Toolbox for analysing consumers, target groups, challenges and conditions

Summary

In this document the toolbox to be used in WP3 to perform task 3.1 is presented. The toolbox consists of four tools to be used to 1) analyze customer needs, 2) select and describe the target group for the service innovation into personas, 3) identify and describe the transport challenge to be focused, and 4) the current conditions in the region to perform service innovation. The toolbox should be used within each region during the spring of 2012 to create good prerequisites for the service innovation workshops that will commence following the Gothenburg workshop in June 2012.

Document Information

Authors

Name	Partner	Email
Niklas Johansson	VIKTORIA	Niklas.johansson@viktoria.se
Anders Hjalmarsson	VIKTORIA	Anders.hjalmarsson@viktoria.se
Koen Salemink	Rijksuniversiteit Groningen	K.Salemink@rug.nl

Editor

Name	Niklas Johansson (Task leader 3.1.1)
Partner	VIKTORIA
Address	
Phone	
Fax	
Email	

History

Version	Date	Changes
V0.0	20-01-2012	Document created
V0.1	03-02-2012	Document structure added
V0.8	15-02-2012	First version of Toolbox completed
V0.9	06-03-2012	Templates added for Tool 1, Tool 2, and Tool 3
V2	05-04-2012	Regional context toolbox added

Distribution

Date	Recipients	Email / distribution
15-02-2012	WP3 Participants and ITRACT project management	Projectplace
05-04-2012	WP3 Participants and ITRACT project management	Projectplace

Table of content

1   Introduction

This document provides a toolbox to perform the work in task 3.1; hence the analysis of customer needs, target groups/personas, challenges and regional context as base for the conceptual service innovation to be done in task 3.2. The aim with the toolbox is to provide a set of comprehensive and straightforward tools/work models to be used by the different partners in order to align the analysis that has to been done in the different regions and create a unified and prioritized base for conceptual service innovation.

1.1   Composition of the toolbox

The toolbox consists of four work models to be used to perform the different steps in task 3.1 (see section 1.2):

- **Tool 1:** a work model for understanding **customer needs**. If a material exists that describes customer needs, this material should be condensed into a brief summary of customer needs. If knowledge about customer needs is absent, then data must be collected by customer focus groups, interviews or a customer questionnaire.
- **Tool 2:** a work model for analysing the **target group** in the specific region and design suitable **user personas** representing the target group. The tool is presented in chapter 2.
- **Tool 3:** a work model to document the **transport challenge(s)** that the user persona(s) currently have in the specific region. The tool is presented in chapter 3.
- **Tool 4:** a work model to summarize the **regional contexts** existing in the specific region based on the situational analysis of the region (outcome from Task 5.4 and 6.1). The tool is presented in chapter 4.

1.2   Work process in task 3.1

The tools in the toolbox are to be used in WP3 during spring of 2012. The work process that comprises this phase of the ITRACT project is depicted in figure 1. Tool 1 aim to provide support in the first step of the activities that has to be performed during spring of 2012. The aim with this step is to delimit the scope of the project by analysing the needs that the customer has in each specific region. This could be done by analysing present material describing customer needs or by collecting and analysing customer experiences using one or several data collection techniques (e.g. interviews, questionnaires and/or focus groups). In the second phase a specific target group for each region is selected. The selected target group is described (represent) in one or several user personas.

In the third phase the aim is to identify and describe the transport challenge that the user personas currently have in each specific region. The third step aims to derive needs for conceptual service innovation based on the designed personas and the identified transport challenge. As a final step in the spring of 2012 the work process in WP3 will include an analysis of the conditions to perform service innovation in each region. When analysing the conditions, the outcome from WP4 and 6.1 will also be used as it provides knowledge about the regional as well as the technical data situation is each region.

Customer needs	What does the customer need in the specific region?
Target group and personas	Who is targeted for service innovation in the specific region?
Transport challenges	What transportation challenges are addressed in the specific region?
INPUT FROM WP 6 / INPUT FROM WP 4 → **Regional context**	Which conditions exist for service innovation in the specific region?

Service Innovation Workshop · Service Innovation Workshop · Service Innovation Workshop · Service Innovation Workshop · Service Innovation Workshop
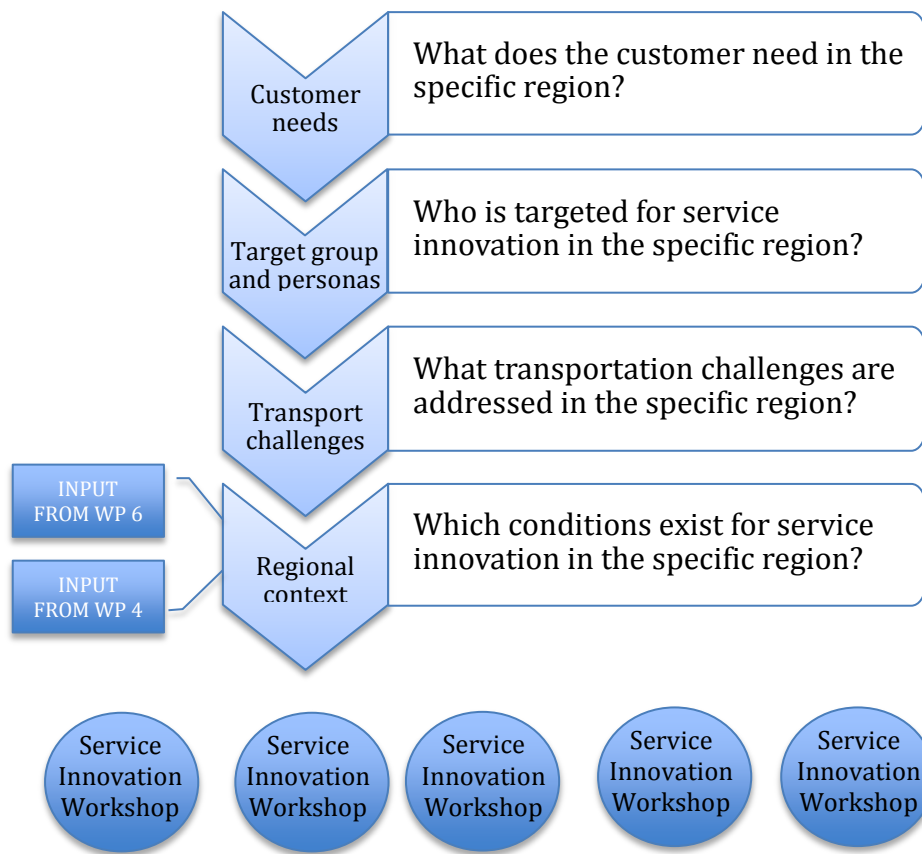
Figure 1. The work process in WP3 (Spring 2012)

2 Tool 1: Customer Needs Assessment

2.1 Introduction

The first step in reaching a good understanding of what type of service that is needed in the region is to get a good understanding of the customer. This can be done in various ways. Focus groups, interviews or questionnaires are common tools for this purpose. We do believe that it is likely that you already have some knowledge about customers in your region. In that case, all you have to do is to summarize this knowledge in a few pages. If you don't have any previous knowledge about customers in your region a little more work effort is required.

2.2 Tool Description "Customer Needs Assessment"

Understanding the customer can mean different things depending on your purpose. If you are about to initiate a service development process (which is the case here) you need to understand how customer perceive the service you offer today and you need to understand what the customer would like the service to be in the future. One way of doing that is to get a better understanding of customers needs. Sometimes it is better to focus on needs rather than ideas about a new potential service. The reason is that sometimes customers don't know so much about the transportation system, rules and regulations. But if you can get the customer to talk about their needs then it is possible to use that knowledge as a start of a service innovation process. It will also ensure that you don't go in the wrong direction from the start.

There are certain methods to use for understanding customer needs. Most of you probably have experience of some methods. The most common one is probably in-depth interviews, which is a qualitative method. Another qualitative method is the focus group method. A focus group is a focused discussion where a moderator leads a group of participants through a set of questions on a particular topic. Focus groups are often used in the early stages of service development and requirements gathering to obtain feedback about users, products, concepts, prototypes, tasks, strategies, and environments.

Quantitative methods can also be useful for understanding customer needs. A questionnaire, which is a quantitative method, is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. Although they are often designed for statistical analysis of the responses, this is not always the case.

Whatever method you decide to choose, some of the above-described methods or something else, the importance is that you feel comfortable that the result have given you valuable knowledge about your customers needs.

2.2.1 Analysing Customer Needs

Aim: The aim with this tool is to gain knowledge about user needs for the region.

Procedure: Start by assessing what studies has already been made and what knowledge you have of your customers needs. If you feel this is sufficient and adequate knowledge, all you have to do is to make this knowledge comprehensible for any other person involved in this project from your region. On the other hand, if you feel that the understanding of your customers needs is somewhat incomplete you need to initiate the start of a new study.

Output: A comprehensible summary describing users needs in the specific region, not exceeding 1500 words.

3 Tool 2: Target Group Selection and User Persona Design

3.1 Introduction

The approach for conceptual service innovation that is used in ITRACT rests on the idea that digital innovation originates from understanding why a novel system, product or in this case a service is needed. One component in that understanding is the articulation of the needs that the intended user has of the service. In order to support the articulation of such user needs a *target group* for the intended service must be selected and motivated in each region. This selection activity must then be followed by an activity in which the target group is represented and described. A *user persona* represents one segment of the target group today. The individual in the user persona does not exist. He or she instead is grounded in data about the user segment and depicts this part of the target group. The purpose with the user persona is to inspire design of new products and services by providing support to the designer to go beyond his or hers own values and wishes connected to the service. By focusing on needs connected to the persona the designer receives base from which he/she can design purposeful new services for the target group.

An example of the differences between target group and user persona:

- Target group: Middle aged commuters in Western Sweden
- User Persona: Janne Björkman 53, living in a municipality outside Gothenburg in Western Sweden

The target group is hence based on actual demographic data about the region. The user persona is then developed and designed based on sensitive judgments made using target group data. It requires motivated selections in regard to how to delimit and focus the target group (for example gender, age, living location). In this case, Janne, is created as a representation for the target group. He does not exist in reality, he instead represents a common group within the target group and he is created based on knowledge derived from demographical data about the target group. He represents one section of the target group, a section that the designers have decided to focus on. As figure 2 illustrate the user persona is often described as a story in which the story is connected to the purpose with the innovation (e.g. personal transportation). The story is a representation of how the target group, represented by the persona, lives their life. In this example Janne mostly travels by car because according to him it is simple and quicker and gives him comfort, privacy and control. A user persona should therefore be based on an analysis of the values that the target group have in regard to the purpose of the innovation. It could also include a route map depicting an often-used commuter route and travel time. It could as in the example in picture 2 also include a bio, information about the family, information about hobbies. Several user personas could be designed in order to cover a wider section of the target group, for example:

- Target group: Middle aged commuters in Western Sweden
- User Persona 1: Janne Björkman 53, living in a municipality outside Gothenburg in Western Sweden – commutes to and from work outside of Gothenburg.
- User Persona 2: Christina Steen 49, living in Gothenburg in Western Sweden – Commutes to and from work within Gothenburg

In this expanded example a second user persona is derived in order to widen the focus in the service innovation by adding two aspects: a new gender and also geographical living location and thereby commuting route.
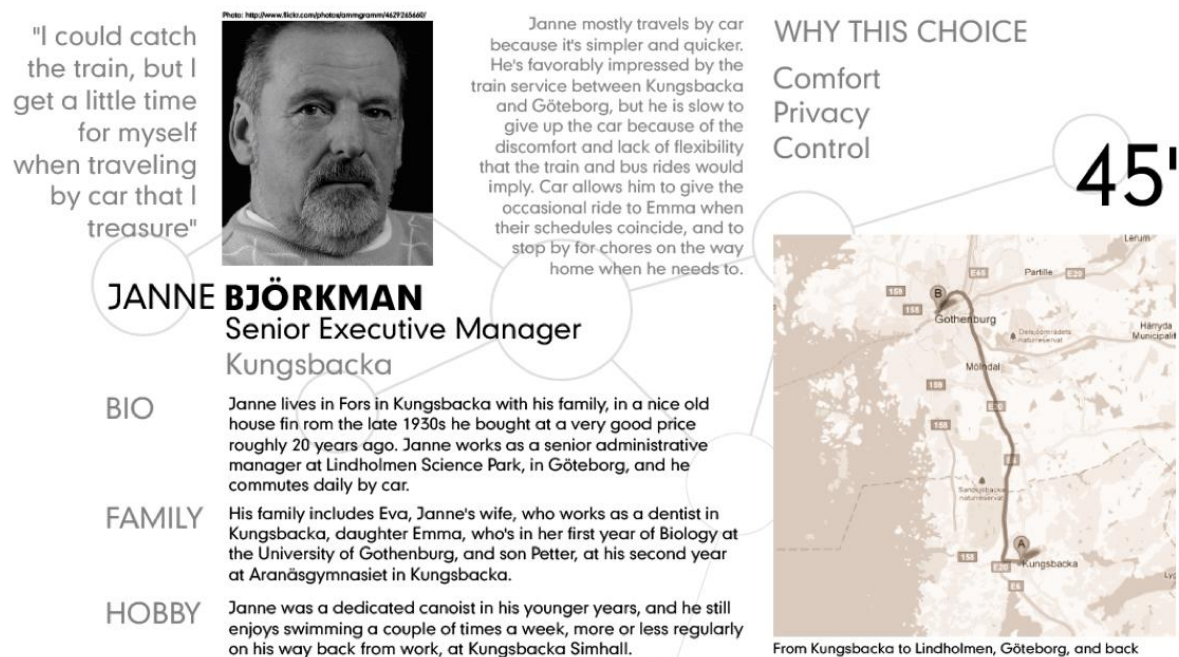

Figure 2. Example of User Persona representing a Selected Target Group (A. Resmini 2011)

3.2 Tool description "Target Group Selection and User Persona Design"

This section provides guidelines for how to use the tool. The guidelines are tentative and provide a baseline for selecting target groups and designing user personas. By following the guidelines outcomes are created which are easily compared and also easy to communicate to individuals outside the work package.

3.2.1 Target Group Selection and Description

Target Group Selection

Aim: The aim with this tool is to end up one or several selected target groups for the specific region.

Procedure: In order to select the target group a number of questions could be asked:

10

- Which target group should be selected in our region?
- Why should the selected target group be selected?
- Should a sub-group within the selected target group be selected?
- If a sub-group is selected why should this sub-group be selected?

Output: A target group selected for the specific region as well as grounds for selecting the target group

Target Group Description

Aim: The aim with this tool is to end up with a description of the selected target group for the specific region.

Procedure: In order to describe the target group a number of questions could be asked:

- What characterize the target group in the specific region in term of size?
- What characterize the target group in the specific region in term of location?
- What characterize the target group in the specific region in term of travel behavior?
- What characterize the target group in the specific region in term of technology adaption?
- These examples of questions for characterizing the target group could be complemented by criteria's such as:
    o Income
    o User status
    o Service adoption
    o Travel behavior
    o […]

Output: A general description of the target group selected not exceeding 1000 words.

3.2.2 User Persona Design

User Persona Selection

Aim: The aim with this tool is to end up one or several user personas representing the target group selected for the region.

Procedure: In order to select the user persona a number of questions can be asked:

- Through which fictional persona or personas do we best represent the target group?
- Why do we choose this and these user personas to represent the target group and not other personas?

Output: One or several personas to be developed in order to represent the target group

User Persona Representation

Aim: The aim with this tool is to end up with one or several user persona descriptions

Procedure: In order to represent the user persona a number of questions can be asked:

- o What is the name of the persona?
- o What is the occupation of the persona?
- o Where does the persona live?
- o What is the short bio of the persona?
- o What is the family situation of the persona?
- o Which is his/hers hobbies?
- o What characterize his travel behavior?
- o Why this choice?
- o His/hers travel route?
- o His/hers travel time?
- o A quote describing his current choice of traveling.

Output: A description of each persona not exceeding 1500 words also summarized in a model similar to the one represented in figure 2.

4 Tool 3: Transportation Challenge

4.1 Introduction

One or several transportation challenges must be defined and selected in order to focus the service innovation that should be performed in each region during fall of 2012. The transportation challenge should be anchored in the user personas life situation and illustrate a value or situation that the result of the service innovation should meet. In the example used above to introduce user personas, Janne Björklund was introduced as the representative for the target group middle aged commuters in Western Sweden. When a target group like this and one or several user personas representing this group are selected a challenge might be designed based on the outcomes achieved from using the first tool in this toolbox. By analyzing customer needs and compare these with the characteristics of the user persona one or several challenges at hand for the persona illuminates'. For middle aged commuters in Western Sweden accustom to the car as the main vehicle for transportation the transportation challenge to address for service innovation might be articulated as "making place for public transportation" in Janne Björklunds life. The self-view that the target group in question have is that public transportation has no place in current life situation. The view is that public transportation does not fit the life situation and is consequently not used as mode of transport for daily commuting. The challenge is hence to innovate services that alter this self-view and makes place for public transportation in the personas life.
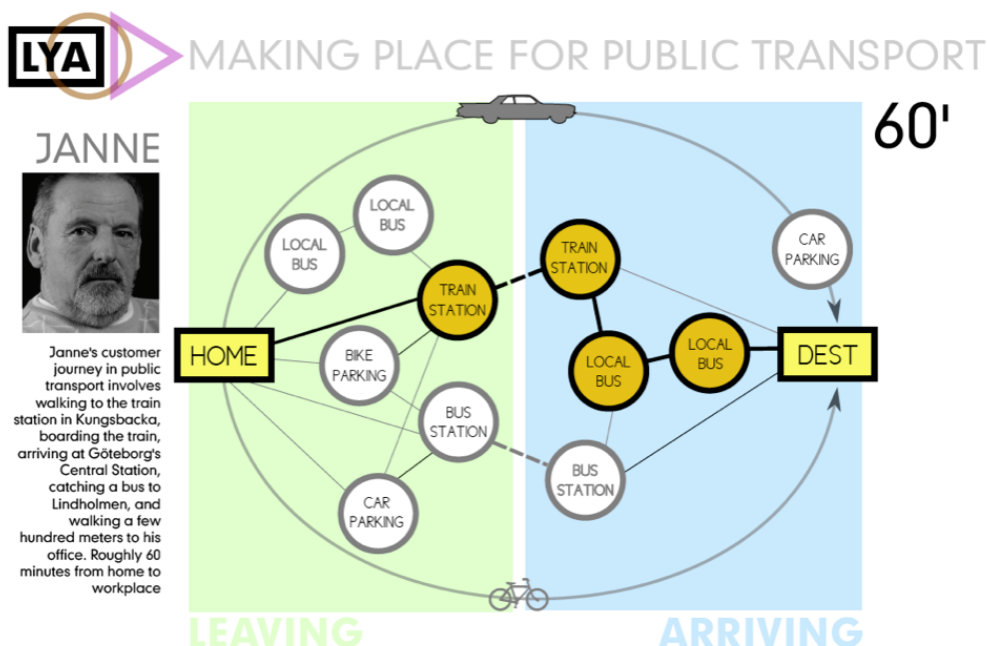

Figure 3. Example of Articulating the Transportation Challenge for the User Persona (A. Resmini 2011)

One way of preparing conceptual service innovation besides articulating the challenge as such is to correspondingly model and illuminate different paths for the persona to reach his or hers destination, and relate this to the transportation

challenge at hand. Figure 2 is one way of summarize the outcome from these activities. The route could then be divided into the phases leaving home and arriving to the destination. The journey could be performed by using bike or by using car. Besides these modes of transportation public transportation might also be used by the persona to reach the transportation. The inter-regional bus service could be used which however require that he either use his car or his bike to go to the bus station where he changes to the inter-regional bus. He then could take two local bus lines to his destination or walk the distance from the inter-regional bus station. He could as complement, and chosen most appropriate for the persona, take the commuter train that he either can reach by to local buses from his home or by a walk to the train station. When arriving to the destination he could either take the local bus to the destination or walk the final distance to the destination. In a glance this representation both declare the transportation at hand for the persona and at the same time illustrate the transportation situation (choices to be made) that the persona has to make in order to reach the destination. With this pre-understanding as baseline, conceptual service innovation can be performed in order to discover service innovation ideas solving the transportation challenge at hand.

4.2 Tool description "Transportation Challenge Description"

This section provides guidelines for how to use the tool. The guidelines are tentative and provide a baseline for selecting and describing the transportation challenge at hand in the region. By following the guidelines outcomes are created which are easily compared and also easy to communicate to individuals outside the work package.

4.2.1 Transportation Challenge Selection

Aim: The aim with this tool is to end up with one or several selected transportation challenges for the persona(s) designed for the specific region.

Procedure: In order to select the transportation challenges a number of questions could be asked:

- What is a suitable transportation challenge for the selected user persona to address for service innovation in the specific region?
- What does the target group mention as needs regarding everyday travel?
- What challenges are the causes behind the needs mentioned?
- What challenges can be derived from the user persona descriptions?
- What are the current trends regarding everyday travel and public transportation?
- Which challenges might these trends cause for the target group if they are implemented?

Output: One or several transportation challenges selected for the user personas defined

4.2.2 Transportation Challenge Description

Aim: The aim with this tool is to end up with a description of the selected transportation challenges for the specific region.

Procedure: In order to describe the transportation challenges a number of questions could be asked:

- What characterize the selected transportation challenge?
    o Is it a technical challenge?
    o Is it a behavioral challenge?
    o Is it a combination of different types of challenges?
- How could the journey for the user persona be understood and modeled?
- Which modes of transport could the user persona utilize in order to travel from point A to point B?
- How is the challenge identified connected to this typical journey?

Output: A general description of the transportation challenge at hand for the user persona selected, including a model and not exceeding 1500 words.

5 Tool 4: Regional Context

5.1 Introduction

By now, knowledge has been gained about customer needs, target groups, user personas as well as transportation challenges. To a rather high degree this knowledge is related to the individual. However, in order to fully understand service innovation needs, knowledge about contextual factors for the specific regions are of equal importance. The purpose of Tool 4 is to be acquainted with the results of the questionnaire conducted by WP6 and if necessary add missing key factors for understanding the regional context. In addition, WP 4 will deliver input about technical constraints and knowledge about data sources.

5.2 Tool description "Regional Context"

In Tool 4 the actual work consists more of gathering and summarizing previously collected knowledge rather than generate more knowledge. The main purpose of Tool 3 is to put together all previously collected knowledge (Tool 1, 2, 3 and 4) and make it easy to comprehend for participants in the upcoming service innovation workshops.

5.2.1 Input needed to Describe the Regional Context

Tool 4 will receive input from the results of the questionnaire conducted by WP 6. The questionnaire covers areas like:

- Number of inhabitants
- Area (square kilometer)
- List of major cities, based on number of inhabitants
- Population structure
- Economic structure
- GDP per household
- Unemployment percentage over the last 10 years
- Highest level of Education
- ICT adoption and prices
- Transport sector (market) situation
- List of expected economic and social reforms in the region

5.2.2 Regional Context Description

Aim: The aim with this tool is to produce a summary of previously collected knowledge (from Tool 1, 2, 3 and 4) designed in a comprehensible format for future participants of the service innovation workshop.

Procedure: In order to produce this summary a number of questions should be addressed:

- What is critical knowledge, i.e. knowledge that must be part of the summary?

- What knowledge can be left out? (Sometimes to much knowledge makes participants less constructive and creative)
- Is the summary designed according to participants needs? (For example, if kids are part of the participant group what would be a good format of the summary?)
- How much time will participants have for reading the summary?

Output: A summary consisting of selected knowledge from Tool 1, 2, 3 and 4, not exceeding 1500 words. The summary should be written in the native language of the region and one version in English.

6 Appendix 1: Template for Tool 1 Customer Needs Assessment

The purpose with the template is to provide guidance in using the tool. The template is not strictly mandatory. It should be used as support when performing and documenting the results from the activity. Target size for the assessment is 1500 words (excluding quantitative data if needed, models and pictures).

6.1 General description of the region

[*Maximum 150 words (excluding eventual tables and quantitative data) introducing in a comprehensive way the specific region in which the customer needs assessment is performed*]

6.2 Approach used to perform customer needs assessment

[*Maximum 150 words introducing in a comprehensive way which methods and data sources that has been used to perform the customer needs assessment*]

6.3 Identified user needs for the region

[*Minimum 1200 words presenting the identified and assessed user needs for the region. In order to make the assessment more comprehensible, use a table to organize the summary, e.g. present the user need with label (a short description of the user need) followed by a detailed description of the need*]

Short description of user need	Detailed description of user need

7 Appendix 2: Tool 2 Target Group Selection and User Persona Design

The purpose with the template is to provide guidance in using the tool. The template is not strictly mandatory. It should be used as support when performing and documenting the results from the activity. Target size for the selection of target group is 1000 words and for each the user persona design 1500 words (excluding quantitative data if needed, models and pictures).

7.1 Target group for region X

[*Maximum 1000 words. Present which target group(s) that is selected for your region and the motives for this selection. If needed divide the target group into sub-groups. Characterize the target group using categories such as size, location, travel behavior, technology adaption etc. (additional criteria's are presented in the tool description*]

7.2 User persona(s) representing the target group for region X

7.2.1 User persona [name]

[*Maximum 1500 words. A depiction of this kind helps the often much fable target audience to become a bit more tangible and compelling for the design team when performing digital service design. It consequently helps bringing the users into the design setting such as service innovation workshops. A persona is a fictional character representing different user types within a targeted demographic (above defined as the Target group). A persona includes a narrative describing a usage pattern embodied in a fictional user by means of text and images and is based on real data. The presentation should include a text presenting the persona together an illustration similar to figure 2 summarizing the persona*]

7.2.2 User persona [name]

[*Maximum 1500 words. A depiction of this kind helps the often much fable target audience to become a bit more tangible and compelling for the design team when performing digital service design. It consequently helps bringing the users into the design setting such as service innovation workshops. A persona is a fictional character representing different user types within a targeted demographic (above defined as the Target group). A persona includes a narrative describing a usage pattern embodied in a fictional user by means of text and images and is based on real data. The presentation should include a text presenting the persona together an illustration similar to figure 2 summarizing the persona*]

8 Appendix 3: Tool 3 Transport Challenge

The purpose with the template is to provide guidance in using the tool. The template is not strictly mandatory. It should be used as support when performing and documenting the results from the activity. Target size for each presentation of transport challenges is 1500 words (excluding quantitative data if needed, models and pictures).

8.1 Transport challenges to address in the service innovation for region X

8.1.1 Transport challenge for user persona [name]

[*Maximum 1500 words. Presentation of the transport challenge at hand for the user persona selected and described, including a model, similar to model 3, which summaries the challenge*]

8.1.2 Transport challenge for user persona [name]

[*Maximum 1500 words. Presentation of the transport challenge at hand for the user persona selected and described, including a model, similar to model 3, which summaries the challenge*]

9 Appendix 4: Tool 4 Regional Context

The purpose with the template is to provide guidance in using the tool. The template is not strictly mandatory. It should be used as support when performing and documenting the results from the activity. Target size for each presentation of transport challenges is 1500 words (excluding quantitative data if needed, models and pictures).

9.1 Regional Context
[*Following the general description you gave in Tool 1, now a more detailed description of your region is needed. Your description of the regional context should summarize the geography, demography, history, economy, social state and legal/governmental setting.*]

9.1.1 Facts and indicators
[We would like you to present key facts and statistical indicators on your region. To make sure we can compare your region with all the participating regions in ITRACT and the whole of the EU and its regions, we will describe to you some basis facts we want to know. Please include a table of the following statistics, if known for your region.
-   Number of inhabitants
-   Area (square kilometer)
    o   Land
    o   Water
-   List of major cities, based on number of inhabitants
    o   Max. 10 cities/towns
    o   Also mention large cities from neighboring regions within travelling distance
-   Population structure
    o   Age
    o   Education
-   Economic structure
    o   Employment in Agriculture, fishing and extracting (%)
    o   Employment in Manufacturing (%)
    o   Employment Service sector (%)
-   GDP per household
-   Unemployment percentage over the last 10 years for every year within that range
    o   If known, include the degree of participation in the workforce
-   Highest level of Education
    o   Primary school (%)
    o   Secondary School (%)
    o   Etc.
-   ICT adoption
    o   Statistics on ICT usage
    o   Internet access (% of households)
    o   Price of broadband internet (10.0 MB p/S) connection per month, in euros
-   Transport sector situation
    o   Market situation in public transport
    o   Car usage and average car ownership
-   List of expected reforms in the region]

9.1.2 Regional Context Description

[*In this paragraph, we want you to summarize the above facts. Write a text, with a maximum of 500 words, that gives us a profile of your region. Emphasize, to your views, what aspects of the regional context plays a role in defining your target group and user persona. Use this text as a part of section 5.2.2*]