'Thick' personas – Using ethnographic Methods for Persona Development as a Tool for Conveying the Social Science View in Technological Design

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Abstract

Designing and developing successful technological innovations requires interdisciplinary research teams, where engineers and social scientists profoundly interact with each other. In this kind of co-operation it is often the challenge for the latter to present the social science findings in such a way that they are understandable and actionable for engineering. One of the tools to bridge both worlds is the use of 'personas'. In this paper we want to explain our experience with the development of well functioning personas. We believe that an optimal approach is multi-methodological. Based on the scope of two research projects this paper will first elaborate on the advantages and limitations of using personas in an interdisciplinary environment. Second it will also discuss the ways in which a combination of different (quantitative and qualitative ethnographic) methods of data collection served as input for the construction of efficient personas and the added value of this approach. The different methods make it possible to obtain 'thick descriptions' (Geertz, 1973) about the different user practices. To communicate these results without losing the advantages of 'thick descriptions', 'thick' personas are necessary.

1. Introduction

Together with other applied social scientists (e.g. Hughes et al. 2000), we experienced the problem to embed our user insights early in the development process. Communication is the main obstacle: the different partners often do not or cannot read the classical, extensive reports with the output. A possible solution is making use of personas, as introduced by Cooper (2004). However there is still too little information available concerning the practical implementation of this approach for sharing key research findings in an interdisciplinary way.

The paper takes a closer look at the creation process of personas, based on two different projects within the IBBT (Interdisciplinary Institute for Broadband Technology) framework. The key question is whether this creation process is easily transposable to different research projects in different phases of the product development process. In other words, has the phase in the development process wherein the research project is situated an impact on the actual creation process of personas? How does creating personas coincide with the research and the scenario development?

Before discussing these projects and the different approaches in creating personas, we introduce some theoretical aspects of personas and how they are created.

2. Personas in theory

In the first part of this paper we will discuss briefly the theoretical background of the concept 'persona', as well as the advantages and disadvantages, and some issues on the practical creation of personas: which steps are considered crucial in the development of personas?

2.1 Theoretical background

2.1.1 Personas as a solution for a failing communication strategy

A problem that frequently occurs during the design process is the use of notions like "the user" and "user profile" when referring to the people one is designing for. These concepts are too vague and therefore impractical to use as design model or as definition for the communication within design teams. A fuzzy concept of "the user" often results in a bad compromise, overburdened with usability issues. Cooper (2004, p.127) calls the phenomena *"the elastic user"*: the user folds and stretches, adapts to "the needs of the moment". This happens especially when developers put forward a specific image of the possible user of their particular technology or application under development. The design does not take the target audience, but the designer's perspective of the user as the point of departure. When a single user or an "average user" plays the central role in the development process, the risk of failure is considerably high. On the one hand, within the perspective of the single user one is designing for a too small niche audience. On the other hand, when developing with the "average user" as a point of reference there is a high possibility that no user is satisfied with the final product of service, but a "virtual user" (Flichy, 1995). If the designer identifies himself with the design, there is a great risk that he/she designs for himself and not for the intended user: they become prisoners of their own environment (Frissen, 2004).

A solution, to overcome this problem, is to replace the "user" by using a very specific (fictional) individual – a persona – and adjust the design on this. Personas are presented as a powerful tool to preserve the user experience in a multidisciplinary design process (Pruitt & Adlin, 2006). The concept has its roots in the Human-Computer Interaction field and was introduced by Alan Cooper in his book "*The inmates are running the asylum. Why high tech products drive us crazy and how to restore the sanity*" (2004). The word persona 'an sich' illustrates already an important characteristic of the concept: a user model should comprise some personality. Cooper (2004, p. 123) defines a persona as:

> *'A precise description of our user and what he wishes to accomplish'*

Calde, et al. (2002, p. 5-6) go one step further and give a more detailed definition:

> *'User models, or personas, are fictional, detailed archetypical characters that represent distinct groupings of behaviours, goals and motivations observed and identified during the research*

phase.'

The linguistic description of the word 'persona', with its origins in Latin, refers to a role in a fictitious story (novel, movie,...). There is also a strong psychological connotation, which refers to the social component of someone's personality. Within the interpretation framework of the symbolic interactionism, Blumer (1986) would refer to it as the '*Me component'.* These associations - the fictitious and the social- are crucial to understand the meaning this concept can have within user research. Although personas are no real persons, they represent them during the design process, since they are based on knowledge about the goals and personal characteristics of real people. The fictitious details are added to make them more concrete, vivid and user friendly for the designers (Blomkvist, 2002; Calabria, 2004).

The definitions also emphasize the underlying motivations of the user. Cooper (2004, p.149) stresses the fact that good design only has meaning in the context of the actual use by a person and for a specific goal. Therefore a persona always is goal-oriented. Those goals are crucial since they give direction in the development of the artefact. It is important to make a clear distinction between goals on the one hand and tasks at the other hand. A goal is a final condition, whereas a task is an intermediary process, necessary to accomplish the goal (Blomkvist, 2002).

2.1.2. Advantages and disadvantages of the persona

The main advantage of working with personas is putting one self in someone else's shoes. By using personas we try to transfer the so-called '*verstehen'*, referring to the social researcher's attempt to understand both the intention and the context of human actions (Weber, 1968/1914). During the user research that '*verstehen'* is gradually constructed. In order to convey this to other partners, who did not participate in the actual user research, personas are a useful instrument.

Personas are a tool for a more efficient context-rich communication, wherein the user plays a central role. "Using personas has proven itself as a valuable approach for designers to switch between a developer's perspective and a user's perspective in the design process." (Johansson & Messeter, 2005, p. 231)

Personas help to define the design by replacing the abstract, virtual, elastic user by a vivid representation of a specific user who becomes an integral part of the design process (Sinha, 2003) and thus helping designers to keep a clear focus by making the user present in the design process (Johansson & Messeter, 2005). Precise descriptions of users create a shared base for communication and thus avoid the use of an elastic user since the focus is placed on a specific user rather than on "everyone" (Rönkkö et al, 2004). By making use of personas as communication method a substantial amount of information can be shared in a well-known and attractive manner (Pruitt & Grudin, 2003).

The strength of personas lies in the fact that they make assumptions about users very explicit for the

design process, on often very nuanced knowledge. This leads to a prioritisation in the discovered values, actions and motivations. When a persona is portrayed very vividly, the design team can better imagine the goals and motivations, which leads to better oriented discussions (Pruitt & Adlin, 2006). Or like Johansson and Messeter (2005, p. 233) state:

> *" Real users are complex, and inconsistent in their wishes, whereas personas are well defined and clear and therefore better suited as a starting point for design work."*

Another important benefit of using personas is that in this way the design process emphasizes the user and his goals and not on his tasks. Designing by tasks instead of goals is a common mistake, which leads to ineffective interaction, since tasks are not steady and transient (Blomkvist, 2002).

Because of their specificity, personas are unique for a project and cannot be simply reused for a new domain (Goodwin, 2001). In this sense Pruitt and Adlin (2006) talk about the life cycle of a persona, which also includes his or her retirement at the end of a project. Each research project has its own cast of characters, but some personas are only defined to illustrate that the design will not take place for this group of users, the so-called negative personas. Depending on the influence they will have on the design process, each persona has a different status: primary, secondary, supplementary and negative. Each cast of characters has minimally one primary persona: the individual that is the most important to focus the design on (Blomkvist, 2002).

The most important reason for us to try out personas, is because they are said to be very supportive in switching from a traditional (more passive) communication strategy to an active one (e.g. workshops) in informing the design team, since extensive reports with the output of user research are often not read (Baird, 2002).

Representing the user very vividly has also a potential drawback. The narrative aspect of a persona can sometimes be complicated by an overload of distracting details, which makes it difficult for a designer to know what is relevant and what is not. Another possible pitfall when making the persona more real, is adding characteristics to a persona that are not based on actual research findings but rise from a 'gut feeling' or intuition. The main risk when building personas on assumptions is that those personas turn into stereotypes. The danger of not linking the personas to the data or not demonstrating the clear relationship with the data, is the creation of unbelievable personas and therefore creating non-workable personas.

The advantages stimulated us to try out the use of personas in some of our recent projects, taking into account the potential pitfalls. To start this creation process, we relied on the few practical guidelines that are available.

2.2 Rules of thumb

Since the use of personas is a relatively new technique, the practical advices and guidelines about constructing them are scarce. The basis for the creation of personas can be found in some documents wherein the '*tacit practical knowledge*' concerning the construction of personas is shared. One of the practical guidelines can be found in the six-step model of conceptualising personas from Pruitt & Adlin (2006, p. 163-271).

According to the literature available, the first step in the creation of personas starts with the identification of the most significant target user segments. Therefore it is important to look at the assumptions of the stakeholders in the project (Pruitt & Adlin, 2006).

As motivated in the theoretical background section (supra), to identify patterns of behaviour, expectations and motivations of the user, data must be gathered and analysed (step 2). However, there is no consensus on the research methods that have to be used. Cooper (2004) suggests that personas have to be based on interviews and observations with a limited focus on the identification of the representative users. Contrary to this vision, Grudin and Pruitt (2003) state that the identification of representative users is the key in the creation of personas. They claim that the creation process of a persona has to comprise as well qualitative as quantitative data (Sinha, 2003). This more structured tradition was also preferred here, because it is more in line with our research practice.

The development of personas usually starts with the collection of demographic information. Furthermore the persona can grow by conducting e.g. ethnographic interviews with real and potential users (Calde et al, 2002). During the phase of data analysis different patterns of attitudes and behaviour will appear. Those patterns are clustered, based on the common goals, attitudes or behaviours, and serves as a basis for the different personas (Goodwin, 2004). Although this phase of clustering is presented as a whole new step in the creation process of a persona (supra), it is already an essential and standard stage in social science research to achieve result. Not the data collection, but the clusters are the real starting point of persona development for us.

By creating several personas, the whole spectrum of behaviour will be taken into account. The creation of the skeleton is therefore the next step (step 3). Ideally the behaviour of the different persona cannot coincide and thus reduce the number of personas to a minimum (Blomkvist, 2002). To structure the personal information a skeleton for each persona is first created. It is a basic document that grows with regard to details and contextualisation as the research process progresses. Per skeleton, characteristics on different features are bulleted. The selection of the characteristics described, depends on the research question on which an answer must be communicated. A skeleton is not written in a narrative form (Pruitt & Adlin, 2006).

In step 4 the priority of the developed skeletons is determined, which implies that you are determining which skeleton will function as a primary persona. Also the total number of skeletons has to be determined, and if one needs a negative persona or not. This selection depends on the aims of the project. It could be the one with the most complex aims or the one with the most clear need. The primary persona is not necessary representing the largest market segment. This step can or should be tackled together with the other stakeholders in the project (Pruitt & Adlin, 2006).

Knowing how many skeletons are made and which is their bone structure, we have to put flesh on, embody them in step 5. Building on the previous made skeleton(s), a foundation document per persona is made in which a description of the identity is being made, with a name, a face by selecting a picture or drawing, and other socio-demographic information, specification of his or her targets, competences, tasks, expectations, and relations with other. In this document there is room to add data pieces, to illustrate e.g. the targets, the goals, the problems, the needs of this persona (Pruitt & Adlin, 2006).

The final step 6 is devoted to the validation of the personas. The goal in this phase is to examine whether the developed personas are still a reflection of the research data. A possible way of validating the developed personas is reviewing them with fellow researchers, who met the real users during the data collection phase or by putting them to the test together with real users (Pruitt & Adlin, 2006).

3. Personas in practice

Taking into account the advantages, pitfalls and descriptions of persona creation, we made an attempt to put this knowledge into practice. After a brief sketch of the aim of both presented projects and their differences, we reflect on the theoretical steps to take in the creation process of personas and compare them with our experiences during these projects.

3.1. Projects

Based on two research projects of the Flemish research centre IBBT (Interdisciplinary Institute for Broadband Technology) this paper explains our experiences with the development of personas. The first project is called MADUF (Maximize DVB Usage in Flanders) and focuses on the user needs and expectations for mobile television[1]. The second project is ROMAS (Research on Mobile Applications and Services), which concentrates on user research of information retrieval and use in a wireless city environment[2]. Within both projects our goal was to convey the social science findings in such a way that they are understandable and actionable for development.

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[1] This part of the project was carried out during the first half of 2006: from January 2006 till August 2006.
[2] This part of the project was carried out during: from December 2006 till February 2007.

The MADUF-project has a more technological focus as it explores the essential possibilities and constraints for the mobile television standard DVB-H (Digital Video Broadcasting on Handheld devices). It is a one-way standard for one-to-many communication, thereby replicating standard television broadcasting. It has lower battery power consumption than DVB-T (terrestrial), which makes it appropriate for handheld devices. The standard is characterised by an improved robustness in the difficult reception environments for indoor and outdoor portable use of devices with built-in antennas. The technology also enables interactivity via a parallel access to a mobile telecom network. For translating the technological viewpoint to everyday user practices, we need to involve the two main practices at stake: watching television and being on the move (in a nomadic sense as well as in a mobile sense).[3] Our final goal was to create contextualised personas as a translation of our user research, to guide the technological design of mobile television devices and services. A multi-methodological research set-up enabling data triangulation among mobile television users was seen as starting point for the persona development. We combined the following (mainly interpretative) research methods: desk research, observation with contextual inquiries, profiling questionnaires, logging, diaries, cultural probes, visual clues (photographs) and in-depth interviews. This rich data set was first analysed and reported on in the form of a classical project report.

The overall objective of the ROMAS-project was to conduct a user-oriented assessment of (future) wireless applications and services within a large-scale living lab environment from an interdisciplinary approach[4]. The i-City living lab environment in the city of Hasselt (Flanders - Belgium) is used as the setting for studying the users in real life. This environment consists of 600 users (and 4,000 in the end), equipped with a mobile device (PDA) and running a city services software platform, which enables a range of dedicated mobile applications. In the first phase of this project a number of archetype users for wireless city applications are identified and selected based on the purposeful sampling (Sandelowski, 1995). The sampling was partly derived from the main application ideas within the ROMAS project: a mobile local news application and a mobile city guide application. The affordances[5] of these two applications were translated into two more abstract practices. The two central practices for selection were on the one hand 'searching and finding news and information linked to the city' and on the other hand 'the different ways inhabitants (and not so much tourists) move around in the city'. The archetype users became the subject of our ethnographic research. The main goal was identifying applications and concepts that fit in the everyday life of those inhabitants. In order to incorporate as many characteristics and information as possible, a multi-methodological data collection was chosen. Since the focus is on the invisible of the everyday city life, we

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[3] A distinction is made between nomadic and mobile use. The first kind of use refers to users that connect to the network from arbitrary and changing locations, but do not use the service while moving. Mobile use refers to the use of services during movement (Podnar, et al., 2002).
[4] This project was conducted from September 2006 until February 2007.
[5] Affordances are defined as the combination of 'perceived and actual properties of the thing - primarily those fundamental properties that determine just how that thing could possibly be used.' (Norman, 1988: 95). A term borrowed from Gibson's ecological theory of perception (1977)

tried to collect as many context information as possible by making use of observations (registration on video), diaries, visual clues (photographs), cultural probes and in-depth interviews (Pierson et al, 2007). After this first explorative phase we experimented with a number of applications that are developed in real live with living lab users. In the end the ROMAS project will deliver a set of personas that can better guide the development team.

3.2. Differences and similarities in projects

Although the two projects were situated in the same stage of the development process, the conceptual phase, their position with this phase is somewhat distinct. In the MADUF-project the technology (mobile television) was already clear whereas in the second project, ROMAS, the applications were still vague (Figure 1).
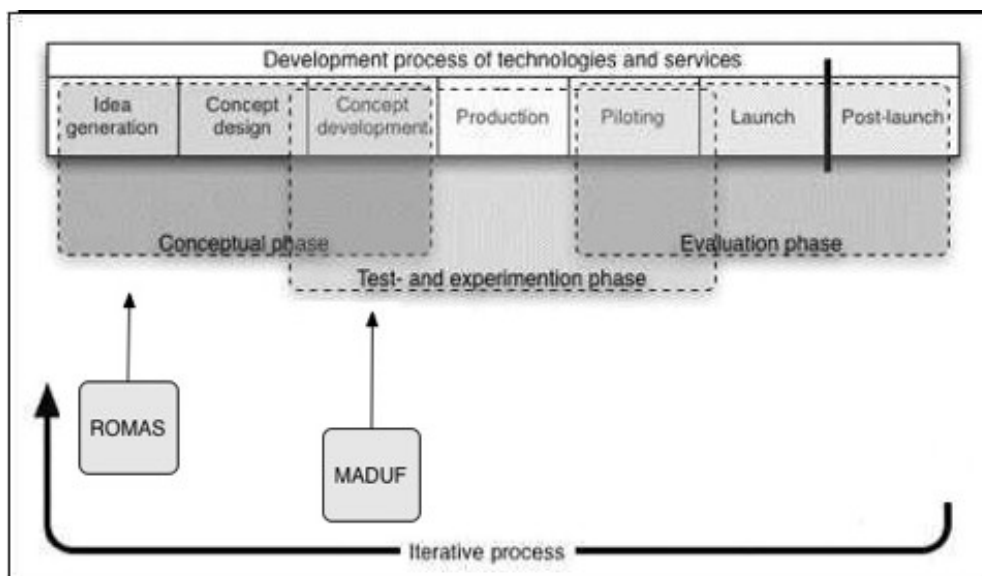

Fig. 1. Different stages in the development process

In the MADUF-project we introduced technological probes (Hutchinson, 2003) and we called them proxy technologies. These techniques refer to the use of devices and applications that incorporate as much as possible similar functionalities and characteristics as the future media technology (Pierson et al, 2006). For the respondent it is not always easy to reflect on a technology that only exists at a conceptual level. Moreover when only referring to a concept, there is the risk that people are talking with different images of

the concept. By using proxy technologies as an illustration tool, the conceptual level not only becomes tangible, but it also provides the respondents with an identical reference framework. This enables a better basis for in-depth questioning (Pierson et al, 2006). The actual use of those technological probes or proxy technologies is closely related with the maturity of the technology and is therefore not always possible. The maturity of the technology has also an influence on the actual persona and scenarios: a higher level of maturity of the technology also implies a higher level of technology present in the personas and scenarios.

The second project, ROMAS, followed an explorative approach. Since the preferred applications were not clear, the main goal was to explore the everyday life in a city environment and identify practices in which mobile city applications could offer some added value.

In both projects several methods are combined. Since the final goal in both was the construction of several personas and scenarios, ethnographic methods were chosen in order to collect as much contextual information as possible. A technique used in both projects was the integration of cultural probes. The main reason for incorporating this method was to get to know the attitudes of the respondents. The cultural probes allowed us to investigate very broadly how the different respondents thought about different aspects related with mobile television and mobile city applications. In each project different themes, closely related to the research questions, were identified and printed on a post card. The information risen out of these cultural probes are not facts, but opinions and attitudes, which served as input for the concluding in-depth interview.

Fig. 2. Example of cultural probes as used in ROMAS

Another common method was the use of diaries. The main advantage is that they encourage the respondents to record, in a very structured manner, the details of their everyday life as a research diary (Toms & Duff, 2002; Corti, 1993). After all, gaining an insight in the daily user patterns and the associated experiences (annoyances and aspirations) is crucial in the identification of the possibilities of mobile television and mobile city applications. In order to collect as much contextual information as possible, the

participants were also asked during the diary period to photograph their location when they were watching mobile television or when they were visiting the city (with a camera they received for this purpose). Those photographs, as well as the information from the diaries, were used as a prompt during the final in-depth interview as a mean to investigate some aspects linked to the research questions more in depth.

Fig. 3. Example of an observation route as used in ROMAS

In both projects also observations were conducted as a way of collecting as much contextualised information as possible. During the MADUF-project observations were carried out in public settings, for example in trains, to study the use of mobile devices to watch audiovisual content.[6] In the ROMAS-project the participants were observed during their visit of the city centre. During those observations the respondents were encouraged to think aloud. In this way it was easier for the observer to follow the movements and motivations of the participants, to understand recurring patterns as well as investigating in-depth certain issues. In the course of the observations notes were taken, the followed route was marked on a city map (Figure 3) together with taped fragments of certain activities on video. All this observation material served as input for the actual observation report.

3.3. Creation: step by step
In this part we elaborate on the steps taken to develop the personas in both of the projects, MADUF and ROMAS. We largely follow the different steps available in the literature, as discussed above. This was not always self-evident in both projects, since the framework for the persona development is not smoothly transposable to any project: every research project has its own focus and set-up, which sometimes implies

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[6] This research part was largely done the partner IBBT research centre CUO (Centrum voor Usability Onderzoek) from the Katholieke Universiteit Leuven.

in taking another strategy. In the first project MADUF we followed a deductive approach, while in the second project ROMAS we pursued a more inductive strategy.

In the MADUF-project we developed the personas in three phases (Figure 5). The first phase started with the construction of a hypothetical primary persona – the train spotter - based on preliminary findings in the literature and foreign trials of mobile television. In the next step that hypothetical persona was questioned by looking at the other clusters or codes of the collected and analyzed data in an internal workshop[7]. Other members of our research team, not involved in the project, participated in this workshop. The goal of this involvement was to see the collected data from another point of view, in order to identify the patterns in attitudes and behaviour and subsequently to cluster those identified patterns. This corresponds largely with step two: data analysis and assimilation as discussed in the rules of thumb (supra). This can not be seen as a whole new step in the creation process of a persona, but is in fact an essential and standard stage in social science research. The data answered our main question – who is going to watch mobile television – with several clusters or categories that collectively were part of a recurring pattern and formed the first user group: **the pluggers.** They use their mobile television during a waiting period to quickly inform themselves, to keep in touch with the latest developments. Their most important motivation in the use of mobile television is an information need; they want to fill their waiting moments as constructive as possible. Based on this information, a skeleton document was composed which would later form the basis for the persona, which matches with step four discussed in the rules of thumb (supra).

In the subsequent step we looked at other codes that were important to determine the practice of watching mobile television. More in particular attention was given to the codes that describe the non-use of mobile television. This would normally lead to the formation of a negative persona, but still some interest in mobile television could be retrieved. We called the group: **the social fillers**. They are mainly using mobile television as a means to reduce boredom. When no form of social contact is possible, they resort to mobile television with as primary goal relaxation.

During the final phase of this first step a remaining cluster was incorporated which appeared rarely, but formed the basis for a user group that is a potentially interesting client although it is a small niche. This group are called **the long viewers**. They consider their mobile television more as an individual television, as a supplement to their fixed television set. The mobile viewing behaviours of these people are not only limited to short fragments to kill time when they are waiting. They also found longer programmes are appropriate to watch on the mobile device. This last group will serve as basis for the last persona.

In the second phase of the persona development the skeletons constructed in the first phase, were completed with more details like identity details, goals, roles, and attitudes and became foundation

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[7] This workshop took place the 22nd of August 2006.

documents. This matches with step 5 in the rules of thumb: putting flesh on the skeletons (supra). For each group of users a persona was created. The primary persona was rooted in the group of pluggers, because this user pattern was encountered the most. The translation of the abstract level to the narrative, concrete level resulted in three personas: Pedro (plugger) , Laurence (social filler) and Vincent (long viewer) (Figure 4).

Fig 4. Personas (Pedro, Laurence and Vincent) in MADUF

The next step in this phase was the development of one scenario – a semi-factual narrative of a day or days in the life of the person- for each persona. Only one one-day scenario was developed, since the analysis focused on only one practice, 'watching mobile television'. All other practices (e.g. social activities) go with that central one in competition. In the scenarios a day in the live of each persona – pre-mobile television stadium - was developed with a focus on storytelling rather than on the representation of a task analysis.

The final phase was the translation of the scenarios to mobile television scenarios wherein different practices related with watching television are incorporated (e.g. zapping, video on demand). The amount of final scenarios is dependent on the number of central research questions and the topical distance between them. But the total of scenarios has to be kept limited, otherwise the advantage of vivid representations gets lost. Other members of the project use those final scenarios as a guide for the paper prototyping. A communal meeting is organised with the other partners in the project to translate the scenarios in concrete requirements.

Although the organisation of a workshop between social and technical partners is strongly encouraged in the literature, in practice it is often a difficult exercise for numerous reasons: agenda-problems, different language and different kind of thinking.
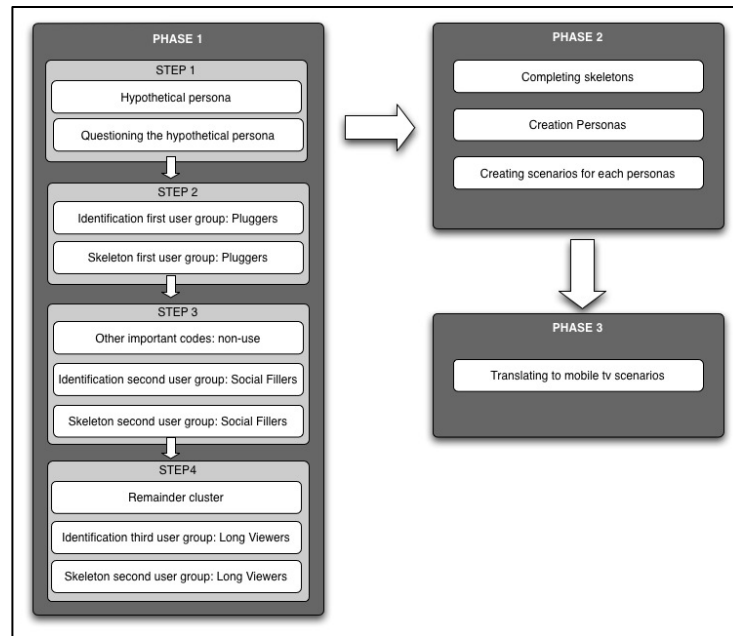
Fig. 5. Persona and scenario development process in MADUF

In the second project, ROMAS, we followed a quite different approach. Given our experiences with the MADUF-project, we realised that organising an internal workshop between social researchers, as a first step in the creation of personas is very useful. Provided that the participants already are somewhat acquainted with the research data, which was not the case in the workshop of the first project. A preparation time is therefore necessary, so that the participants get to know the data in advance.

The original idea was the creation of the primary persona, based on the clusters visible in the analyzed data. But since the focus of the ROMAS-project was on the identification of everyday city practices and the possible implementation of mobile city applications, those practices were more central in the data than differentiating characteristics. Compared with the MADUF-project the variation in practices was considerably higher, which resulted from the explorative nature of the ROMAS-project. Therefore it was much easier to construct the scenarios prior to the personas, since scenarios are more action directed. Nevertheless a persona is still required in order to construct a scenario as a means to translate the practices. This led to the construction of a primary persona: Roel. This corresponds with steps two until five in the rules of thumb as discussed above. The data brought a typology of city visitors to the surface: from a very structured planner to an on the spot improviser. Nevertheless the analysis also showed that this classification was very dynamic: people can take on different roles during one single visit tot the city: they

can change from planner to improviser. By looking at other clusters in the data it become clear that not all practices could consistently be comprised in one one-day scenario. This expressed the need for a second scenario and subsequently also the creation of a second primary persona: Marleen, which also matches with the four different steps (two to five) described in the rules of thumb. After identifying clusters of opposite acting in the data, different negative personas were created and incorporated in the two scenarios. Those scenarios made clear that a city visitor could easily change in role (from an active planner to an improviser) dependent on several dimensions, like time, place, and goal of the city visit. In order to communicate those shifts in roles that are present in a city visit, scenarios were the most useful tools.
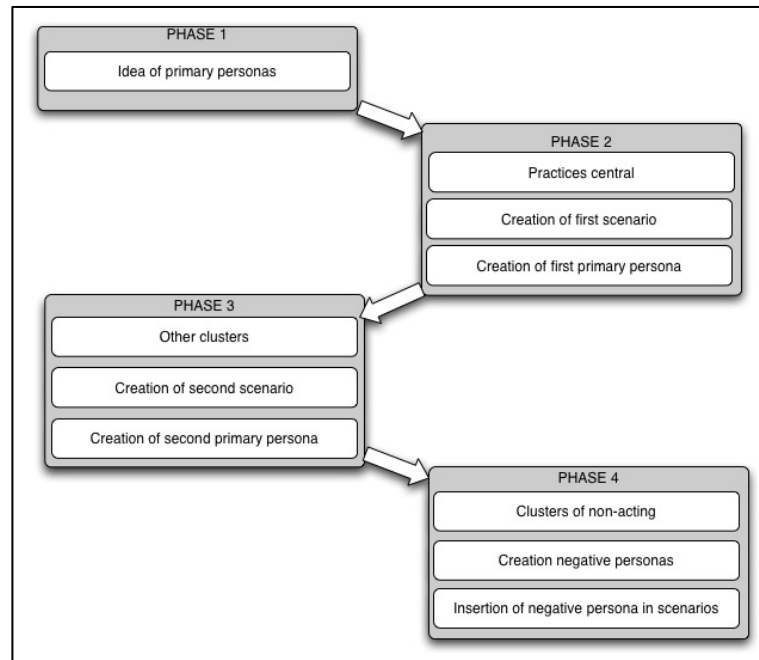

Fig. 6. Persona and scenario development process in ROMAS

Subsequently an external workshop with the different (social and technical) partners in the project was organised to discuss the developed scenarios. In contrast to the MADUF-project in which we presented the personas 'an sich' during an external workshop, this time the scenarios with the personas in action were introduced. During the presentation we made clear that the scenarios and personas were based on the research data and explicitly showed were the data was situated. Previous experiences taught us that the border between data and fiction in the construction of personas and scenarios is a very thin line. To reduce this risk of sliding into a dominant fictitious approach, it is better to show how the data are incorporated in

the persona or scenario. Another way to reduce the fictitious level to a minimum is, as already mentioned, constructing the persona or scenario in a group, e.g. within the research team.

4. Conclusion

In this paper we reported on our practical experiences with the persona development in two recent projects, MADUF and ROMAS. By clarifying the different approaches followed in both projects, we hope to contribute to the rules of thumb related to the persona development.

The guidelines for creating a persona are not as rigid as described in the literature: the different steps to follow are not very distinct and often overlap. Some research is still required with regard to formalizing the persona development process even more.

We strongly believe that the main advantage of building personas on collected contextual information lies in the fact that a lot of incorporated details arise from the collected data and therefore the risk of inventing details or using the 'gut feeling' is strongly limited. We also recommended, when communicating the persona or the scenario, to show were the data are exactly hidden in order to prevent the use of unbelievable personas.

Although the use of personas is strongly recommended we believe that a persona is the logic step to a scenario framed on the research question, since otherwise all the actions go lost. Or to put it differently: we see the raw data as the necessary pre-montage material for a movie, the scenario as the script and the actor as the persona. Without the construction of a scenario, the persona can be seen as an actor without a script.

The practical experiences with both projects convinced us that the way to create personas heavily dependents on the research project. If there is only one practice central and the gathered data focus on characteristics of that practice, it is easier to create the personas prior to the scenarios. For example, in the MADUF project the personas are used for an already defined application and device (mobile television broadcast via DVB-H signals on a dedicated device). However if there are more central practices in the data, the most logical first step is creating the scenarios prior to the personas. In the ROMAS project, for example the personas are brought in for guiding the design choices on applications in a wireless city setting, linked to a broad range of practices on exchanging news and information and moving around in the city.

Depending on the place in the product development process in which the personas are developed, the preparatory work is done differently as well as the choice for creating the persona prior to the scenario or vice versa.

'Personas' in action within scenarios are presented in literature as powerful boundary objects between the world of social research on ICT user practices and the world of technological design. In our own research practice we feel the potential, but the main problem using them as active boundary objects remains the timing. The technical partners are already developing prior to the user research. This implies that decisions are already taken based on a 'gut feeling' and not on the actual user research. Personas and scenarios should optimally be constructed before the actual development, so that the design based only based on the designers perspective is strongly limited.

The personas and the scenarios are communication tools. Using them in interaction between the different partners is crucial. One way of doing this is organising a workshop to discuss the developed personas and scenarios with the technical partners, in order to come to a communal vision concerning recommendations. Giving our experiences in both projects, conducting a workshop is the first step towards interaction with the different partners, but even a more interactive format needs to be implemented.

It is however clear that personas fit in the vision that:

> *"If users' appropriation of a technology innovation is viewed as the completion of the innovation's design process then understanding the influences on, and outcomes of, the appropriation process provides the basis for improving design."* (Carroll, 2004)

In order to translate these influences and outcomes in a more successful way making personas 'thick' enough will help in bridging user research and technology design.

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