



---

Activity Report of WP3.1

12 | 2021

---

# Customer Journey and Customer Relationship Management (CRM) System Requirements

**Authors: Päivi Aro & Anna Alapeteri**

## CONTENTS

1	Introduction of WP3.1	3
2	Theoretical background and the main concepts	4
3	Methods	6
4	Customer journey workshops	10
	4.1 Workshop 1: Jointly Describing the Customer Journey	10
	4.2 Workshop 1: Reflecting and evaluating the Customer Journey	19
5	Customer Relationship Management (CRM) system requirements specification	25
6	Conclusions and discussion	27
	References	30

## 1. INTRODUCTION OF WP3.1

WP3.1 consists of two tasks: the **customer journey** and the **customer relationship management (CRM) system requirements**. They are closely related, and the first task supports the latter.

In the **BSUIN project**, the general customer journey was briefly discussed and roughly sketched, and it was then stated that the customer journey needs to be created for the underground labs (<https://canvanizer.com/canvas/rg37NTprGvQQg>).

In this activity, the generic customer journey of the ULs was described, tested and evaluated by using Service Design and co-creation tools. Online workshops were organized with the ULs and interested project partners. The co-created customer journey was tested by the ULs with their customers, and the feedback was discussed with the ULs and network partners in online workshops.

Based on the previous workshops and the results of the BSUIN WP2.4, 3.2 and 3.5, a system requirements specification was provided to start planning a CRM system for the ULs (Final activity reports 2021). The System Requirements Specification includes a description of the functional requirements, system requirements, technical requirements, constraints, assumptions, and acceptance criteria. The contributors were the ULs, WP2 and WP4 representatives.

The main **target group** is the ULs within the project. The ULs will be able to manage their customer relationships better with the help of this activity. Another important group is the customers of the ULs. The CRM system enables the customers to get relevant information and feedback. It also engages them in the service process. In addition, the ULs in the Baltic Sea Region can expand their customer base to new areas and get new business.

The **outputs** of the WP3.1 are:

- 1) Customer journey of the ULs and online workshops. A visual ideal customer journey is described.
- 2) The content of systems requirements specification for a CRM system. The main elements of systems requirements specification are described.
- 3) Report of the activity, which is this paper.

## 2. THEORETICAL BACKGROUND AND THE MAIN CONCEPTS

**Customer journey** means the sequence of events that customers go through to learn about, purchase and interact with company offerings (Norton & Pine 2013). The customer journey is described visually, for example, customer journey map, customer journey canvas, service blueprint. The visualization of the customer journey can be used to describe the existing service and to sketch service improvements and innovations. (Stickdorn & Schneider 2011.)

Services are a series of interactions between customers and the service system through many different touchpoints during the customer journey. The touchpoints where customers interact with the service are often used to construct a “journey”. To describe the customer journey, good customer insight is required, not only from the service provider’s perspective. It provides a high-level overview of the factors influencing user experience, constructed from the user’s perspective. (Stickdorn & Schneider 2011.)

The common stages of customer journey (buying process) are awareness, consideration, acquisition, service, and loyalty. The customer journey related to the context of the project is described in FIGURE 1.

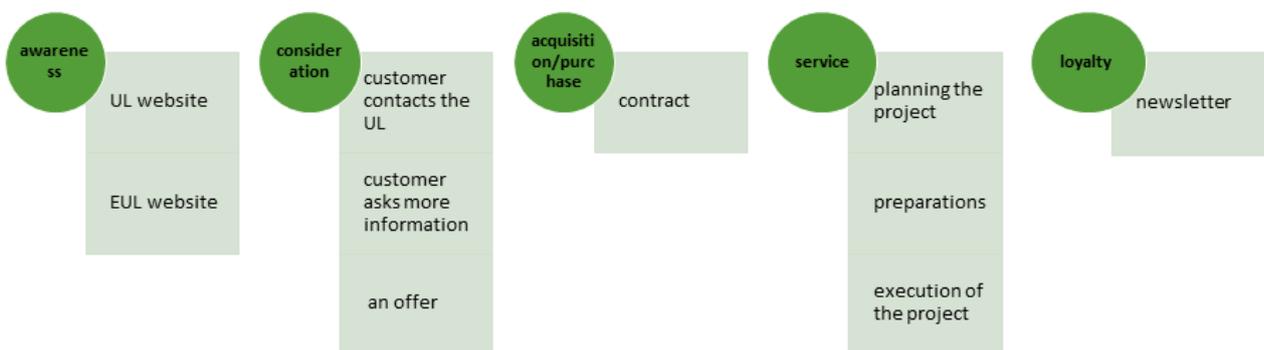


FIGURE 1: Common stages of the customer journey

Customer journey can also be staged: before service, during service and after service. Every service process follows a three-step transition of pre-service period (getting in touch with a service), the actual service period (when the customers actually experience a service) and the subsequent post-service period. (Stickdorn & Schneider 2011.)

**Customer relationship management** (CRM) can be defined as a strategic approach that is concerned with creating shareholder value through developing relationships with key customers and customer segments. It unites relationship marketing strategies with IT systems to create profitable, long-term relationships with customers and other key stakeholders. CRM provides enhanced opportunities to use data and information to understand customers, which requires a cross-functional integration of processes, people, operations, and marketing capabilities. (Payne & Frow 2005.)

From a cornucopia of CRM software in the market, choosing the right system may be challenging, but it is crucial to reap the benefits of CRM systems (Cricelli, Famulari, Greco & Grimaldi 2019). Thus, before a CRM system is acquired for a particular organization, precise CRM requirements and specifications should be defined. The main elements of a **system requirements specification for CRM** are, in general, a description of the functional requirements, system requirements, technical requirements, constraints, assumptions and acceptance criteria, including use-cases. (Lipiäinen 2014.) This is a prerequisite for marketing automation, which enables tailoring every interaction based on customer data to create ongoing, seamless journeys through every touch point. Marketing automation creates relevant content and messaging at scale across many channels.

### 3. METHODS

The implementation of WP3.1 is based on service design and its tools, and an online survey as a base for CRM requirements system.

#### Service Design

Service design can be considered as a mindset, a process, a toolset, a cross-disciplinary language, and a management approach. Service design has established itself as a practice that enables industries to design and deliver their services with a human-centered approach. Through its tools, service designers obtain contextual and cultural understanding, which creates a backdrop for new service solutions, with improved user experience and customer satisfaction. (Stickdorn & Schneider 2011 & 2018.)

Service design was used as an approach in the project because it helps to innovate or improve services to make them more useful, usable, desirable for customers and efficient as well as effective for organizations (Moritz 2005). Applying service design is a novel approach in this context, as its visual tools and customer orientation are believed to benefit such industrial B2B service development. Besides customer orientation, service design emphasizes the importance of the lucrativeness of the services being developed for the service provider.

The main principles of service design include the following (Stickdorn & Schneider 2018):

- *Human-centered*: the experience of all the people affected by the service is considered
- *Collaborative*: all relevant stakeholders should be included in the service design process
- *Iterative* means that service design is an exploratory, adaptive and experimental approach, iterating toward implementation
- *Sequencing*: the service should be visualized and orchestrated as a sequence of interrelated actions
- *Real*: needs should be researched in reality, ideas prototyped in reality, and intangible values should be evidenced in terms of physical artefacts or digital reality
- *Holistic* in nature: the entire environment of a service should be considered.

Service design was chosen as an approach, because it offered a process and toolset for the service development. As it is co-creative and practical with visual tools, it allowed underground experts from different disciplines, for example, physics and geology, to

collaborate. The project partners are familiar with service design and its tools, since they participated in such workshops in the BSUIN project. Because of COVID19, the workshops were online this time.

### Service Design workshops

Two online workshops were arranged according to the principles of service design. The main target group was the ULs within the project, and they were encouraged to invite their customers to the workshop. Also, all other project partners were invited, since they use underground labs and thus can be considered customers.

Workshop invitations, agendas and material were sent in advance to the partners. The premarketing of the workshops was actually launched in the project kick off and the partners were asked to save the date of the first workshop. Zoom was used as an online system, and Padlets were used as a tool in the workshops.

### Customer Journey Map as a tool

In order to create a generic customer journey, service design Customer Journey Map was used as a tool. The customer journey map provides a structured, linear visualization of a service user's experience. The touchpoints where users interact with the service are used in order to construct an end-to-end "journey". The journey may include recognizing a need, searching for a specific service, booking and paying it, and using it as well as possibly complaining. It is important to identify the touchpoints where the users interact with the service. They can take different forms, for example, personal face-to-face contact, virtual interaction with the website, a space or physical trips to a building. Once the touchpoints have been identified, they can be connected in a visual representation of the overall service. Photos, personal quotes and commentaries supplement the representation. The overview enables to identify the problems whilst focusing on specific touchpoints allows the service experience to be broken down into individual stages for further analysis. (Stickdorn & Schneider 2011, 2018.)

Customer journey maps can have various scales and scopes. What a customer journey map represents, its quality, its focus, and its level of detail, depends on many factors. Anyway, they make the intangible service visible and facilitate a common understanding between team members. (Stickdorn & Schneider 2018.)

The layers of the customer journey can be:

- main actor (customer profile)
- stages (the main phases)
- steps (each stage contains several steps, depends on the overall scale of a journey map)
- storyboards (illustrations, photos, screenshots)
- channels (means of communication involved at a specific step, e. g. website, face-to-face communication)
- stakeholders (list of stakeholders involved in each step, internal or external)
- backstage processes (reveal which departments or systems are involved in specific steps)
- what if (what could possibly go wrong at every step)?
- further lanes can be added, e. g. quotes from customer and employees, observations from researchers, documents, responsibilities, key performance indicators

### Online survey as a base for CRM system requirements specification

In order to provide CRM system requirements specification, an online survey was used to collect data from the ULs. An online survey as a data collection method was chosen on the one hand due to its efficiency and on other hand due to time restraints; interviewing all UL representatives would have taken too much time and would not have necessarily yielded better results.

Designing and conducting the survey was done in collaboration with a Master's degree student at Oulu University of Applied Sciences. The survey was implemented by using Webropol survey, which is a simple and easy data collection tool for research. The survey was planned in May 2021 in collaboration with the student and researchers of the task. In addition to providing background information, the respondents answered questions about the existing customers base of ULs, their current customer relationship management, and needs and constraints for a potential CRM system (Please see Appendix X). The survey was designed to include only essential information needed for the system requirements specification. The survey was tested before publication. The upcoming survey was communicated in the project newsletter published on the 8<sup>th</sup> of June 2021. The link to the survey with a covering note was sent to the representatives of six ULs on the 11<sup>th</sup> of June 2021. The ULs were advised to discuss the survey questions together with colleagues and requested to submit the responses by 30 June 2021. In August 2021, a reminder was sent to submit responses.

All in all, five ULs out of six submitted their responses. The data analysis was conducted in October–November 2021, by using Webropol survey tool. Although the number of respondents seems very low for a survey, the amount of data was sufficient for the purposes of the project and thus the data collection and analysis were successful. Instead of conducting statistical analyses, the data was explored and described in a manner that provided the information needed for the project. The analysis yielded the CRM system requirements specification presented in chapter 5.

## 4. CUSTOMER JOURNEY WORKSHOPS

In order to create the customer journey, two online workshops were arranged according to the principles of service design. The main target group was the ULs within the project, and they were encouraged to invite their customers to the workshop. Also, all other project partners were invited, since they use underground labs and thus can be considered customers.

### 4.1. Workshop 1: Jointly Describing the Customer Journey

The summary of the workshop 1 is described in TABLE 1 (below).

TABLE 1. Summary of the workshop

Name and Date	Number of participants	Focus of the workshop	Tools of the workshop	Results
Describing and elaborating the customer journey 14.4.2021 via Zoom	10 project partners	Essential steps of the customer journey, using before, during and after stages, and some cross-stage issues	Orientation material (the topics) in advance Padlets Interactive discussion	Content for the generic customer journey Critical points Joint understanding of the customer journey

## Invitation, orientation material and agenda

The calendar invitation was sent by using EUL email list ([bsuin@lists.oulu.fi](mailto:bsuin@lists.oulu.fi)) 23.3.2021.

The material of the workshop was sent a week before the workshop (5<sup>th</sup> April 2021) to all invited participants. They were asked to familiarize themselves with the material and especially the questions related to the customer journey. That was very important, because the schedule of the workshop was quite tight (90 minutes). The agenda is described in FIGURE 2.

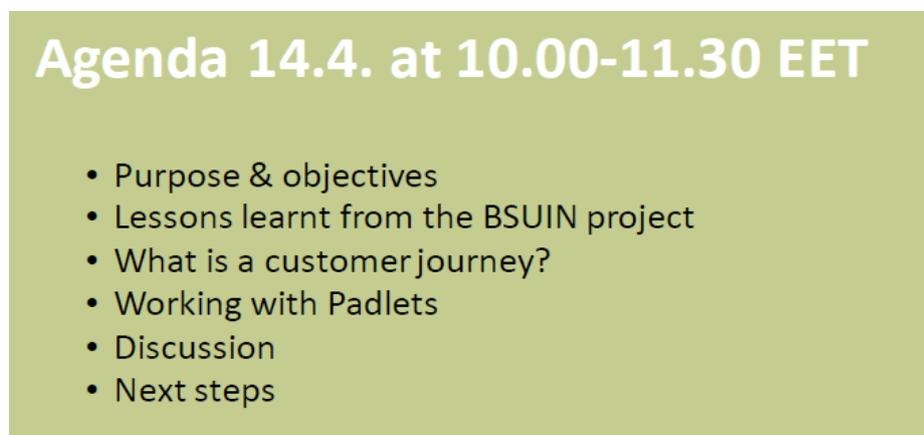


FIGURE 2. Agenda of the workshop 1

## Padlets ([www.padlet.com](http://www.padlet.com))

In order to generate ideas for the customer journey, four Padlets were used.

### 1. *Before the service (4 questions):*

- How can the ULs reach new customers?
- How does the potential customer become aware of the UL?
- When the customer is considering the acquisition (definitely needs the service), what kind of information does the customer need?
- How can the UL help the customer make the purchase decisions?

### 2. *During the service (3 questions)*

- Customers expect the service to be reliable, secure and certified. They appreciate physical accessibility, ready-made infrastructure and spaces, stability, predictability, good data connections, sustainability, price. How do we ensure that these features are put into practice during the service?

- What is important for the customer during the service (can sometime be a long process)?
- How do we ensure that the communication between the customer and the UL works?

3. *After the service (2 questions):*

- How do we ensure that the customer is satisfied after service?
- How do we maintain the relationship?

4. *All stages of the service (2 questions):*

- What is critical in different stages of the customer journey? (before, during and after)
- How can we surprise the customer in a positive way (what “wows” the customer)

There was approximately 10 minutes for each Padlet and then 5 minutes for discussion. The active participants produced a lot of ideas. The “Before”, “During” and “After” Padlets can be seen in FIGURE 3, 4 and 5 respectively. FIGURE 6 illustrates critical cross-stages matters.

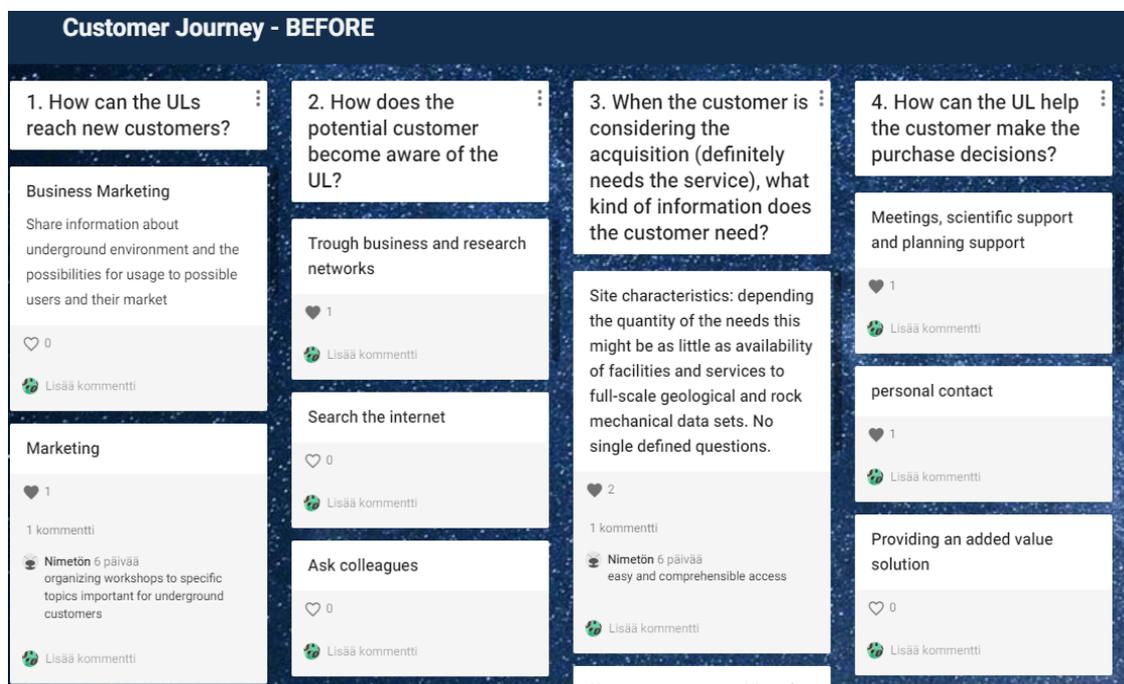
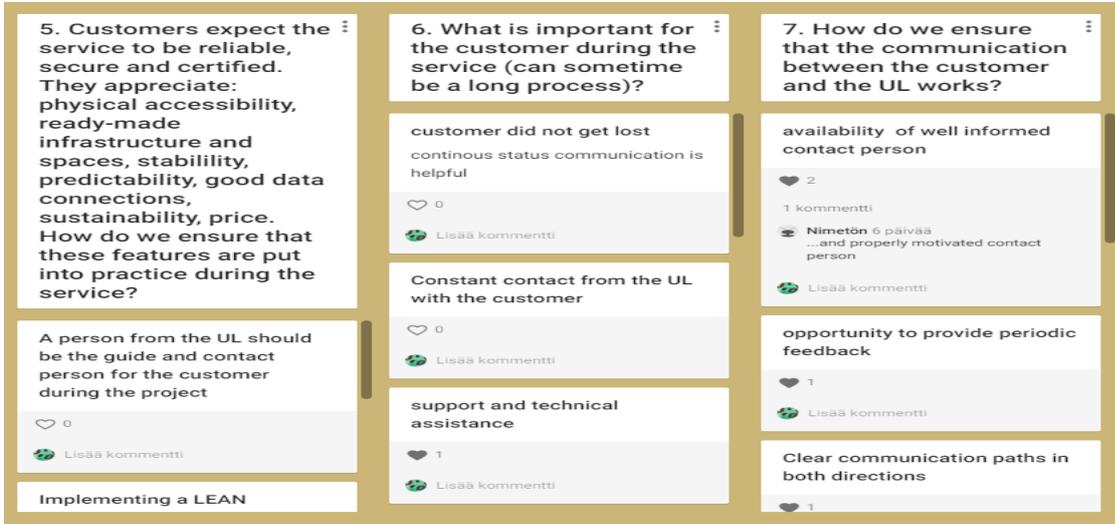


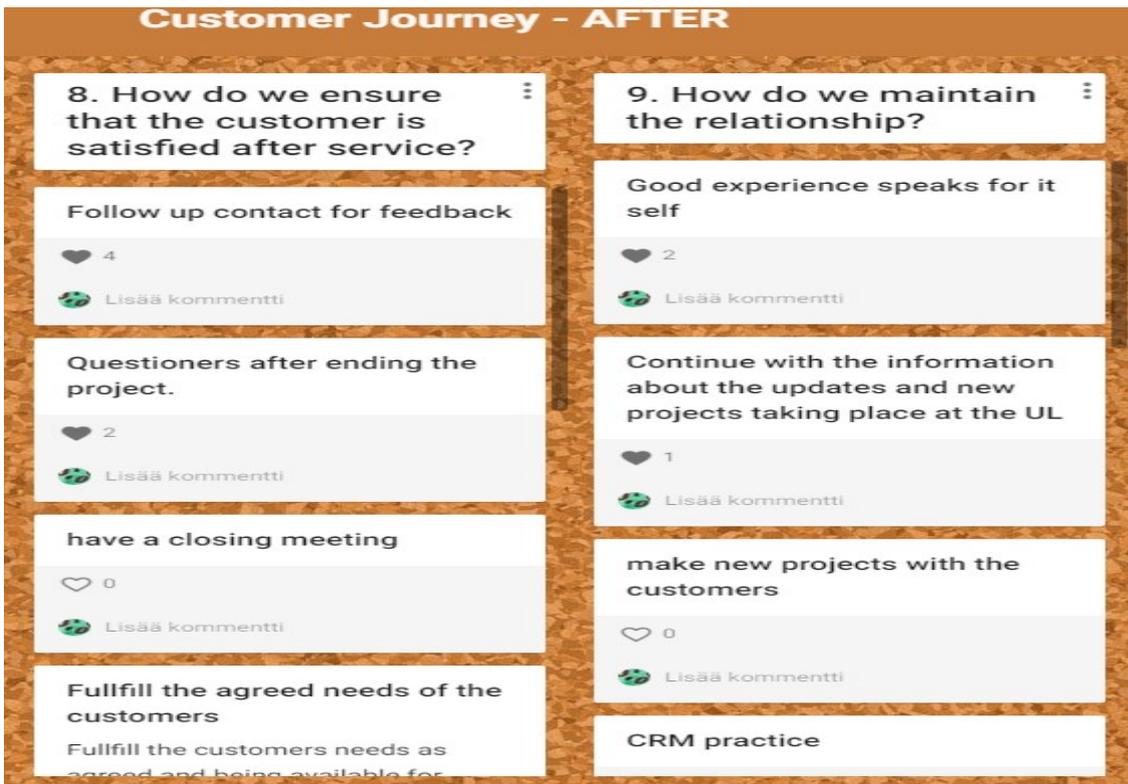
FIGURE 3. Before the service Padlets

**Customer Journey - DURING**



<p><b>5. Customers expect the service to be reliable, secure and certified. They appreciate: physical accessibility, ready-made infrastructure and spaces, stability, predictability, good data connections, sustainability, price. How do we ensure that these features are put into practice during the service?</b></p> <p>A person from the UL should be the guide and contact person for the customer during the project</p> <p>0</p> <p>Lisää kommentti</p> <p>Implementing a LEAN</p>	<p><b>6. What is important for the customer during the service (can sometime be a long process)?</b></p> <p>customer did not get lost continous status communication is helpful</p> <p>0</p> <p>Lisää kommentti</p> <p>Constant contact from the UL with the customer</p> <p>0</p> <p>Lisää kommentti</p> <p>support and technical assistance</p> <p>1</p> <p>Lisää kommentti</p>	<p><b>7. How do we ensure that the communication between the customer and the UL works?</b></p> <p>availability of well informed contact person</p> <p>2</p> <p>1 kommentti</p> <p>Nimetön 6 päivää ...and properly motivated contact person</p> <p>Lisää kommentti</p> <p>opportunity to provide periodic feedback</p> <p>1</p> <p>Lisää kommentti</p> <p>Clear communication paths in both directions</p> <p>1</p>
--	---	--

FIGURE 4. During the service Padlets



<p><b>8. How do we ensure that the customer is satisfied after service?</b></p> <p>Follow up contact for feedback</p> <p>4</p> <p>Lisää kommentti</p> <p>Questioners after ending the project.</p> <p>2</p> <p>Lisää kommentti</p> <p>have a closing meeting</p> <p>0</p> <p>Lisää kommentti</p> <p>Fullfill the agreed needs of the customers</p> <p>Fullfill the customers needs as agreed and being available for</p>	<p><b>9. How do we maintain the relationship?</b></p> <p>Good experience speaks for it self</p> <p>2</p> <p>Lisää kommentti</p> <p>Continue with the information about the updates and new projects taking place at the UL</p> <p>1</p> <p>Lisää kommentti</p> <p>make new projects with the customers</p> <p>0</p> <p>Lisää kommentti</p> <p>CRM practice</p>
--	--

FIGURE 5. After the service Padlets

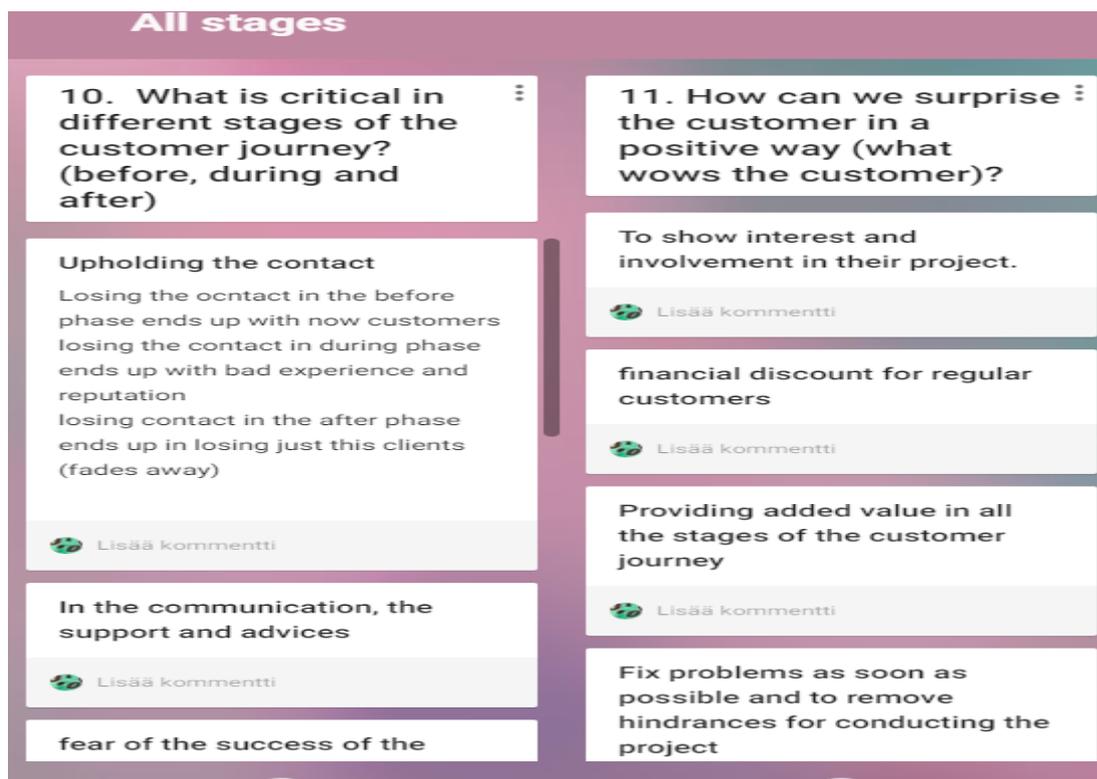


FIGURE 6. Cross-stages Padlets

## Results

The results/outputs of the workshop are compiled below based on the analysis by the facilitators.

### How can the ULs reach new customers?

- Marketing (e. g. share information)
- Organize workshops of specific underground topics
- Offer something disruptive (what??)
- Showcases
- Good examples as references
- Presentations during expos & conference
- Send offers with short description (to whom?)
- “Scientific marketing” by representing research results in scientific journals and conferences
- Newsletters
- Public information, also for great public
- Social media

- Provide service for different customer segments (science, tourism...)

### **How does the potential customer become aware of the UL?**

- Searching the internet
- Asking colleagues and business acquaintances
- Recommendations
- Website
- Blogs
- Networks
- From scientific journals
- Information desks at various professional events & conferences

### **When the customer is considering the acquisition, what kind of information does the customer need?**

- Technical / mechanical data sets (no single defined questions)
- Easy and comprehensible access
- How to operate at the UL and what kind of support is available at site?
- Does the service fit to the budget?
- Are there experiences available with these kinds of acquisitions?
- Parameters describing the conditions prevailing at UL
- Contact person

### **How can the UL help the customer make the purchase decisions?**

- Meetings
- Scientific and planning support
- Personal contact
- Provide an added value solution
- Innovation management system/department
- Fast response
- Personal touch
- By offering help and support
- Hold the contact to the customer
- Lower fee for new customers
- Data and contact person accessibility

- Offer benefits (e. g. network, contacts...)

### **How do we ensure that customers' expectations and valued features are put into practice during the service?**

- Contact person available at all times
- Lean management system for continuous improvement
- Customers need to be delivered existing availabilities (can be done, cannot be done)

### **What is important for the customer during the service?**

- Customer do not get lost (regular communication)
- Regular contacts with the customer
- Offer support and technical assistance
- Assistance is available at every stage of the operation
- Price as agreed
- Organizing quick help if needed
- Safe, secure and stable operational environment (also in the future and commitment to those)
- Clear responsibilities and structures

### **How do we ensure that the communication between the customer and the UL works?**

- Experienced & motivated contact person has an important role
- Periodic feedback
- Clear communication paths in both directions
- Get to know each other
- Implementing an agile and transparent online system in the EUL website
- Meetings
- Communication plan

### **How do we ensure that the customer is satisfied after service?**

- Follow-up contacts for feedback
- Feedback questionnaire after ending the project
- Closing meeting

- Fulfill the agreed needs of the customer
- Alumni club
- Use successful projects for the public available (case studies)
- Try to go one step beyond expectations

### **How do we maintain the relationship?**

- Good experience speaks for itself
- Keep in touch with the customer afterwards
- Have new projects with the customer
- CRM practices
- Keep abreast of the developments in the field
- Keep in touch for further business
- Newsletter
- Keep in touch in a network or a conference
- Provide new products / services that can meet the needs of the customer

### **What is critical in different stages of the customer journey?**

- Upholding the contact with the customer
- In communication support and advice are important
- Fear of the lack of support from the UL
- Transparency
- If the project stops suddenly for some reason
- Prompt feedback
- Deadlines are met
- Rules are not changed during the service
- Being prepared for situations that could be dangerous for the project
- Change of contact person
- Disruption in communication and support

### **How can we surprise the customer in a positive way (what “wows” the customer)?**

- To show interest and involvement in their project
- Financial discount for regular customers
- Providing added value in all stages (or maybe in some stages)
- Fix problems asap and remove hindrances for conducting the project

- Send an official letter of thanks for using the service of the UL
- Being aware of the situation of the customer
- Informing the public about excellent results
- Being emphatic and understanding, what could be the future needs for the success of the customer (understand what brings value to the customer)
- Invite the customer to a special event
- Offer possibilities to make a new project

Based on the results of the workshop, the first version of the generic customer journey was created by the facilitators of the workshop (OUAS team) with the help of the customer journey map. The preliminary customer journey is illustrated in FIGURE 7. The included layers of the customer journey were:

- Stages: awareness, consideration, acquisition, service and loyalty
- Customer steps
- UL steps
- Critical points
- Others involved

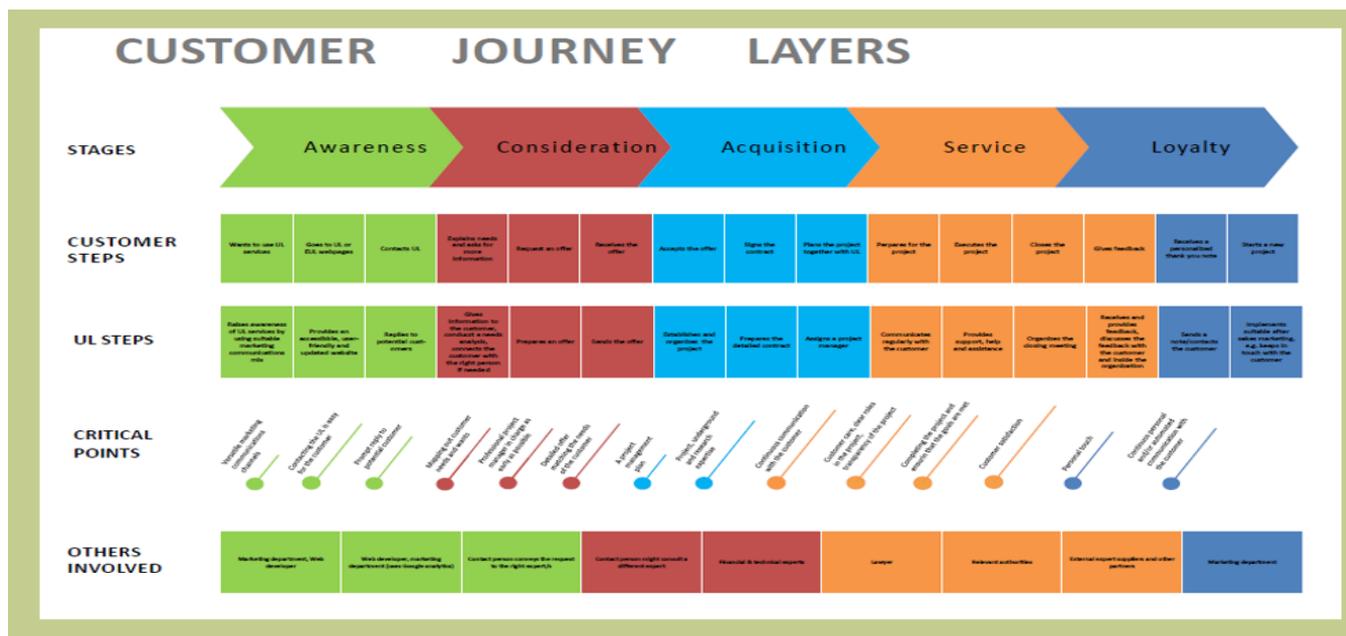


FIGURE 7. Preliminary customer journey



## 4.2. Workshop 2: Reflecting and evaluating the Customer Journey

The summary of the workshop 2 is described in TABLE 2 (below).

TABLE 2. Summary of the workshop

Name and Date	Number of participants	Focus of the workshop	Tools of the workshop	Results
Reflecting and elaborating the customer journey 2.6.2021 via Zoom	10 representatives of the ULs 2 representatives of project partners 1 associated partner 3 outside participants, companies ...	Fine tune & finalize the generic customer journey Focus on the beginning of the customer journey and transparency	First version of the generic customer journey (orientation material) in advance, Padlets, Interactive discussion	Improved content for the generic customer journey Issues to be highlighted

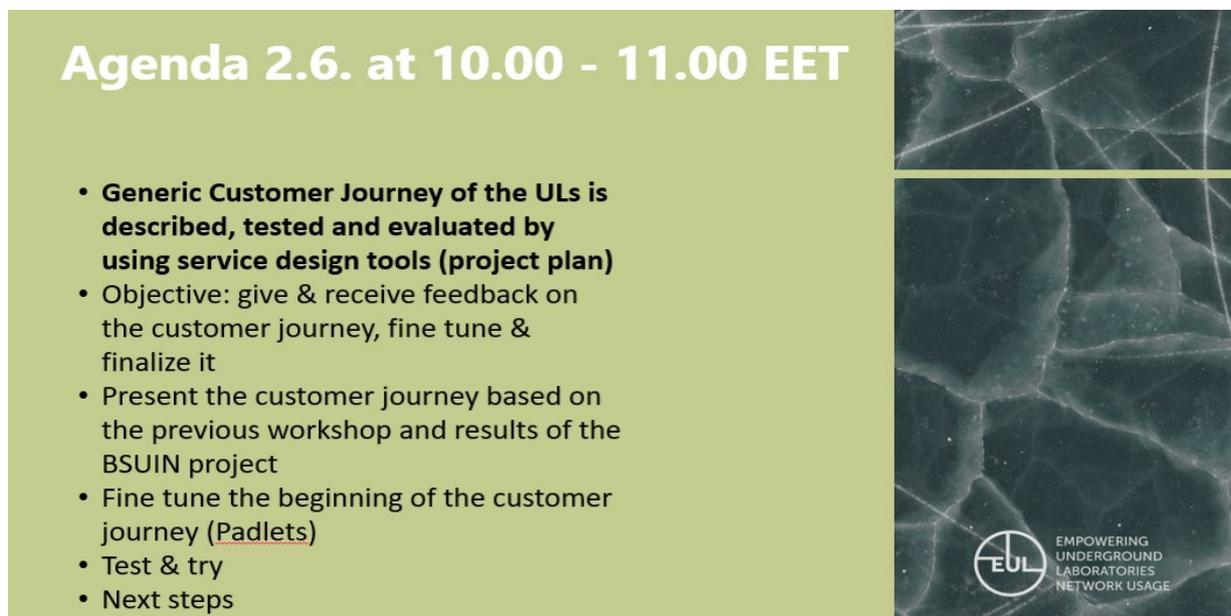
### Invitation, orientation material and agenda

The calendar invitation was sent by using EUL email list ([eul@lists oulu.fi](mailto:eul@lists oulu.fi)) on 10 May 2021.

The first version of the generic customer journey (FIGURE 7) designed by the facilitators was sent a week before the workshop (25 May 2021) to all invited participants. They were asked to prepare and familiarize themselves with it, because the schedule of the workshop was quite tight (60 minutes).

Based on the results of the previous workshop (14 April 2021), emphasis was given to the during and after service stages, whereas the before stage had a minor role and it needs to be

strengthened as well as the question of transparency. The agenda for the second workshop is illustrated in FIGURE 8.



**Agenda 2.6. at 10.00 - 11.00 EET**

- **Generic Customer Journey of the ULs is described, tested and evaluated by using service design tools (project plan)**
- Objective: give & receive feedback on the customer journey, fine tune & finalize it
- Present the customer journey based on the previous workshop and results of the BSUIN project
- Fine tune the beginning of the customer journey (Padlets)
- Test & try
- Next steps


 EMPOWERING  
 UNDERGROUND  
 LABORATORIES  
 NETWORK USAGE

FIGURE 8. Agenda of workshop 2

### Padlets ([www.padlet.com](http://www.padlet.com))

In order to generate ideas for the customer journey, a Padlet with two questions was used. The Padlets are illustrated in FIGURE 9. The participants were randomly divided into two groups. The questions were:

- How can the UL make an excellent impression on the potential customer in the awareness, consideration and acquisition stages?
- What does transparency in customer journey mean in practice? How do you make it visible?

There was approximately 10 minutes for each question and 20 minutes for discussion. The participants were very active and produced many ideas.

### Customer journey A

**1. How can the UL make an excellent impression on the potential customer in the awareness and consideration and acquisition stages?**

Visuallu and informatically clear web pages to start with. The pages need to guide from the beginning how to get in contact and what the underground facility is generally used for

Show the UL possibilities and support functions for the user trough web and marketing

**2. What does transparency in customer journey mean in practice? How do you make it visible?**

Show the steps of the customer journey at an early stage of the discussion

To be open about the possibilities and restrictions what can be done at the facility; addition to what the cost structure would be or consist of. Fair and square.

Provide detailed documentation on the as-built

### Customer Journey B

**How can the UL make an excellent impression on the potential customer in the awareness, consideration and acquisition stages?**

To give the clear info about all stages

the first impression is important; the customer needs to feel himself being inside an underground space with unique conditions.

a face-to-face meeting is easier to give this impression but when this is done virtually, the customer must be given a great impression as well, maybe by using VR,AG, MR techniques or 360o virtual tours

**What does transparency in customer journey mean in practice? How do you make it visible?**

Customer knows what is happening and who is doing what. E.g. link to process phase saying like we are working on to specify your contact person...

the customer should get answers about the reasons for each decision

highlighting the use of international standards and protocols e.g. for H&S that would make the customer understand the level of proficiency

FIGURE 9. The used padlets

## Results of the workshop 2

The results of the workshop are described below based on the analysis of the facilitators.

### **How can the UL make an excellent impression on the potential customer in the awareness, consideration and acquisition stages?**

- Visually and informatically clear website, first impression is important, and a good picture tells more than 1000 words
- Customer finds easily the information that is needed, for example, what is the underground facility used for, what can be done, access terms
- Using VR, AR, MR techniques or 360 virtual tours
- Cases, examples of ongoing projects
- Easy to get started, for example, how to get started, who to contact
- Customer becomes easily aware of the support that is available
- Fast customer service, for example, chat, response service with time frame
- Highlight successful projects
- References & recommendations
- Publications available
- Service offering (core and additional services) is clearly communicated and visualized
- Customer needs to feel being inside an underground space with unique conditions, wow factor!
- Contact person can provide relevant and sufficient information for the customer
- Safety, quality and environmental (sustainability) issues are professionally managed and communicated
- Different customer segments may need different information, for example, physics-based customer and geoscience-oriented customer. How is this solved?
- Customer visits the UL

### **What does transparency in customer journey mean in practice? How do you make it visible?**

- Customer is aware of all stages and steps of the customer journey beforehand and during the process
- Customer is duly informed during the entire process
- Clear & precise information, for example, what can be done, what needs to be taken into account in experiment planning
- Openness about the possibilities and restrictions on what can be done at the facility, communicate that clearly on the website

- Clear information on the conditions of use and access procedures before the purchase decision
- Clear cost structure
- Provision of detailed documentation on the as-built facility design
- Highlight the use of international standards and protocols
- Demonstrations of running projects, past successful projects
- References
- Visibility of ULs in scientific publication
- Obtain a respective “social license to operate”

Based on the results and discussion of the workshop, the facilitators made final touches to the generic customer journey. The changes that were made were minor. The revised customer journey can be seen in FIGURE 10. The fine-tuned generic customer journey was sent to the workshop participants on 9 June 2021. They received also an editable version and the results of the workshop. There were some guidelines to a test & try assignment in the report.



FIGURE 10. Revised customer journey

## Test & try

It is very important to test and evaluate the customer journey, which allows the ULs to get started with the customer journey. The facilitators gave some ideas for the ULs to test & try:

- Tell someone about the UL's services (you are selling)
- Look at your UL's website with the eyes of a customer. Is all relevant information there? Is something missing?
- Interview the contact person of your UL. What would s/he like to improve?
- Create a way to get feedback (short survey, email, interview...)
- Create a customer journey for your UL by using the template provided by OAUS
- Discuss in your UL, how you communicate to / with your customers (channels)
- Create a thank you note for your customer (do not forget the wow)
- Discuss how you ensure that customer is satisfied with your UL

## 5. CUSTOMER RELATIONSHIP MANAGEMENT (CRM) SYSTEM REQUIREMENTS SPECIFICATION

In this chapter, the CRM system requirements specification is described. The requirements for the CRM system are categorized into functional, technical, quality, cost, and security requirements, and can be found in TABLE 3.

TABLE 3. CRM SYSTEM REQUIREMENTS SPECIFICATION

Functional requirements	<p>The system:</p> <ul style="list-style-type: none"> <li>• has basic functions and features</li> <li>• enables users from under 10 to 70</li> <li>• manages bookkeeping</li> <li>• stores contracts</li> <li>• stores all customer data in one place</li> <li>• organizes customer database</li> <li>• manages the sales process</li> <li>• finds potential customers</li> <li>• tracks customer communications</li> <li>• prepares marketing reports and analyses</li> <li>• manages projects</li> <li>• helps customer service</li> <li>• manages social media channels*</li> <li>• manages marketing campaigns*</li> </ul>
Technical requirements	<p>The system is easy to:</p> <ul style="list-style-type: none"> <li>• use</li> <li>• install and configure</li> <li>• update</li> <li>• extend if business grows</li> <li>• integrate with current systems</li> <li>• tailor to specific needs</li> <li>• fix</li> <li>• adopt</li> <li>• use with different devices</li> <li>• integrate with 3rd party applications and programs*</li> <li>• integrate with social media channels*</li> </ul>
Quality requirements	The system is:

	<ul style="list-style-type: none"> <li>• provided by a reputable service provider: market share and customer rating</li> <li>• easy to adopt and use</li> <li>• easy to customize</li> </ul>
Cost requirements	<p>The system is:</p> <ul style="list-style-type: none"> <li>• reasonably priced</li> <li>• partner-hosted or on-premise solution according to organizational needs, which affects costs heavily (costs per users and features in a partner-hosted solution vs. acquisitions involved in on-premise solutions)</li> </ul>
Security requirements	<p>The system is:</p> <ul style="list-style-type: none"> <li>• private and secure</li> <li>• meets GDPR compliance requirements in EU area</li> <li>• fulfils the security requirements of different organizations</li> </ul>
To be noted*	<p>There was great deviation in some functional and technical requirements due to security issues. For example, some ULs prefer a system that does not manage, for example, marketing campaigns or social media channels or integrate with social media channels or 3<sup>rd</sup> party systems.</p>

## 6. CONCLUSIONS AND DISCUSSION

WP3.1 consisted of two tasks: the customer journey and CRM system requirements. They are closely related, and the first task supports the latter.

### **Customer journey**

The generic customer journey was described visually with the customer journey map, since it provides a structured, linear visualization of a service user's experience and helps the service provide to make their service more tangible and visible. In addition, it facilitates a common understanding between UL representatives.

Customer journey maps can have various scales and scopes. What a customer journey map represents, its quality, its focus, and its level of detail, depends on many factors. (Stickdorn & Schneider 2018.)

In this case the layers included in the customer journey map were:

- Stages (awareness, consideration, acquisition, service and loyalty)
- Customer steps
- UL steps
- Critical points
- Others involved

Since the customer journey map is meant for all ULs, it is generic, not too detailed, and not UL-specific. It is recommended that each UL describes its own specific customer journey. An editable version of the generic customer journey map has been provided for the ULs, and they were encouraged to use it.

It is recommended that the ULs also create a more detailed customer journey with service blueprint, which aids in describing the service processes, enabling clear and detailed descriptions of all relevant activities and participants and separating visible and backstage actions. The customer journey map is added with layers of frontstage and backstage processes. Service blueprints are set up to connect customer experiences with both frontstage and backstage employee processes as well as support processes. Frontstage refers to people and processes with which the user has a direct contact, whereas backstage represents people and processes that are invisible to the user. Support processes are usually executed by external partners. (Stickdorn & Schneider 2018.) There are plenty of free and editable service blueprints available.

When analyzing the workshop results, the facilitators noticed that the beginning of the customer journey could be strengthened by the ULs. That stage is critical and challenging for the ULs, since they need (new) customers and revenue streams.

Concrete action plan for the ULs:

- Every UL should name a responsible contact person
- Use of social media actively
- It is important to remember that everyone is doing marketing consciously or unconsciously
- ULs need a marketing expert
- The customer journey map should be tailored to the specific need of each UL
- Introduce and look over the customer journey with all those who are involved in it
- Revise the customer journey regularly, for example, once a year
- Bring after-sales activities into use, for example, feedback survey

The ULs were also recommended to think what “wows” and delights the customer. These ideas can be found in chapter 4.1.

### **CRM system requirements specification**

In this project, the requirements and specifications for a CRM system for the ULs were defined. The purpose of the requirements was to help the ULs choose a CRM system that caters for their customer relationship management needs. Adopting a CRM system can help the ULs develop a more systematic and professional approach to managing relationships with key customers and segments. A CRM system could also help the organizations use data to understand their customers in a more profound way. (Payne & Frow 2005.)

When considering the CRM system, it must be borne in mind that the ULs are not a homogenous group but a collection of organizations in different countries with, for example, different resources and limitations, and have thus different needs and requirements for the system. For example, most ULs employ only a small number of people, whereas one of the ULs was clearly a larger organization with almost 100 employees. Choosing the right CRM system is challenging for one organization (Cricelli et al. 2019); choosing one right system for

several organizations is downright impossible. Thus, the system requirements defined in this project serve as a starting point for the acquisition of a CRM system, but each UL should consider the requirements from their perspective.

Although the ULs have different needs and requirements, there are also similarities that have been considered in the specification. For example, in this business context the system must meet the highest security needs due to highly confidential data, and thus the security of the system is a key factor in the selection most likely for all ULs. The security aspect should be taken into consideration, for example, when choosing between a cloud-based service and an on-premise solution. In addition, the ULs currently do not have marketing personnel and extensive experience in CRM systems, which suggests that at this stage the system should be easy to adopt and use with very little training effort. In the induction stage, it is advisable to acquire a system with basic functions and features in order to keep the system simple, but a good system can be extended and upgraded if more functions and features are required in the future. In this business context, an active sales aspect may not be as important as organizing all customer data in one place.

The number of different CRM systems in the market is both a blessing and a curse; on the one hand, it might be difficult to choose a system from the cornucopia, but on the other hand, there are many good alternatives in the market. Whichever system a UL decides to purchase, it is essential that the organization commits to using the system to reach the full potential of the system. It is also important that the organization names a person in charge of the system and makes sure that the employees who will be using the system are trained to use the new system. It can also be useful to inform customers about the system, which can be a positive sign for the customers, indicating that the organization cares about their customers, is willing to invest in customer relationships and wants to take their CRM to a next level.

## REFERENCES

Aro, P., Ahola, H. & Vuorela, T. 2019. Creating New Innovation Services for Underground Labs in the Baltic Sea Region via Service Design: Part 1: Exploration. ePooki. Oulun ammattikorkeakoulun tutkimus- ja kehitystyön julkaisut 53. Cited 15.03.2021. <http://urn.fi/urn:nbn:fi-fe2019061921339>.

Aro, P. & Ahola, H. 2020. Creating value propositions and service offering for the underground labs and their network: Part 2: Creation and reflection. ePooki. Oulun ammattikorkeakoulun tutkimus- ja kehitystyön julkaisut 62. Cited 28.10.2021. <http://urn.fi/urn:nbn:fi-fe2020082763350>.

Cricelli, L., Famulari, F.M., Greco, M. and Grimaldi, M., 2020. Searching for the one: Customer relationship management software selection. Journal of Multi-Criteria Decision Analysis, 27 (3-4), pp.173-188.

Final activity reports. 2021. Referred 1.11.2021. <http://bsuin.eu/2021/01/08/bsuin-final-reports>

Lipiäinen, H. S. M. 2015. CRM in the digital age. Journal of Systems and Information Technology, 17 (1), 2-19.

Moritz, S. 2005. Service Design: Practical Access to an Evolving Field. Köln International School of Design.

Norton, D.W. and Pine II, B. J. 2013. Using the customer journey to road test and refine the business model. Strategy & Leadership Vol. 41 No. 2, 2013, 12–17.

Payne, A. and Frow, P., 2005. A strategic framework for customer relationship management. Journal of marketing, 69(4), pp.167-176.

Stickdorn, M. & Schneider, J. 2011. This is service design thinking. Basics - Tools - Cases. Amsterdam: BIS Publishers.

Stickdorn, M., Hormess, M., Lawrence, A. & Schneider, J. 2018 This is service design doing. Applying Service Design Thinking in the Real World. A Practitioner's Handbook. Sebastopol, USA: O'Reilly.