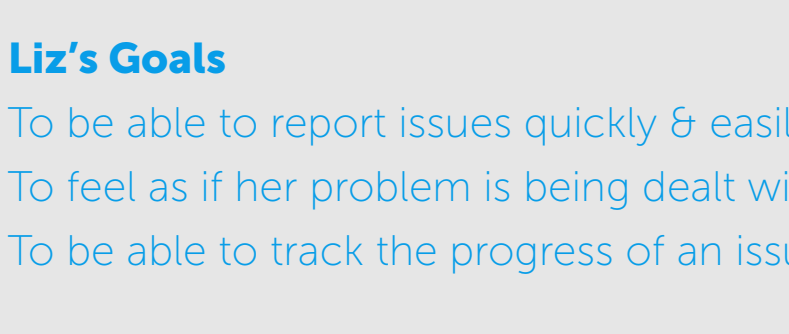


Introduction

The purpose of this document is to evaluate the usability of dublincity.ie by reference to Jakob Nielsen's heuristics. While we have found the website to be highly functioning in many ways, we have addressed a number of possible areas for further improvement. This evaluation aims to flag areas where more emphasis could be placed on the user's goals and key concerns in order to create a user-centred, task-oriented solution. Key topics that we would recommend for further study are error prevention, error handling, system conventions, guiding the user and labeling.



Liz Dunne, 54

"Being able to report things Online is great but I'm always getting lost on websites, it's very stressful!"

Liz's Goals

- To be able to report issues quickly & easily
- To feel as if her problem is being dealt with
- To be able to track the progress of an issue

Liz's Pain Points

- Not being able to deal with a 'real' person
- Not being comfortable on computers
- Not knowing the status of her report

Scenario 1: Liz reports an abandoned car

Liz returns home from work on Monday evening to find an abandoned car still parked outside her house. It has been there for a week now. Liz decides to report the car to Dublin City Council in hopes that they will collect it. Liz searches the issue Online to find an appropriate way to contact the council. As it is outside of hours Liz decides to report the problem Online. After submitting details of the issue, pinning the address and providing her contact details she has completed her report. The website provides her with a reference number so that she can track the issue. Happy to have gotten the task out of the way, Liz goes to downstairs to relax for the evening.

Scenario 2: Liz tracks the report

A week has passed and Liz would like to check on the status of her report. While on her lunch-break, she launches the website and submits her tracking number. Upon doing so Liz is informed that the issue is still open and being dealt with by the waste department. She updates the report with a request for information and, being short on time, closes the browser with a view to checking on the issue at a later stage.

Wayfinding

Navigation isn't always intuitive

Problem Severity:
Minor: Sometimes Happens, Minor Impact – Fix it whenever (1)

Heuristics:
Match between system and the real world

Problem Overview:

It can sometimes be difficult for the user to find what they are looking for. There is a well-defined route to the iSupport page, through 'I want to' and 'Report it', and it works well for those users who navigate here first.

However, it is important to realise that the user might not always take this route. Taking into account their mental model and their use of natural language, they might navigate to 'Contact Us', as they feel they are contacting the council. They might also choose to go to the A-Z section, thinking they would find it under 'Report', or 'Vehicles', etc. Likewise, they might go to the search bar and type in 'Abandoned car'. Once the user gets to the page where they have to select a service request type, they might look under the headings of 'Roads', or 'Traffic', rather than 'Waste'.

The issue here is a mismatch between the user's perception of the task they are completing, and how the system deals with the task. Not being able to navigate to where they want to be quickly and easily generally frustrates users, and makes them less patient with the whole system. It is important to try to anticipate where the user might navigate to, and provide clear links to redirect the user when this happens.

Solutions:

In order to help users to find the iSupport page, any other pages that the user might navigate to while trying to report an issue (such as the 'Contact Us' page), should contain links to the correct page. A link might say, 'Click here to Make a Service Request'. The A-Z list of services should also include a page for 'Reporting Issues'.

Consideration should be given to moving the link for 'Abandoned Vehicle Inspection' to 'Roads', rather than 'Waste', and to removing the word 'Inspection'. The system should speak the user's language, with words, phrases and concepts familiar to them, rather than system-oriented terms.

The search results should be more tailored to user's needs. If the user enters the word 'report', for example, the link to the page to report issues should be prioritised and displayed before articles containing the word report. The search results could also be made to more closely match the user's use of language, by also searching for synonyms of what they enter, such as searching for 'vehicle', when they enter 'car'.

System Conventions

Map controls do not conform to well-known conventions.

Problem Description:
Happens everytime, Minor Impact – Fix it Soon (2)

Heuristics:
Consistency and standards
Match between system and the real world

Problem Overview:

Providing the user with a map to pin-point the location of the abandoned car is a good solution. However, there is some room for improvement in terms of usability. In general, users are very used to using Online maps, in particular Google Maps, and when they are provided with a map that uses different controls to navigate, it can be a jarring experience.

During the usability inspection, users tend to ignore the instructions for the map on screen, due to a perceived familiarity with normal conventions of how maps work. They tried to use the scroll wheel of the mouse to zoom in and out, which is how Google Maps works. They did not expect to have to click the hand button first, in order to navigate around the map. It feels more natural to be in navigation mode automatically, and then have to select a particular mode to mark the map.

The toggle between the two different modes (the hand for navigation and the pencil for marking a point), also caused some confusion with users. When the user clicks the hand to navigate the map, that icon disappears, to be replaced by the pencil. The result is that on 'Hand Mode', the pencil is visible, on the 'Pencil Mode', the hand is visible. Here, the system conflicts with their perception of the real world – they feel that the icon is an indication of what they can do.

The resulting confusion meant that users tended to spend several extra minutes trying to use the map before they figured out how to use it, during which time a less patient user may have given up on the task.

Solutions:

The ideal solution in this case would be to use an embedded Google Map on the page, instead of the Ordnance Survey map currently in use. It is important in terms of usability to be consistent with current standards, and for users, Google Maps is the standard they know.

If this not possible for technical reasons, the controls should be adapted to mirror these controls. Click and drag should zoom the map, double click or scroll should move in. A single click should place a pin on the map at the required location. There should also be zoom controls in the corner of the map for users without a scroll wheel mouse.

This would also eliminate the need for the hand/pencil navigation between modes, and the surrounding confusion. The use of a pin to show the location also reflects more closely the real-world concept of pinpointing a spot, and is more intuitive and easier for users to understand.

Guiding the User

No clear path during the process of reporting an issue.

Problem Description:
Happens Frequently, Minor Impact – Fix it Soon (2)

Heuristics:
Consistency and standards
Match between system and the real world

Problem Overview:

While the instructions on how to use the iSupport portal are task orientated, they are not correctly organised into concrete steps. With the amount of information provided, relevant content can be difficult to retrieve. As the instructions are provided before the user needs them, they will also need to remember the instructions for subsequent pages. This will be difficult to do as they are so complex and have a large amount of content.

Without next and back buttons on all pages it is often unclear to the user as to how they should proceed. In the place of a 'next' button, the instruction page has three links to the iSupport portal. These are not obvious links and they are also competing with the headings, which can be overwhelming to the user. This is an issue of consistency and standards. Users expect links to be obvious, and easily spotted when scanning a page.

From existing knowledge of the platform, the user expects there to be clear navigation buttons and a clear hierarchy of information. The progress bar may

not be necessary here as there are only two pages. It would be more useful in a longer form where the user will need to estimate how long it will take to fill out. The bar also doesn't serve any purpose as a navigation tool which is confusing to the user. As real estate on every page is so valuable, this use of space is more likely to distract the user and take emphasis from more important information.

Some steps in the process are a little unclear. User expect buttons to be descriptive and guide them through the task. When the user enters their address into the search bar they expect to submit it to the map. As a result, the use of the phrase 'select map' here is a little confusing.

The instructions on how to use the map are very content heavy. The user should be able to easily retrieve information as it should be organised into clear and concise points. The instructions are also taking up a large amount of space, as much as the map itself in fact. This distraction makes it more difficult for the user to progress through the steps of the task.

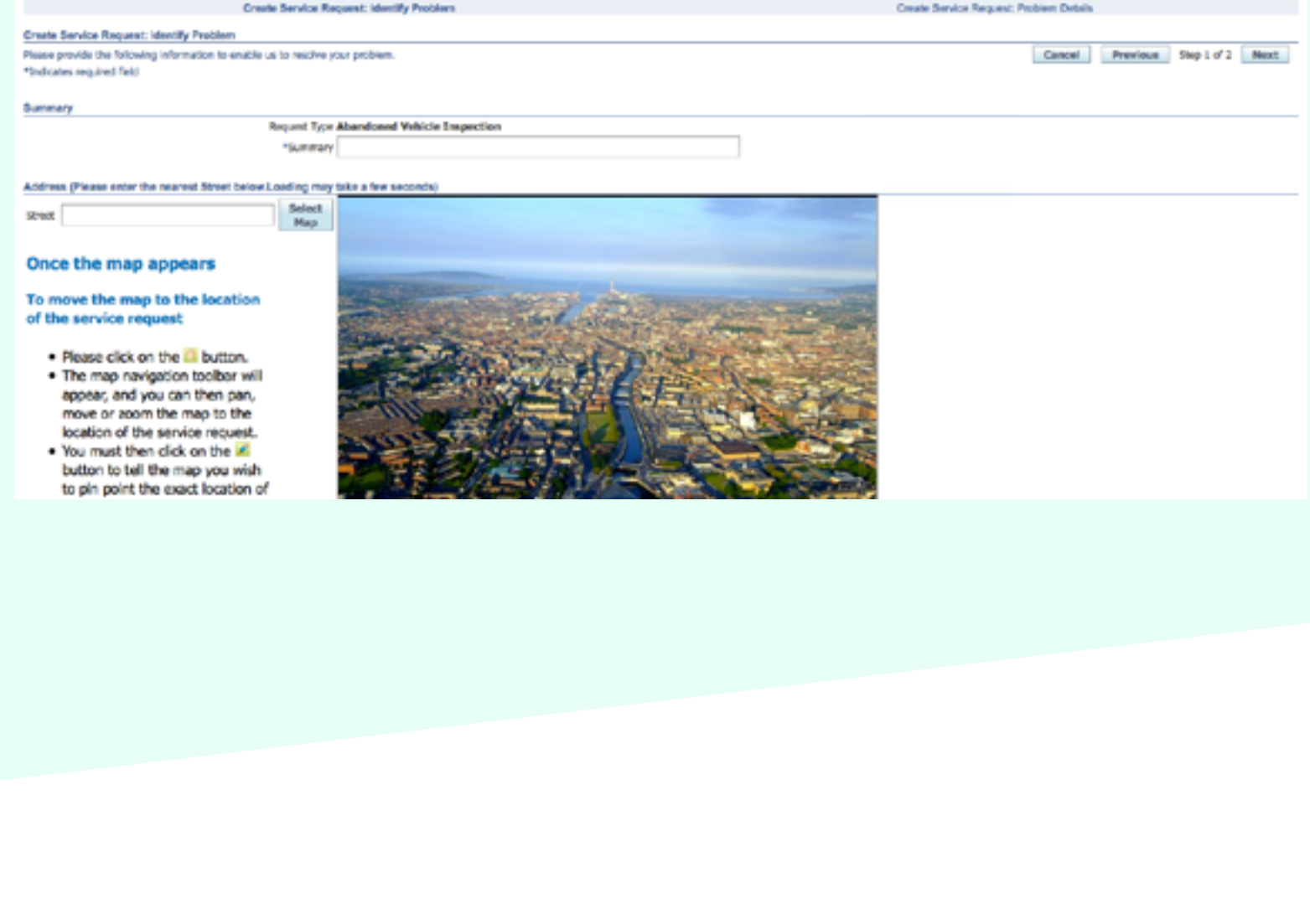
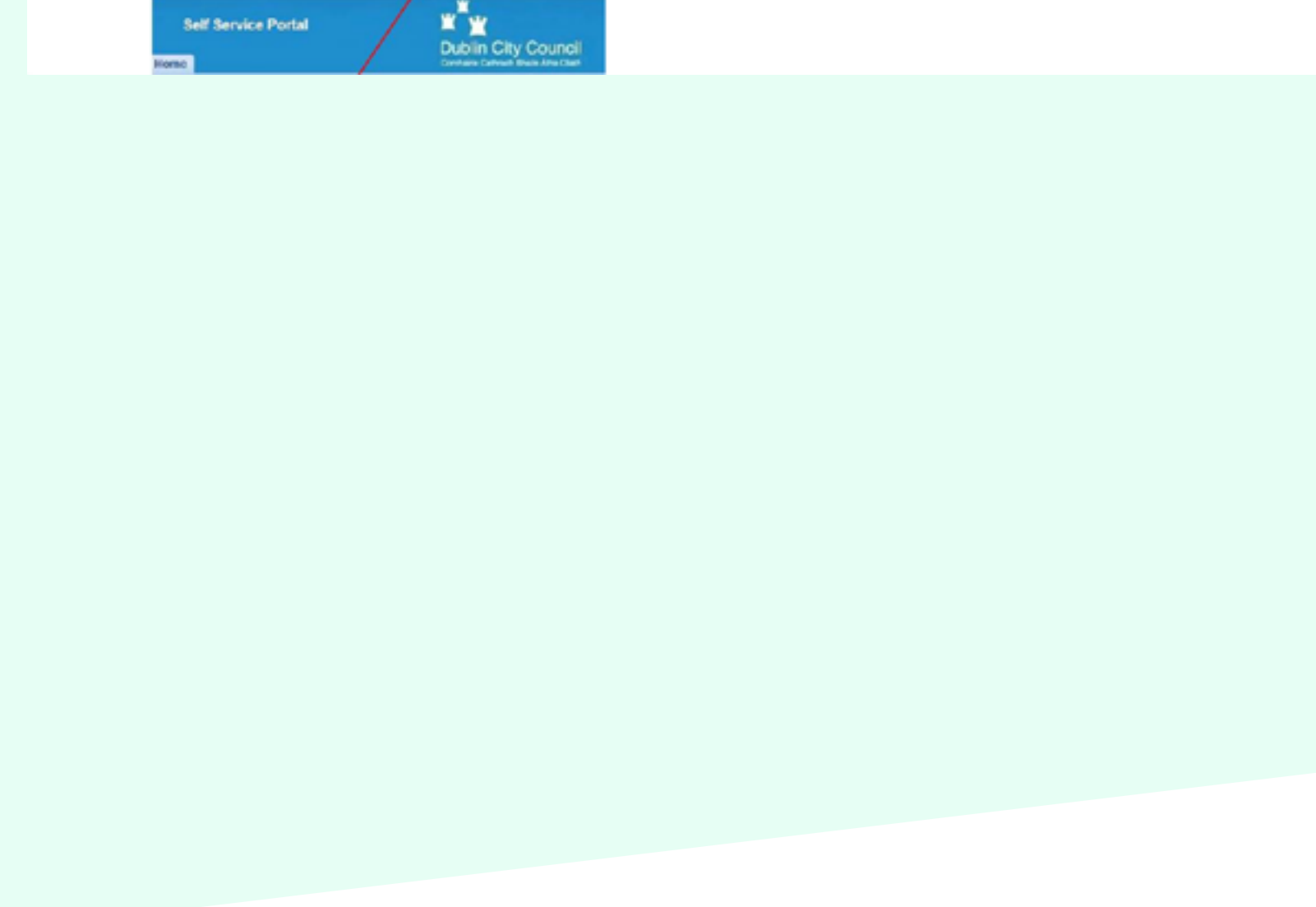
Solutions:

There are a number of solutions that could be implemented to guide the users through their task. Firstly, the user should always know where they are and be able to access other pages. For this reason the addition of a navigation menu would add to the user's experience.

Instructions should be provided at the time that the task is being completed and on the correct page. They should be broken down into concrete steps, as well as being clear and concise. Bullet points or a numbered list could solve this problem. They should also be easily retrievable when needed so the inclusion of a 'help' section in the navigation menu could be very beneficial here.

Information and tools on the page need to be reduced to only what is necessary. The removal of the progress bar and excess instructions will solve this problem.

Ensure that buttons and navigation aids are always provided, always descriptive and that user always knows how to get back. The inclusion of 'next' and 'back' buttons on all pages will be necessary for the user. 'Select Map' should be changed to 'Submit'. Links should be separated, underlined and smaller than the page headings. The issue of links being difficult to find can be easily solved by ensuring that all links in the website are visually consistent in terms of font, colour and size.



Error Prevention

Lack of labeling required fields leads to user errors

Problem Description:
Happens frequently, Major Impact – (4)

Heuristics:
Match between system and real world
Error prevention
Consistency and standards.

Problem Overview:

The user is required to enter an address in addition to marking the location of the incident on the map. The user is made aware of one required field, a summary of the request. Entering the street address is also a required field but isn't marked as one. This text field is actually a dropdown list of all the street names in Dublin City Council. Although a dropdown list is a useful way to present users with information, there is nothing to indicate this is a dropdown list. Additionally, there is no warning to the user that there is an option from this list is accepted. These are issues of consistency and standards, the user is not presented with the information in a format they expect.

The title to this section is 'Address'. If the user enters a number first, as the title might suggest, the dropdown list never appears. This issue is a conflict between the system and real world; what the user is thinks an address is, is not what the system requires.

In the request form, the user is allowed to submit the request without providing any contact details or information about the incident. As this is essential information needed to service the request, this is a major error prevention issue. The user is not warned that they are submitting without filling out the form correctly.

Text fields in this form are large text boxes into which anything can be entered. There are no procedures to check if correct information has been entered, for example, a phone number or an address. This form is inconsistent with standard Online forms, and the user is unsure of how to enter the information.

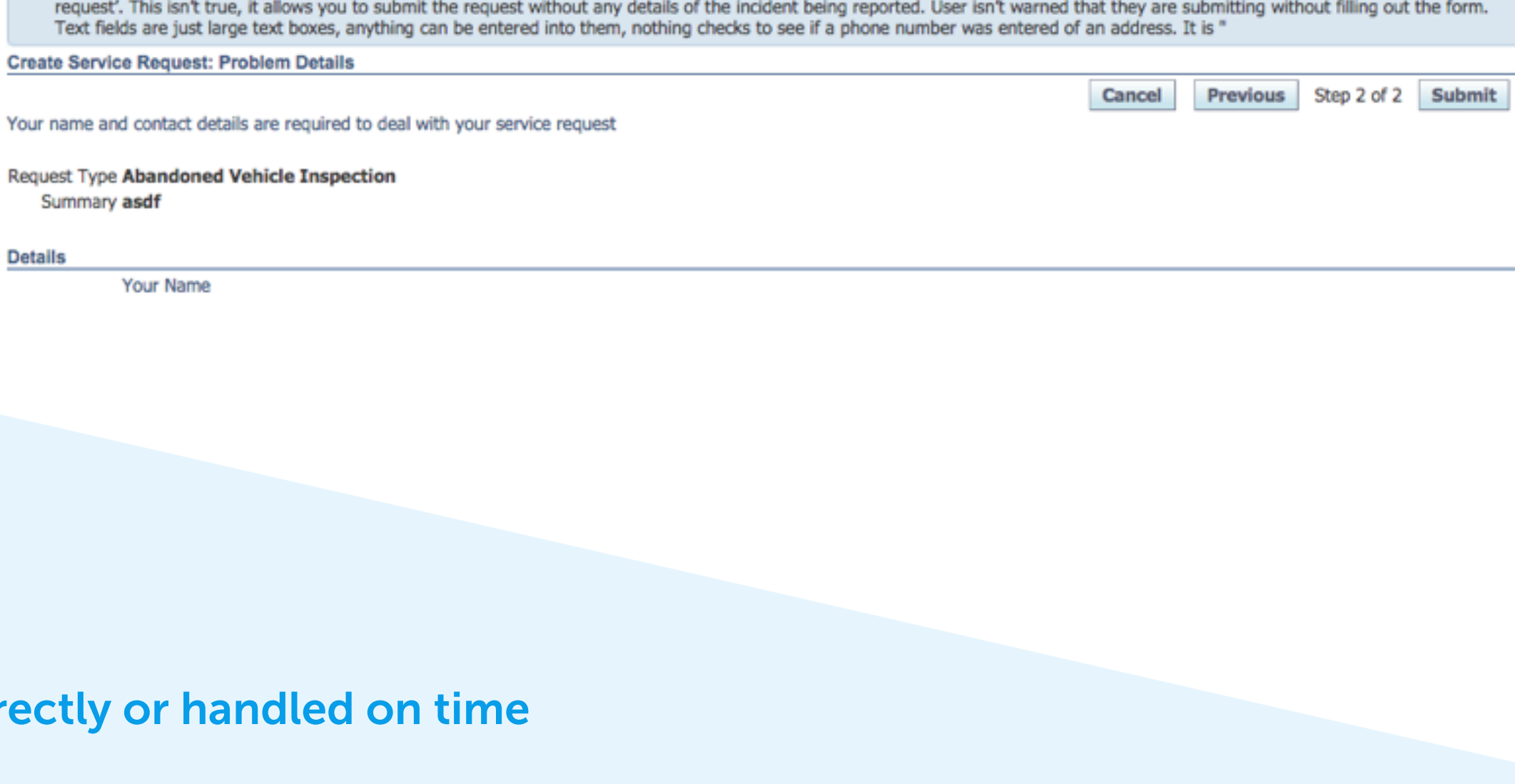
There is no limit to the amount of text a user can enter into any these text fields, but there is however, a limit to the amount of text they system will accept. There is no warning regarding the limit that the system will accept, and the user is only notified of their mistake after the submission has been made.

Solutions:

Proper identification and labeling of required fields is essential. For example, 'Please select a street name from the dropdown list'.

All required fields should be clearly marked with an asterisk. Careful design solutions are rather than the user know what is required of them before correcting them after a mistake has been made.

Proper input validation should be put into practice, especially in fields where the user has to enter vital information, like a valid phone number. A more structured and consistent format is required for entering information into the form to minimise the risk of typing mistakes by the user.



Error Handling

Errors are not always diagnosed correctly or handled on time

Problem Description:
Happens Frequently, Major Impact (3) – Fix it urgently

Heuristics:
Help users recognize, diagnose and recover from errors

Problem Overview:

It is clear that there is an attempt to provide error messages for the user when things go wrong, which is good. However, in some cases they can confuse the user, by either incorrectly diagnosing the problem, or informing the user of their error too late in the process.

In the case of the user forgetting to press save on the map, an error message pops up, saying 'Select the location and press Save Button in Map before proceed to next page'. However, around half of the times this error occurred in the usability inspection, the message appeared too late, only after the following page had been loaded. This means that the user has to navigate back to the previous page to solve the problem. When they go back, all of the information that they had entered has disappeared, and they lose time in having to repeat the whole process.

In the usability inspection, another user made an error by attempting to report an abandoned car in an area of South Dublin, which is not in the jurisdiction of Dublin City Council. This error was not diagnosed correctly, causing much confusion. The error informed the user that they had not entered a street, which they had. In the case of this happening, the user would most likely have contacted Dublin City Council by phone, to be told in person that they require South Dublin County Council to deal with their issue.

Solution:

Error messages need to occur immediately after the error is detected. As soon as the user placed a dot on the map, outside of the jurisdiction, they should have told that the location is outside of the Dublin City Council area.

Care needs to be taken to ensure that the error message appears on the same page as the error occurred on, so that the user does not need to navigate back to fix it.

It is also important that in diagnosing errors, that the user is given a constructive solution. In the case of the user trying to report a car in an informal area, a message could have appeared to inform them that they should report the issue to South Dublin County Council, and providing a link to the correct website.

