

Project:

My Pages Malmö City (MiMa)

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This is a summary of the usability testing and decisions taken in the user-driven development of a prototype for Malmö City's inquiry-system "My Pages". The document describes (in chronological order) the prototyping, usability testing, and the decisions taken as a result of the tests. The document is concluded with a presentation of the results for the three developed interfaces (Mobile, Tablet, Desktop).

Initial questions to the users

We began by asking randomly chosen users from the target audience the following questions about a theoretical system:

What information would users want to see on 'My Pages'?

The users want a list of pending cases and to be able to see previously closed cases. They want to see how far into the process a case has come, when the case was registered and what has happened so far. There are also requests for the opportunity to easily find contact information to the person / persons handling the case in order to be able to follow up with questions about the process. To see how cases in the same category normally are handled and the time they normally take users also want a FAQ-like functionality. It is important for the users to have access to the decisions taken by the municipality, particularly for when a case is rejected or denied. Users would also like to have the option to change the language.

What would users like to be notified about?

Users would like to be notified when there is an update to their case, i.e. a confirmation when it is received and when it is approved/disapproved. It's also of importance for users to know if a case is lacking some of their information and needs their input. They want to know when the case was started and when it's completed. It's also in the users interest to know if the case is handled to another another department or if it gets stuck along the way.

How and how often do users want notifications?

They want to be notified through email and/or text messages and the ability to choose through which of these means they will be contacted.

Mobile - Version 1.0

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Fig. 1 Version three-menu



Fig. 2 Version two-menu

The first brainstorming after the interviews resulted in two different prototypes for a mobile layout. The only difference between the two prototypes is the number of menu items. A version with three items and a version with two. The version with three items were intended to act as a 'home'-function with the purpose of making room for other, future, functionality such as creating files or links to other services. Cases were sorted as *Updated*, *Active* and *Closed*. Updated cases are cases where there has been a change that is of interest to the user, for example, when it's status changed from received to registered. Active cases are the cases still ongoing and completed cases are the ones who got a decision and are archived.

Four stages were identified in the overall-process and these stages were presented graphically in the form of a line with dots (inspired by a subway map). The four stages were *Received*, *Registered*, *Processing* and *Approved*. The case is Received when it's been received by the City of Malmö and

thus entered the system. The case then becomes Registered when all the submitted data have been verified, approved, and the case forwarded to the proper handler. Processing is when a handler is processing the case and Decided is when a decision is made and the case is closed.

The first iteration of usability tests showed that the prototype with three menu items were confusing and in consultation with the project owner, it was decided that two items would be enough as making room for future functionality was outside the scope of the project and unnecessary to relate to at this stage. It was also difficult for users to understand the difference between Updated and Active cases, so it was decided that all active cases would be grouped under *Ongoing* cases. The term Ongoing was tested over the phone by asking a couple of persons "What is an Ongoing case in the municipality?" All persons responded that an ongoing case is a case that is not yet completed / resolved and which is still

pending. A case which had been updated with information that is relevant to the user had it's name displayed in bold, which follows the conventions email applications.

Mobile - Version 2.0

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Fig. 3 Mobile layout, version 2.0

Usability tests were performed on April 3rd at the city library where two scenarios were used to test the mobile interface. For these tests, paper prototypes were used. The interviews, which were recorded with a dictaphone, were discussed with the entire project team afterwards to quickly figure out how the prototype would be updated according to the feedback. The scenarios were designed to lead the user through the system, to see if the test person could properly use it, while the test leader asked specific questions to confirm the terminology and usage of other markers such as the bold text. As these interviews were conducted in a public place where the test persons might be short on time, the tests' depth were adjusted accordingly.

The test person was asked to find a closed case and read the decision taken. The test person was encouraged to think aloud and explain all the elements he or she saw so that the test leader could take notes and examine if the system was understand-

able. To solve the problem, the test person had to open the closed cases submenu and scroll down to find the application for studies abroad. The test person then had to tap the link application for studies abroad, and then find the text which presents and explains the decision taken.

The next scenario was to find a case that has been updated since the last visit. The test person had to identify the updated case in the list of ongoing cases, thereby testing if test person understood the metaphor to mail applications by its text being bold.

Something that was consistent through all tests was that the four steps in the process was problematic to understand at first glance. Less than half of the participants understood the difference between the received / registered or registered / processing, indicating that the process line had to be revised. The participants gave a variety of answers as to what it means when a case is registered and it was discovered that the

general trend in the tests was that the steps were too numerous and redundant. For a user, it was not interesting to know whether a case was registered and processing or not, it was only interesting to know that the case was actually started and being processed. Therefore it was decided to completely discard the status "Registered" and instead use the three remaining to describe the entire process. In doing so, it became very essential to clearly mark where in the process a case is when the status is a very general description. This was solved by conducting a wider range of tests in which the test persons were asked to answer questions about if the date combined with the status were clear enough and understandable. This resulted in far fewer question marks and a much clearer representation of the process. Figure 4 on the next page shows a graphical representation of the scenarios and our revised process line.



Fig. 4 Graphical representation of test scenarios on the mobile layout, version 3.0

Tablet - Version 1.0

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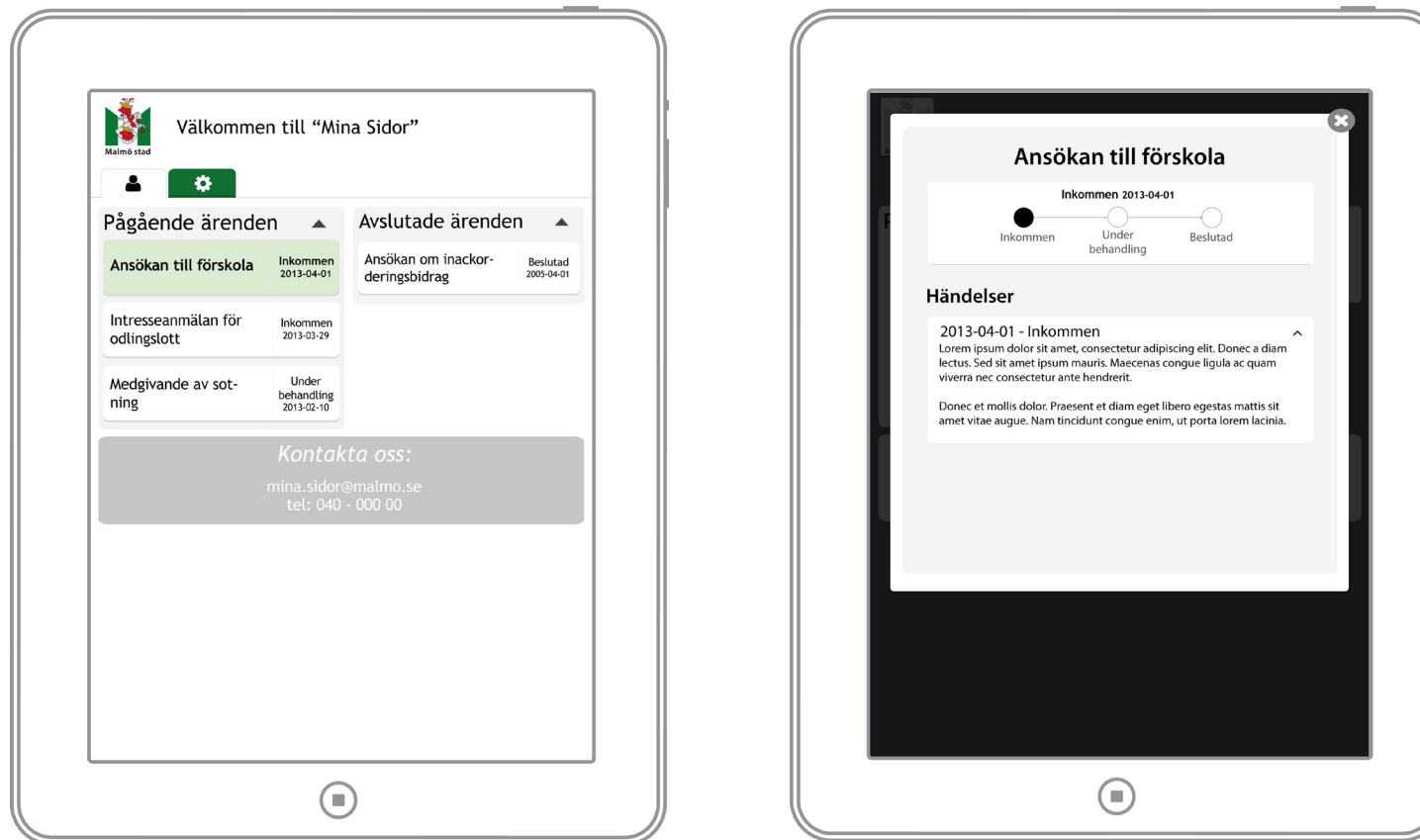


Fig. 5 Layout tablet, version 1.0

The mobile layout was used as a base for the tablet as they are two fairly similar platforms that has similar interaction. Apart from minor adjustments, the layout was tweaked as a tablet has a larger display, enabling both columns to be placed next to each other. The tests on this layout turned out to be consistent with the mobile, and the only problem that emerged was that the test persons had a problem understanding what an Updated errand was. To indicate that a case has been updated or has new information it was given a green background color, which can be seen in Figure 5. The color green was picked since it follows Malmö city's graphic identity. This made it more problematic than before, since a number of test persons associated the color green with a "completed" case and did not understand that the case instead had an update. After further discussion with the project owner it was understood that there were updates that were more essential than others, and that a case can only have one out of two states: either it is processing with no input



Fig. 6 New appearance for a case that requires the user's input

required of the user, or the case has come to a halt, waiting for the user's input. The solution was to put a banner over the case (see Figure 6) in order to clearly indicate to the user that some form of action or input is required of them, resulting in a much more positive response from the test persons. The remaining updates, e.g. if the case has changed from Recieved to Processing, are only informative updates and something the user would have to actively log in to see.

Desktop - Version 1.0

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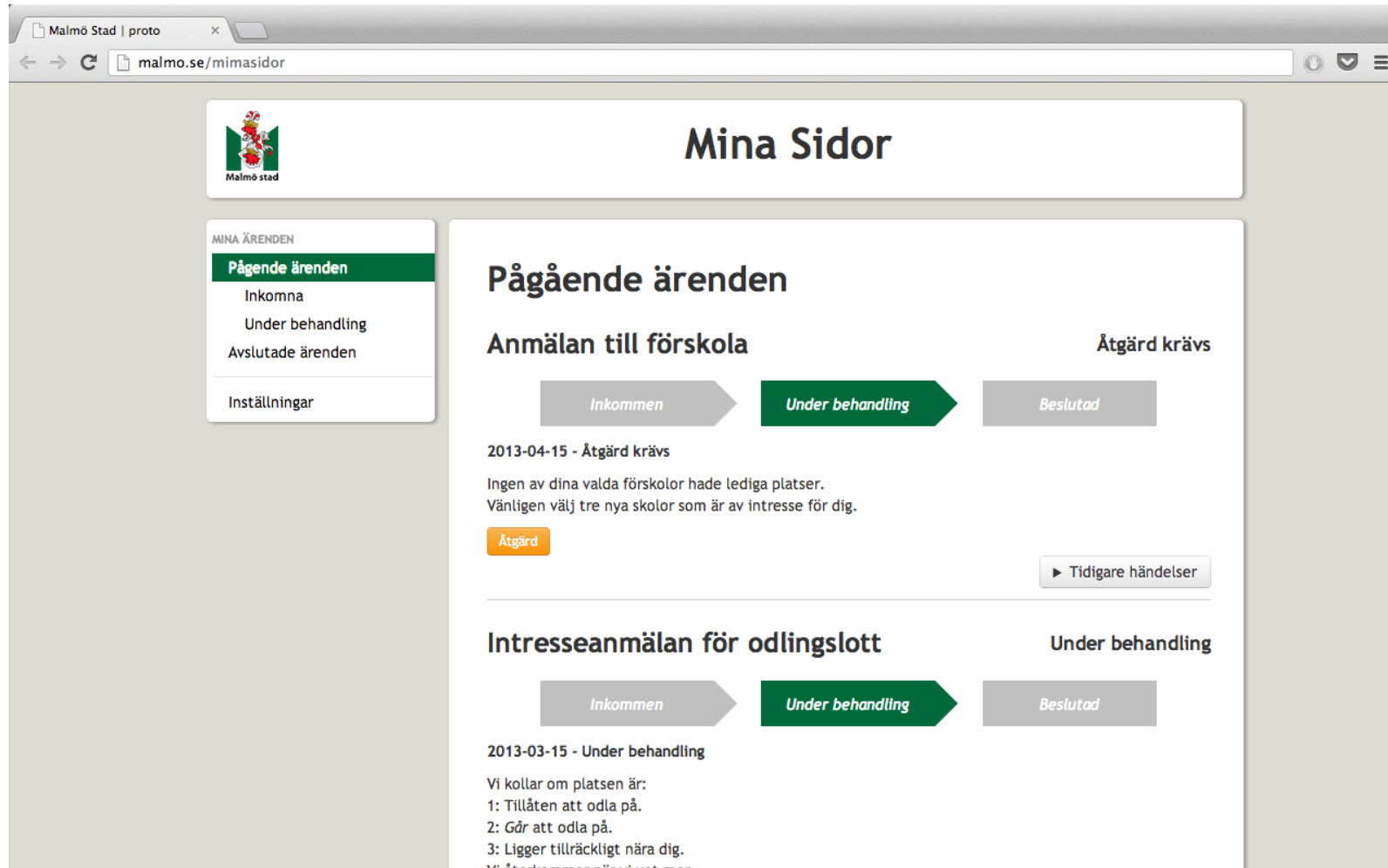


Fig. 7 Layout desktop, version 1.0

Usability testing on desktop used the same scenario as previous tests since these covered all the functionality the service offers. Spontaneous feedback about the layout and content were all positive. The test objectives were solved with ease, which was expected since it's the same terminology and interaction patterns as on the previously tested platforms.

The single big change from previous versions was that several qualitative tests were performed on the desktop layout, as this platform will account for the large bulk of the visits / traffic. The process line was improved so that it would be possible to use on all screen sizes, so that My Pages would have a consistent appearance.

Final prototype: Mobile

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Mina Sidor



Pågående ärenden ^

Kräver åtgärd !




Ansökan till förskola	Behandlas 2013-03-04
Intresseanmälan för odlingslott	Registrerad 2013-03-15
Medgivande av sotning	Inkommen 2013-03-04

Avslutade Ärenden v

Kontakta oss:
minasidor@malmo.se
tel: 040-00 00 00

Ansökan om förskoleomsorg x

Inkommen



Händelser

2013-04-15 - Åtgärd krävs ^

Ingen av dina valda förskolor hade lediga platser.
Vänligen välj tre nya skolor som är av intresse för dig.

2013-04-11 - Under behandling v

2013-04-08 - Under behandling v

2013-04-01 - Inkommen v

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Final Prototype: Tablet

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Pågående ärenden ^

Avslutade Ärenden v

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Under behandling

Beslutad

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2013-04-11 - Under behandling v

2013-04-08 - Under behandling v

2013-04-01 - Inkommen v

tel: 040-00 00 00

Final Prototype: Desktop

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Mina Sidor

Pågående ärenden

Inkomna

Under behandling

Avslutade ärenden

Inställningar

Anmälan till förskola

Åtgärda!

Inkommen

Under behandling

Beslutad

2013-04-15 - Åtgärd krävs

Ingen av dina valda förskolor hade lediga platser.
Vänligen välj tre nya skolor som är av intresse för dig.

► Tidigare händelser

Intresseanmälan för odlingslott

Inkommen

Under behandling

Beslutad

2013-03-15 - Under behandling

Vi kollar om platsen är:
1: Tillåten att odla på.
2: Går att odla på.
3: Ligger tillräckligt nära dig.
Vi återkommer när vi vet mer.

► Tidigare händelser