

SyncMaster

Usability Testing Report

Team 15, SyncMaster

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Executive Summary

SyncMaster is a cloud-based user authentication and document distribution system hosted using Amazon Web Services. This application will have many users from many backgrounds. Users will also have wide variation in the make and model of the devices with which they access the SyncMaster application. Some users will frequently make use of the system and therefore be familiar with its features, while others will be new or infrequent users of the system. As such, usability testing to ensure the application can meet the needs of the user base is of utmost importance. This document outlines the user testing performed, and what actions were made in response to the feedback provided.

Usability Testing Process

Users in the usability testing were asked to perform the following actions, and then asked to answer the subsequent survey. The main objective of these actions is to cover all of the usability testing items in the VnV Plan [here](#). A further objective is to receive first hand validation of the performance and design of the system, and incorporate any feedback received into the next iteration of the design prototype.

The testing is composed of two parts. The first is testing on the contractor portal, for which each user used an existing contractor account and QR code for a station configured for the usability testing. The second is testing on the admin portal, for which an existing admin account was used.

Contractor Portal

Users were provided the following scenario:

You are a contractor hired by the City of Hamilton that has completed their annual health and safety training and been sent a work order to perform a job at a Hamilton Water site. You have arrived at the site. We will ask you to perform a variety of tasks to assess their discoverability and usability. We welcome you explaining your thought process as you navigate through the screens. If you experience any confusions, please describe what they are, but we will not intervene to assist you unless you are truly stuck and request assistance.

They then had to perform the following tasks:

Item Number	Description	VnV Test ID

C.1	Scan the site QR code to access the portal. Please follow the screen prompts for the health and safety acknowledgements and respond accordingly based on the scenario provided. Did viewing the acknowledgements screen feel easy and intuitive? Did you encounter any errors?	TC-UP-1, TC-UP-2
C.2	Enter a work order number and add a description of work at the site. Were you successful? How would you rate the ease of accomplishing this?	TC-UP-1, TC-UP-2
C.3	Upload an attachment to the work order. Were you successful? How would you rate the ease of accomplishing this?	TC-UP-1, TC-UP-2
C.4	Find where the station documents are located and attempt to view one. Were you successful? How would you rate the ease of accomplishing this?	TC-UP-1, TC-UP-2
C.5	Update the description of your work to indicate your work is completed and that you are leaving the site, then end your visit. Were you successful? How would you rate the ease of accomplishing this?	TC-UP-1, TC-UP-2

Admin Portal

Users were provided the following scenario:

You are a facility manager working on the Technical Services team at Hamilton Water with an account with admin permissions. You sign into the application for a typical day of work.

Item Number	Description	VnV Test ID
A.1	You would like to navigate to the station documents and add a site specific document for station HCS04. Please attempt to do so. Were you successful? How would you rate the ease of accomplishing this?	TC-LR-1, TC-UP-1, TC-UP-2
A.2	You would like to add a site wide document that is relevant to all sites. Please attempt to do so. Then, delete the document you uploaded. Were you successful? How would you rate the ease of accomplishing this?	TC-EU-2, TC-UP-1, TC-UP-2

A.3	Try and find the site visit logs and see the recent visit to HCS04. Locate the station visit information and the most recent site log from the contractor testing.	TC-UP-1, TC-UP-2
A.4	Try and export the logs to a csv file. Were you successful? How would you rate the ease of accomplishing this?	TC-UP-1, TC-UP-2
A.5	Locate where the “manage sites” feature is, and view the details of station HCS04. Were you successful? How would you rate the ease of accomplishing this?	TC-UP-1, TC-UP-2

After these items were asked, a usability survey was given to the user testers to fill out. The questions asked were the following:

Item Number	Question	VnV Test ID
S.1	Do you feel the initial screen you saw on the contractor portal and the admin portal made the purpose of the system clear?	TC-LF-2, TC-OE-1, TC-OE-2
S.2	Was the colour palette of the system aesthetically pleasing and pleasant to look at?	TC-LF-1
S.3	Do you feel comfortable if you used the system again at a later date, you would be able to navigate the screens successfully?	TC-AS-1
S.4	Were you able to successfully locate the site wide and site specific documents in the admin portal?	TC-AS-1
S.5	On a scale of 1 to 10, how confident are you using the system without assistance?	TC-AS-1, TC-LR-1
S.6	On a scale of 1 to 10, how easy was it to discover features of the system?	TC-AS-1
S.7	On a scale of 1 to 10, was the experience of adding documents to the admin portal a smooth experience?	TC-LF-2
S.8	Did you feel frustrated at all in the time it took for you to view a document?	TC-LF-2
S.9	How confident were you in interpreting the system feedback? Was it able to provide confirmation or possible solutions to your input?	TC-AS-1
S.10	Did you find the content of the system to be politically neutral and inoffensive?	TC-LF-1

Usability Testing Profiles

The below table provides an overview of the users which performed usability testing on the SyncMaster application.

User	Occupation	Age	Technical Skills
User 1	City of Hamilton Employee	30-35	Owns a laptop and a smartphone and is familiar with navigating apps on the phone and web browsers. Comfortable using technology.
User 2	City of Hamilton Employee	20-25	Owns a laptop and a smartphone and is familiar with navigating apps on the phone and web browsers. Comfortable using technology.
User 3	City of Hamilton Employee	20-25	Owns a smartphone and has a desktop computer. Comfortable using apps, familiar with web browsers but not a common user of web applications.
User 4	City of Hamilton Employee	20-25	Owns a laptop and a smartphone and is familiar with navigating apps on the phone and web browsers. Very comfortable with technology.
User 5	Contractor	60-65	Owns a smartphone and a laptop. Not very familiar with web applications or QR codes. Is familiar with the basics of navigating these devices.
User 6	Contractor	60-65	Owns a smartphone and a laptop. Comfortable using apps and web browsers.

Usability Testing Data

This section outlines the data received from the users in the user testing. It is organized by user, as identified in the *Usability Testing Profiles* section.

User 1

Item Number	User Feedback	Action Item
C.1	Yes, scanning the QR code and viewing the acknowledgement screens felt easy and intuitive. I did not encounter any errors. One thing I would like changed is change in the title Hamilton Waterworks to Hamilton Water instead.	F.1
C.2	Yes, I successfully added a work order number and a description. The process was very easy.	N/A
C.3	I took a photograph and then uploaded it by going to my camera roll. I had to locate which photo was the right one in my camera roll, but once I did I had no issues uploading the photo to the site visit.	N/A
C.4	Yes, I was successfully able to find the site documents by discovering the button on the bottom right of the screen for them. I think the location of the button is pretty good and easy to discover. No concerns.	N/A
C.5	I was successfully able to edit the work description without any issues, the process was easy and I have no concerns.	N/A
A.1	I found the site documents without any issues, and it worked as it was presented during the figma prototyping process. Easy to use and I have no concerns.	N/A
A.2	I was successfully able to locate the site wide documents. They were beside the site specific which I liked as that was the first place I looked. Uploading a document to site HCS04 was easy, when deleting it I'm glad that it asked me if I was sure I wanted to delete the file as I don't want to accidentally delete the wrong file. Easy to use and I have no concerns.	N/A
A.3	I successfully found the site visit log for the contractor visit, did not take me long to find that I could filter the column. Pretty easy to use.	N/A
A.4	Yes, I was able to export the logs and encountered no issues. I like how the button is very easy to view at the top left.	N/A
A.5	Yes, I was able to locate the manage sites page. I like how it is simple	F.2

	and easy to use. I recommend including units on the fields to make it clear that the coordinates are longitude and latitude in degrees, and that the radius around a station is in meters. Otherwise, no concerns	
S.1	Yes, I had no trouble understanding what I was seeing.	N/A
S.2	Yes, the colour palette was pleasing and I have no concerns.	N/A
S.3	Yes, it was easy to learn and I think I will remember how to navigate the screens.	N/A
S.4	Yes, I did not have any issues.	N/A
S.5	10/10	N/A
S.6	10/10	N/A
S.7	10/10	N/A
S.8	No, it was only a couple of seconds at most.	N/A
S.9	Yes, I was confident in the system input. Wasn't initially expecting to double click on folders in the admin portal, but the learning curve is negligible and is of no concern to me. System responded nicely to the double click input.	N/A
S.10	Yes, no concerns.	N/A

User 2

Item Number	User Feedback	Action Item
C.1	Straightforward process to access portal. Would be nice if documents could be viewed in app instead of download only, but not a major concern	F.3
C.2	Uploading a work order number and visit details was easy. No concerns.	N/A
C.3	Uploaded a photo from my phone's camera roll. Process was easy and have no concerns	N/A
C.4	The button to view station documents was easy to find at the bottom right of the screen. No concerns.	N/A
C.5	Successfully updated visit description. Process was easy and I had no concerns.	N/A

A.1	Successfully located the location to upload site specific documents. Recommend changing the box so that you can click on the entire box rather than only the chevron on the right side so that it is easier to access the file tree.	F.4
A.2	Locating the site wide documents location was easy. Have no concerns.	N/A
A.3	Was able to locate the record of the most recent site visit. Would be a nice feature if there were filters for sites, etc along the columns. I was able to discover that by clicking on the site log I viewed the details about that visit	F.5
A.4	Was easily able to locate the export to csv button. Process was easy and have no concerns.	N/A
A.5	Was able to locate the site details successfully and was able to locate where the sites were without any issues.	N/A
S.1	The home screens for both portals felt intuitive, and I knew what I was looking at and what actions I could take.	N/A
S.2	The colour palette is pleasant to look at and reminds me of other city applications.	N/A
S.3	The system was comfortable to use and I do not foresee any issues using the system again at a later date. The system is easy to learn.	N/A
S.4	Was able to locate the documents without issue.	N/A
S.5	10/10	N/A
S.6	10/10	N/A
S.7	10/10, I had no problems uploading a document.	N/A
S.8	I felt no frustration uploading a document.	N/A
S.9	Yes, the system provided pretty good feedback I think. No major issues or things that come to mind which should be changed.	N/A
S.10	No it was not offensive or political.	N/A

User 3

Item Number	User Feedback	Action Item
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C.1	Accessing the portal through the QR code didn't give me any problems. Acknowledged the documents, a bit awkward downloading documents might be nicer if I could view them instead, some documents I downloaded I could preview but not others.	F.3
C.2	I had no trouble uploading a work order number and a visit description without assistance. It was easy to do.	N/A
C.3	I uploaded a pdf file from my device files and it worked no problem. Easy to do.	N/A
C.4	I was able to discover the button for station documents pretty quickly, I won't have any issues finding it again.	N/A
C.5	Updating my visit description was as easy as it was to enter it the first time.	N/A
A.1	I was able to locate the location for site specific documents right away. The buttons are easy to see and emphasized with colour which I like.	N/A
A.2	Also easy to find the site specific. Maybe there could be a better name than site wide? But I understand what it is trying to convey.	F.6
A.3	I was able to locate the site visit records, easy to navigate for me and I have no concerns.	N/A
A.4	I successfully found the export to csv option without any issues and it worked nicely. No concerns.	N/A
A.5	I was able to locate the site details along the left side panel. I don't have any concerns.	N/A
S.1	Yes, I knew what I was looking at and it felt intuitive to use.	N/A
S.2	Yes, I have no concerns with the colour palette.	N/A
S.3	I feel comfortable using the system. I should be able to remember how to use it at a later date, no concerns.	N/A
S.4	I had no issue finding the documents.	N/A
S.5	9/10	N/A
S.6	9/10	N/A
S.7	10/10	N/A
S.8	No major frustration, apart from what I already mentioned about how viewing the documents within the app itself would be easier.	N/A
S.9	I was satisfied with the system feedback.	N/A

S.10	No I didn't see any issues.	N/A
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User 4

Item Number	User Feedback	Action Item
C.1	I was able to scan the provided QR code and access the contractor portal for the site. It was fairly easy to do.	N/A
C.2	I had no trouble adding a work order number and adding a description to the site visit.	N/A
C.3	I uploaded a photo from my phones image gallery and it loaded quickly, so I have no concerns.	N/A
C.4	Navigating the documents was fairly smooth, might be nice to have a back button built in the application but using the browsers back button worked fine for me too.	N/A
C.5	I didn't encounter any problems with updating the description of the work. The leave site button was nice and big and easy to press.	N/A
A.1	I initially went to the wrong section and ended up on the manage sites page, although this only lasted a few seconds before I found the right spot and I won't forget it now, so no concerns. Pretty easy to find the site specific documents in the end.	N/A
A.2	I was able to locate and add a side wide document without any concerns. Was also able to delete it easily.	N/A
A.3	I had some difficulty realizing that I could click the site visit logs to view the visit details. I recommend including some other kind of symbol or indicator to make it clearer that the site visit logs are buttons.	F.7
A.4	I was successfully able to locate the csv button at the top of the screen. Easy to use and I don't have concerns.	N/A
A.5	I was able to find the site details, this was the first screen I had found when looking for site documents. It all seems fine to me, I don't think I would use this page much when using the app.	N/A
S.1	I thought it was pretty clear on the contractor portal. Admin portal only minor confusion but still not a concern to me now that I know how to use it.	N/A
S.2	Yes, the colour palette looks nice.	N/A

S.3	Yes, I feel comfortable and would not have problems using it again on my own.	N/A
S.4	As mentioned I went to the site visits accidentally first, but found the right spot within a few seconds so no concern to me.	N/A
S.5	10/10	N/A
S.6	9/10	N/A
S.7	10/10	N/A
S.8	Not really, some documents might be hard to read on my phone but it is what it is.	N/A
S.9	I think it was pretty good, other than the site visit logs not realizing they could be clicked on. Otherwise it was a good system.	N/A
S.10	No, there is nothing offensive.	N/A

User 5

Item Number	User Feedback	Action Item
C.1	Scanning the QR code went ok. Reading the documents took some time but it was easy to click on the box that I had read them. No errors and I have no concerns.	N/A
C.2	I was able to type in a work order number and a description, no concerns.	N/A
C.3	I took a picture then uploaded it, everything worked fine and it was easy to do so I have no concerns.	N/A
C.4	Yes, it was very easy to click on the button on the bottom of my phone which brought me to the documents. Looked pretty similar to the outlook my company uses which I like and I have no concerns.	N/A
C.5	I was able to update the description and sign out without any issues. It was easy to do.	N/A
A.1	I found the site in the documents section without any issues, uploaded a file from my laptop and it appeared in the portal. I don't have concerns or suggestions.	N/A
A.2	I was able to add a document in the right spot, felt similar to uploading a document to specific sites. No concerns and easy to use.	N/A

A.3	I was able to discover the site logs, although I recommend making the header of the site logs stay visible as you scroll down. Currently, it disappears and I forget what the information in each column means.	F.8
A.4	Yes, I was able to bring the logs to a csv file and it was easy to do.	N/A
A.5	Yes, I was able to find the manage sites section and had no problems doing so. Easy to use.	N/A
S.1	Yes I wasn't confused looking at it. Not too many different options presented to you which is nice.	N/A
S.2	Yes I liked the colour palette.	N/A
S.3	I think so, it was pretty easy to navigate.	N/A
S.4	Yes I found the documents no problem.	N/A
S.5	10/10	N/A
S.6	9/10	N/A
S.7	10/10	N/A
S.8	Not really, reading the documents takes a while and I wouldn't enjoy doing it when I have work to do, but nothing can be done about that. The application is for me.	N/A
S.9	The system feedback was good, I was not confused about what was happening and it did what I expected it to do. Just my recommendation about keeping the header in the side logs visible.	N/A
S.10	No nothing offensive.	N/A

User 6

Item Number	User Feedback	Action Item
C.1	I was able to scan the QR code just fine and read the documents and check the boxes. No errors encountered, so I'm happy.	N/A
C.2	I typed in a work order number and a description which was very easy to do.	N/A
C.3	I uploaded a picture to the app and it didn't take very long, only a few	N/A

	seconds. Easy to do.	
C.4	It took me a few seconds but then I found the documents button on the bottom right screen, so I don't have any suggestions.	N/A
C.5	Updating the description was easy to do again once I was back on the site visits screen, no concerns.	N/A
A.1	I found the site specific document section right away, and the stations were ordered nicely which was good. Uploading a document was easy and felt similar to my google account.	N/A
A.2	I was able to find the right spot and upload and delete a file without any issues. No concerns.	N/A
A.3	I found the site visit logs pretty quickly, took a bit of scrolling to find the right station and understand what I was looking at but the information was all there. No suggestions I can think of.	N/A
A.4	Yes, I clicked on the button on the top left which I had seen from the beginning. It was easy to do.	N/A
A.5	I recommend having a message of some kind appear when I hover over the icons on the manage sites tab on the pencil, garbage can, and QR code. This would help me know what the buttons do before I click on them. Otherwise, no concerns.	F.9
S.1	Yes I think the initial screens were pretty clear.	N/A
S.2	Yes it was pleasing.	N/A
S.3	Yes I think so.	N/A
S.4	Yes it was nicely labelled and easy to find.	N/A
S.5	9/10, I think I would know how to use everything if I had to again.	N/A
S.6	8/10, I think it is a nice application.	N/A
S.7	10/10	N/A
S.8	It wasn't too bad, certainly not frustrating.	N/A
S.9	It was overall good, only wish there were more descriptions about what some of the icons do as I mentioned earlier.	N/A
S.10	There was nothing offensive or political.	N/A

Actions Taken to Address Feedback

The following table summarizes the actionable feedback which was received from the usability testing:

Feedback	Action Taken
F.1	Will change “Hamilton Waterworks” to “Hamilton Water” in the title per User 1 feedback.
F.2	Will add units of measurement to the fields on the manage sites screen per User 1 feedback.
F.3	The ability to view documents within the application in the browser, rather than downloading each of the files, is not implemented by the application and is instead slated for a future release due to its complexity. No action to be taken.
F.4	Per the feedback received from user 2, we will implement the suggested change to improve the usability.
F.5	The applying of various filters to columns within the side logs is a feature for a future release. Currently, the feature to export the site log data to an excel file provides that functionality within excel. Therefore, no action was taken.
F.6	Explore alternative names for site wide documents than just site wide, as a user could interpret that was meaning a single site. Alternative names that suit the stakeholder best are for a future release.
F.7	We will add a new icon to further increase the discoverability for the user that they can click on each visit log.
F.8	We will make the header in the site visit logs a sticky header so that it stays visible as users scroll through the site visit logs per the user 5 feedback.
F.9	We will include tooltips when hovering over the icons on the manage sites page to indicate what the purpose of those buttons are per the user 6 feedback.

The usability testing was successful and provided us with the above action items to improve the design, directly from the feedback of users of the system. This input will improve the usability of the system and has helped provide us with confidence in the ability of the system to solve the stakeholders initial goals.