com](http://www.anniinanurmi.com)) where, instead of selling and buying the items, a customer would be able to rent them (Nurmi 2018b).

### **Creating a value-based concept for a fashion brand**

In autumn 2010, two groups of 12 students starting their third year attended a course called "Creating a concept for a fashion brand" in both Aalto University and Lahti University of Applied

Sciences. The course was started with a simple task: “Study yourself and make a list of the ten most important things to you in fashion and dressing, and another list of ten important things in your life in general”. These were the only instructions, besides an instruction to be as honest as possible. The students had total freedom to list whatever they thought was important. The aim of this task was not to value the listed issues or to be logical, but merely to inspire and differentiate one’s designs from another’s.

In both universities, the students found this simple sounding task surprisingly difficult for multiple reasons. Firstly, they had never been asked to study themselves before and usually a task was given to them in the form of a design brief. Secondly, they found it difficult to be totally honest. Third year students were already socialised with the fashion scene so deeply that they already knew in theory what they should answer. However, thirdly, the students found it difficult to find ten important things. Finding five or six important things was easy, as most of them were thinking about big issues like quality or comfortability, instead of listing more detailed things like what makes a piece of clothing high quality or comfortable. Also, it was noticed that the students automatically interpreted the word quality to mean high quality, as revealed when asked to define whether they meant bad quality or good quality.

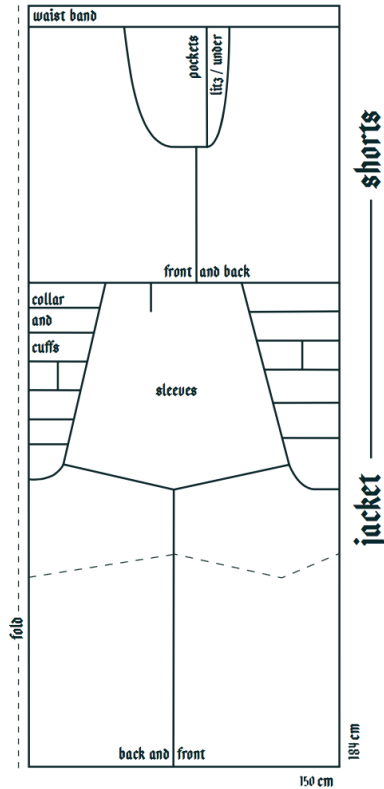
This course has now been organised for eight years. In 2010, three out of twelve students listed ecology and it was placed among the three last issues on the list of the most important things in fashion and dressing. By 2018, the words ecology, sustainability, ethicality and recycling were listed in the top five items by LAMK Fashion and Clothing Design students, as well as Wearable Design students (total 12 students).

This course was started in order to offer students the possibility to create a concept and a business plan for their own collection and to take a step towards entrepreneurship. However, it has become a platform to study the values and possibilities behind designing and manufacturing apparel. The name of the course has been changed to A Value-Based Concept for a Brand.

## **Zero Waste**

Finland has a lack of abundant material resources. The efficient use of materials is seen as the norm. CAD-based pattern layout was introduced in the manufacturing processes in the 1980s. It indicates the real-time consumption of material during the pattern layout process and aims to consume as little material as possible. This same target has also been treated as an economic issue, meaning less expensive pieces of clothes. Eco-efficient design can be considered as the means of reaching the aim of less consumption. Still, an average amount of 15 % of fabric is wasted during cutting and manufacture (Rissanen & Mc Quillan 2016).

In fashion design, zero waste is defined as design that wastes no fabric by integrating pattern cutting into the design process (Rissanen & McQuillan 2016). Whenever material is precious enough, especially when compared to the cost of labour, it is usually used with extra attention to the consumption and the consumption is considered in the design of the item. There are challenges in implementing zero waste principles into the industrial process: it is considered too slow, it is difficult to predict the final look of the garment and it is very easy to make “not flattering” or “odd looking” clothes with the technique.



**Picture 1. The marker (pattern layout) and the final outfit designed by Jenna Uotila. Photo: Eve Nieminen. Model: Valtteri Nevalainen.**

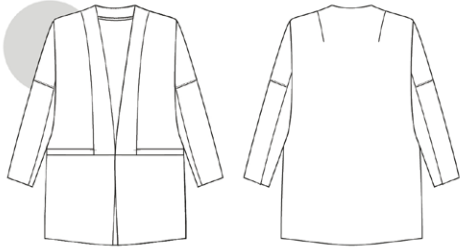
## Studies in zero waste design

In the LAMK Institute of Design, second year students have studied ways to use zero waste techniques to make “normal-looking”, wearable and fashionable items. According to our experience, the zero waste principle, and especially the difference in the design process, is more difficult to adopt if the student has a lot of experience in the traditional 2-D patterning. As Koski stated “I found it almost an advantage that I didn’t have any specific ideas about pattern making” (Rissanen 2016). On the other hand, learning a new way of designing is also

dependent on one’s enthusiasm and curiosity about the subject.

Jenna Uotila, a second year student (2018), experimented with zero waste principles in creating a wearable and fashionable unisex outfit. (Picture 1)

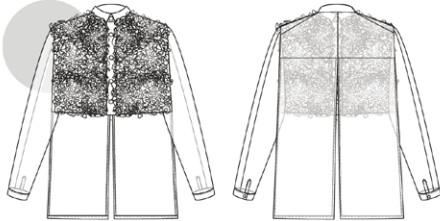
The experiments during the second year have been developed later in several graduation collections. Piia Emilia’s (Piia Honkanen) Bachelor’s thesis graduation collection 2014 outfit (Pictures 2 and 3) presents a stylish and wearable women’s coordination where the denim jacket and frill blouse are both designed and made using the zero waste technique.



Vuorittamaton denimjakku vajaamittaisilla hihoilla ja kaitaletaskuilla. Ei kiinnitystä, sisäsaumat huoliteltu kanttinauhalla. Zero waste-kaavoitettu.



100% PUUVILLA



Kauluspaita silkkiorganzaa, lyhyt etuosa röhhelöpintaa. Edessä napitus ja takana pitkä halkio. Huoliteltu pussisaumoilla. Zero waste-kaavoitettu.



IX  
ORGANZA  
100%POLYESTER



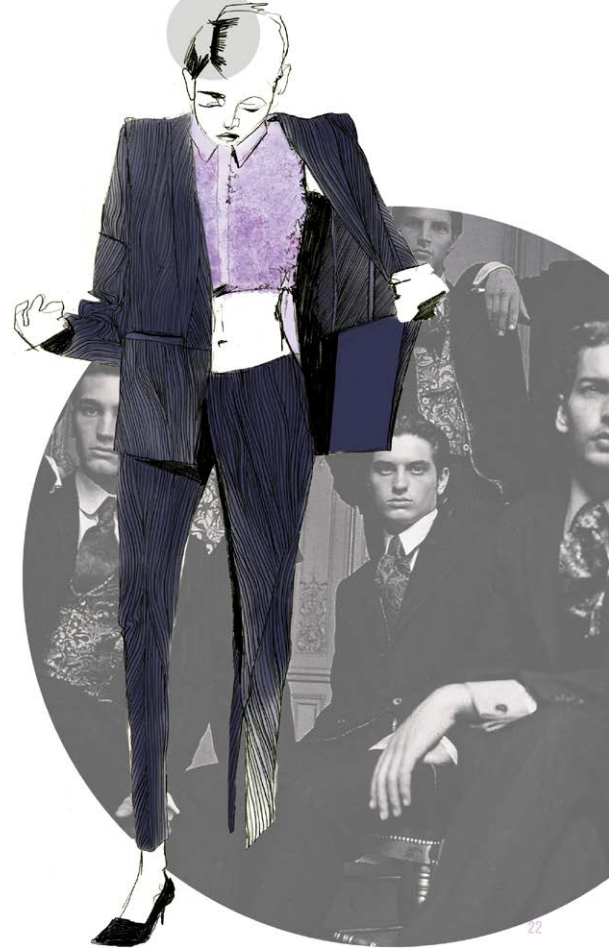
VII  
ORGANZA  
100%SILKKI



Vajaamittaiset, porkkanamalliset denimhousut. Vasemman lahkeen etupuoli avoin, kappale taittuu keskiedunpäälle. Ommellutprässit polviin asti. Taskut sivusaumoissa, vetoketju edessä läpän alla.



100% PUUVILLA



Picture 2. A zero waste denim jacket and frill blouse.  
Flat drawings and fashion illustration by Piia Emilia (2014).



## **Sustainable design, the circular economy and circular design thinking**

Sustainable development has set a background for LAMK's curriculum and project activities for a long time, even though it may have meant different approaches for different faculties. In sustainability related discussion in the European Union, and hence in Finland, the term the circular economy has become a buzzword. In short, the main difference between recycling and the circular economy is that the life-cycle thinking of, for example, materials is extended from linear to circular thinking, and waste is seen as a resource. When Kircherr and his research group analysed 114 definitions for the circular economy, they found that the circular economy is most frequently depicted as a combination of reducing, reusing and recycling activities, whereas it is often not highlighted that the circular economy necessitates a systemic shift. They also found that the definitions showed few explicit linkages of the circular economy concept to sustainable development. The main aim of the circular economy is considered to be economic prosperity, followed by environmental quality; its impact on social equity and future generations is barely mentioned (Kircherr 2017).

Circular design, which is a part of the circular economy, consists of improvements in material selection and product design (the standardisation/modularisation of components, purer material flows and design for easier disassembly) that are at the heart of a circular economy (Ellen MacArthur Foundation 2013). It refers to the creation of products and services that no longer have a life cycle with a beginning, middle and end. Therefore they contribute less waste and can actually add value to the ecosystem (The Circular Design Guide 2018).

## **Students and sustainability**

Design students are already conscious about sustainability when they enrol, but their point of view is mostly based on mainstream opinions offered by social media. In 2018, first year students of Wearable Design (formerly Fashion and Clothing Design) were introduced to the hierarchy of waste and recycling as part of the design brief in a course called "Creative design methods". Students were given a task to design two outfits for 5- to 7-year-old children considering the aspects mentioned above. The focus was on both the choice of materials and the design, including the user profile, and the user's needs and wishes.

The "Creative design methods" course has a multidisciplinary approach to the subject. Design and technology issues are combined to emphasise the importance and knowledge of both aspects. A Finnish label – Népra Active-wear, which was founded in 2015 – is a good example of the benefits of the multidisciplinary approach that university surroundings can offer. According to the information on the company's web page, their brand creator Ama's background of studying International Trade, along with her passion for the environment and corporate responsibility, helped foster an idea that combines perfectly with her love of holistic wellbeing and exercise. Their product creator Essi, on the other hand, has completed a degree in Textile and Clothing Engineering and is passionate about finding the perfect fit and utilising perfect materials (Népra Active-wear 2018).



**Picture 3. Piia Emilia's zero waste denim jacket, combined in two different coordinations. Photo: Emma Sarpaniemi.**

### **Telaketju and textile recycling**

LAMK is taking part in a national project called Telaketju, which is a cooperation network that advances textile recycling. The project includes developing the collection, sorting out and refining the processes of end-of-life textiles. Moreover, it enables the development of business models related to the discussed circular economy. In Telaketju, a national ecosystem of knowledge is being advanced, building a platform for the creation of a new and strong industry with multidisciplinary collaboration (Telaketju 2017).

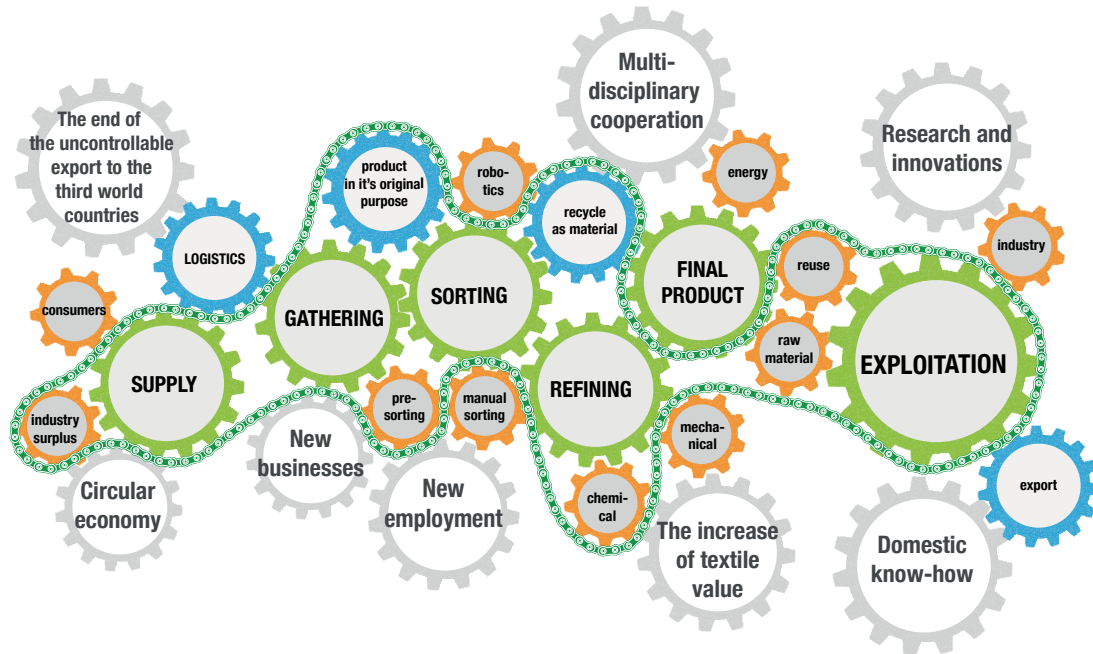
In the context of sustainable fashion, the focus is often on the sourcing and production

that take environmental effects into consideration and do not use non-renewable resources. As a result, sustainable fashion is considered something ethically and ecologically produced which does not promote the term in its entirety (Karell 2014). For the Telaketju project, first year students of LAMK Institute of Design worked according to a circular design -based brief in the "Creative design methods" course. The results have created interest and discussion on this type of design process. In addition, it proves that is essential to take design students along when creating a national ecosystem for textile recycling in Finland.

## Conclusions

Introducing sustainable thinking to the fashion industry is essential. At LAMK, after several years of experimenting, we see that to improve students' sustainability thinking it is better to start as early as possible, preferably already in their first year. We believe that it is easier to change the ways clothes will be designed in the future than to change the way they are consumed. This approach will take students' design thinking towards circular design thinking principles. Future possibilities to ensure easier

and more efficient circulation and closed loops in the fashion industry will be established at the designer's desk. The aim will be to educate future experts whose design process includes sustainability issues as a normal design approach, not as an added value. This will require more and even closer multidisciplinary projects in which design and technology students work together and learn from each other. The best outcome can be reached when both sides understand each other's needs, requirements and limitations.



Picture 4. Telaketju – the chain of the sorting and exploitation of textile waste.



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Anu Raappana, Marianne Valola

# The Designer in the Changing Working Life

## Abstract

This article examines the professional identity of a designer and especially the relationship of sales competence to the professional identity of the designer. In many professions, changes in working life have led to discussion about competence, professional identity and competence identity. This has also happened in the profession of the designer. Sales competence, in particular, is viewed as a challenging new area in the work and profession of the designer.

The Design or Die – Creative Value Creation and Competitiveness project (funded by European Social Fund) has discussed the changes in working life and their effect on both the profession and professional identity of the designer. On the other hand, the changes have brought requirements for the development of pedagogical solutions. The aim of the project has been to comprehensively examine the opportunities for design in various areas of society.

The article is based on material collected during the Design or Die project. Education experiments and business cooperation experiments have been implemented in the project. In addition, interviews have been conducted with both students and professional designers. The professional identity of the creative expert and the ability to productise and sell one's services is emphasised in the material created over time. The material is limited, so it does not lend itself to extensive generalisations, but some noteworthy observations can be highlighted.

**Keywords:** professional identity, design

## Professional identity, self-knowledge and sales competence

The work environment of the designer has changed and become wider. The professional identity of the designer is flexible and adaptable. The importance of professional identity and self-knowledge has increased with the changes in working life. Working life has become more fragmented. In terms of the professional identity of the designer and of finding work as a designer, one challenge is to find one's way into those companies that have not yet been able to utilise design. This emphasises the skills related to the selling of one's expertise. As the scope of design has widened, the role of the designer has also changed.

The concept of professional identity refers to the qualities, characteristics and features that describe the identification of an individual with their profession and role in working life. Professional identity can be thought of as describing the way the individual lives and acts in relation to the surrounding society and its prevailing division of tasks (Eteläpelto & Vähäsantanen 2006). Professional identity is thought to be created over time and through different life situations. Education builds professional identity, but the identity may only be formed in working life (Nummenmaa 1993, 48). Professional identity is not in a permanent state; it changes and develops through activity in working life (see Heusala 2004; Rätty 1982, 46).

For a designer, this means identification with the role of the designer. The role varies depending on where the designer works. For example, the role can be an expert role in a large organisation or the role of a freelance designer. New kinds of role have developed for designers in their working life; for example, with the increased need for abstract competence relating to design. For example, service design and information design as concepts and competence areas have widened the field of design beyond traditional product design.

The consideration of professional identity is based on the broad questions caused by the changes in working life: What is the playing field of a designer? How does the playing field affect competence? Will designers remain designers even if they drift away from traditional designer jobs? Falin (2011) states in her dissertation that the professional identity of the designer is not built on traditional design skills alone. The work of the designer is information and service work, and requires, besides design skills, the ability to process extensive data materials. The different fields of design overlap and partly mix. For example, the traditional boundaries between fashion designers, industrial designers and graphic designers have blurred. The practices of fields of design previously perceived as separate have blended.

The concept of professional identity is related to the concept of self-knowledge. The commercialisation of one's competence needs to be based on strong self-knowledge. People spend a large part of their lives in their work roles. With self-knowledge, a designer can build a strong base that carries her or him through hard times. The interviewed designers described how the development of self-knowledge had led to cutting out unnecessary things. Self-knowledge had developed through both studies and practising

the profession. The designers had gradually understood what parts of their competence can and should be sold and how they can sell their own competence. At the beginning of their careers, many designers had been unsure of their own competence. The development of self-knowledge should be invested in during studies because the recognition of one's competence and values are emphasised in the design business.

### **Sales competence as part of the competence of the designer**

Sales competence is strongly linked with the competence of the designer. Although the importance of sales as part of the work of designers is understood and the commercial perspective of design is clear, the designers in the Design or Die project also described sales work as a bogeyman. How has sales work become a bogeyman?

From the point of view of the professional identity of the designer, commercial skills have a significant role. A designer involved in the Design or Die project said that a designer is only a designer when they have sold their design product. For a designer, it may be challenging to accept the commercial value of one's work. For some designers, art has inherent value and the idea of commercialism feels unfamiliar. One aim of education is to cherish the relationship of design and art, on the other hand, another aim is to break down unnecessary barriers between design, art and commercialism. The designers interviewed in the project described a path to growing as a designer. The designer can grow as a designer through professional development. In this case, the designer aims to deepen their professional designer skills with each individual work task. The reverse side of emphasising a strong professional identity is

that some designers feel hopeless when they do not have work in their field. For designers who emphasise the strong professional role relating to concrete design work in particular, it may be difficult to look for work in other fields. They might even experience working in other fields as disappointing and view it as giving up. On the other hand, in a situation like that, designers might be driven to sell their competence at a too low price or under unfavourable conditions just to get work in the design field.

The point of view changes if designers emphasise earning money in their work. Designers might have to work in a completely different field. The curriculum vitae of a designer who emphasises earning may, in all its incoherence, drive away recruiters looking for someone with deep knowledge of design. However designers emphasising earning find it easier to tolerate economic fluctuation, because their idea of the work tasks that are suitable for them is extensive. Designers emphasising earning feel that they better succeed in their work the more they earn on a good day and the better they manage during hard times.

Based on the interview material, the strong professional identity of the designer tied to design competence does not crumble, even if the designer performs work tasks differing from traditional design work. False steps can also be of benefit. Or are they false steps? Different work tasks strengthen self-knowledge and provide new opportunities to commercialise one's competence. What is the identity of the designer in the fragmented working life? How do designers define themselves in the changing working life, in which the role of design is also changing?

## **Challenges for education**

Design or Die has implemented different education experiments, looking for ideas and tips for the development of design education. The experiments have strengthened the understanding of the designer's extensive field of work and the need for a flexible professional identity. A specific challenge for education is the strengthening of the designer's commercial thinking during studies. The activity already includes a strong commercial aspect, but it must be further strengthened.

Network competence and the understanding and utilisation of different forms of entrepreneurship are part of the competence of the designer. All this is connected to entrepreneurship skills: How do I ensure that my competence sells and can be bought? Long-term work and the designer's vision help the designer make it through hard times. During the project, one theme recurred in several different contexts: there is no quick way from rags to riches, the competition is tough and everyone has to work to achieve their desired position and standard of living.

Some kinds of pop-up job seem to have formed in the working environment of designers. These jobs seem to be created, for example, in the third sector and on the interfaces of the cooperation of different organisations. The challenge is that designers must recognise work opportunities and be able to offer their work input at the right time and in the right way. Therefore, in the competence of the designer, entrepreneurship skills are emphasised. One must be familiar with the different company forms, and invoicing possibilities must be found for different assignments.

From the point of view of the development of education, it could be useful to move from the concept of professional identity to the concept of competence identity. It would help identify personal competence and the opportunities for its commercial utilisation better than professional identity. Professional identity may easily lead one's thoughts to the profession and, from the point of view of the designer's field of work, lead to limited and sometimes conservative thinking.

The working life of a designer can be seen as standing in a flowing river and jumping from one stone to another. Each stone is a project that takes a certain amount of time. Before the stone is covered with water, one must jump to the next stone. The next stone must always be in view. What kind of competences do this type of work and this kind of identity building require? The is the question educational organisations need to ask.

## **A summary of the project**

The aim of the Design or Die project is to strengthen the collaboration within creative fields and between different networks of players by utilising multidisciplinary practices and competence. The project is aimed at promoting the employment of professionals, enthusiasts and students of creative fields. The project is implemented as a collaboration between Lahti University of Applied Sciences, Aalto University, the University of Lapland and Ornamo Art and Design Finland.

Various experiments and pilot projects have been implemented during the project. In addition, design students and professionals have been interviewed. The project is being implemented between 1 September 2016 and 31 December 2018.

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# Daria Ivanova, Noora Nylander

## A New Brand Model to Empower Customers

### Abstract

What is the New Brand Model (NBM)? How does it work? These are questions I was eager to find answers to and indeed did so during the process of creating my thesis work. To achieve the goal, I explored a new way of brand building, depicted by Marty Neumeier in his book *The Brand Flip: Why Customers Now Run Companies – and How to Profit from It*. I followed the book's theory in order to implement the NBM in a real-life branding case for a local, Lahti-based flowers and lifestyle store, named Florencia. An important part of my brand building process was customer engagement, which in the end was achieved through voting, interviews and workshops, among other means. Customers built Florencia's new brand. The thesis and the designer were assisting and documenting the process, leaving the rest to them.

**Keywords:** New Brand Model, branding, brand design, brand strategy, brand communication, customer empowerment

In a modern, digitally driven world, where people are connected on many levels, the power has slipped from the companies' hands into the customers' hands. How has this shift in power possession become possible? What has caused it?

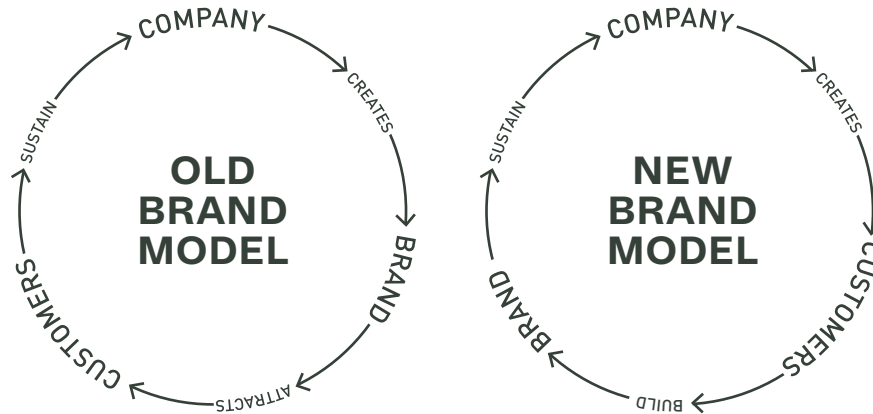
Compared to a century or even half a century ago, a tremendous growth in the number of companies has taken place. This led to a situation of overchoice. Overchoice, in turn, means people se-

lect their shopping places more carefully. This was a game changer for the companies since the customers became in charge. On top of this, new mechanisms of marketing and advertising started to appear. According to the results of the Nielsen company's research, up to 92% of customers trust word-of-mouth advertising, which puts it right at the top of the list. Online customer reviews take second place with a 70% level of trust (Nielsen Company 2012.) The facts tell us that a change in brand building strategy has not only become possible, but almost vital for any company's long-term success (Neumeier 2016).

In order to keep up with the requirements of the industry, multiple branding models have appeared throughout the years. One of them belongs to an American writer, speaker, designer and consultant, Marty Neumeier. In his latest book, *The Brand Flip*, Neumeier presents his theory, which he has named the New Brand Model (NBM).

The NBM changes the order of elements in a branding process. To make it easier to understand, here is a quote from *The Brand Flip* and a supporting illustration:

Instead of creating the brand first, the company creates customers (through products and social media), then the customers create the brand (through purchases and advocacy), and the brand sustains the company (through customer loyalty). This model takes into account a profound and counterintuitive truth: A brand is not owned by the company, but by the customers who draw meaning from it. (Neumeier 2016, 5)



**Figure 1. The New Brand Model, modified from Neumeier 2016, 4.**

Neumeier’s NBM is revolutionary for its focus on the customers, which has become the feature of our time. According to the NBM, the course of actions should be heading towards customer (persona) creation in the first place. This model allows building up the perfect personas, finding potential future customers in accordance with the personas and actively involving people in the brand building process. This system does not only lead to success from the strategic point of view, but also saves a great deal of money. Cheap workshops and careful observation of potential customers save funds, as opposed to launching a brand based on the company’s (or the designer’s) intuition. Similar thinking can be seen in design practice by using methods of user-driven design or service design – the customer (the user) is in focus and her or his involvement is tested with workshops and quick prototypes.

Going back to the phenomenon of overchoice, it is worth adding that not only do people choose more carefully what to buy, but they also know better who they are and what exactly they want. This fact leads

to another strong point of the NBM – its openness to the customers’ ideas and ability to be flexible. The company’s purpose, oneness and values are built on top of (ideal) customers’ identities, aims and mores (= how they belong). To sum up, the NBM helps to create the customers, gives them a voice and involves them in brand building by truly empowering them (Neumeier 2016).

Inspired by the NBM theory, I made a decision to check its applicability in practice. As a client, I got a local flowers and lifestyle store called Florencia (in Lahti, Finland). At that moment, the store had been going through concept changes as well as relocation. It seemed like a perfect moment to try out the NBM in real-life circumstances.

I decided to use The Brand Flip book as a guideline but also added my own concept of organising events at the stage of customer involvement. From the book, I took the main tools described by Neumeier in detail and applied them to the case of Florencia.

	CUSTOMERS	COMPANY	
WHO THEY ARE	<p><b>IDENTITY</b></p> <ul style="list-style-type: none"> <li>- YOUNG WOMEN FOLLOWING TRENDS, APPRECIATING GOOD DESIGN</li> <li>- PROUD OF LOCAL ACHIEVERS AND ACCOMPLISHMENTS</li> </ul>	<p><b>PURPOSE</b></p> <ul style="list-style-type: none"> <li>- BRING JOY AND BEAUTY INTO EVERYDAY LIFE</li> <li>- SUPPORT LOCALITY</li> <li>- MAKE QUALITY PRODUCTS AVAILABLE TO PEOPLE LIVING IN LAHTI</li> </ul>	WHY WE EXIST
WHAT THEY WANT	<p><b>AIMS</b></p> <ul style="list-style-type: none"> <li>- SUSTAINABLE LIFESTYLE</li> <li>- BEAUTIFUL HOME</li> <li>- WAY TO PAMPER THEMSELVES OR CONGRATULATE A FRIEND / FAMILY MEMBER</li> <li>- SHOWCASE TASTE</li> </ul>	<p><b>ONLYNESS</b></p> <ul style="list-style-type: none"> <li>- SUPPORT LOCALITY</li> <li>- FRESH WAY TO LOOK AT FLOWER BUSINESS (WEEKEND BOUQUET)</li> </ul>	WHAT WE OFFER
HOW THEY BELONG	<p><b>MORES</b></p> <ul style="list-style-type: none"> <li>- TIRED OF BORING FLOWERS BOUQUETS AND SAME-LOOKING PRODUCT</li> <li>- ACTIVE SOME USERS</li> <li>- GROWING PLANTS ENTHUSIASTS</li> <li>- EVENT-GOERS AND KNOWLEDGE-SEEKERS</li> </ul>	<p><b>VALUES</b></p> <ul style="list-style-type: none"> <li>- SUSTAINABLE LIVING</li> <li>- OPENNESS</li> <li>- CULTURE OF SHARING</li> <li>- COMMUNITY BUILDING</li> </ul>	HOW WE BEHAVE

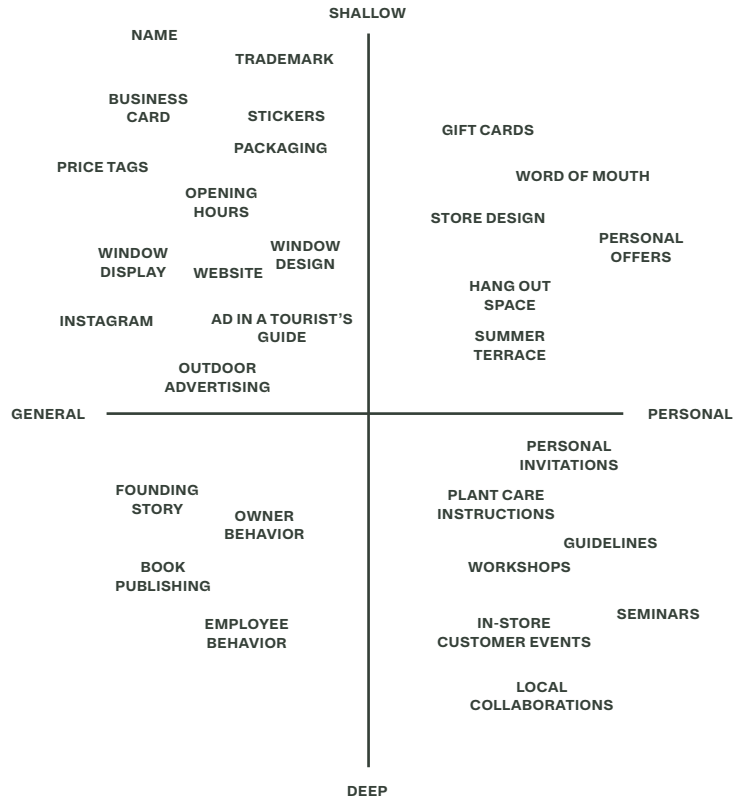
**Figure 2. The Brand Commitment Matrix, modified from Neumeier 2016, 67.**

**The key points for me were:**

- To create and involve the customers in the design process
- To let the customers build the brand
- To emphasise community building
- To start future strategy building
- To make the brand as liquid (adaptable, able to adjust) as possible

Figure 2 is one example of a tool from The Brand Flip book called the Brand Commitment Matrix. It was used for customer (persona) creation and alignment of the customer's side with the company's side.

Another useful tool, the Brand Experience Map (Figure 3), was used not only during the brand building process but also for planning the future strategy of Florencia. In the lower-right corner, where deep personal experience is built, one can notice examples of customers' involvement, which have been mentioned before. They include, for



**Figure 3. The Brand Experience Map, modified from Neumeier 2016, 75.**

example, workshops and in-store customer events.

All in all, seven tools were used straight from the book.

Apart from the NBM implementation agenda, there were additional aims for the new brand of Florencia. Here are a few of them listed:

- To reflect Florencia's values
- To speak the same visual language as the products
- To welcome the customers and break the feeling of uneasiness
- To be fresh and appeal to younger customers
- To have a holistic visual look
- The results of the whole branding process can be seen in the pictures (1–3).

Picture 1. Brand images for Florencia,  
Ninni Vidgren, 2018.





The business owner of Florencia, Merja Lohisalo, also emphasises customer involvement, which was created by the Florencia store during the process. Some of the ideas in the final result that customers appreciated did not surprise her, but their involvement and enthusiasm for the design process and ideation was great (LAMK 2018). Lohisalo also relates that the new brand guidelines are now clearer and there is recognisable style in her company's social media (LAMK Oy 2018). To sum up what happened during the process: valuable customer involvement was created by encouraging them to participate in the design process (LAMK 2018).

To draw a certain conclusion, it can be said that the NBM gives a fresh perspective on brand building, which answers the questions of today. With a few adjustments it serves well as a guide to follow. The NBM is great for analysing and building personas. It offers various possibilities with which to include the customers in the branding process. It is up-to-date and has been proven to work well for real-life companies.



**Picture 2. Brand images for  
Floraencia, Ninni Vidgren, 2018.**



**Picture 3. Brand images for  
Florencia, Ninni Vidgren, 2018.**

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# Mirja Kälviäinen, Kati Kumpulainen and Paula Mäkinen

## Design Thinking for Sustainable Behaviour Change Workshops

### Abstract

Drawing on findings from the user research of the project The City as a Service for Young Citizens, a grave finding was the anxieties the young respondents felt about environmental degradation, as nature was an important value element in their lives. In the first related service experiment, an easy way to be environmentally active was provided by the environmental day in Lahti with a selection of funny memes and the possibility to count your own environmental back bag using a mobile application. Following the Lahti City environmental education strategies, a more scalable activity was initiated, applying the findings from the first experiment. Three fine art teachers participated in an experiment involving workshops based on design thinking in which the students designed their own environmentally sustainable behaviour change.

It is possible to apply design thinking to the challenge of decreasing the impact of everyday consumption. This paper specifies the main workshop process experimented with in three different schools in the Lahti region. The process consisted of a quiz designed to make the students think about the state of ecological deprivation; calculating the impacts of your consumption with a mobile calculator, getting to know the areas in which you can decrease your consumption impact and the means by which to do so; and ideating, planning, trying out, documenting and depicting for others the possible changes of behaviour. The findings of the experiments led to process and material development.

**Keywords:** environmental education, design thinking, behaviour change, art education

### Introduction

The project called The City as a Service for Young Citizens (funded by Helsinki Metropolitan Region Urban Research Program) revealed environmental concerns and worries from a mosaic of explorative, participatory and design-based user research activities with 16–30-year-old citizens. This led to a service experiment for environmentally conscious behaviour for young citizens during an environmental week in autumn 2017. The purpose of the service experiment was to help the young citizens to understand how to lower the environmental impact of their consumption.

At the same time, the forthcoming Lahti city environmental programme will emphasise environmental education efforts in schools. Relating also to the educational enthusiasm for processes based on design thinking as a new practice with which schools can embrace creative development learning, the idea of design thinking was combined with the idea of making the students design low-impact consumption possibilities. Three art teachers agreed for their student groups to participate in the experiments in order to develop a learning package from the design thinking and a behaviour change starting point. The experiments during the spring semester of 2018 and the further development of this package during the summer of 2018 are accounted for in this paper.

## **The starting points for the behaviour change workshop**

The City as a Service for Young Citizens project investigated the requirements and service needs of 16–30-year-old city inhabitants. Drawing on findings from a mosaic of explorative, participatory and design-based user research activities for the young inhabitants of Lahti city produced a rich picture of the young users' needs, skills, experiences, communication channels and behaviour as public sector service users. One value-based and grave finding was that the young respondents felt anxious about the state of the world and felt that they were without any means to influence how issues, such as environmental degradation, are proceeding. The young seemed to also respect and value nature as an important element in their lives (Ikävalko et al. 2017, 39–50).

The purpose of the project The City as a Service for Young Citizens was to conduct, through user research, an envisioning of the new possible services for the young citizen. In the first experiment related to environmental concerns, an easy way to be conscious about your environmental impact was provided for the young citizen on an environmental day in Lahti. The experiment was planned together with environmental technology students, who also carried out the interaction with the youngsters in the city. The experiment consisted of advocates circulating in the city centre with information about a mobile calculator for testing the amount of your material impact on the environment and a selection of funny memes about environment-protecting issues. The memes were provided for the young people to distribute and further information about the means by which to decrease your consumption impact was provided through a link to Tonni Lähti's Internet pages (Ikävalko et al.

2017, 50). The possibility to calculate and see your material footprint from a mobile application was based on calculating your material consumption impact (the calculator was called the “materiaalijalanjälkilaskuri”). The related web pages also offered advice on how other people had lowered their bag back results (Tonni Lähti). The experiment was in many ways successful, but it proved that the visual material of interest should be based on young people and the behaviour change efforts should be scalable in order to have a wider effect.

Lahti City's forthcoming environmental programme will introduce several initiatives for environmental education, so a further, more scalable activity was envisioned with the fine art teachers to create workshop experiments based on design thinking in order for the young students to design their own sustainable behaviour change. The starting point in this experiment was to apply design thinking for educational purposes, in this case for learning how to change your consumption activities so that they have a lower impact.

Design thinking has become a tool to be used also for educational purposes, both in Finland in internationally. Internationally, the IDEO design consultancy has been instructing and developing the use of design thinking as an educational tool for 20 years and produced related guidance material for this (Design Thinking for Educators). In Finland there are several public and third-sector organisations that have been producing material and instructing educators in using design processes and design thinking for educational purposes (Koulujen Muotoilupolku 2016; Leinonen et al. 2015). Even a guidebook for applying service design thinking and the related process has been published for educational use in schools, and it especially emphasises the service design process as the change maker (Kapanen et al. 2017).

The claim for taking design thinking into educational use is based on the idea that with the support of design thinking it is possible to tackle various issues and challenges and produce change. With a volatile, complex and rapidly changing society, the development, creativity and change-making capabilities provide useful meta-skills for future work life. The design thinking process is about tackling challenges, engaging in creative observations, ideations and learning by doing. All of this can also combine the content from the different curriculum disciplines, which is one of the main goals for the new educational programmes. In addition to products and environments, design thinking can also be used for developing immaterial solutions: different activities, services and solution combinations (Leinonen et al. 2015, 10–12).

Also, in environmental education design thinking can be applied both in developing and designing concrete environments, and in developing and changing human activities. One of the big social challenges is to diminish the environmental impact of our everyday consumption (Sitra. Kestävä Arki). It is sensible to suggest that design thinking would also be a tool you could apply to steer individual and household-based consumption activities in the direction of low environmental impact.

### **The experiments of the behaviour change workshops at schools**

In the discussions with the Lahti City environmental department, it was agreed that the plan for the behaviour change workshops should be presented to the interested group of teachers that they had gathered for activating environmental education at the schools. The presentation took place in January 2018 and three art teachers expressed

their interest to take part in the experiment in which they would try out this kind of workshop with some suitable student groups they had on their art courses in April. Two art teachers were teaching at the primary school level, from 7th to 8th grade, and one art teacher was teaching on the upper secondary school level, teaching young students of around 16 to 18 years of age.

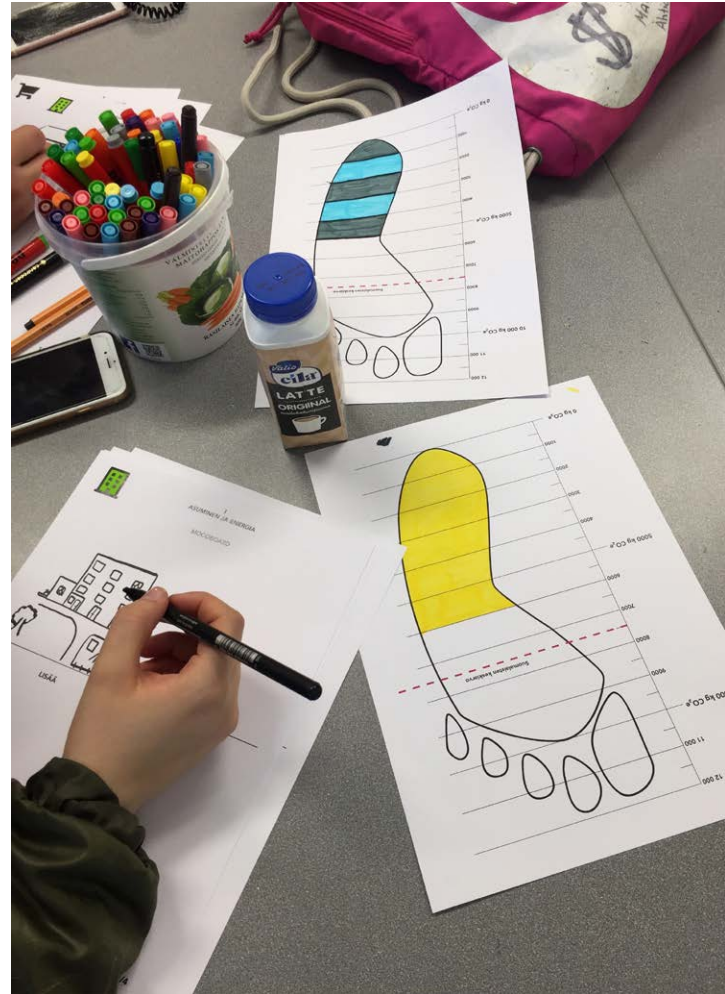
The planning of the behaviour change workshop was started inside the project team – by two project members and two assistant design and media students – during January–February 2018. The initial plan was presented to the three teachers for feedback in the middle of March. It was further developed and the real-life experiments, consisting mainly of two learning contact-workshop days with a week’s interval in between, took place in April. The primary school experiments were conducted with eighth grade students of about 14 years of age, and the upper secondary school experiments for the free-choice art course students consisted of students from 16 to 17 years of age.

The workshop material was developed to guide the students to consider their own consumption actions and impact, and to plan better consumption solutions with the aid of a practical design thinking process. The material considered that the design thinking process is activated through thinking by doing. Following the process activities presented also in the Finnish Koulujen Muotoilupolku (‘Schools Design Path’) (2016) material, the process tackled the issues of challenges, observation, ideation, experimentation, planning, execution and assessment. These activities were organised into a process limited by the schools’ April timeframes of two contact workshops and some short homework in between them.

In the design process the issues for development need to be understood by looking at them from different perspectives and by questioning them, observing them and searching for their challenges. From the knowledge and challenges, the process moves to optimistically ideating the solution opportunities. The possible solutions are prototyped and experimented with. The experiments also led to failures, but this can be used as a learning opportunity for improving the solutions. The concretisation with prototyping and experimenting is also relevant with immaterial solutions since it provides a means to present the low-impact consumption behaviour in a way that everyone can see it and comment on it.

The workshop was directed towards one of the biggest sustainable development challenges: behaviour change for low-impact consumption. In Finland 68% of all the greenhouse gas (GHG) emissions are related to household consumption: how we live, move, eat and what we purchase (Salo & Nissinen 2017, 3). The aim of the workshop was to pose to the students the big challenge of how you could redesign your own and your family's life for a decreased environmental impact. The workshop was planned in order to follow the design thinking process through two workshop sessions of about two hours each and to involve some independent work in between them.

In the first workshop session, the understanding of the challenge was provided by a short, visually stimulated quiz about some of the effects of the current consumption on the negative environmental change. The quiz idea was proposed by design and media students working on the workshop development. The quiz included questions about the environmental impacts of technology, the weather changing through climate change, the diminishing biodiversity and the big



**Figure 1. Some footprints coloured by the students to illustrate their environmental impact on different impact areas.**



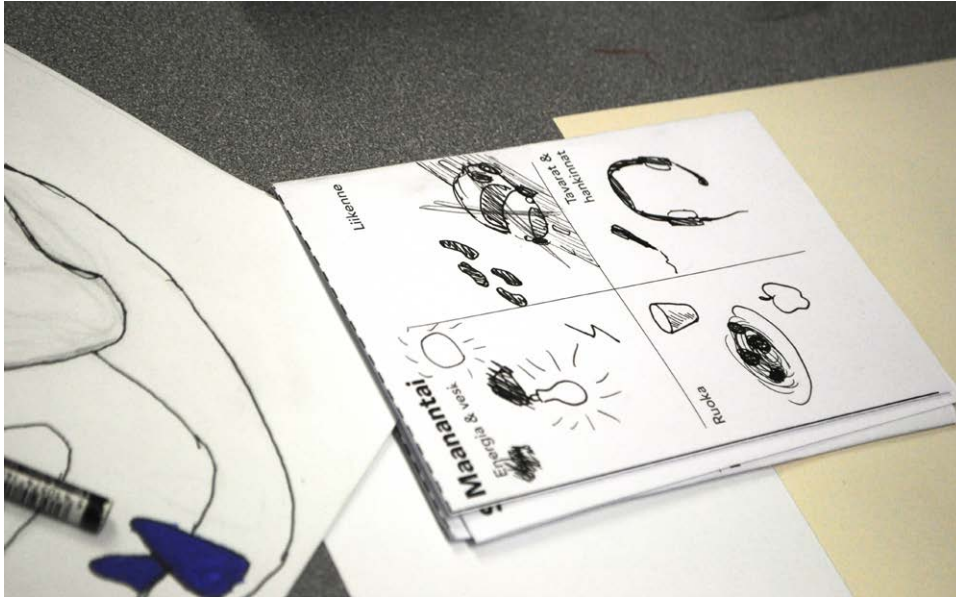
**Figure 2. Some examples of moodboard sheets describing the different everyday activities that produce environmental impact.**

share of everyday consumption as a cause of the total emissions. The other understanding-building stimulus task was to use a mobile calculator for counting your environmental impact. The test used for this was the new Sitra lifestyle test (Elämäntapatesti) for calculating your carbon footprint, published in autumn 2017 (Mänty 2017).

After the test, the students were asked to colour in their own footprint with different segments for different consumption types on a piece of paper. They were given a paper with a footprint figure that also pointed out the average Finnish result for comparison. A short discussion followed regarding whether the students' results were big-

ger or smaller than the average and what were the reasons for some of the results that were bigger.

After this the students got four forms describing the different impact areas of consumption: **housing and energy use at home, travel, food, and goods and services**. In the forms there was space both for making a moodboard and, after that, for marking what you should do more and what less so that consumption in each of the consumption areas would change to adopt a more sustainable direction. An example was shown to the students of the making of a quick moodboard. It was also described to the students how a moodboard related to the emphatic observation



**Figure 3.** An example of a self-made booklet containing the low-impact activity plan for the week.

of everyday life as a means of design thinking. The students were encouraged to make the quick moodboards for each of the consumption areas and also additional lists were distributed to cover issues about how to lower your environmental impact in these areas. From these, the meaning was to pick ideas regarding your impact area and what you should do more and what less.

At the end of the first workshop the students received big sheet of paper designed so that you could fold a booklet out of it. The booklets were for the purpose of planning low-impact activities during the week in between the workshops and for documenting the observations about the execution and success of these activities during the week.

In the second workshop session the students were asked to present their observations in groups. Then, alone or in a group, they were asked to choose an interesting low-consumption

theme that they would like to develop as a poster, storyboard or a video. The different types of visualisation had some instructions regarding how to execute them. The rest of the second workshop session consisted of the execution of the low-impact consumption visualisation. The idea of the final work was to concretise the behaviour change intentions and to provide authentic, young student-based material for peer marketing via exhibitions or other means at schools or in the students' social circles.

At the end of the second workshop the students also answered a simple feedback form, where different choices were visualised with different berry pictures. The presented questions were: Did design thinking help you to overcome the challenge and do you intend to continue to carry out the low-impact designs you made during these workshops?

## **The findings to be used for developing the behaviour change workshop**

The three experiments in different schools, observations of how the workshop activities were functioning, the produced results from the student work and comments from the students gave interesting development information. Some obvious flaws were already altered after the first school's first experiment session had been conducted. A final feedback discussion with the teachers was held at the end of the semester. All of this material helped to analyse the process and the content of the behaviour change workshops and to consider further development steps to improve it.

The quiz at the beginning of the first workshop functioned well and supported both diving into the state of the environment and questions of consumption impact. The students partly made correct guesses about the answers and this provided a feeling of success and generated interest. The last question – about the large proportion (68%) of everyday consumption in GHG emissions – motivated the work on counting your impact and considering low-impact consumption possibilities.

The Sitra lifestyle test for calculating your carbon footprint was easy to find from the Internet and it worked well as a mobile application. All of the students conducted the test with their own mobile phones. The problem with the test was similar to the problem with the earlier environmental day experiment with the material consumption impact calculator; the young students did not know the practical housing issues regarding square metres of housing or the type of electricity used as these kinds of consumption issues were decided by their parents, so they needed help in estimating these. However, to start thinking about these kinds of self-evident everyday issues was educational for the students.

The forms given for describing the different consumption areas looked too similar and already after the first workshop at the first school, icons were attached to them to mark the four different influence areas. The lists for sustainable consumption possibilities invited the students just to pick things from the list and leave the making of moodboards undone; so, after the first school the lists were only given to the students after some consideration had been paid to the moodboard work. In general it was difficult for the students to start depicting aspects and activities of their life on a moodboard and the produced issues were rather self-evident. This led to the conclusion that diverse stimulus material and more ideation work might have been beneficial at this stage.

The booklet made by folding it from a sheet of paper as an item was interesting for the students and they also thought they could use this kind of booklet idea for other purposes. However, the task of considering low-impact consumption activities for the week in between the workshops was unclear to them, as was the documentation they were asked to do. The second workshop session revealed that the students had not remembered to experiment, observe or document their everyday life, so this task had to be made clearer and a definite homework demand had to be made in order to oblige the students to present their observations at the beginning of the second workshop.

The second workshop's start up discussions were partly successful, but would have been improved if there had been real observation material and preparation work made by the students during the week in between the workshops. This would also support the choice for the final low-consumption impact issue that was visualised. There were some difficulties in making the choice of the issue to present, and the choices were rather self-evident, which

further supports the conclusion that more stimulus material and ideation would have been beneficial. The students were also slow to start the visualisation task and the work was left unfinished by many, so more working time would be recommendable. Furthermore, it was observed that the three possibilities for the means of visualisation that were given to the students provided additional, complicated information that was out of the focus of the work.

The quick feedback from the workshop sessions form that the students filled in revealed that most of the students felt that the activities were rather positive, but they did not feel very enthusiastic about them. For the question regarding if they would continue the planned low-impact consumption activities, most students did not know if they would continue the activities or not. However, an important result from the workshops was that it is possible and sensible to integrate this kind of challenging and difficult environmental theme into art lessons and that making-based thinking supports driving these issues forward. In the initial phase of the workshop planning, the idea that the material produced by the students would be used as peer-recommended material was already one scaling opportunity for spreading the low-impact consumption activities. This further distribution of the produced workshop outcomes was considered important in the further development steps in order that the exhibitions or distribution in social media channels agreed on at the beginning would provide a goal and motivation for the students to work more intensively on the tasks.

### **Further steps: Improving, scaling and distribution**

The development of the workshop process and material led to the following new structure, consisting of three workshop sessions.

#### **Workshop Session 1**

- Quiz
- A clear explanation of the work process for tackling the challenge
- The lifestyle calculator test
- Footprint worksheets and moodboards of the students' current consumption habits

#### **Workshop Session 2**

- Ideation by making idea cards
- Ideation is supported by pre-made Pinterest collection with a collection of practical ideas and Sitra's 100 everyday activities guide
- A research based guidance list of what to do more and what to do less is provided
- Planning what to experiment with in practice during the week in between workshops

#### **The homework between workshops**

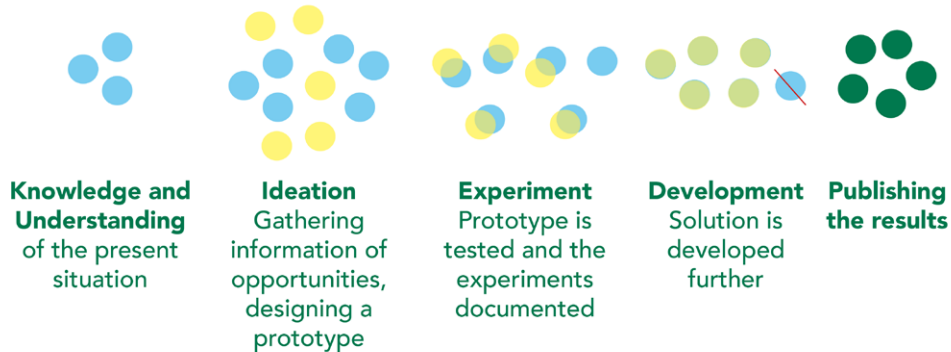
- Experimenting with, observing and documenting low-impact activities

#### **Workshop Session 3**

- Presenting the documentation and the observations
- Choosing a visualisation target
- Making a storyboard using the documented material



# Design thinking process



**Figure 4.** The improved design-thinking process for the workshops that the students follow in order to design their own environmentally sustainable behaviour change.

## An exhibition and other distribution activities

The idea was to distribute the improved material to local art teachers without the project staff members' support during the art course's implementation. For this reason, a short guide for the teachers on how to use the material was designed and provided for them. This guide included some of the philosophy of the design-thinking process, how it has been applied to the behaviour change issue and how the teachers can start putting the material offered into learning practice. The educational material produced included the presentations for the students and the files to print the necessary sheets for the students to use. The teachers' material also promoted the teachers being creative and modifying the process and the material according to their school's specific learning needs.

In October 2018 the Lahti City environmental education staff distributed the material to the

regional art teachers and invited them to also take part into a presentation session where the behaviour change workshops and their content were presented to them. This distribution of the workshop material was made in order to scale the use of the behaviour change workshops to several schools. The idea of the material being used by the teachers themselves was a good one from the scaling point of view. The environmental education actors of Lahti City can seldom use their scarce resources in different schools and supporting the teachers to add environmental education into different subjects is an efficient way of spreading environmental education in the schools. In the case of the workshops for the consumption behaviour change, collaboration between different subject courses inside the schools would be beneficial, but that aspect was left in the hands of the teachers in order that they could organise it in a way that is possible or in accordance with the various schools' habits and organisational structures.

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# Ari Känkänen, Anu Raappana

## Platforms for Cooperation with Companies

### Abstract

For years, cooperation projects with companies at the LAMK Institute of Design have served as authentic learning environments that develop working-life skills. The practical nature and working life-orientation of the training have been considered important. However, previous approaches of cooperation with companies were observed to involve issues, and conscious effort has been made to resolve them.

In this article we describe three university-business cooperation platforms that promote students' design skills, entrepreneurship skills and build designer's professional identity. This article describes the piloted models for cooperation with companies and the factors behind their development. The article is based on previous experiences with cooperation with companies and observations from the Lahti Design Centre (ERDF 2015-2017) and Design or Die projects (ESF 2016-2018).

**Keywords:** University-Business cooperation, pedagogy

### Developing a new kind of model for cooperation with companies

Cooperation projects with companies completed as part of studies help develop students' working-life skills extensively. Cooperation with companies

increases relevant competence, reinforces professional identity and develops areas that are vital for designers for purposes of exercising their profession. This competence includes business competence, recognition of personal competence, commercialisation of competence, copyright issues and the ability to continuously update one's competence. Designers must also be able to solve complex issues in cooperation with specialists of various fields. Often, is not known in advance what kind of competence a new task will require; the competence needs are only recognised over the course of the work. In addition to advanced knowledge in one's own field, new kinds of competence needs have arisen that cannot be taught in a classroom using conventional methods. (see Yrjänheikki 2011; Nykänen & Tynjälä 2012; Ornamo 2016.)

In autumn 2018, three platforms for cooperation with companies will be piloted under the working names Product development route, the Design Studio and RDI team. Students will apply for the platforms with a motivational letter and portfolio. They can complete 2-45 credits on the platforms. The key to platform thinking is that we will no longer try to integrate cooperation with companies into basic studies. It will be easier for students to manage the entity formed by studies when they can focus on one larger project instead of several small ones.

## **Questions behind the development of the models for cooperation with companies**

### **What educational content is suited for cooperation with companies?**

Many courses focus on the study of fairly narrow entities. Cooperation projects with companies that are integrated into courses, however, often have wide-ranging and multifaceted contents. Courses have been used to build larger modules in order to achieve greater resources, but the implementation resources has often been insufficient. Projects have also not been equally available for different courses. The disparity of project availability has become a problem; suitable projects are not always available for all fields of design, while some fields have occasional oversupply. Due to this, it has not been possible to offer all students equal learning experiences in regard to working life cooperation skills in their field. However, cooperation with working life is vitally important in all fields in terms of improving instruction and reacting to changes in working life.

### **How do we align the schedules of education and business?**

It is difficult for companies to visualise the rhythm, class schedule practices and course goals and requirements of the educational institute. It has not always been possible to consider the wishes of the company when planning teaching schedules. Often, the company's contact came too late in terms of planning the academic year. It was difficult to carry out quick and intensive projects because, for the educational institute, the best time to start projects is mainly at the start of term, and students have several courses

at the same time. As such, it is not possible to work on a corporate project intensively on several days a week. Other concurrent studies and often overlapping deadlines sometimes put too much strain on students and make it difficult for them to prioritise tasks.

### **How does the company benefit from the cooperation?**

The cooperation is often a company's first contact with commissioning design work. The educational institute is seen as a safe partner, one with which they can try things that they might otherwise not do. Most often, this is because of a lack of time, competence or financial resources. A cooperation project gives the company an opportunity to test the utilisation of design in its business development. With cooperation with companies, we can also take small-scale commissions that are unprofitable for design entrepreneurs and therefore disregarded. For many companies that have already used design, an educational institute is an attractive environment. An educational institute's strength is a large and open-minded student community capable of creating plenty of new ideas and directions for development worth seizing upon. Cooperation models also serve as excellent testing platforms for any new designer recruitment.

### **What is the teacher's role in cooperation with companies and how is the realisation of the goals of the curriculum ensured in cooperation projects with companies?**

Cooperation projects with companies require a lot of background work. The maintenance of contacts in companies is time-consuming and requires a lot of correspondence. Building cooperation, especially with a new customer, takes a lot of time. Getting to know each other

and charting the possibilities takes resources. Companies sometimes find it difficult to visualise the differences between different implementation options and their suitability for the company's needs. This has created a need to productise and profile the different approaches into easy-to-grasp entities with differences and strengths that are clear to all parties.

The role of the teacher in cooperation projects with companies differs greatly from the conventional role of the teacher. The teacher is a coach or facilitator who ensures that the project is feasible. They build the teams, guide learning and help acquire background materials. The teacher may also be a seller and coordinator if they are responsible for acquiring the project.

#### **How can we always get the right students for the right projects?**

It is sometimes difficult to coordinate the right kind of student competence for all projects. The amount of student resources available is limited. There are many factors connected to the structure of studies that can hinder a student's participation in projects. One such factor is going on an international student exchange, for example. Once the competence required for demanding corporate projects has been acquired, around third year on average, the student is also eligible to apply for student exchange at the end of that academic year. Students who go on an exchange are lost from the student resources. Although foreign exchange students are correspondingly gained, their suitability for project work cannot be guaranteed in advance. In multisectoral projects spanning all of the fields of study at LAMK, the coordination of student resources is even more difficult.

#### **How much human resources does the model require?**

The human resources needed to carry out the model will be determined during the pilots. Under the current practice, the calculation of human resources has been difficult because the nature and duration of projects and the number of students participating has not been always known in advance. It was previously observed that cooperation with companies requires flexibility in the planning of the teacher's working hours. The model will be built in a format that allows easy estimation of the human resources in advance.

#### **How will student feedback be collected?**

Student feedback will play a key role in the development of the models for cooperation with companies. In order for the feedback to be usable, special attention must be paid to the correct timing of the feedback collection. For example, in case of a wide-scale project carried out over a long period of time, students may find it difficult to remember what was done during the different phases of the project. Correctly timed feedback collected in different ways will also serve to help students recognise their own competence. The learning and identification of the design process require places to stop as well as active identification and verbalisation of learning.

### **Three model pilots**

#### **Product development route**

In the projects of the product development route, students will learn about project management, team work and how to carry out the product development process. Teams will be formed for each project based on the project contents.

All students in the product development route will be offered shared theory modules. The commissioning companies will be required to take an active role in steering the student work. The product development route is aimed at simulating how a multisectoral product development project is carried out, for example at a design office or a company's product development department.

To participate in the product development route, the student must have mastered the theoretical foundation of product development and possess sufficient instrumental skills. The working-life projects of the product development route will have standard pricing and duration. For the realisation of learning objectives, projects must be as commensurate as possible. The projects must progress through similar work phases, and the end result must be in a format that will also serve as a reference when presenting how the model works.

Project work will be done in teams of 4–6 students. The entire group of students participating in the product development route may be temporarily harnessed to carry out a project if it serves both learning and the needs of the company. Each member of a team will have a designated role and job description. One student will be designated as the team leader. The progress of projects will be followed through shared project reviews presenting the current phase of each project. Upon agreement, the commissioning parties of all projects can also attend project reviews. By following the projects of other companies, companies could learn about each other's processes and development projects. Naturally, this requires that the projects do not involve conflicts of interest. Confidentiality obligations must also be signed.

On a case-by-case basis, projects of the product development route can be supported through various additional services if the company wants to take the project beyond the goals enabled by the route phase. The model requires early commitment from companies. The model is probably better suited to large companies and LAMK's strategic partners, which have the opportunity to jointly plan the student projects. In some cases, a project of the product development route could be a part of the company's existing product development process. It would repeat regularly under the same principles.

### **The Design Studio**

As the name implies, the Design Studio will be a pilot comparable to an office selling design services. The model will be aimed at resolving conflicts between project supply and demand, in particular. Students working at the Design Studio will assess the quantity and quality of commissions themselves and prepare the implementation schedule. In this model, student teams will give quotes, plan project contents and scheduling and handle labour resourcing on their own. Although the students will be given a large role in the planning of activities and in practical arrangements, the activities will be managed by teachers, who will make final decisions and take responsibility for the result. A teacher can also serve as the office manager, as it were.

The Design Studio model coaches students in an entrepreneurial approach and the challenges of design entrepreneurship. The activities will be profiled such that they stand out from the area's commercial operators and do not compete with them. One goal of the Design Studio is to bring together people interested in entrepreneurship during studies and after graduation. The aim is to inspire the students to continue with entrepreneurship after their studies.

### **RDI teams**

In RDI teams, students and staff can advance their knowledge around specific themes. Each RDI team will communally produce materials for publication and coordinate shared events and seminars connected to their themes. The themes may include, for example, national and international development of the field of design, urban design or the utilisation of design in promoting the circular economy.

The activities of the RDI teams will mainly be based on ongoing publicly funded projects. For example, an urban design RDI team could comprise actors from all projects where the city serves as the development context. By focusing on a specific theme, students strengthen their expertise in the theme in question. The combination of practical training and a thesis completed on an RDI team will enable truly extensive specialisation in a specific competence area. Acquired special expertise matters in the job market and when applying to further education, for example. RDI teams can carry out wide-scale development projects for companies, the public sector and operators in the third sector.

The RDI team is also an opportunity for staff to carry out RDI work based on their own interests and expand their competence. Publications, seminars and exhibitions will be used to distribute information about the groups' activities and results as well as attract the attention of outside parties. The RDI teams will support the regional development mission of Lahti University of Applied Sciences and familiarise companies with opportunities for utilising design competence.

### **Conclusion**

The pilots have now started, and the first observations of their activities have been positive. Due to practicalities of the teaching arrangements, it was not possible to use port-

folio-based application for the pilot phase. Three groups of students were selected for the pilots. An introductory event was organised for students, presenting the main principles of the activities and charting students' willingness to participate in the pilots. A sufficient number of corporate projects was acquired to pilot the models. The pilots were launched in stages and purposely with a lower volume of projects to begin with in order to make the whole more manageable and facilitate extensive assessment of the operating model and learning process. The models also require a great deal of pedagogical planning so that they motivate both students and staff, achieve the objectives of the curriculum and have contents that form functional entities.

The ongoing pilots seek experience with different practices, space needs and other factors that affect practical implementation. One project of the product development route is to create a single brand to cover all of the models. There will be continuous assessment during the pilots. The assessment will be carried out in cooperation with the companies, students, their teachers and other Lahti UAS staff participating in the activities. The financial profitability of the operating model must also be included in the assessment. How are the finances constructed in the platform models, what factors must be taken into account and how many students are needed in order to have feasible cooperation with companies through the platforms? Questions of immaterial rights are also a subject to the assessment.

In an ideal situation, the projects implemented would involve as many design entrepreneurs as possible. The entrepreneur will serve as the student group's hired instructor or, for example, as the commissioning company's lead designer for the project.

This would open opportunities for design offices to observe potential future employees for recruitment purposes.

The models facilitate community spirit because they involve intensive studies with the same team. All of the models provide good contacts and skills for moving into working life. Students will likely utilise the contacts created immediately after graduation. A thesis that examined the practices of cooperation with companies at the Institute of Design found that cooperation with companies is a functional recruitment channel for students (Pohjola 2013).

For the staff, the models create a new kind of opportunity to update and maintain their competence alongside teaching work. The models will make it easier to plan and market cooperation with companies. They enable clear definition of the contents of various service products and make it easier for companies to visualise the end result. A standardised model facilitates sales work and the coordination of the contents of instruction. In the projects, the staff get to exercise their creativity and have close contact with business life. All of the models facilitate publication, which further enhances the visibility of the competence of Lahti UAS. Furthermore, publication events connected to the models will bring positive visibility to every actor involved.



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# Jari Hautamäki, Mika Kylänen and Heidi Freudlich

## Foresight Information to Boost the Business of SMEs

### Abstract

Business environments have become more difficult to predict. To prepare for changes, SMEs must constantly navigate the future and reform their business operations. Due to new challenges imposed by rapid changes in the operating environment, it is important to create new practices that improve the ability and preconditions for SMEs to identify and compile crucial future signals and trends, as well as information related to changes in markets, competitors and customers.

ERDF funded Tuleva project coaches SMEs to take advantage of information about the future and markets in product development and to boost sales and marketing through marketing automation methods. The coaching creates new competence in SMEs for understanding the consumption patterns of their customers. The objective is to gain an even better idea of the products and services that customers need now and in the future. The central question here is how to collect and analyse information about changes in consumption patterns and the customer experience from distributed digital data (big data) so that it can be utilised in developing the products and services of an individual SME. Furthermore, the project creates new mechanisms to enable mutual learning between enterprises and the engagement of students in the development of business operations.

**Keywords:** Foresight, business intelligence, marketing intelligence, marketing automation, productisation

### Premise

In 2016, Lahti University of Applied Sciences decided to shift its foresight activities from a regional network of actors towards cooperation with businesses. This idea was supported by the Häme Chamber of Commerce, which wanted to provide foresight information for the development of its members' business. Cooperation with the Chamber of Commerce was organised into the NÄKY project (from 1 October 2016 to 31 December 2017). Its aim was to make new trends and signals visible as well as experiment with quick and agile business development methods in cooperation with Lahti University of Applied Sciences and Chamber of Commerce member businesses. The Regional Council of Päijät-Häme financed the development actions through a provincial development allowance.

The NÄKY project was a great success. Its results included, among other things, the NÄKY map (Lahti University of Applied Sciences 2017), which included more than 100 of the most crucial future trends and signals of change that enterprises should take into account when developing their business. In addition, the project tested new business development methods such as Business Model Canvas and Lean Service Creation. The project also created a plan for

constructing processes and services that would provide the region's SMEs with permanent new opportunities for developing their business in a future-oriented way. To achieve this, support was sought from the Helsinki-Uusimaa Regional Council, which in the spring of 2018 decided to fund the TULEVA project (Foresight information to boost the business of SMEs) from the European Regional Development Fund (ERDF).

## **Background**

Business environments have become more difficult to predict. To prepare for changes, SMEs must constantly navigate the future and reform their business operations. A mismatch between information about the future, markets and customers on the one hand and business development on the other hand often becomes a problem. Enterprises need more competence in utilising foresight information (Laakso & Turunen 2017).

Due to new challenges imposed by rapid changes in the operating environment, it would be important to create and develop new practices that improve the ability and preconditions for SMEs to identify and compile crucial future signals and trends, as well as information related to changes in markets, competitors and customers. It would be essential to be able to analyse this information and concretely mobilise it to identify new opportunities, produce new ideas, develop new products and services, as well as improve marketing and sales activities.

Business Intelligence (BI) is a means of management by information, and has become common in business planning, strategic decision-making, change management and preparation for changing circumstances in the future. IT-based BI systems systematically collect data about an enterprise's operating environment,

its customers, consumers, competitors and the enterprise's own processes (for example, sales, product development, production, inventory). The purpose of BI systems is to analyse collected data and provide corporate management with information that supports forecasts and strategic management, as well as the development of products and services offered to customers. BI solutions offer tools for shaping an overall picture from distributed data sources. (Tutuneaa & Rusa 2012.)

Another substantial challenge in SME business development is efficient sales and marketing. To respond to this, digital technologies and systems called marketing automation have been developed. The purpose is to enhance and automate continuously repeating marketing processes, classify customers, search for new contacts and customer information and maintain the interest of potential customers. Marketing automation also streamlines marketing and sales by automating repetitive marketing activities that take a lot of staff hours, and allows precise timing of communications and personalisation of their contents. (Rantaruikka et al. 2017.)

The challenges of a SME include 1) building up sufficient knowledge of business intelligence and competence in marketing automation and 2) allocating development resources to the enterprise's internal development actions. According to Leino (2017), enterprises need good contacts and partnerships with parties that produce competence, such as higher education institutions. However, they do not have the time to complete the study modules and lectures included in formal higher education to acquire competence. Knowledge transfer from higher education institutions to SMEs requires suitable short coaching, online studies and materials, networking with other enterprises, as well as engagement with higher education students. (Leino 2017.)

## **Knowledge transfer from the university to SMEs**

The Tuleva project coaches SMEs to take advantage of information about the future and markets (business intelligence) in product development and to boost sales and marketing through marketing automation methods. Furthermore, the project creates new mechanisms to enable mutual learning between enterprises and the engagement of students in the development of business operations.

The project contains five distinct but inter-linked work packages (see Figure 1).

In work package 1, “Project Management and Communication”, Lahti University of Applied Sciences shall establish and manage the project within the preconditions and rules set by the financier, as well as utilise the appropriate communication channels between the parties involved in the project, enterprises and higher education institutions. In addition, the project shall ensure that the results are to be published in accordance with the existing interaction plan.

Work package 2, “Improving the development capabilities of SMEs”, shall create an electronic forecast platform that is independent of time and place and aimed at the needs of SMEs. It is a platform that will become a compilation of pre-analysed foresight, BI and MA knowledge that a SME can utilise in the development of its business. The enterprises participating in the project will be organised into teams aiming at mutual benchmarking. New foresight information will also be produced through organising hackathons and workshops for the networked enterprises. The project will also organise the Future Business Summit 2019 and 2020 events. The project co-operates with the Southwest Finland Forecast Academy (EKA).

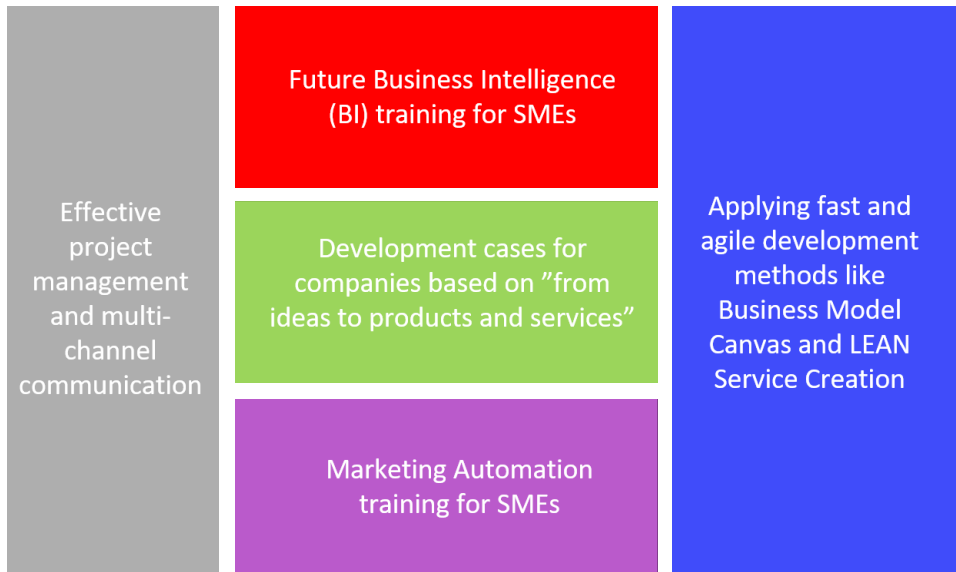
Work package 3, “Future Business Intelligence in SMEs”, will coach company management and experts in the practices of collecting, analysing and utilising distributed information about customers, consumers, competitors and the future for the purposes of business planning, strategic decision-making, change management and preparing for changing circumstances in the future. Digital learning materials are produced to support the coaching, and students participate in the utilisation of data within enterprises.

Work package 4, “From ideas to products”, involves brainstorming on foresight information in workshops. Jointly with the enterprises participating in the workshops, students will plan and implement solutions based on development ideas created in BI coaching and workshops. The work package also includes mutual benchmarking visits between the enterprises that have participated in the workshops.

Work package 5, “Marketing Intelligence in SMEs”, coaches business management and experts. In the coaching, each enterprise seeks the optimal solution, tools and practices for developing its marketing automation. Furthermore, the coaching will share first-hand experience and questions about setting up and using automation in the enterprise. The aim is to involve external companies in the implementation of the Marketing Intelligence (automation) work package.

## **Summary**

The Tuleva project provides SMEs with the opportunity of achieving knowledge in Business Intelligence (BI) and Marketing Automation (MA). This has traditionally been the competence of large enterprises but the aim of the Tuleva project is to develop them into a lighter model suitable for SMEs through coaching. The objective is that the



**Figure 1. Foresight information to boost the business of SMEs (TULEVA) project.**

enterprises taking part in the coaching would launch cooperation with universities of applied sciences in relation to productisation and commercialisation.

BI coaching creates new competence in SMEs for understanding the consumption patterns of their customers. The objective is to gain an even better idea of the products and services that customers need now and in the future. The central question here is how to collect and analyse information about changes in consumption patterns and the customer experience from distributed digital data (big data) so that it can be utilised in developing the products and services of an individual SME.

In MA coaching, SMEs gain new knowledge and preconditions for monitoring the results of their marketing actions and for marketing and digitally selling (commercialising) their products or services. The crucial question is how the SME can optimally utilise the opportunities provided by digital tools and services in marketing and selling its own products.

The project also aims to stimulate cooperation and learning between SMEs and higher education institutions. Higher education institutions offer SMEs innovative development projects implemented by students applying quick and agile development methodology. The aim is to integrate the Lahti University of Applied Sciences' Forecasting the Future study module with enterprise co-operation as widely as possible. Furthermore, the project will organise mutual benchmarking activities between enterprises, in which they can share experiences and good practices. In addition to this, a forecast platform will be developed that SMEs can use for planning future business operations both during and after the project. The annual Future Business Summit concept will be developed in the project for the purpose of making new competences, development prospects, networking and future trends visible.

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**Jari Hautamäki, Kati Peltonen**

# **Boosting the Business of Enterprises in Lahti University of Applied Sciences**

## **Abstract**

The versatile business structure is one of the strengths of the Päijät-Häme area. Although many guidance and counselling services are available for the start-ups and SMEs in the area, there is an acknowledged need to develop these services to meet the changing demands of the nascent entrepreneurs and start-ups. As a Higher Education institute, Lahti University of Applied Sciences also plays an important role in providing entrepreneurship education and support for entrepreneurship for HEI students. To tackle these challenges Lahti University of Applied Sciences has started a new project, which aims at developing and launching a multidisciplinary business accelerator to boost business development and new venture creation, especially student start-ups in the area and thus to contribute to regional development and economic growth of Päijät-Häme.

**Keywords:** Start-ups, student entrepreneurship, accelerator activities, regional growth

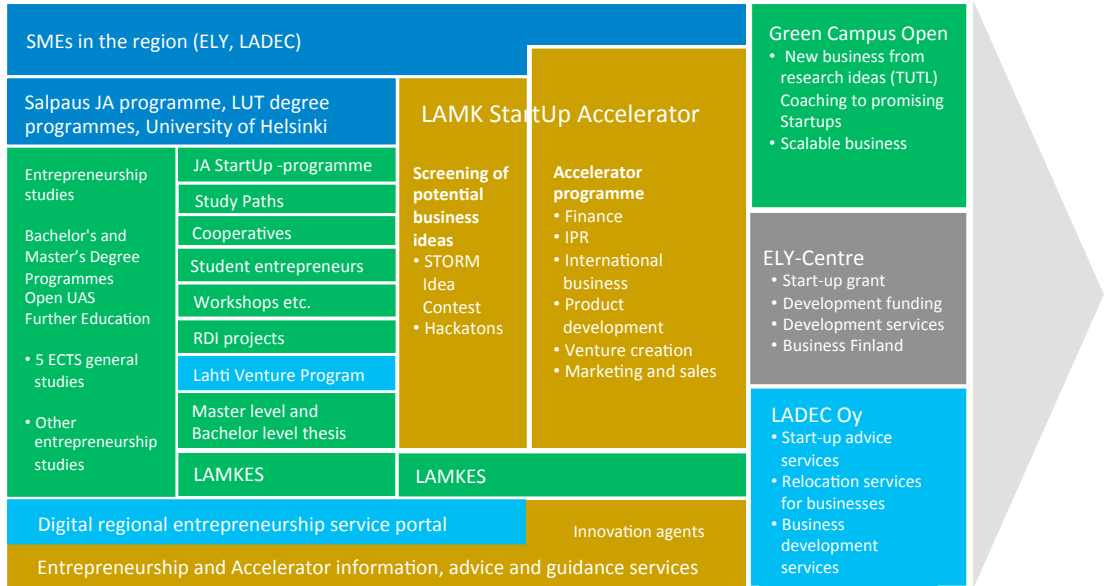
## **Starting point**

There are 9,576 enterprises in the Päijät-Häme region. 57 % of these operate in the service sector, which is slightly lower than the national average (61 %). The trade sector makes up 16 % of enterprises in Päijät-Häme, which is close to the national average (15 %). Correspondingly, the shares of manufacturing (10 %) and construction (17 %)

are slightly higher than the national averages. (SME barometer, 02/2017.) The most important manufacturing industries are the mechatronics, foodstuffs and furniture industries. (EURES 2018.) The industrial structure of Päijät-Häme is the third most multidisciplinary among Finland's provinces (Hautamäki et al. 2013), and enterprises engage in multiple fields of business. The versatile business structure of the region provides a solid foundation for various types of developing entrepreneurship and business activities. However, it is a recognised challenge that the existing measures to promote entrepreneurship do not adequately respond to the needs of enterprises.

The region also needs the development of student-originated entrepreneurship. In discussions between Lahti University of Applied Sciences and Lahti Region Development LADEC Ltd it has been found that students in higher education use the services of LADEC Ltd to establish new enterprises relatively little. It was noted at Lahti University of Applied Sciences that although all students complete some entrepreneurship studies, the distance from studies to startup enterprise services is too long. In relation to this, Lahti University of Applied Sciences decided in the autumn of 2017 to start development activities aimed at boosting the business of enterprises, with crucial target groups being enterprises established by higher education students and small enterprises operating in the region. The idea was to create a concept that would bridge the gap

## LAMK Start-Up path



**Figure 1. The role of LAMK Startup Accelerator in the student entrepreneurship path.**

between entrepreneurship studies and startup enterprise services. On the basis of negotiations over the matter, the Häme Centre for Economic Development, Transport and the Environment decided in the spring to give an enterprise operating environment grant to the development actions of the LAMK Startup Accelerator project.

### Background

The economic structure of Päijät-Häme is dominated by SMEs, and the region's strengths include a versatile industrial structure and an exceptionally large number of SMEs engaged

in exports. There are a lot of small enterprises in Päijät-Häme that are prosperous market leaders in their respective industries but are often overlooked (EURES 2018; Päijät-Häme business and growth prospects 2016). From the point of view of developing the region, actions to facilitate the establishment and growth of new enterprises come into focus as efforts are made to create new jobs and reform the economic structure. From this perspective, Päijät-Häme needs a multidisciplinary business accelerator that would support (student) start-ups and existing SMEs.

Key projects in the government programme are aimed at strengthening cooperation between higher education institutions and business life. The starting point is to improve higher education institutions' ability to respond to development needs in business life and to boost innovation activities. (Finnish Government 2018). In practice, this calls for the development of novel mechanisms for utilising the resources of higher education institutions and directing them to appropriately improve the competence and operating processes of enterprises and organisations. A business accelerator can be considered as such a mechanism.

In the regional strategy for Päijät-Häme 2018–2021 (Regional Council of Päijät-Häme 2018), creating economic growth through research and development activities is identified as one of the crucial opportunities. The region can be made more attractive, for example, by improving business opportunities and generating new competences. Development actions must improve the competitiveness of enterprises. This requires effort in building hubs for know-how, centres of excellence and reference environments that strengthen interaction between research, education and business life, as well as open innovation activities.

A multidisciplinary business accelerator is needed because the RDI activity of enterprises in Päijät-Häme and the Lahti region is lower than the national average. According to the Päijät-Häme plan for anticipated structural change drafted in 2016, the region's private sector R&D expenditure in 2013 stood at 1.3 %, which is clearly lower than the national average (compare with Pirkanmaa at 14.3 %). Furthermore, according to Hautamäki et al. (2013), Päijät-Häme was the third to last province when assessing the number of R&D personnel in working and business life.

## **Business accelerator to a hub for know-how**

A hub for know-how is forming in the Niemi region of Lahti. It consists of Lahti Science Park and the new university campus (M19). The new business accelerator will be a part of this hub. The intention is to build the accelerator into a regional reference platform in cooperation with the Green Campus Open accelerator at LUT-university in Lappeenranta (former Lappeenranta University of Technology). Operations of LUT-University in Lahti are also about to be relocated to the new university campus.

The planning of the business accelerator has also utilised the views of experts at Lahti Region Development LADEC Ltd, the Häme Centre for Economic Development, Transport and the Environment (ELY Centre), the provincial planning group for growth services, as well as feedback from enterprises in the Päijät-Häme region. According to the feedback, LAMK should enhance mechanisms and platforms where concrete actions can be taken on the basis of “from idea to commercial product”. According to feedback from parties involved in regional development, more support should be given to student entrepreneurship originating in the region's higher education institutions. Students should be encouraged to establish new enterprises and improve their own opportunities of finding employment.

Accelerating the operations of a student enterprise towards the final stage of studies becomes a challenge. Often the framework for starting up a business arises from one's thesis work or ideas created in a development project. Services will be built to support students in 1) identifying the commercial potential of a student's or student team's business idea and 2) creating the prerequisites for participating in workshops and coaching situations that provide informati-

on, advice and guidance (IAG) for developing a business idea into a business plan. IAG services are focused particularly on product development and commercialisation, such as protecting intellectual property rights (IPR), sales and marketing, electronic commerce, networking, financing and internationalisation.

### **LAMK startup accelerator project**

The project is funded by the Häme Centre for Economic Development, Transport and the Environment. The purpose of the project is to build and productise a multidisciplinary business accelerator at Lahti University of Applied Sciences that will serve the development of the region's working and business life and the creation of new enterprises. Its operations are based on research, development and innovation activities aimed from higher education institutions towards enterprises and entrepreneurship. The business accelerator supports the development of start-ups and existing SMEs in Päijät-Häme. A particular development target is student entrepreneurship originating from higher education. In the initial stage of the project, other accelerators will be benchmarked, and the experience gained will be used for the profiling and conceptualisation of the accelerator. It is essential to identify key customer groups and operating processes.

Mechanisms and practices will be created for identifying ideas that contain a lot of commercial potential. To support acceleration, high-quality information, advice and guidance services will be created, with emphasis on coaching related to issues such as establishing an enterprise, digital and service business, business-oriented networking, financing opportunities and international business. The goal is to create processes and mechanisms for the

accelerator that can be used for hatching such business plans from commercially potential ideas that can then be leveraged in the start-up services of LADEC Oy, seeking for start-up or development funding from the Häme Centre for Economic Development, Transport and the Environment or start-up coaching at the Green Campus Open accelerator.

### **Guidelines and targets for accelerator operations**

#### **Multidisciplinary joint development**

The starting point for the project is joint development through experiments, with efficient initial planning providing a fast track to experiments and the development of different practices. Support for practices that enable an experimental culture makes it possible to learn through competitions, events, workshops and intensive cooperation.

The accelerator is multidisciplinary so that it can take advantage of competence in LAMK's four different fields of education and the services of the new university campus. Multidisciplinary activities enable innovative and creative entrepreneurship. Start-up operations oriented towards higher education students provide a new opportunity of creating research-based, novel and innovative entrepreneurship that will reform the business life and economic structure of the region.

One particular feature is the involvement of LAMK Entrepreneurship Society (LAMKES) in the development of the accelerator operations. LAMKES is an association established by students for innovatively promoting student entrepreneurship. Its members are involved in development operations and creating new communal practices for screening business ideas and operating the accelerator programme.

### **Many paths to accelerator operations**

The role and opportunities of science and research-oriented start-up entrepreneurship in Päijät-Häme will improve substantially when all of the higher education units and secondary education institutions in the area are linked to the STORM business idea competition in the Lahti region. In the future, the aim is that the accelerator will be accessible through multiple alternative paths and routes. Entrepreneurial studies in Open University of Applied Sciences can also serve as a route for people outside the university and small enterprises to learn about the practices of identifying the commercial potential of a business idea (for example, participating in the STORM business idea competition) and the accelerator's information, advice and guidance services (such as an IPR workshop). Various parties meet in accelerator services, and mutual business synergies are unavoidable. In addition to studies in the Open University of Applied Sciences, paths to the accelerator can also be built from study modules (such as NY StartUp), RDI projects, the thesis process, the Lahti Venture Program, path studies, cooperatives etc.

### **Accelerator operations to bring regional and international growth**

New business acceleration practices speed up the birth of enterprises, as well as the start-up and growth of their business. Such practices include mutual networking between new enterprises, as well as with venture capitalists and existing enterprises. The project supports the region's intelligent specialisation in which the growth opportunities of enterprises are particularly viewed from the perspectives of strategically important competence areas, digitalisation and internationalisation.

Efforts put into the productisation and commercialisation of products and services offered by enterprises will improve their preconditions for growing and creating new business. At best, enterprises can gain the ability and willingness to grow their market by going to international business.

Piloting during the project is aimed to develop readiness for implementing continuous identification of potential ideas and frameworks and at least two accelerator programmes annually, which means coaching of some 40 to 60 newly established or existing enterprises in their way forward. The aim is that during the project, at least 100 enterprises will take part in information, advice and guidance events arranged by the accelerator. About 200 enterprises are expected to take part in innovative events and meetings arranged by the accelerator during the project.

The student enterprises and existing SMEs in the accelerator programme will learn to utilise the resources and competence of higher education institutions. At best, this means immense potential in the business development of a small start-up. Through the accelerator, enterprises can link to the research, development and innovation activities of Lahti University of Applied Sciences and Lappeenranta University of Technology, as well as their expertise and technological opportunities for business development. This is particularly necessary for small enterprises that do not have their own product development staff. Through the accelerator, SMEs have the opportunity to become involved in international networks of higher education institutions and to create new opportunities for the emergence of international business contacts and business planning.

## **Effectiveness of accelerator operations**

### **Short and long term effects**

In the short term, the accelerator will provide student enterprises and existing small enterprises with services through which they will be able to develop competitive products or services get to an independent growth path. The number of enterprises set up by students will increase as the accelerator is linked to the entrepreneurship training programmes and path studies of all higher education institutions in the region.

As a long-term effect of the project, the accelerator will promote the birth of new enterprises and the creation of new business in existing enterprises. The accelerator will increase the attractiveness of the region and facilitate the placement of new companies here. The internationalisation opportunities of small enterprises in the region will also become stronger. This supports the expansion and deepening of the region's economic structure. Furthermore, the accelerator promotes the creation of new jobs.

Another objective is that the students' commitment to the accelerator operations will increase their motivation to settle in the Päijät-Häme region as an entrepreneur. All of the factors described above increase the region's resiliency and its ability to prepare for structural changes.

### **Summary**

After the project ends, the accelerator developed within the project will continue as a part of Lahti University of Applied Sciences and remain a permanent structure activating cooperation with enterprises in the region. During the development work, cooperation relationships, earning mechanisms, processes and mechanisms will be built for maintaining a high standard of agile accelerator operations. The accelerator operations will increase innovation and business competence in the region and thus support the strengthening of regional entrepreneurial ecosystems. The role of Lahti University of Applied Sciences as a regional development organisation will become stronger through the accelerator operations.

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This is the second review of the publication series named the Lahti Design Annual Review. This publication presents the latest research, development and innovation activities in the field of design and entrepreneurship education. The aim of this review is also to introduce multidisciplinary development work and cooperation with companies and stakeholders. It contains eight articles written by experts and students from Lahti University of Applied Sciences.

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