ACCESSIBILITY ROADMAP

QMATIC EXPERIENCE CLOUD ONLINE BOOKING

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OVERVIEW

Following the accessibility review conducted by Cardan Audit organization on August 26, 2024, per WCAG 2.2 audit level AA, we have identified key areas of improvement in Online Booking application as part of the Experience Cloud Platform. The following document outlines the development plan to address and resolve these issues to ensure the product we develop meets WCAG 2.2 compliance standards.

KEY OBJECTIVES

1. **Enhance accessibility for all users**: Ensure that the application is usable for individuals with disabilities, particularly those relying on assistive technologies like screen readers or keyboard-only navigation.
2. **Compliance with WCAG 2.2 Guidelines**: Achieve the full compliance with the WCAG 2.2 AA standards, addressing all critical, high-impact, and minor issues found in the report.
3. **Provide a seamless user experience**: Improve the overall usability of the application, helping all users, regardless of their abilities.

ISSUE BREAKDOWN & RESOLUTION PLAN

To efficiently address the accessibility issues found in the report, we have divided the work into phases based on the following criteria:

- **Impact on users**: We prioritized fixing issues that directly block users from completing key tasks, such as finishing the booking process. These are critical fixes that must be addressed at once to ensure seamless user interaction with essential functionalities.
- **Development time and effort**: The issues can be resolved with minimal development effort and provide quick wins for improving accessibility. While these might not always affect critical workflows, addressing them helps ensure full compliance with accessibility standards.
- **Application evolution**: Certain issues relate to parts of the platform that are currently undergoing significant updates or technical improvements. These fixes will be managed alongside ongoing development to streamline the process and avoid redundant work.

Phase 1: Quick wins (Implemented)

Objective: Implement low-effort, high-impact fixes that can be resolved within 1-2 months.

The following issues were addressed:

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Issue	Issue Statement	Action
Principle 1: Perceivable		
Guideline 1.1: Text Alternative Success criterion 1.1.1: Non-text Content	The selected amount can be increased or decreased with buttons visually showing a plus or a minus, but this information is not made available in the code where assistive technology can read it.	Added aria labels to decrease/increase amount buttons
Guideline 1.3: Adaptable Success criterion 1.3.1: Info and Relationships	When a visitor of the website has JavaScript disabled in their browser, they are met with a message saying "We're sorry but appointment doesn't work properly without JavaScript enabled. Please enable it to continue.". This text is made bold with a <strong> element. The <strong> element is intended to emphasise text, not to create a visual effect.	Corrected "JavaScript disabled" error message
	The text "Time zone" itself is a label or a heading for the text below it, but to assistive technologies there is no relationship distinguishable between the two. This can be solved by placing the text "Time zone" with a heading element.	Placed the text "Time zone" with a heading element.
	The proper usage of heading elements is important to let people navigate through the content with assistive technology. A person who can't visually see the page is not able to quickly spot the location information based on the visual styling. If the heading "Location" is placed they will also be able to jump to that information quickly.	Placed the text "Location" with a heading element in Confirmation page
Success criterion 1.4.4: Resize text	When the page is zoomed in to 200% at a screen resolution of 1280x1024, the longer descriptions of in the content are cut off at the end of the line, with the missing parts replaced by triple dots.	Fixed pages behaviour when zooming of 200%
Success criterion 1.4.10: Reflow	The first step of booking flow offers various services with a short description. When the page is viewed at a screen resolution of 320px wide, the longer descriptions of services like "Architecture & Interior design" and "Building Permit" in the content of "Architecture & Design" are cut off at the end of the line, with the missing parts replaced by triple dots. A user needs to be able to see the same content on each screen size. On the page with the language set to Dutch, various headings fall partially off the screen when viewed at a screen resolution of 320px.	Fixed content display on each screen size. Fixed "Accessibility statement" page heading at a screen resolution of 320 px

Success criterion 1.4.12: Text spacing	The first step of booking flow offers various services with a short description. When an in-browser tool is used to adjust the text spacing to reflect the minimum requirements of this success criterion, the longer descriptions of services like "Architecture & Interior design" and "Building Permit" in the content of "Architecture & Design" are cut off at the end of the line, with the missing parts replaced by triple dots. People most commonly use such tools to better be able to read the text, which is made impossible if the text then simply disappears. All the content needs to remain legible with these changes.	Fixed the issue with text disappearing
Success criterion 1.4.3: Contrast (minimum)	At the right side of each page in the booking process we are shown a summary of the appointment information we have filled in so far. During the first step, and before inputting anything in during the second step, this includes grey texts such as "Time and date not selected". This grey text has a colour contrast of 3.9:1 with the light grey background. This text needs a contrast ratio of at least 4.5:1.	Fixed contrasts and resolution for Appointment Summary section across the Booking flow
Principle 2: Operable		
Success criterion 2.4.6: Headings and Labels	The second step on Booking form starts with an input field to select a location. In the right side of this field is a button with a cross available to clear the contents of the field. This button has the (aria-)label "Clear icon". While it may be argued that this label describes the icon in the button, supplying this information is not relevant to the function of the button. It's possible to open a modal on various pages, for example by clicking on the "read more" text of a service like "Architecture & Interior design" on the page with the first step of booking flow. These buttons visually show the text "read more", but for screen readers the additional text "open modal" has been added to make the purpose of the button clearer.	Added aria-labels to input fields, "read more" button
Principle 4: Robust		
Success criterion 4.1.2: Name, role, value	The first step on Booking form offers various services to choose from, categorised into expandable elements. The buttons to expand these options receive the aria-expanded="true" attribute when clicked to expand, but the attribute is removed when returned to the folded state. The button needs to have the aria-expanded="false"	Fixed attributes usage and added aria-labels to "Expand/Collapse "actions

	attribute in the non-expanded state. It seems this attribute with the correct values was placed on the parent element of the button, but as this element is not interactive, this is not properly recognised by assistive technologies	

Phase 2: Medium-Complexity Fixes

Objective: Address more complex issues that require moderate development effort and testing.

The following issues are included in the scope:

Reference	Issue Statement	Action
Principle 1: Perceivable		
Success criterion 1.3.5: Identify input purpose	The third step of Booking flow contains various inputs for personal information. Most of these inputs have autocomplete attributes with a correct value, except for country code, which has the value "nope". This is not a valid value for the autocomplete attribute. The correct value for the autocomplete of a country code is "Tel country-code"	Add valid values for autocomplete attributes.
Success criterion 1.4.3: Contrast (minimum)	An input field in the third step of Booking form is left empty or filled incorrectly, the input text turns red and an error message in the same red appears directly beneath the input field. This red text has a contrast of 3,2:1 with the white background, where a minimum of 4,5:1 is required. When an input field in the third step is left empty or filled incorrectly, the input text turns red and an error message in the same red appears directly beneath the input field. This red text has a contrast of 3,2:1 with the white background, where a minimum of 4,5:1 is required.	Change contrast for error messages in Enter Personal Info form
Principle 2: Operable		
Guideline 2.1: Keyboard Accessible	The second step of Booking flow starts with an input field to select a location. In the right side of this field is a button with a cross available to clear the contents of the field. This button is not available for keyboard users. The left side of the page with the second step of Booking flow shows a calendar view of a month. When clicking on the current month at the top of the calendar view, the days are swapped out for the months, and in the location of the clicked button appears the year. When the year is clicked, a view appears in which one can select a year, with currently only 2024 as an available option. In this year selection screen, the button to select 2024 can't be pressed using a keyboard.	Fix access to "Location" input field by using keyboard Fix year selection issue for Calendar timeslots selection widget

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Guideline 2.4: Navigable Success criterion 2.4.2: Page Titled	When selecting one of services in the first step on Booking form we are directed to the page with questions as an additional step. This page has the same page title as the first step, despite being a different page. It's important that visitors can recognise which page they have in front of them from the page title. The additional step therefore needs a different page title that describes this page.	Fix navigational issues for the pop ups with configured screening questions
Success criterion 2.4.3: Focus Order	It's possible to open a modal on various pages, for example by clicking on the "read more" text of a service like "Architecture & Interior design" on the page with the first step. This modal has several buttons, like buttons to close the modal, but the modal itself has no interactive function. The modal is focusable, however, because it received a tab index attribute. Since this is not an interactive element, it is better to remove the tab index from the modal	Fix the issues with" Read more" modal window that opens service description
Success criterion 2.4.7: Focus Visible	It's possible to open a modal on various pages, for example by clicking on the "read more" text of a service like "Architecture & Interior design" on the page with the first step, this modal has several buttons but is also focusable itself because it received a tab index. The modal does not, however, have a visible focus indicator. This is necessary for every element that gets focus. This can be solved by making sure the modal does not receive focus, as it is not an interactive element.	Fix the issue so that the modal does not receive focus, as it is not an interactive element.

Milestone:
- Major medium-complexity fixes will be completed by **November 15**.
- Conduct initial accessibility testing after changes are deployed.

Phase 3: Long-term Improvements

Objective:
- Focus on structural improvements, future-proofing the design, and building accessibility into the development process.
- Revise and standardize design components for accessibility
- Implement ongoing user testing with assistive technologies

Reference	Issue Statement	Action
Principle 1: Perceivable		
Guideline 1.1: Text Alternative Success criterion 1.1.1: Non-text Content	The left side of the page with the second step with selection shows a calendar view of a month. Every day with available appointment slots is marked with a green dot. The information this green dot gives us needs to	Redesign of calendar widget making sure that alternative way to receive availability is provided

	be made available in a (textual) alternative as well.	
Guideline 1.4 Distinguishable Success criterion 1.4.1: Use of Colour	At the top of each page in the booking process, such as on Timeslots selection page a blue bar which shows the current progress in the booking process. The current step is only distinguishable from the upcoming steps with a slight difference in text colour, from a light blue to white. This difference needs to be visually apparent in an additional way, for example with an underline of the text. This ensures that visitors with a visual impairment such a colour blindness are also able to perceive the difference.	Redesign the booking flow (progress bar) to make sure that it explains the current progress in the booking process
Success criterion 1.4.3: Contrast (minimum)	Next to the calendar view on the page with the second step on Timeslots selection are three buttons to filter on appointment options in the morning, midday or afternoon. The teal text in these buttons have a contrast of 4.0:1 with the off-white background, but a minimum of 4.5:1 is required. When the buttons are clicked, the background changes to a teal colour and the text to white. This combination has a contrast of 3.5:1 but still needs to be at least 4.5:1. When changing these, consider that the contrast needs to meet this requirement in the hover state of the button as well, both when selected and not selected.	Redesign the filters for timeslot selection to ensure the buttons are easily accessible and provide an improved user experience (UX).
Principle 2: Operable		
Keyboard Accessible	Next to the calendar view on the page with the second step on Timeslots selection are three buttons to filter on appointment options in the morning, midday or afternoon. These buttons can't be activated with a keyboard.	Redesign the filters for timeslot selection to ensure the buttons are easily accessible and provide an improved user experience (UX).
Success criterion 2.4.4: Link Purpose (In Context)	At the left side of each page after step 1 in the booking process, we are provided with a button that reads "back". On the pages within the process this button brings the user back to the previous step or page, but this does not include all "previous pages". For example, when picking the service "Building Permit" in the first step, one first must answer two	Fix the navigational issue with "Back" button across the whole booking flow

	questions. When the first question is answered and the "next" button is clicked, the first question is no longer available. One might expect the "back" button to return to the first question now, but instead we are returned all the way to step 1, before selecting a service. This kind of ambiguity needs to be avoided, for example by giving the link a clearer text such as "previous step". A similar problem is presented by the "next" button beneath the appointment summary on the right side of each step, which becomes available after navigating backwards through the steps with the "back" button. This button needs a clearer link text as well.	
Success criterion 2.4.7: Focus Visible	Next to the calendar view on the page with the second step of Booking flow there are three buttons to filter on appointment options in the morning, midday or afternoon. The buttons can receive the keyboard focus but have no visible focus indicator. It's necessary to let keyboard focus always be visible.	Redesign the filters for timeslot selection to ensure the buttons are easily accessible and provide an improved user experience (UX).
Principle 3: Understandable		
Guideline 3.2: Predictable Success criterion 3.2.2: On Input	The left side of the page with the second step of Booking flow shows a calendar view of a month. When using the keyboard to select a date, the focus immediately jumps to the time slots on the right side of the calendar view, skipping the buttons to filter for specific parts of the day. This jump of the focus to a different element is a change in context and therefore fails this criterion. The intent is admirable, however, because it saves a user from navigating through all the remaining days of the month, so we'd advise to not remove the focus jump but instead add a warning for this behaviour, for example as a small instruction before the calendar view that is connected to each button with an aria-described by attribute.	Define an alternative method to display available timeslots, ensuring better communication of this information. Address contrast issues to improve readability and enhance branding options by recommending default secondary colour values based on the selected primary colour.

Milestone:
- Continuous accessibility monitoring and testing are in place by **September 15, 2025**
- Fully accessible design system for future development.

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CONCLUSION

We are committed to creating an inclusive and accessible Online Booking application for our end users. By following this comprehensive roadmap, we aim to address the accessibility issues found in the report and continuously improve our product's user experience.

For any questions or further details, please contact