

Accessibility research 'Ximmio (Westland)' app for iOS

Client

DigiToegankelijk TOP (in connection with the implementation of the Ceder motion on behalf of the Ministry BZK)

























Date





















29 maart 2024

Report version














3.0.0

Table of Contents

Executive summary	5
1. Introduction	7
2. Research	8
2.1. Scope	9
2.2. Devices	9
2.3. Techniques	9
3. Results	10
 Success Criterion 1.1.1 - Non-text Content	13
 Success Criterion 1.2.1 - Audio-only and Video-only (Prerecorded)	14
 Success Criterion 1.2.2 - Captions (Prerecorded)	14
 Success Criterion 1.2.3 - Audio Description or Media Alternative (Prerecorded)	14
 Success Criterion 1.2.4 - Captions (Live)	15
 Success Criterion 1.2.5 - Audio Description (Prerecorded)	15
 Success Criterion 1.3.1 - Info and Relationships	16
 Success Criterion 1.3.2 - Meaningful Sequence	17
 Success Criterion 1.3.3 - Sensory Characteristics	17
 Success Criterion 1.3.4 - Orientation	18
 Success Criterion 1.3.5 - Identify Input Purpose	18
 Success Criterion 1.4.1 - Use of Color	19
 Success Criterion 1.4.2 - Audio Control	20
 Success Criterion 1.4.3 - Contrast (Minimum)	20
 Success Criterion 1.4.4 - Resize text	21
 Success Criterion 1.4.5 - Images of Text	24
 Success Criterion 1.4.10 - Reflow	24
 Success Criterion 1.4.11 - Non-text Contrast	25
 Success Criterion 1.4.12 - Text Spacing	26
 Success Criterion 1.4.13 - Content on Hover or Focus	27
 Success Criterion 2.1.1 - Keyboard	28
 Success Criterion 2.1.2 - No Keyboard Trap	29
 Success Criterion 2.1.4 - Character Key Shortcuts	30
 Success Criterion 2.2.1 - Timing Adjustable	30

 Succes Criterion 2.2.2 - Pause, Stop, Hide	30
 Succes Criterion 2.3.1 - Three Flashes or Below Threshold	31
 Succes Criterion 2.4.3 - Focus Order	31
 Succes Criterion 2.4.4 - Link Purpose (In Context)	31
 Succes Criterion 2.4.6 - Headings and Labels	32
 Succes Criterion 2.4.7 - Focus Visible	33
 Succes Criterion 2.5.1 - Pointer Gestures	36
 Succes Criterion 2.5.2 - Pointer Cancellation	37
 Succes Criterion 2.5.3 - Label in Name	38
 Succes Criterion 2.5.4 - Motion Actuation	38
 Succes Criterion 3.1.1 - Language of Page	39
 Succes Criterion 3.2.1 - On Focus	39
 Succes Criterion 3.2.2 - On Input	39
 Succes Criterion 3.3.1 - Error Identification	40
 Succes Criterion 3.3.2 - Labels or Instructions	41
 Succes Criterion 3.3.3 - Error Suggestion	42
 Succes Criterion 3.3.4 - Error Prevention (Legal, Financial, Data)	43
 Succes Criterion 4.1.1 - Parsing	43
 Succes Criterion 4.1.2 - Name, Role, Value	44
 Succes Criterion 4.1.3 - Status Messages	47

4. Recommendations 48

 Succes Criterion 1.1.1 - Non-text Content	48
 Succes Criterion 1.3.1 - Info and Relationships	48
 Succes Criterion 1.4.1 - Use of Color	49
 Succes Criterion 1.4.4 - Resize text	49
 Succes Criterion 1.4.5 - Images of Text	49
 Succes Criterion 1.4.11 - Non-text Contrast	50
 Succes Criterion 2.1.1 - Keyboard	50
 Succes Criterion 2.4.7 - Focus Visible	50
 Succes Criterion 2.5.1 - Pointer Gestures	51
 Succes Criterion 2.5.3 - Label in Name	51
 Succes Criterion 3.3.2 - Labels or Instructions	51
 Succes Criterion 4.1.2 - Name, Role, Value	52
 Succes Criterion 4.1.3 - Status Messages	52














Appendix A: Findings per screen

53

1. Beginscherm	54
2. Onboarding: Postcode	55
3. Afvalkalender	58
4. Containerlocaties	61
5. Afvalwijzer	69
6. Informatie	73
7. Instellingen	74
8. Berichten	76

Executive summary

Abra has carried out accessibility research on behalf of DigiToegankelijk TOP (in connection with the implementation of the Ceder motion on behalf of the Ministry BZK). We have selected 8 screens through a structured sample. We have checked whether these screens comply with the EN 301 549 standard. This standard references 44 success criteria from the WCAG 2.1.

- We found 31 problems on 8 screens.
- The app passes 31 of the 44 succes criteria.
- The app does not pass the following success criteria:
 1.  Succes Criterion 1.1.1 - Non-text Content
 2.  Succes Criterion 1.3.1 - Info and Relationships
 3.  Succes Criterion 1.4.1 - Use of Color
 4.  Succes Criterion 1.4.4 - Resize text
 5.  Succes Criterion 1.4.5 - Images of Text
 6.  Succes Criterion 1.4.11 - Non-text Contrast
 7.  Succes Criterion 2.1.1 - Keyboard
 8.  Succes Criterion 2.4.7 - Focus Visible
 9.  Succes Criterion 2.5.1 - Pointer Gestures
 10.  Succes Criterion 2.5.3 - Label in Name
 11.  Succes Criterion 3.3.2 - Labels or Instructions
 12.  Succes Criterion 4.1.2 - Name, Role, Value
 13.  Succes Criterion 4.1.3 - Status Messages

In this third evaluation the Ximmio development team has solved 29 issues, 14 remain unsolved, and 17 new issues are new.

Feedback report 2: Key areas of attention include navigation using point gestures, input fields, and accessibility with an external keyboard. Additionally, a variety of issues of different natures were identified. Ensure that the screen can be navigated both by swiping in sequence and by point gesture. Also, ensure that the input fields have a visible name, which is programmatically linked to the field; a correct role; and that placeholder text (if different from the field name) is read by screen readers. Furthermore, all interactive elements should be focusable and navigable with an external keyboard.

Please note that some issues, though mentioned only once, are present on multiple screens. Check all screens for the reported issues.

Questions about this report can be asked via info@abra.nl. On our website abra.nl you can read more about our services.

1. Introduction

Abra has carried out accessibility research on behalf of DigiToegankelijk TOP (in connection with the implementation of the Ceder motion on behalf of the Ministry BZK). The evaluation method Appt-EM has been used to conduct this research. This method has been developed specifically for apps and is based on WCAG-EM. We investigated whether the app complies with the EN 301 549 standard. This standard contains 44 success criteria from the WCAG 2.1 guidelines.

WCAG

WCAG stands for Web Content Accessibility Guidelines. The guideline was originally created for websites, but can also partly be applied to apps. Version 2.1 of the WCAG consists of 4 principles, 13 guidelines and 78 success criteria. The success criteria are divided into three levels: A, AA and AAA. Level A consists of 30 success criteria, level AA of 20 success criteria and level AAA of 28 success criteria. To meet level AA you must also meet level A.

EN 301 549

EN 301 549 is the European standard for digital accessibility. We applied version 3.2.1 of this standard for this research. Apps fall under the 'Software' chapter. For apps, 44 of the 50 success criteria from level A and AA of the WCAG 2.1 apply. Minor adjustments have been made to the notes or definitions for 13 success criteria, often keeping the context the same. The following success criteria are not mandatory for apps: 2.4.1, 2.4.2, 2.4.5, 3.1.2, 3.2.3 and 3.2.4.

Accessibility statement

Government agencies are required by law to optimize the accessibility of their apps. They are held accountable for how far they have progressed. For that accountability, government agencies must make and upload an [accessibility statement](#). This report gives a good overview of the level of accessibility.

Support

Abra supports organizations that want to improve the accessibility of their apps. We provide services and software to improve the accessibility of apps. Our reports always contain solutions specifically for apps.

Questions about this report can be asked via info@abra.nl. On our website abra.nl you can read more about our services.

2. Research

Abra has carried out accessibility research on behalf of DigiToegankelijk TOP (in connection with the implementation of the Ceder motion on behalf of the Ministry BZK). This are the details:

App name

Ximmio (Westland)

Operating system

iOS

Tested version

2.0.0.0

Installation method

<https://apps.apple.com/nl/app/afval-westland/id1583188932?l=en-GB>

Research type

WCAG 2.1 level AA

Applied standard

[EN 301 549](#) with [WCAG 2.1](#)

Research method

[Appt-EM](#), based on [WCAG-EM](#)

Client

DigiToegankelijk TOP (in connection with the implementation of the Ceder motion on behalf of the Ministry BZK)

Researcher

Tanya van Workum

Reviewer

Paul van Workum

Date

29 maart 2024

2.1. Scope

The research is based on a structured sample. Part of the app has been selected to draw conclusions about the entire app. Problems that occur several times on a screen might only be described once.

Overview of the selected screens

Nr	Screen	Path
1	Beginscherm	... > Welkom > Home
2	Onboarding: Postcode	Beginscherm > Welkom > Home
3	Afvalkalender	Home > Afvalkalender
4	Containerlocaties	Home > Containerlocaties
5	Afvalwijzer	Home > Afvalwijzer
6	Informatie	Home > Informatie
7	Instellingen	Home > Instellingen
8	Berichten	Home > Berichten

2.2. Devices

The following devices were used during the research:

- iPhone SE (iOS versie 17.4)

2.3. Techniques































The app has been developed with the following techniques:









































- Flutter
















3. Results

The research shows that the 'Ximmio (Westland)' app meets 31 of the 44 success criteria from the guideline.

Results per success criterion

Success criterion	Level	Title	Result
 1.1.1	A	Non-text Content	 Does not pass
 1.2.1	A	Audio-only and Video-only (Prerecorded)	 Passes
 1.2.2	A	Captions (Prerecorded)	 Passes
 1.2.3	A	Audio Description or Media Alternative (Prerecorded)	 Passes
 1.2.4	AA	Captions (Live)	 Passes
AD)) 1.2.5	AA	Audio Description (Prerecorded)	 Passes
 1.3.1	A	Info and Relationships	 Does not pass
 1.3.2	A	Meaningful Sequence	 Passes
 1.3.3	A	Sensory Characteristics	 Passes
 1.3.4	AA	Orientation	 Passes
 1.3.5	AA	Identify Input Purpose	 Passes
 1.4.1	A	Use of Color	 Does not pass
 1.4.2	A	Audio Control	 Passes
 1.4.3	AA	Contrast (Minimum)	 Passes
AA 1.4.4	AA	Resize text	 Does not pass
 1.4.5	AA	Images of Text	 Does not pass

Success criterion	Level	Title	Result
 1.4.10	AA	Reflow	 Passes
 1.4.11	AA	Non-text Contrast	 Does not pass
 1.4.12	AA	Text Spacing	 Passes
 1.4.13	AA	Content on Hover or Focus	 Passes
 2.1.1	A	Keyboard	 Does not pass
 2.1.2	A	No Keyboard Trap	 Passes
 2.1.4	A	Character Key Shortcuts	 Passes
 2.2.1	A	Timing Adjustable	 Passes
 2.2.2	A	Pause, Stop, Hide	 Passes
 2.3.1	A	Three Flashes or Below Threshold	 Passes
 2.4.3	A	Focus Order	 Passes
 2.4.4	A	Link Purpose (In Context)	 Passes
 2.4.6	AA	Headings and Labels	 Passes
 2.4.7	AA	Focus Visible	 Does not pass
 2.5.1	A	Pointer Gestures	 Does not pass
 2.5.2	A	Pointer Cancellation	 Passes
 2.5.3	A	Label in Name	 Does not pass
 2.5.4	A	Motion Actuation	 Passes
 3.1.1	AA	Language of Page	 Passes
 3.2.1	A	On Focus	 Passes


Success criterion	Level	Title	Result
 3.2.2	A	On Input	 Passes
 3.3.1	A	Error Identification	 Passes
 3.3.2	A	Labels or Instructions	 Does not pass
 3.3.3	AA	Error Suggestion	 Passes
 3.3.4	AA	Error Prevention (Legal, Financial, Data)	 Passes
</> 4.1.1	A	Parsing	 Passes
 4.1.2	A	Name, Role, Value	 Does not pass
 4.1.3	AA	Status Messages	 Does not pass

The following pages contain an explanation of each success criterion and an overview of the findings.

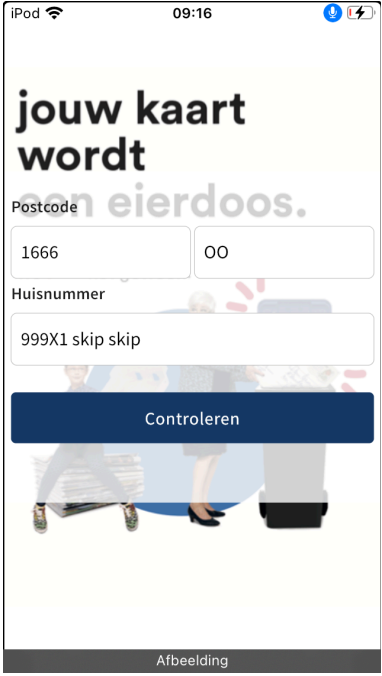


Succes Criterion 1.1.1 - Non-text Content

Ensure that alternative text is available for all content without text. These include images, icons and graphs. Describe what there is to see. People who are blind have this description read aloud through their screen reader. Alternative text can also be useful for anyone who is unsure about the meaning of the content.


 Does not pass


[Solution for success criterion 1.1.1](#)

Nr	Screen	Problem	Screenshot
1	Onboarding: Postcode	<p>The decorative image is read aloud by the screen reader. Make sure all decorative images are hidden.</p> <p>The decorative background image gets focus but does not have a label.</p>	

Succes Criterion 1.2.1 - Audio-only and Video-only (Prerecorded)


Ensure a transcript is provided when information is only conveyed by audio or images. With podcasts, the information is conveyed only through audio. People who are deaf cannot hear what is being said. In animation films, the information is often only conveyed through images. People who are blind cannot see the images. By making a transcript available, the information can be read instead.

 Passes

[Additional information about success criterion 1.2.1](#) 

Succes Criterion 1.2.2 - Captions (Prerecorded)


Ensure captions are provided for all videos with sound. People who are hard of hearing, deaf or deafblind depend on captions to understand what is being said. Captions are also useful for anyone who is temporarily unable to perceive sound, for example inside a quiet zone.

 Passes

[Additional information about success criterion 1.2.2](#) 

Succes Criterion 1.2.3 - Audio Description or Media Alternative (Prerecorded)

Ensure a transcript or audio description is provided for videos where you can't hear what is displayed. The content can then be read in case of a transcript, or heard in case of audio description. If you choose to add a audio description, you also meet success criterion 1.2.5.


 Passes

[Additional information about success criterion 1.2.3](#) 



Success Criterion 1.2.4 - Captions (Live)


Ensure real-time captions are available for all live videos with audio. This allows people who need subtitles to directly access the spoken information.

 Passes

[Additional information about success criterion 1.2.4](#)

AD))) Success Criterion 1.2.5 - Audio Description (Prerecorded)

Ensure audio description is available when important information is shown which you cannot hear. An extra sound track must be provided where where the visual information is described. This allows people who are blind or have difficulty processing visual information to also understand the content.

 Passes

[Additional information about success criterion 1.2.5](#)

☰ Succes Criterion 1.3.1 - Info and Relationships

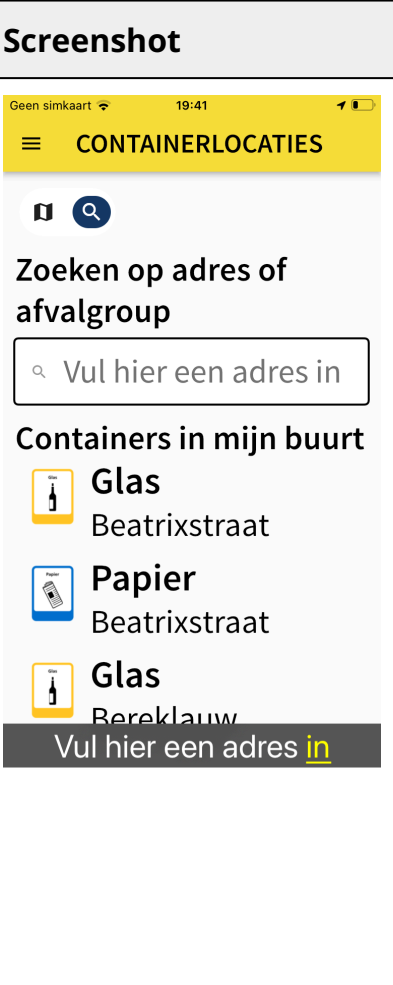
Ensure that the information and relationships on the screen are not only conveyed visually.


Information on the screen must be conveyed to assistive technologies. For example, make sure that headings are not only bold, but also marked as headings in the code.

Relationships on the screen must be usable with assistive technologies. Elements in a list must be navigable one by one. Elements in a table must be navigable by rows and columns.

✘ Does not pass

[Solution for success criterion 1.3.1](#)

Nr	Screen	Problem	Screenshot
2	Container-locaties	<p>The label is not programmatically associated with the related input field. Make sure that by selecting an input field, the screen reader reads the label.</p> <p>It concerns the label 'Zoeken op adres of afvalgroep'. This label should be programmatically associated with the input field to enable navigation with Voice Control.</p> <p>Ensure that the input field has a name that is both visible and programmatically associated with it, a correct role, and that the placeholder text is read aloud by the screenreader. For example, "Zoeken op adres of afvalgroep, bewerkingsvak, Vul hier een adres in."</p>	

Nr	Screen	Problem	Screenshot
3	Afvalwijzer	<p>On this screen, there are headings that are not marked-up as headings. Make sure that assistive technology recognizes headings as headings.</p> <p>It is about the bold headings: "Wat wel/wat niet?" and "Wel" and "Niet" etc.</p>	

Succes Criterion 1.3.2 - Meaningful Sequence


Ensure that the order which assistive technologies follow reflect the meaning of the content. Otherwise, users of assistive technology may misunderstand the content. Most content is presented from left to right, from top to bottom. The information should also be presented to users of assistive technologies in this way.

 Passes

[Additional information about success criterion 1.3.2](#)

Succes Criterion 1.3.3 - Sensory Characteristics


Ensure instructions can be understood by everyone. Instructions that only use shape, size, location, orientation or sound are not understandable for everyone. For example, people who are blind cannot see shape. Combine multiple properties to allow everyone to understand the instructions.


 Passes

[Additional information about success criterion 1.3.3](#)

Success Criterion 1.3.4 - Orientation


Ensure that the screen content rotates with the device display. All screens of an app must be usable in all orientations. Users in wheelchairs sometimes have their device mounted horizontally. People who use an enlarged font also often rotate their device so that more words fit on the screen.


 Passes

[Additional information about success criterion 1.3.4](#) 

Success Criterion 1.3.5 - Identify Input Purpose


Ensure it is clear what information is expected from users inside input fields. Set the correct input type to allow auto-completion, e.g. for e-mail addresses. This is faster for everyone and prevents errors for users of assistive technology.

 Passes

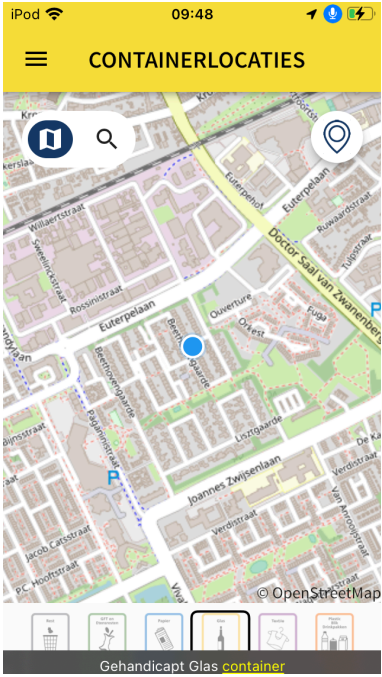
[Additional information about success criterion 1.3.5](#) 

Succes Criterion 1.4.1 - Use of Color

Ensure colour isn't the only way information is conveyed. Information which is conveyed only by colour cannot be perceived by everyone. For example, also use shape to give instructions, e.g. reference a green checkmark or red cross. Inside a legend, use numbers in addition to colour, to allow people who are colour blind to find what they are looking for.


 Does not pass


Solution for success criterion 1.4.1 [↗](#)

Nr	Screen	Problem	Screenshot
4	Container-locaties	<p>Color is used to convey information. Make sure that another visual cue is used, for example, the shape of the lines.</p> <p>It is about the indicators where garbage containers are on the map.</p> <p>An exception applies to online maps and mapping services. Maps themselves do not have to be accessible. You can try to make it as accessible as possible.</p>	

Success Criterion 1.4.2 - Audio Control

Ensure that audio which lasts longer than three seconds can be paused or stopped. It is disturbing if audio cannot be paused, especially for people who use a screen reader. As a result, they can no longer hear the screen reader's voice properly. For people who have difficulty concentrating, it is also nice if audio can be paused. This allows them to focus better on the other information.


 Passes

[Additional information about success criterion 1.4.2](#) 

Success Criterion 1.4.3 - Contrast (Minimum)


Ensure that the contrast ratio between the text colour and background colour is at least 4.5:1. For bold and large text, a ratio of 3:1 is sufficient. By maintaining these ratios, visually impaired and colour blind users can usually read the text well. In addition, this makes an app easier for everyone to use, for example outside in the sun.

 Passes

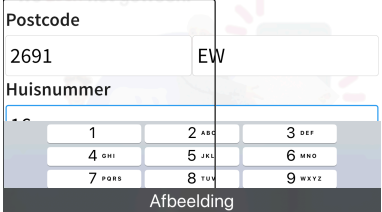

[Additional information about success criterion 1.4.3](#) 

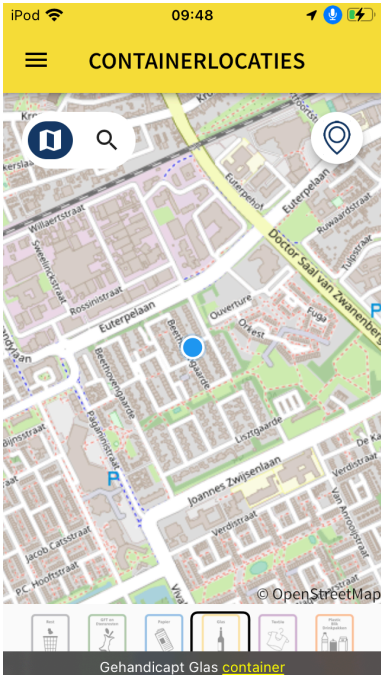

AA Succes Criterion 1.4.4 - Resize text



Ensure that the text in your app supports resizing. Users specify their preferred font size in the system settings. Text in your app should resize according to the preferred font size. This is especially important for visually impaired users because otherwise they might not be able to read the text. Text should not be abbreviated with dots.

 Does not pass

[Solution for success criterion 1.4.4](#)

Nr	Screen	Problem	Screenshot
5	Onboarding: Postcode	<p>(Parts of) text on this screen are no longer visible when the text is magnified to 200%. Make sure that all text remains available to users who use the app with an enlarged text.</p> <p>The button "Controleren" en "Ga Verder" are not visible in landscape mode. Implement a scroll function to make all elements reachable.</p>	
6	Afvalkalender	<p>(Parts of) text on this screen disappear when the text is magnified to 200%. Make sure that all text remains available to users who use the app with an enlarged text.</p> <p>It is about the text in de calendar.</p>	


Nr	Screen	Problem	Screenshot
7	Container-locaties	<p>(Parts of) text on this screen does not scale when the text is scaled to 200%. Make sure all text remains readable when magnified.</p> <p>It concerns the indicators showing where garbage containers are located, both on and below the map.</p> <p>In the re-audit, it was noted that the icons scale to 200%, but the text on the icons remains the same size. Tip: Ensure that the text scales appropriately as well.</p>	
8	Container-locaties	<p>(Parts of) text on this screen disappear when the text is magnified to 200%. Make sure that all text remains available to users who use the app with an enlarged text.</p> <p>It concerns the title 'Kies welke...' in landscape mode when the text is enlarged to 200%.</p>	

Nr	Screen	Problem	Screenshot
9	Container-locaties	<p>The text that is pinned to the screen covers other text. Make sure the texts do not cover each other.</p> <p>This concerns the error message.</p>	
10	Afvalwijzer	<p>(Parts of) text on this screen does not scale when the text is scaled to 200%. Make sure all text remains readable when magnified.</p> <p>All text below the icons does not scale.</p> <p>Please note that it scales properly in landscape mode.</p>	


Succes Criterion 1.4.5 - Images of Text

Ensure images are not used to display text. Always use plain text to allow the text to be adapted to the user's preferences. The font size inside an image often scales to a limited extent or not at all. As a result, the text cannot be read by everyone.

Exception: If an image of text does scale or if text as image is specifically needed to convey information.


 Does not pass

[Solution for success criterion 1.4.5](#)

Nr	Screen	Problem	Screenshot
11	Onboarding: Postcode	<p>The text from the image is not offered as plain text on the screen and therefore cannot be adjusted by the user. Make sure that the user can adjust text to their needs.</p> <p>The background image contains text which screen reader users will miss. It's important to ensure this text is accessible to all users.</p>	

Succes Criterion 1.4.10 - Reflow


Ensure that all content on the screen remains readable even with the largest font. Content should be readable without having to scroll in two directions. Because the text is displayed larger, it can push other elements off the screen. Ensure content can still be reached, for example, by scrolling vertically.


 Passes

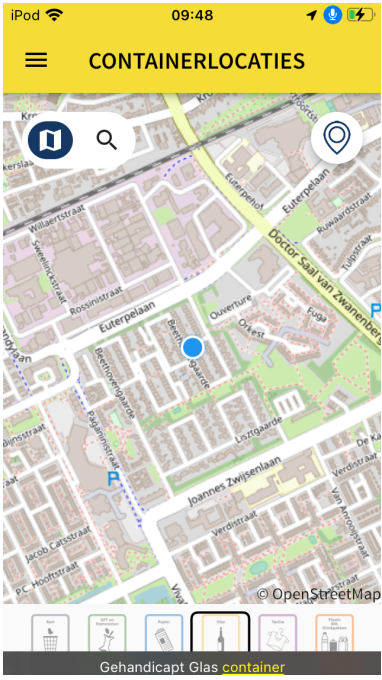
[Additional information about success criterion 1.4.10](#)

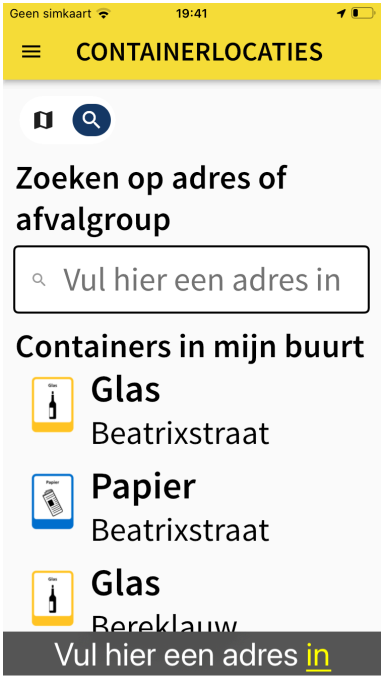
Succes Criterion 1.4.11 - Non-text Contrast

Ensure that the content on the screen has a contrast of at least 3:1 with the surrounding colour. Think of graphic elements such as icons, buttons and input fields. By keeping this ratio, visually impaired and colour blind users can distinguish the content well. In addition, this makes an app easier for everyone to use, for example outside in the sun.

 Does not pass

[Solution for success criterion 1.4.11](#) 


Nr	Screen	Problem	Screenshot
12	Container-locaties	<p>The contrast of interface elements on this screen is less than 3.0:1. Provide a minimum contrast of 3.0:1.</p> <p>When the switches are selected, the yellow and orange colors do not meet the minimum contrast requirements (they are 1.56 and 2.86, respectively).</p> <p>When the switches are not selected, none of the colors meet the minimum contrast criteria. The grey text with grey icons also fails to meet the minimum requirements.</p>	

Nr	Screen	Problem	Screenshot
13	Container-locaties	<p>The contrast of interface elements on this screen is less than 3.0:1. Provide a minimum contrast of 3.0:1.</p> <p>It concerns search icon. Contrast is 2.67:1.</p> <p>Suggestion: The label of the input field has a spelling mistake - "AfvalgroUp" (U instead of E)</p>	

Succes Criterion 1.4.12 - Text Spacing


Ensure there is enough space between paragraphs, letters and words. People with dyslexia can read faster as a result. People who are visually impaired can also read the text more easily. White space can also help people with a cognitive impairment to distinguish parts from each other.


 Passes

[Additional information about success criterion 1.4.12](#) 

Success Criterion 1.4.13 - Content on Hover or Focus


Ensure it possible to hide content which appears automatically when touching an element. It often happens that an element is touched accidentally. If new content appears, it may affect the completion of a task. Automatic content mainly causes problems for users of assistive technologies.

 Passes

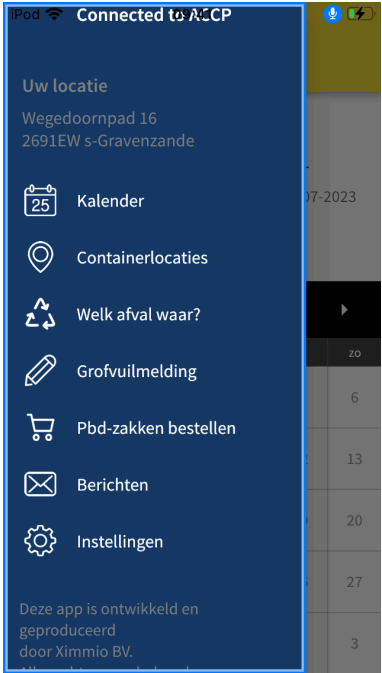

[Additional information about success criterion 1.4.13](#) 


Succes Criterion 2.1.1 - Keyboard

Ensure that all functionality in the app can be used with assistive technologies. People who are blind use the screen reader. People with a motor disability use switch control, voice control and/or the keyboard. These assistive technologies are built into the operating system.

 Does not pass

[Solution for success criterion 2.1.1](#)


Nr	Screen	Problem	Screenshot
14	Afvalkalender	<p>The screen/parts of the screen cannot be operated with an external keyboard. Make sure that all functionality is available using an external keyboard.</p> <p>The menu cannot be reached with an external keyboard.</p> <p>This issue occurs on all the screens.</p>	
15	Containerlocaties	<p>The screen/parts of the screen cannot be operated with an external keyboard. Make sure that all functionality is available using an external keyboard.</p> <p>Search field is not focusable and not editable in landscape mode.</p>	

Nr	Screen	Problem	Screenshot
16	Afvalwijzer	<p>The screen/parts of the screen cannot be operated with an external keyboard. Make sure that all functionality is available using an external keyboard.</p> <p>With text enlargement set to 200%, the focus moves to the text box 'veel huisvuil...' and then to the text 'Restafval'. However, the search field and toggles are not visible, nor do they receive focus when swiping. When the screen reader is switched off, the text 'veel huisvuil...' is visible, along with the search field and toggles. It seems like activating the screen reader causes part of the text to collapse. Note that the search field can be reached by scrolling while the focus is on the text field.</p> <p>Screenrecording: https://storage.on-toegankelijk.nl/attachments/1902/West-land__2024-03-26-10-19-57.mp4</p>	



Succes Criterion 2.1.2 - No Keyboard Trap

Ensure users of assistive technologies can't get stuck anywhere in the app. It is especially common that overlays cannot be closed. Many assistive technologies do not support clicking next to an overlay. As a result, the user gets stuck. You must include a close button which assistive technologies can activate.


 Passes

[Additional information about success criterion 2.1.2](#)



Success Criterion 2.1.4 - Character Key Shortcuts

Ensure that shortcuts cannot be accidentally activated when using assistive technologies. Many assistive technologies mimic keystrokes to perform actions. This can result in unwanted shortcuts being activated. Make it possible to change or disable shortcuts.

 Passes

[Additional information about success criterion 2.1.4](#)



Success Criterion 2.2.1 - Timing Adjustable

Ensure everyone has enough time to complete tasks. People with disabilities sometimes need more time to navigate through a screen. Operating an app with assistive technologies is often slower compared to touch. People with learning disabilities, dyslexia and cognitive impairments may also need more time. If there are time limits, then the time limit should be adjustable. It's best to make sure there are no time limits.


 Passes

[Additional information about success criterion 2.2.1](#)



Success Criterion 2.2.2 - Pause, Stop, Hide


Ensure it is possible to pause, stop or hide moving parts on the screen. Users of assistive technologies may find it difficult to use animated elements. After pausing or stopping animations, interaction is often possible. Flashing content makes it more difficult for people with attention disorders to stay focused. Hiding the distracting content makes it easier for them to use an app.


 Passes

[Additional information about success criterion 2.2.2](#)

Success Criterion 2.3.1 - Three Flashes or Below Threshold

Ensure no more than three flashes per second are shown anywhere in the app. This can cause an epileptic seizure. Warnings do not work well, because they are often overlooked. This is especially the case with children who cannot read yet.


 Passes

[Additional information about success criterion 2.3.1](#) 

Success Criterion 2.4.3 - Focus Order


Ensure assistive technologies use a logical focus order when navigating. The order of navigating a screen is usually from left to right, from top to bottom. Make sure assistive technologies use an equivalent focus order. The difference with success criterion 1.3.2 is that this only concerns the focus order.

 Passes

[Additional information about success criterion 2.4.3](#) 

Success Criterion 2.4.4 - Link Purpose (In Context)

Ensure links are clear without the surrounding content. Users of assistive technologies can request an overview of all links on the screen. It is important that the purpose of each link is clear. A common mistake is to name a link 'here'. Without the surrounding text it is not clear what you will read more about.

 Passes


[Additional information about success criterion 2.4.4](#) 


Success Criterion 2.4.6 - Headings and Labels

Ensure to use descriptive headings and labels.

Descriptive headings are important to understand how the content is constructed. Blind users can navigate through headings using a screen reader.


Descriptive labels help users identify content. Voice control users speak the labels to perform actions.


 Passes


[Additional information about success criterion 2.4.6](#) 

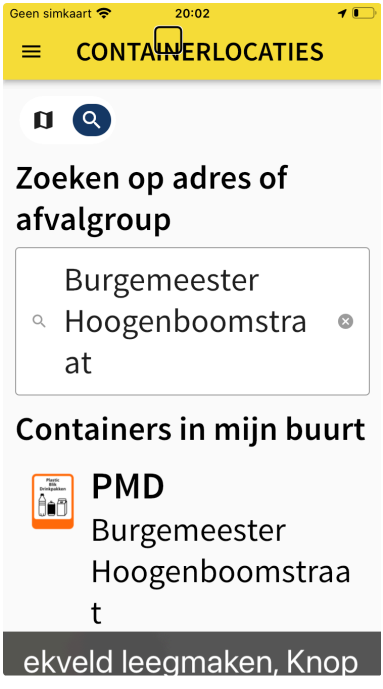

Succes Criterion 2.4.7 - Focus Visible


Ensure that elements focused by assistive technologies are clearly indicated. Focus is often shown by placing a box around the element. Make sure that the placement is correct and that the colour is clearly visible. For apps it is not possible to adjust the colour of the frame. However, it is possible to give elements a different background colour when they have focus.

 Does not pass

[Solution for success criterion 2.4.7](#) 

Nr	Screen	Problem	Screenshot
17	Afvalkalender	<p>The focus lands on invisible elements. Make sure that the focus only lands on visible elements.</p> <p>When the menu is open, the focus goes to the invisible element 'Sluiten.' Neither the element nor the focus frame are visible.</p> <p>There is a button at the bottom of the menu labeled 'Menu sluiten.' Ensure that this button is accessible by the screen reader and has a proper role and name. There is no need for an alternative option for closing the menu if this button is accessible and functioning properly.</p>	 A screenshot of a mobile application interface. At the top, it says 'Uw locatie' followed by an address: 'Wegedoornpad 16, 2691EW s-Gravenzande'. Below this is a menu with several items: 'Kalender', 'Containerlocaties', 'Welk afval waar?', and 'Melding maken'. At the bottom of the menu, there is a button labeled 'Sluiten'. The focus is on the 'Sluiten' button, but it is not clearly visible as a distinct element.


Nr	Screen	Problem	Screenshot
18	Container-locaties	<p>The focus lands on invisible elements. Make sure that the focus only lands on visible elements.</p> <p>The visible focus frame for the 'Zoekveld leegmaken' button should be around the respective button. Currently, it is positioned in the wrong place.</p>	
19	Afvalwijzer	<p>The focus lands on invisible elements. Make sure that the focus only lands on visible elements.</p> <p>The element that receives focus should be visible. Also, the focus frame should be visible and should surround the respective element. In this case, the focus frame of the search field is visible, but the element itself is not.</p> <p>The same applies to the search field on this page: https://storage.ontogankelijk.nl/attachments/1902/Westland_2024-03-26-10-51-15.mp4</p>	

Nr	Screen	Problem	Screenshot
20	Instellingen	<p>The focus lands on invisible elements. Make sure that the focus only lands on visible elements.</p> <p>When navigating with swiping gestures, after 'Instellingen', the whole screen receives focus, but the screen reader does not announce anything. Ensure that all visible elements receive focus and are announced by the screen reader. Elements should receive focus in the correct order when navigating sequentially, and all elements should be focusable when navigating with point gestures. Currently, it is only possible to navigate sequentially by swiping.</p>	




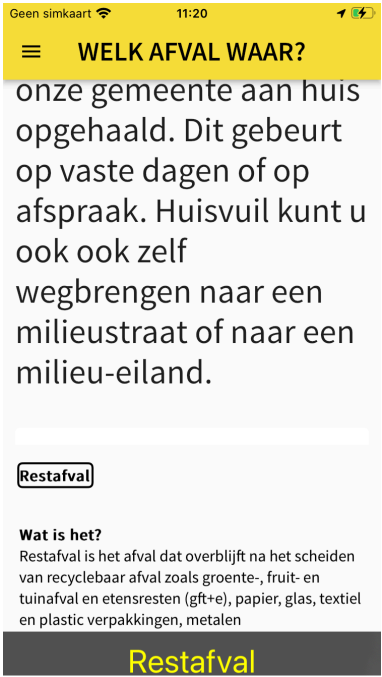
Succes Criterion 2.5.1 - Pointer Gestures

Ensure an alternative is provided for all gesture-triggered actions. People with a motor disability cannot perform all gestures. For example, not everyone is able to move two fingers apart to zoom. Add an alternative, such as a button, to allow users to zoom in without gestures.

 Does not pass

[Solution for success criterion 2.5.1](#)


Nr	Screen	Problem	Screenshot
21	Onboarding: Postcode	<p>There is no alternative for the pointer gestures. Make sure that all functionality can also be used without using (multiple) fingers, for example by offering extra buttons.</p> <p>Elements on this screen cannot be operated with a single pointer without a path-based gesture. All the elements can be reached only by swiping.</p>	

Nr	Screen	Problem	Screenshot
22	Afvalwijzer	<p>There is no alternative for the pointer gestures. Make sure that all functionality can also be used without using (multiple) fingers, for example by offering extra buttons.</p> <p>It is possible to navigate through the text only by swiping sequentially. Focusing on a specific paragraph via touch is not possible. This means that users who rely on a screen reader and wish to listen to a middle section of the text would need to swipe through the entire text in sequence.</p>	 <p>The screenshot shows a mobile application interface. At the top, there is a status bar with 'Geen simkaart', signal strength, Wi-Fi, and battery icons, and the time '11:20'. Below that is a yellow header with a hamburger menu icon and the text 'WELK AFVAL WAAR?'. The main content area contains text: 'onze gemeente aan huis opgehaald. Dit gebeurt op vaste dagen of op afspraak. Huisvuil kunt u ook ook zelf wegbrengen naar een milieustraat of naar een milieu-eiland.' Below the text is a button labeled 'Restafval'. Underneath the button is a section titled 'Wat is het?' followed by a paragraph: 'Restafval is het afval dat overblijft na het scheiden van recyclebaar afval zoals groente-, fruit- en tuinafval en etensresten (gft+e), papier, glas, textiel en plastic verpakkingen, metalen'. At the bottom of the screen, there is a dark grey bar with the text 'Restafval' in yellow.</p>



Succes Criterion 2.5.2 - Pointer Cancellation


Ensure it is possible to cancel touches. Buttons may only be activated with a click and not with a touch. This gives the user the option to cancel the touch.

 Passes


[Additional information about success criterion 2.5.2](#)

Succes Criterion 2.5.3 - Label in Name

Ensure the technical name of elements contain the visual name. A button with the text 'Log in' must be able to be activated by voice control via this name. This is not possible if the technical name is different. For visually impaired people using a screen reader, it is also confusing when they hear a different name compared to what they see on the screen.


 Does not pass

[Solution for success criterion 2.5.3](#)

Nr	Screen	Problem	Screenshot
23	Onboarding: Postcode	<p>Because visible text on the button does not appear in the accessible name of the button, this button cannot be activated with voice. Make sure the accessible name contains the visual name.</p> <p>Visible text label should be the same as announced by the screenreader.</p>	

Succes Criterion 2.5.4 - Motion Actuation

Ensure an alternative is provided for motion-triggered actions and make it possible to disable them. For users with limited hand function, shaking is often not possible. Provide an alternative, such as a button. For users with spasms, the actions can be triggered inadvertently. Make it possible to disable motion-triggered actions.


 Passes


[Additional information about success criterion 2.5.4](#)



Succes Criterion 3.1.1 - Language of Page

Ensure the language is set for all content. A screen reader reads all text that appears on the screen. The pronunciation of the words depends on the language that has been set. When the language is not set, or a wrong language is set, the pronunciation is unclear. A correctly set language also helps to display letters and to display subtitles.

 Passes


[Additional information about success criterion 3.1.1](#) 



Succes Criterion 3.2.1 - On Focus

Ensure it is predictable what happens when you move the focus. When users move their finger over a button, it should not be activated unexpectedly. If the last field of a form is filled in, it should not be sent unexpectedly. These types of actions should only be performed automatically if users are notified in advance. By making focus behavior predictable, you help people with a visual, cognitive or motor impairment.

 Passes


[Additional information about success criterion 3.2.1](#) 



Succes Criterion 3.2.2 - On Input

Ensure it is predictable what will happen when entering data. In case the focus moves automatically on correct input, this should be indicated in advance. Indicate if a new screen will be opened when submitting a form. Unexpected actions can confuse users with visual or cognitive impairments.


 Passes


[Additional information about success criterion 3.2.2](#) 



Success Criterion 3.3.1 - Error Identification

Ensure a clear error message is shown when data has been entered incorrectly. It often happens that data is entered incorrectly. Clearly indicate which input is incorrect and explain why. It is important that error messages are also clear for user of assistive technologies. Ensure errors are also indicated in text to allow everyone to perceive them.

 Passes

[Additional information about success criterion 3.3.1](#) 



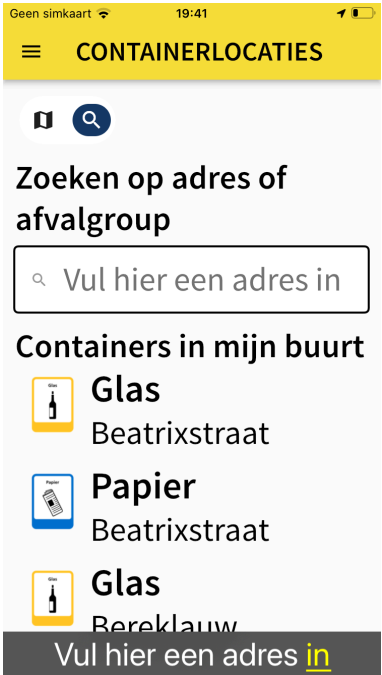
Succes Criterion 3.3.2 - Labels or Instructions

Ensure clear instructions are provided in places users have to input data. Add a label to the input fields, for example 'First name'. Mark whether fields are required or optional. Indicate if data must be entered in a specified order. All users benefit from clear instructions. Clear instructions are indispensable for users with cognitive impairments.

Does not pass


[Solution for success criterion 3.3.2](#)

Nr	Screen	Problem	Screenshot
24	Onboarding: Postcode	<p>A specific instruction is included in the placeholder text. This information disappears when the user starts entering data. Make sure the label/instruction remains visible at all times.</p> <p>It is about the text "(1234)" and "(AB).</p> <p>Consider merging the (1234) and (AB) fields to make the postal code a single field. When doing so, the "Postcode" label is sufficient.</p>	

Nr	Screen	Problem	Screenshot
25	Container-locaties	<p>In this input field, a placeholder text serves as a label. The placeholder text disappears when a user starts to type and therefore cannot act as a label. Make sure that the label always remains visible.</p> <p>It concerns the input field 'Vul hier..!'. Ensure that the input field has a name that is both visible and programmatically associated with it, a correct role, and that the placeholder text is read aloud by the screenreader. For example, "Zoeken op adres of afvalgroep, bewerkingsvak, Vul hier een adres in."</p> <p>Similar situation occurs with the search field on the screen "welk afval waar?".</p>	

Succes Criterion 3.3.3 - Error Suggestion


Ensure suggestions are provided when data has been entered incorrectly. Users regularly make mistakes when entering data. Help users to fix these errors by providing suggestions. For example, when a date has been entered incorrectly, indicate in which order the day, month and year are expected.

 Passes

[Additional information about success criterion 3.3.3](#)

Success Criterion 3.3.4 - Error Prevention (Legal, Financial, Data)


Ensure data is submitted intentionally. Allows users to undo, correct or confirm a submission. At least one of these options must be provided for submissions that cause a legal obligation, financial transaction, or loss of data. These options reduce the chance of unforeseen consequences.

 Passes

[Additional information about success criterion 3.3.4](#)

Success Criterion 4.1.1 - Parsing

Ensure the source code of the app does not contain any errors and does not use any deprecated functions. Assistive technologies may not behave as expected when code is not updated to modern standards. Adhere to the standards of the platforms which are supported. Check that the app works on all versions of the supported operating systems.

 Passes

[Additional information about success criterion 4.1.1](#)


Succes Criterion 4.1.2 - Name, Role, Value

Ensure it is clear for users of assistive technologies what actions can be performed.

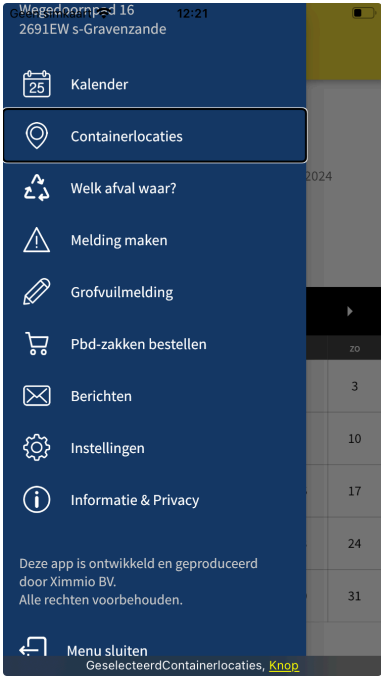
Set a name. The name is used for identification. By setting a name, assistive technologies such as voice control can perform targeted actions.

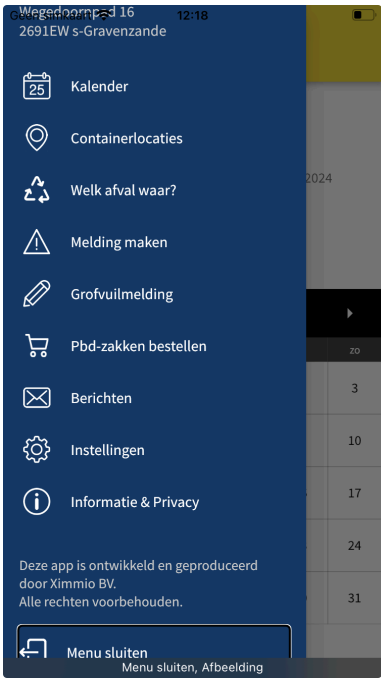
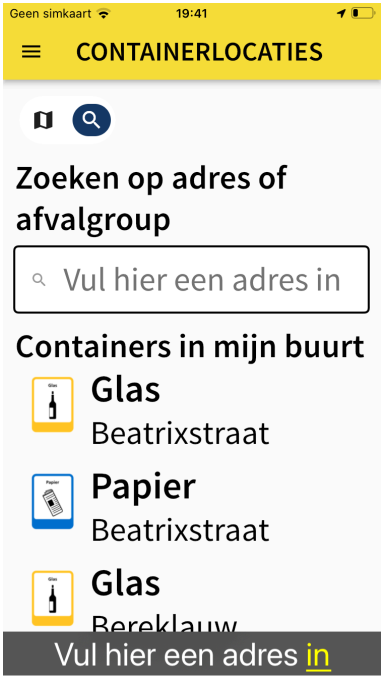
Set a role. With the role “button” it is clear that an action takes place upon activation. With the role “link” it is clear that you will be referred to another location. By setting a role, it is clear to users of assistive technologies what they can do.



Set a value. A check box should have the value “selected” or “not selected”. With a volume control, the value can be “50%”. By setting a value, this text value can be passed to assistive technologies.

 Does not pass

[Solution for success criterion 4.1.2](#)

Nr	Screen	Problem	Screenshot
26	Afvalkalender	<p>The accessible name of this button does not describe whether it is selected or not. Make sure that this information is read by the assistive technology.</p> <p>All the buttons in the menu list have the value 'Selected'. Make sure that only the selected tab has the value 'selected'.</p>	

Nr	Screen	Problem	Screenshot
27	Afvalkalender	<p>This interactive element does not have a proper role. This element looks and behaves like a button. Make sure the screen reader announces the correct role of this element.</p> <p>In the re-audit, this was solved for almost all the buttons in the menu, except for the 'Menu sluiten' button.</p>	 <p>The screenshot shows a mobile application menu with a dark blue background. The menu items are: Kalender, Containerlocaties, Welk afval waar?, Melding maken, Grofvuilmelding, Pbd-zakken bestellen, Berichten, Instellingen, and Informatie & Privacy. At the bottom of the menu, there is a button labeled 'Menu sluiten' with the text 'Menu sluiten, Afbeelding' below it.</p>
28	Containerlocaties	<p>This interactive element does not have a proper role. This element looks and behaves like an input field. Make sure the screen reader announces the correct role of this element.</p> <p>It concerns the input field 'Vul hier..!'. Ensure that the input field has a name that is both visible and programmatically associated with it, a correct role, and that the placeholder text is read aloud by the screen reader. For example, "Zoeken op adres of afvalgroep, bewerkingsvak, Vul hier een adres in."</p> <p>Similar situation occurs with the search field on the screen "welk afval waar?".</p>	 <p>The screenshot shows the 'CONTAINERLOCATIES' app interface. At the top, there is a yellow header with the text 'CONTAINERLOCATIES'. Below the header, there is a search bar with the placeholder text 'Vul hier een adres in'. The search results are displayed as a list of containers in the neighborhood, including 'Glas' and 'Papier' at 'Beatrixstraat'. At the bottom of the screen, there is a dark blue bar with the text 'Vul hier een adres in' and a small 'in' icon.</p>

Nr	Screen	Problem	Screenshot
29	Afvalwijzer	<p>The value/state of a button should be obvious without changing this state. Make sure the screen reader announces the value/state together with the button name.</p> <p>The value of the non-selected button is being announced as 'gehandicapt'.</p>	 <p>Geen simkaart 11:53</p> <p>WELK AFVAL WAAR?</p> <p>Veel huisvuil wordt in onze gemeente aan huis opgehaald. Dit gebeurt op vaste dagen of op afspraak. Huisvuil kunt u ook zelf wegbrengen naar een milieustraat of naar een milieueiland.</p> <p>Zoek in scheidingswijzer</p> <p>Restafval</p> <p>Wat is het? Restafval is het afval dat overblijft na het scheiden van recyclebaar afval zoals groente-, fruit- en tuinafval en etensresten (gft+e), papier, glas, textiel en plastic verpakkingen, metalen verpakkingen/blik en drinkpakken (pmd). Twijfelt u of het product restafval is, kijk dan hieronder bij</p> <p>Gehandicapt Textiel container, Knop</p>
30	Instellingen	<p>The input field does not have an accessible name. When tapping this input field, the assistive technology does not read out which data must be entered here. Provide a correct name.</p> <p>It is about all the input fields at the bottom of the screen, these should have their own label.</p> <p>Ensure that the input field has a name that is both visible and programmatically associated with it, a correct role, and that the placeholder text is read aloud by the screen reader.</p>	 <p>Geen simkaart 12:25</p> <p>INSTELLINGEN</p> <p>herinneringen voor het ledigen van uw container(s) <input checked="" type="checkbox"/></p> <p>Tijdstip herinnering</p> <p>Dag van tevoren 18:30 uur</p> <p>Voor meldingen</p> <p>Voorletter(s)</p> <p>E-mail adres</p> <p>m te bewerken.</p>



Succes Criterion 4.1.3 - Status Messages

Ensure that status messages are also passed to assistive technologies. A blind user cannot see new information appearing anywhere on the screen. By providing a status message, the screen reader can announce that new information is available.

✗ Does not pass

[Solution for success criterion 4.1.3](#)

Nr	Screen	Problem	Screenshot
31	Container-locaties	<p>The button triggers new content. This content receives no focus and is not read aloud. Make sure this information is accessible.</p> <p>When an incorrect street name is entered, an error message appears. However, the focus does not automatically shift to this message, and it is not read aloud by the screen reader.</p> <p>Similar situation occurs with the search field on the screen "welk afval waar?".</p>	<p>The screenshot shows a mobile application interface with a yellow header bar containing the text "CONTAINERLOCATIES". Below the header is a search field with a magnifying glass icon. Below the search field is a message: "Zoeken op adres of afvalgroep". Below the message is a search input field with a magnifying glass icon. Below the input field is a message: "Het adres dat bij deze postcode en huisnummer hoort is ongeldig of onbekend, controleer uw postcode en huisnummer". Below the message is a button labeled "PMD". At the bottom of the screen is a dark bar with the text "gereed".</p>

4. Recommendations

To comply with the standard, the app needs to be improved on the following points:



Success Criterion 1.1.1 - Non-text Content

Ensure that alternative text is available for all content without text. These include images, icons and graphs. Describe what there is to see. People who are blind have this description read aloud through their screen reader. Alternative text can also be useful for anyone who is unsure about the meaning of the content.

- [Solution for success criterion 1.1.1](#)
- [Definition of success criterion 1.1.1](#)
- [Explanation of success criterion 1.1.1](#)



Success Criterion 1.3.1 - Info and Relationships

Ensure that the information and relationships on the screen are not only conveyed visually.

Information on the screen must be conveyed to assistive technologies. For example, make sure that headings are not only bold, but also marked as headings in the code.

Relationships on the screen must be usable with assistive technologies. Elements in a list must be navigable one by one. Elements in a table must be navigable by rows and columns.

- [Solution for success criterion 1.3.1](#)
- [Definition of success criterion 1.3.1](#)
- [Explanation of success criterion 1.3.1](#)



Success Criterion 1.4.1 - Use of Color

Ensure colour isn't the only way information is conveyed. Information which is conveyed only by colour cannot be perceived by everyone. For example, also use shape to give instructions, e.g. reference a green checkmark or red cross. Inside a legend, use numbers in addition to colour, to allow people who are colour blind to find what they are looking for.

- [Solution for success criterion 1.4.1](#)
- [Definition of success criterion 1.4.1](#)
- [Explanation of success criterion 1.4.1](#)



Success Criterion 1.4.4 - Resize text

Ensure that the text in your app supports resizing. Users specify their preferred font size in the system settings. Text in your app should resize according to the preferred font size. This is especially important for visually impaired users because otherwise they might not be able to read the text. Text should not be abbreviated with dots.

- [Solution for success criterion 1.4.4](#)
- [Definition of success criterion 1.4.4](#)
- [Explanation of success criterion 1.4.4](#)



Success Criterion 1.4.5 - Images of Text




Ensure images are not used to display text. Always use plain text to allow the text to be adapted to the user's preferences. The font size inside an image often scales to a limited extent or not at all. As a result, the text cannot be read by everyone.

Exception: If an image of text does scale or if text as image is specifically needed to convey information.

- [Solution for success criterion 1.4.5](#)
- [Definition of success criterion 1.4.5](#)
- [Explanation of success criterion 1.4.5](#)




Succes Criterion 1.4.11 - Non-text Contrast

Ensure that the content on the screen has a contrast of at least 3:1 with the surrounding colour. Think of graphic elements such as icons, buttons and input fields. By keeping this ratio, visually impaired and colour blind users can distinguish the content well. In addition, this makes an app easier for everyone to use, for example outside in the sun.

- [Solution for success criterion 1.4.11](#) 
- [Definition of success criterion 1.4.11](#) 
- [Explanation of success criterion 1.4.11](#) 




Succes Criterion 2.1.1 - Keyboard

Ensure that all functionality in the app can be used with assistive technologies. People who are blind use the screen reader. People with a motor disability use switch control, voice control and/or the keyboard. These assistive technologies are built into the operating system.

- [Solution for success criterion 2.1.1](#) 
- [Definition of success criterion 2.1.1](#) 
- [Explanation of success criterion 2.1.1](#) 

Succes Criterion 2.4.7 - Focus Visible

Ensure that elements focused by assistive technologies are clearly indicated. Focus is often shown by placing a box around the element. Make sure that the placement is correct and that the colour is clearly visible. For apps it is not possible to adjust the colour of the frame. However, it is possible to give elements a different background colour when they have focus.

- [Solution for success criterion 2.4.7](#) 
- [Definition of success criterion 2.4.7](#) 
- [Explanation of success criterion 2.4.7](#) 



Succes Criterion 2.5.1 - Pointer Gestures

Ensure an alternative is provided for all gesture-triggered actions. People with a motor disability cannot perform all gestures. For example, not everyone is able to move two fingers apart to zoom. Add an alternative, such as a button, to allow users to zoom in without gestures.

- [Solution for success criterion 2.5.1](#)
- [Definition of success criterion 2.5.1](#)
- [Explanation of success criterion 2.5.1](#)



Succes Criterion 2.5.3 - Label in Name

Ensure the technical name of elements contain the visual name. A button with the text 'Log in' must be able to be activated by voice control via this name. This is not possible if the technical name is different. For visually impaired people using a screen reader, it is also confusing when they hear a different name compared to what they see on the screen.

- [Solution for success criterion 2.5.3](#)
- [Definition of success criterion 2.5.3](#)
- [Explanation of success criterion 2.5.3](#)



Succes Criterion 3.3.2 - Labels or Instructions

Ensure clear instructions are provided in places users have to input data. Add a label to the input fields, for example 'First name'. Mark whether fields are required or optional. Indicate if data must be entered in a specified order. All users benefit from clear instructions. Clear instructions are indispensable for users with cognitive impairments.

- [Solution for success criterion 3.3.2](#)
- [Definition of success criterion 3.3.2](#)
- [Explanation of success criterion 3.3.2](#)

Success Criterion 4.1.2 - Name, Role, Value

Ensure it is clear for users of assistive technologies what actions can be performed.

Set a name. The name is used for identification. By setting a name, assistive technologies such as voice control can perform targeted actions.

Set a role. With the role “button” it is clear that an action takes place upon activation. With the role “link” it is clear that you will be referred to another location. By setting a role, it is clear to users of assistive technologies what they can do.

Set a value. A check box should have the value “selected” or “not selected”. With a volume control, the value can be “50%”. By setting a value, this text value can be passed to assistive technologies.

- [Solution for success criterion 4.1.2](#)
- [Definition of success criterion 4.1.2](#)
- [Explanation of success criterion 4.1.2](#)

Success Criterion 4.1.3 - Status Messages

Ensure that status messages are also passed to assistive technologies. A blind user cannot see new information appearing anywhere on the screen. By providing a status message, the screen reader can announce that new information is available.

- [Solution for success criterion 4.1.3](#)
- [Definition of success criterion 4.1.3](#)
- [Explanation of success criterion 4.1.3](#)

Appendix A: Findings per screen

In total we made 31 findings on 8 screens.

Overview of the findings per screen

Nr	Screen	Amount of findings
1	Beginscherm	0
2	Onboarding: Postcode	6
3	Afvalkalender	5
4	Containerlocaties	12
5	Afvalwijzer	6
6	Informatie	0
7	Instellingen	2
8	Berichten	0
Total		31


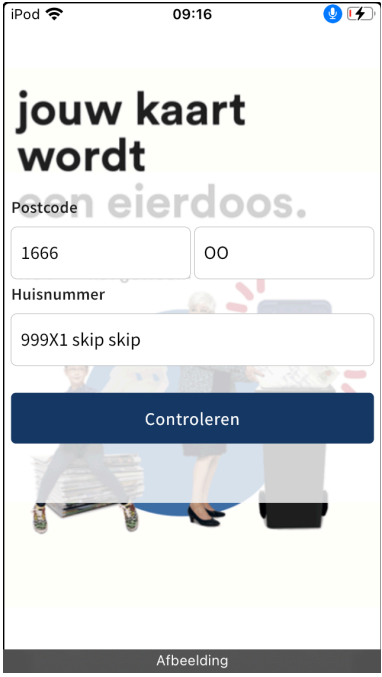

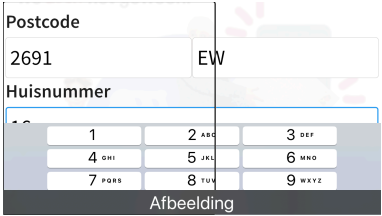
The following pages list all the findings per screen.





1. Beginscherm


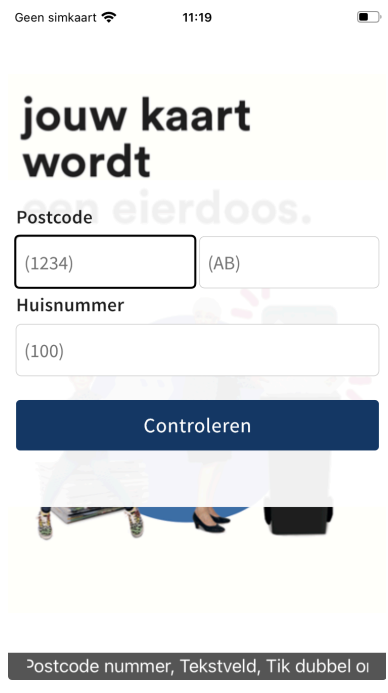

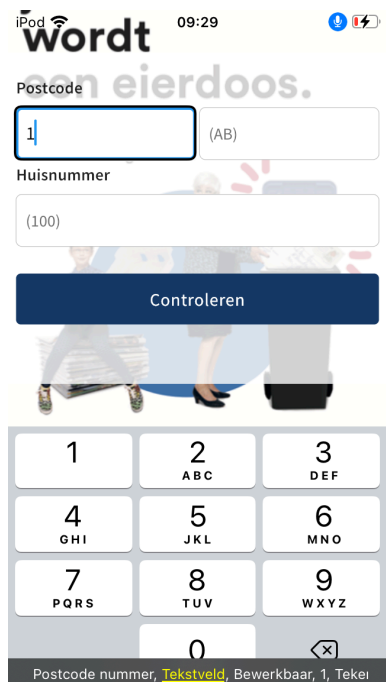
We have not made any (new) findings this screen. This screen may contain recurring findings that have already been reported on other screens.

2. Onboarding: Postcode

We detected 6 findings on this screen.


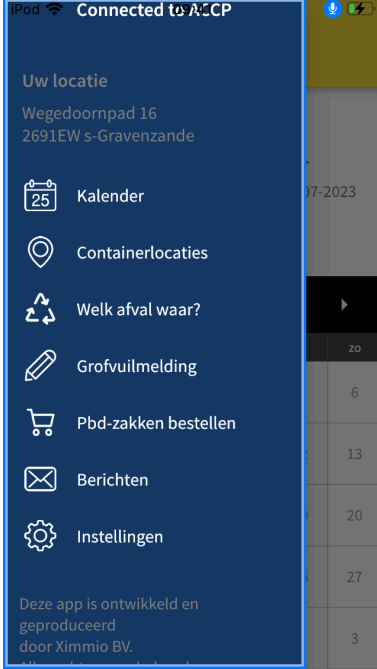
Nr	Success criterion	Problem	Screenshot
1	 1.1.1 Non-text Content	<p>The decorative image is read aloud by the screen reader. Make sure all decorative images are hidden.</p> <p>The decorative background image gets focus but does not have a label.</p>	
5	 1.4.4 Resize text	<p>(Parts of) text on this screen are no longer visible when the text is magnified to 200%. Make sure that all text remains available to users who use the app with an enlarged text.</p> <p>The button "Controleren" en "Ga Verder" are not visible in landscape mode. Implement a scroll function to make all elements reachable.</p>	




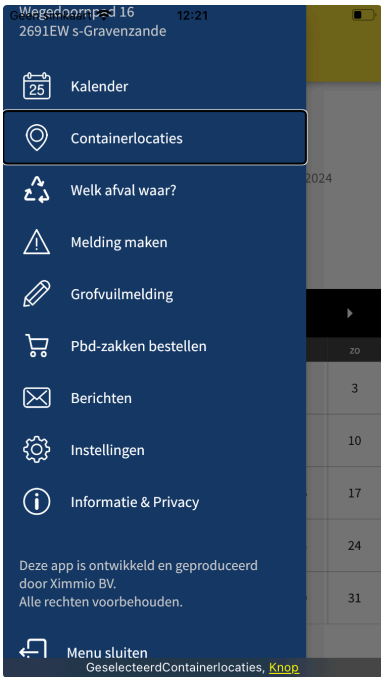
Nr	Success criterion	Problem	Screenshot
11	 1.4.5 Images of Text	<p>The text from the image is not offered as plain text on the screen and therefore cannot be adjusted by the user. Make sure that the user can adjust text to their needs.</p> <p>The background image contains text which screen reader users will miss. It's important to ensure this text is accessible to all users.</p>	
21	 2.5.1 Pointer Gestures	<p>There is no alternative for the pointer gestures. Make sure that all functionality can also be used without using (multiple) fingers, for example by offering extra buttons.</p> <p>Elements on this screen cannot be operated with a single pointer without a path-based gesture. All the elements can be reached only by swiping.</p>	


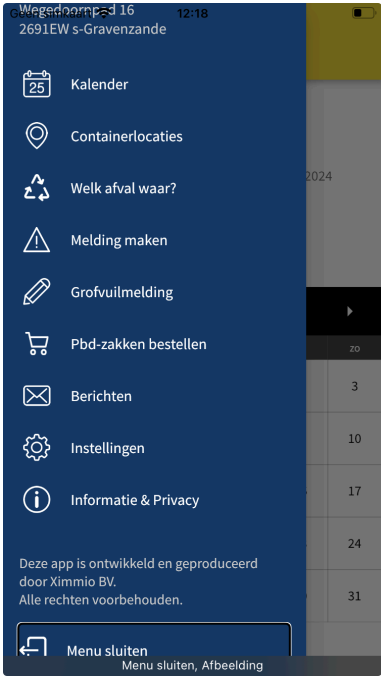
Nr	Success criterion	Problem	Screenshot
23	 2.5.3 Label in Name	<p>Because visible text on the button does not appear in the accessible name of the button, this button cannot be activated with voice. Make sure the accessible name contains the visual name.</p> <p>Visible text label should be the same as announced by the screenreader.</p>	 <p>The screenshot shows a mobile app interface. At the top, it says 'Geen simkaart' and '11:19'. The main heading is 'jouw kaart wordt' with a sub-heading 'aan eierdoos.'. There are two input fields: 'Postcode' containing '(1234)' and '(AB)', and 'Huisnummer' containing '(100)'. Below the fields is a blue button labeled 'Controleren'. At the bottom, there is a status bar with the text 'Postcode nummer, Tekstveld, Tik dubbel o'.</p>
24	 3.3.2 Labels or Instructions	<p>A specific instruction is included in the placeholder text. This information disappears when the user starts entering data. Make sure the label/instruction remains visible at all times.</p> <p>It is about the text "(1234)" and "(AB)".</p> <p>Consider merging the (1234) and (AB) fields to make the postal code a single field. When doing so, the "Postcode" label is sufficient.</p>	 <p>This screenshot is similar to the previous one, but the 'Postcode' field now contains the character '1'. A numeric keypad is visible at the bottom of the screen, with digits 1 through 9 and 0, along with a backspace key. The status bar at the bottom reads 'Postcode nummer, Tekstveld, Bewerkbaar, 1, Tekst'.</p>

3. Afvalkalender

We detected 5 findings on this screen.

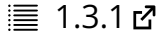
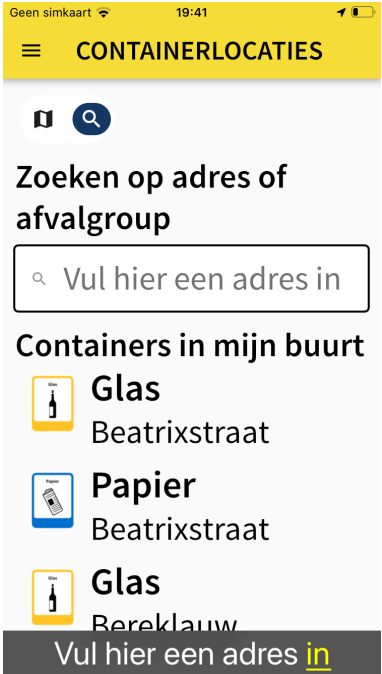
Nr	Success criterion	Problem	Screenshot
6	1.4.4 Resize text	<p>(Parts of) text on this screen disappear when the text is magnified to 200%. Make sure that all text remains available to users who use the app with an enlarged text.</p> <p>It is about the text in de calendar.</p>	
14	2.1.1 Keyboard	<p>The screen/parts of the screen cannot be operated with an external keyboard. Make sure that all functionality is available using an external keyboard.</p> <p>The menu cannot be reached with an external keyboard.</p> <p>This issue occurs on all the screens.</p>	


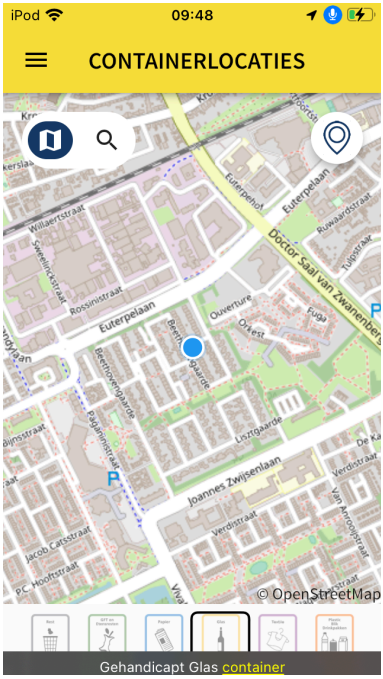

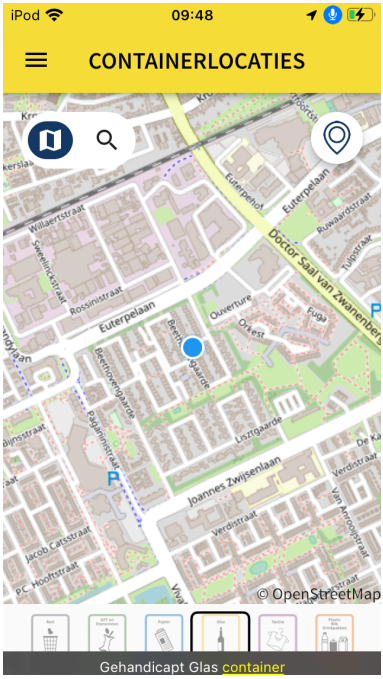
Nr	Success criterion	Problem	Screenshot
17	 2.4.7 Focus Visible	<p>The focus lands on invisible elements. Make sure that the focus only lands on visible elements.</p> <p>When the menu is open, the focus goes to the invisible element 'Sluiten.' Neither the element nor the focus frame are visible.</p> <p>There is a button at the bottom of the menu labeled 'Menu sluiten.' Ensure that this button is accessible by the screen reader and has a proper role and name. There is no need for an alternative option for closing the menu if this button is accessible and functioning properly.</p>	 <p>The screenshot shows a mobile application interface with a dark blue menu overlay. The menu items are: 'Uw locatie', 'Wegedoornpad 16', '2691EW s-Gravenzande', 'Kalender', 'Containerlocaties', 'Welk afval waar?', 'Melding maken', and 'Sluiten' at the bottom. The status bar at the top shows 'Geen simkaart' and '11:51'.</p>
26	 4.1.2 Name, Role, Value	<p>The accessible name of this button does not describe whether it is selected or not. Make sure that this information is read by the assistive technology.</p> <p>All the buttons in the menu list have the value 'Selected'. Make sure that only the selected tab has the value 'selected'.</p>	 <p>The screenshot shows the same mobile application interface as above, but with the 'Containerlocaties' menu item highlighted with a white border, indicating it is selected. The status bar at the top shows '12:21'. At the bottom of the menu, there is a button labeled 'Menu sluiten' with the accessible name 'GeselecteerdContainerlocaties, Knop'.</p>



Nr	Success criterion	Problem	Screenshot
27	<p>4.1.2 </p> <p>Name, Role, Value</p>	<p>This interactive element does not have a proper role. This element looks and behaves like a button. Make sure the screen reader announces the correct role of this element.</p> <p>In the re-audit, this was solved for almost all the buttons in the menu, except for the 'Menu sluiten' button.</p>	


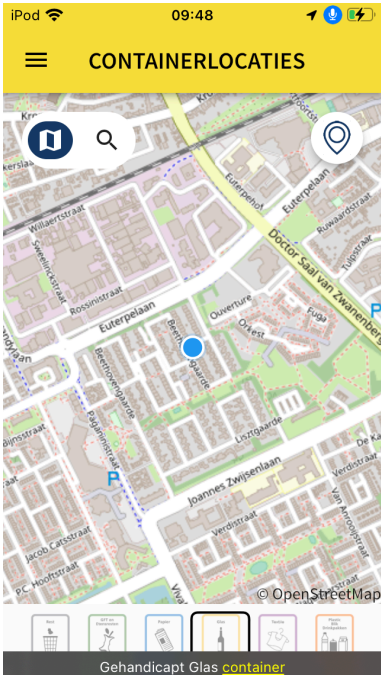

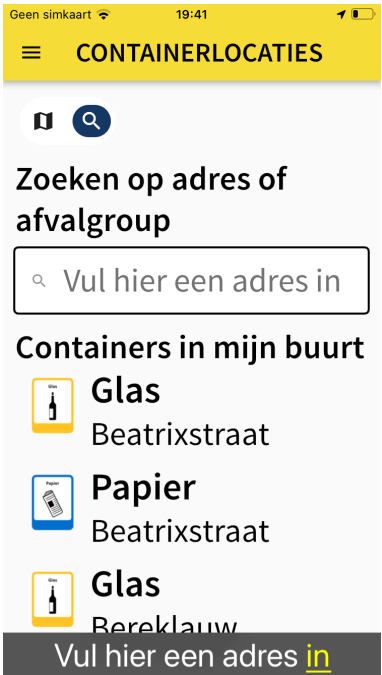
4. Containerlocaties





We detected 12 findings on this screen.



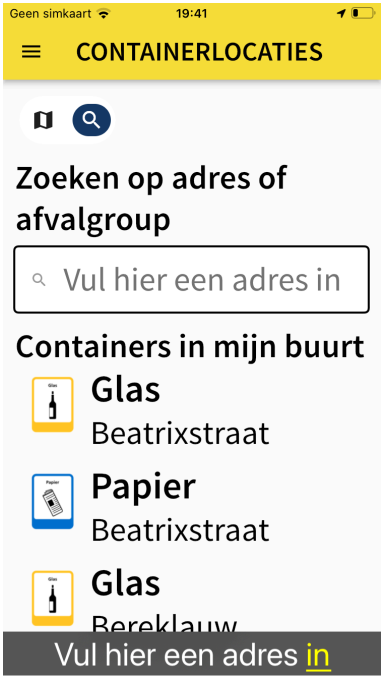
Nr	Success criterion	Problem	Screenshot
2	<p> 1.3.1 Info and Relationships</p>	<p>The label is not programmatically associated with the related input field. Make sure that by selecting an input field, the screen reader reads the label.</p> <p>It concerns the label 'Zoeken op adres of afvalgroep'. This label should be programmatically associated with the input field to enable navigation with Voice Control.</p> <p>Ensure that the input field has a name that is both visible and programmatically associated with it, a correct role, and that the placeholder text is read aloud by the screenreader. For example, "Zoeken op adres of afvalgroep, bewerkingsvak, Vul hier een adres in."</p>	


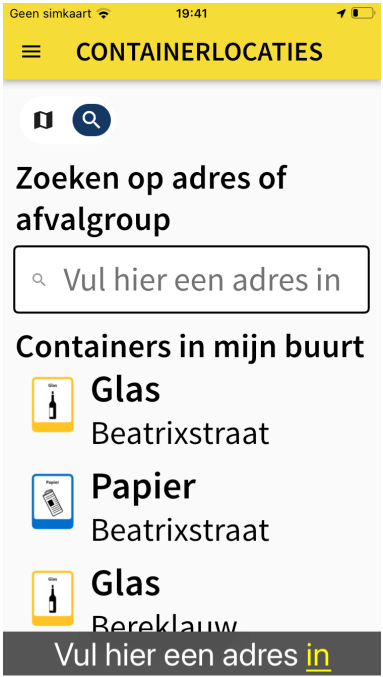
Nr	Success criterion	Problem	Screenshot
4	<p> 1.4.1 Use of Color</p>	<p>Color is used to convey information. Make sure that another visual cue is used, for example, the shape of the lines.</p> <p>It is about the indicators where garbage containers are on the map.</p> <p>An exception applies to online maps and mapping services. Maps themselves do not have to be accessible. You can try to make it as accessible as possible.</p>	
7	<p> 1.4.4 Resize text</p>	<p>(Parts of) text on this screen does not scale when the text is scaled to 200%. Make sure all text remains readable when magnified.</p> <p>It concerns the indicators showing where garbage containers are located, both on and below the map.</p> <p>In the re-audit, it was noted that the icons scale to 200%, but the text on the icons remains the same size. Tip: Ensure that the text scales appropriately as well.</p>	



Nr	Success criterion	Problem	Screenshot
8	<p>AA 1.4.4 Resize text</p>	<p>(Parts of) text on this screen disappear when the text is magnified to 200%. Make sure that all text remains available to users who use the app with an enlarged text.</p> <p>It concerns the title 'Kies welke...' in landscape mode when the text is enlarged to 200%.</p>	
9	<p>AA 1.4.4 Resize text</p>	<p>The text that is pinned to the screen covers other text. Make sure the texts do not cover each other.</p> <p>This concerns the error message.</p>	

Nr	Success criterion	Problem	Screenshot
12	 1.4.11 Non-text Contrast	<p>The contrast of interface elements on this screen is less than 3.0:1. Provide a minimum contrast of 3.0:1.</p> <p>When the switches are selected, the yellow and orange colors do not meet the minimum contrast requirements (they are 1.56 and 2.86, respectively).</p> <p>When the switches are not selected, none of the colors meet the minimum contrast criteria. The grey text with grey icons also fails to meet the minimum requirements.</p>	
13	 1.4.11 Non-text Contrast	<p>The contrast of interface elements on this screen is less than 3.0:1. Provide a minimum contrast of 3.0:1.</p> <p>It concerns search icon. Contrast is 2.67:1.</p> <p>Suggestion: The label of the input field has a spelling mistake - "AfvalgroUp" (U instead of E)</p>	

Nr	Success criterion	Problem	Screenshot
15	 2.1.1 Keyboard	<p>The screen/parts of the screen cannot be operated with an external keyboard. Make sure that all functionality is available using an external keyboard.</p> <p>Search field is not focusable and not editable in landscape mode.</p>	
18	 2.4.7 Focus Visible	<p>The focus lands on invisible elements. Make sure that the focus only lands on visible elements.</p> <p>The visible focus frame for the 'Zoekveld leegmaken' button should be around the respective button. Currently, it is positioned in the wrong place.</p>	

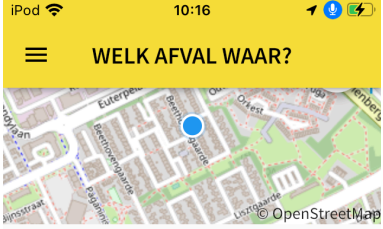

Nr	Success criterion	Problem	Screenshot
25	<p> 3.3.2 </p> <p>Labels or Instructions</p>	<p>In this input field, a placeholder text serves as a label. The placeholder text disappears when a user starts to type and therefore cannot act as a label. Make sure that the label always remains visible.</p> <p>It concerns the input field 'Vul hier..!'. Ensure that the input field has a name that is both visible and programmatically associated with it, a correct role, and that the placeholder text is read aloud by the screenreader. For example, "Zoeken op adres of afvalgroep, bewerkingsvak, Vul hier een adres in."</p> <p>Similar situation occurs with the search field on the screen "welk afval waar?".</p>	



Nr	Success criterion	Problem	Screenshot
28	 4.1.2 Name, Role, Value	<p>This interactive element does not have a proper role. This element looks and behaves like an input field. Make sure the screen reader announces the correct role of this element.</p> <p>It concerns the input field 'Vul hier..!'. Ensure that the input field has a name that is both visible and programmatically associated with it, a correct role, and that the placeholder text is read aloud by the screen reader. For example, "Zoeken op adres of afvalgroep, bewerkingsvak, Vul hier een adres in."</p> <p>Similar situation occurs with the search field on the screen "welk afval waar?".</p>	




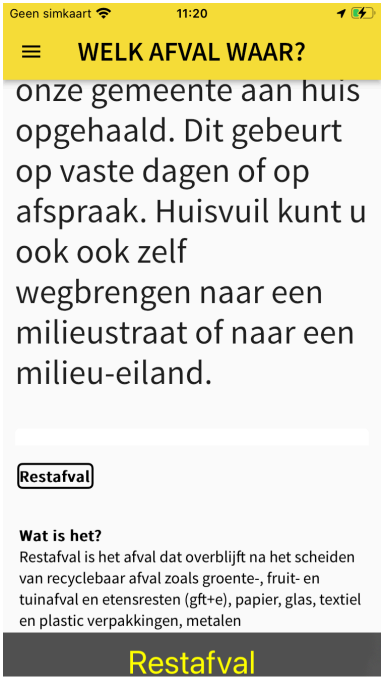
Nr	Success criterion	Problem	Screenshot
31	 <u>4.1.3</u> Status Messages	<p>The button triggers new content. This content receives no focus and is not read aloud. Make sure this information is accessible.</p> <p>When an incorrect street name is entered, an error message appears. However, the focus does not automatically shift to this message, and it is not read aloud by the screen reader.</p> <p>Similar situation occurs with the search field on the screen "welk afval waar?".</p>	


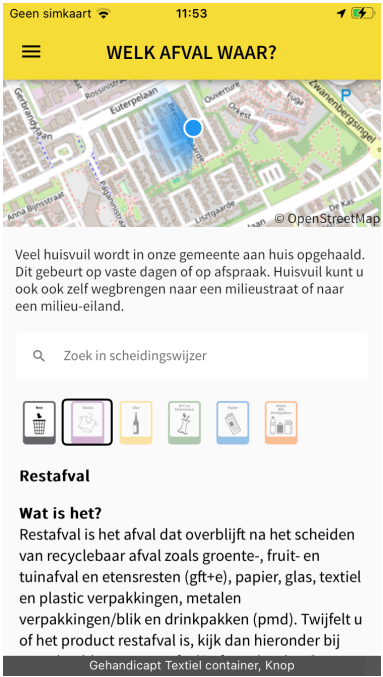
5. Afvalwijzer

We detected 6 findings on this screen.

Nr	Success criterion	Problem	Screenshot
3	<p>☰ 1.3.1 </p> <p>Info and Relationships</p>	<p>On this screen, there are headings that are not marked-up as headings. Make sure that assistive technology recognizes headings as headings.</p> <p>It is about the bold headings: "Wat wel/wat niet?" and "Wel" and "Niet" etc.</p>	 <p>Veel huisvuil wordt in onze gemeente aan huis opgehaald. Dit gebeurt op vaste dagen of op afspraak. Huisvuil kunt u ook zelf wegbrengen naar een milieustraat of naar een milieueiland.</p> <p>Zoek in scheidingswijzer</p> <p>Wat wel/wat niet? WEL</p> <p>Etensresten, zoals:</p> <ul style="list-style-type: none"> Schillen en resten van groente, fruit <p>Wat wel schuine streep wat niet?</p>
10	<p>Ⓐ 1.4.4 </p> <p>Resize text</p>	<p>(Parts of) text on this screen does not scale when the text is scaled to 200%. Make sure all text remains readable when magnified.</p> <p>All text below the icons does not scale.</p> <p>Please note that it scales properly in landscape mode.</p>	 <p>Zoek in scheidingswijzer</p> <p>Oud Papier en Karton</p> <p>Wat is het? Alles wat van papier en karton is. Denk aan kranten en reclamefolders, maar ook aan verpakkingen. Vies karton zoals pizzadozen en drinkpakken waar een plastic of aluminium laagje in zit horen niet bij het papier.</p> <p>Waar kan het heen? Bij huizen wordt papier en karton opgehaald via de groene papierliko met blauwe deksel. Bij hoogbouw staan</p>

Nr	Success criterion	Problem	Screenshot
16	 2.1.1 Keyboard	<p>The screen/parts of the screen cannot be operated with an external keyboard. Make sure that all functionality is available using an external keyboard.</p> <p>With text enlargement set to 200%, the focus moves to the text box 'veel huisvuil...' and then to the text 'Restafval'. However, the search field and toggles are not visible, nor do they receive focus when swiping. When the screen reader is switched off, the text 'veel huisvuil...' is visible, along with the search field and toggles. It seems like activating the screen reader causes part of the text to collapse. Note that the search field can be reached by scrolling while the focus is on the text field.</p> <p>Screenrecording: https://storage.ontogankelijk.nl/attachments/1902/Westland__2024-03-26-10-19-57.mp4</p>	

Nr	Success criterion	Problem	Screenshot
19	 2.4.7 Focus Visible	<p>The focus lands on invisible elements. Make sure that the focus only lands on visible elements.</p> <p>The element that receives focus should be visible. Also, the focus frame should be visible and should surround the respective element. In this case, the focus frame of the search field is visible, but the element itself is not.</p> <p>The same applies to the search field on this page: https://storage.ontogankelijk.nl/attachments/1902/Westland_2024-03-26-10-51-15.mp4</p>	 <p>Geen simkaart 11:20</p> <p>WELK AFVAL WAAR?</p> <p>onze gemeente aan huis opgehaald. Dit gebeurt op vaste dagen of op afspraak. Huisvuil kunt u ook ook zelf wegbrengen naar een milieustraat of naar een milieu-eiland.</p> <p>“voorbeelden van restafval” of maak gebruik van ‘welk afval waar’ op deze website/app.</p> <p>Waar laat u het? U kunt uw restafval in de groene kliko met grijze deksel deponeren of bij hoogbouw in een (ondergrondse) brengcontainer buiten (hiervoor heeft u in veel gevallen uw sleutel nodig) of binnen</p> <p>Zoek in scheidingswijzer</p>
22	 2.5.1 Pointer Gestures	<p>There is no alternative for the pointer gestures. Make sure that all functionality can also be used without using (multiple) fingers, for example by offering extra buttons.</p> <p>It is possible to navigate through the text only by swiping sequentially. Focusing on a specific paragraph via touch is not possible. This means that users who rely on a screen reader and wish to listen to a middle section of the text would need to swipe through the entire text in sequence.</p>	 <p>Geen simkaart 11:20</p> <p>WELK AFVAL WAAR?</p> <p>onze gemeente aan huis opgehaald. Dit gebeurt op vaste dagen of op afspraak. Huisvuil kunt u ook ook zelf wegbrengen naar een milieustraat of naar een milieu-eiland.</p> <p>Restafval</p> <p>Wat is het? Restafval is het afval dat overblijft na het scheiden van recyclebaar afval zoals groente-, fruit- en tuinafval en etensresten (gft+e), papier, glas, textiel en plastic verpakkingen, metalen</p> <p>Restafval</p>



Nr	Success criterion	Problem	Screenshot
29	<p>4.1.2  4.1.2 Name, Role, Value</p>	<p>The value/state of a button should be obvious without changing this state. Make sure the screen reader announces the value/state together with the button name.</p> <p>The value of the non-selected button is being announced as 'gehandicapt'.</p>	 <p>Geen simkaart 11:53</p> <p>WELK AFVAL WAAR?</p> <p>Veel huisvuil wordt in onze gemeente aan huis opgehaald. Dit gebeurt op vaste dagen of op afspraak. Huisvuil kunt u ook zelf wegbrengen naar een milieustraat of naar een milieueiland.</p> <p>Zoek in scheidingswijzer</p> <p>Restafval</p> <p>Wat is het? Restafval is het afval dat overblijft na het scheiden van recyclebaar afval zoals groente-, fruit- en tuinafval en etensresten (gft+e), papier, glas, textiel en plastic verpakkingen, metalen verpakkingen/blik en drinkpakken (pmd). Twijfelt u of het product restafval is, kijk dan hieronder bij</p> <p>Gehandicapt Textiel container, Knop</p>



6. Informatie

We have not made any (new) findings this screen. This screen may contain recurring findings that have already been reported on other screens.

7. Instellingen

We detected 2 findings on this screen.

Nr	Success criterion	Problem	Screenshot
20	 2.4.7 Focus Visible	<p>The focus lands on invisible elements. Make sure that the focus only lands on visible elements.</p> <p>When navigating with swiping gestures, after 'Instellingen', the whole screen receives focus, but the screen reader does not announce anything. Ensure that all visible elements receive focus and are announced by the screen reader. Elements should receive focus in the correct order when navigating sequentially, and all elements should be focusable when navigating with point gestures. Currently, it is only possible to navigate sequentially by swiping.</p>	 <p>The screenshot shows the 'Instellingen' (Settings) screen for 'Uw adresgegevens' (Your address details). It includes input fields for 'Postcode' (2691 EW) and 'Huisnummer' (16), a 'Controleren' (Check) button, and a checked checkbox for 'Wegedoornpad 16, 2691EW s-Gravenzande'. The status bar at the top shows 'Geen simkaart' and the time '12:18'.</p>

Nr	Success criterion	Problem	Screenshot
30	 4.1.2 Name, Role, Value	<p>The input field does not have an accessible name. When tapping this input field, the assistive technology does not read out which data must be entered here. Provide a correct name.</p> <p>It is about all the input fields at the bottom of the screen, these should have their own label.</p> <p>Ensure that the input field has a name that is both visible and programmatically associated with it, a correct role, and that the placeholder text is read aloud by the screen reader.</p>	

8. Berichten

We have not made any (new) findings this screen. This screen may contain recurring findings that have already been reported on other screens.