Functionalities	PWA	API*
PWA		
0. Login		
#0.0 Password Login		
As a user, I need to be able to password log in so that I can gain access to the platform faster.	5	2
I must be able to switch languages: English and Dutch	-	-
If I do not have an account yet, I must be able to sign up for one.	-	-
After a successful login, I must be directed to the 3.0 Overview Netherlands of the platform.	-	-
If my password is wrong or invalid, then I must receive an error message.	-	-
If I enter an incorrect password, then I am not allowed to gain access to the platform.	-	-
#1.0 Login		
As a user, I need to be able to log in so that I can gain access to the platform.	13	5
I must be able to login with my account email address and password.	-	-
If I do not have an account yet, I must be able to sign up for one.	-	-
After a successful login, I must be directed to the 3.0 Overview Netherlands of the platform.	-	-
If my entered email address and password combination are wrong or invalid, then I must receive error messages.	-	-
If I enter an incorrect username and/or password, then I am not allowed to gain access to the platform.	-	-
If I forgot my password, I must be given an option to reset my password.	-	-
I must be able to access the Frequently Asked Questions (FAQ) screen.	-	-
I must be able to contact the platform via email or phone call.	-	-
I must be able to see how many users are currently using the platform.	-	-
I must be able to see the total number of users using the platform.	-	-
I must be able to see the total number of hospitals joined in the platform.	-	-
I must be able to switch languages: English and Dutch	-	-
#1.3 Login – Forget password		
As a user, I need to be able to reset my password so that I can still gain access to the platform even when I forget my password.	3	3
I must enter my registered email address.	-	-
Once I enter my email address, I must receive a password reset link via email.	-	-
When I click the link in the email, then I must be directed to the reset password screen, where I must enter a new password.	-	-
If I enter passwords that do not match, then my new password cannot be confirmed.	-	-
#1.5 Login – Reset password		
As a user, I need to be able to reset my password so that I can log in.	3	3
I must receive a message via email inbox containing a password recovery link to the Reset Password screen.	-	-
I must enter a new password (which must be entered twice).	-	-
If I enter passwords that do not match, then my new password cannot be confirmed.	-	-
If I do not enter the same password twice, then I must receive an error message.	-	-
I am able to save the new password and go back to the Login screen.	-	-
1. Sign up		
#2.0 Sign up		
As a user, I need to be able to sign up for a personal account so that I can gain access to the Ziekenhuisbedchecker website.	34	13
I must enter a valid email address.	-	-
I must enter a password and confirm it again.	-	-
I must be able to choose a profession from the provided list: hospital, ambulance, general practictioner, other.	-	-
I am able to read and agree to the Terms & Conditions and Privacy Policy of this app.	-	-
If I already have an account, then I must see an option to go to the login screen.	-	-
I must see an error message If the email address is already taken.	-	-
I must see an error message when the passwords do not match.	-	-
I must see an error message when I have not agreed to the Terms & Conditions and Privacy Policy.	-	-
I must be able to access the Frequently Asked Questions (FAQ) screen.	-	-
I must be able to contact the platform via email or phone call.	-	-
I must be able to see how many users are currently using the platform.	-	-
I must be able to see the total number of users using the platform.	-	-
I must be able to see the total number of hospitals joined in the platform.	-	-
I must be able to switch languages: English and Dutch	-	-
After filling in all the required input fields, I must receive a registration link via my email address.	-	-
Upon opening the registration link, I must be directed to the login screen and given an option to login with my email address and password.	-	-

2. Overview hospitals
#3.0 Overview

As a user, I need to be able to an overview of the hospitals in the Netherlands, so that I can check the details of each hospital easily.	34	13
I must be able to see a map view of the Netherlands.	-	-
I must be able to see an indicator of how many hospital located on each city.	-	-
I must be able to see a list view showing list of hospitals available in the Netherlands.	-	-
I must be able to easily find a hospital via a search feature.	-	-
I must be able to show or hide availability indicators: ICU beds, regular beds, emergency department, and many more.	-	-
I must be able to see the name of each hospital in the list view.	-	-
I must be able to see the city and the distance of each hospital in the list view.	-	-
I must be given an option to see the capacity of each hospital when I select them from the list view or map view.	-	-
After scrolling down through the list view, I must be given an option to automatically scroll up to the top of the list.	-	-
I must be able to see the information of the legends and bed availability statistics.	-	-
I must be able to zoom in on the map view.	-	-
When zooming in, I must be able to see each hospital with availability indicators shown.	-	-

#3.2 Overview - Filter

As a user, I need to be able to filter my search results so that I can easily find a hospital based on certain indicators.	21	8
I must be able to sort my search by: closest, most recent update, hospital name.	-	-
I must be able to filter my search by the availability of: ICU beds, reguller beds, elective surgery.	-	-
I must be able to filter my search by distance (km), regions.	-	-
I must be able to filter my search by regions.	-	-
I must be able to filter my search by city.	-	-

#3.4 Overview - Search

As a user, I need to be able to use a search feature so that I can easily find a hospital by entering a certain keyword.	13	5
If I enter a keyword in the search input field, I must get suggestions based on the keyword I have entered.	-	-
If there's no matching result from my keyword, I must see an empty state.	-	-
I must be able to sort and filter my search.	-	-
I must be able to see my search results in the list view and map view.	-	-

3. Capacity
#4.0 Capacity

As a user, I need to be able to see the capacity of hospitals so that I can get more insights of each hospital facilities.	21	5
I must be able to see the capacity of each hospital when I press them from the list view and map view.	-	-
I must be able to see the name of the hospital.	-	-
I must be able to see the location of the hospital.	-	-
I must be able to see the distance to the hospital.	-	-
I must be able to see the bed capacity of the hospital.	-	-
I must be able to see the services of the hospital.	-	-
I must be able to see the contact of the hospital.	-	-

4. Overview emergency locations
#5.0 Overview emergency

As a user, I need to be able to see an overview of emergency locations so that I can find emergency hospital easily.	34	13
I must be able to see a map view of the Netherlands.	-	-
I must be able to see an indicator of how many emergency location located on each city.	-	-
I must be able to see a list view showing list of emergency locations available in the Netherlands.	-	-
I must be able to easily find a emergency location via a search feature.	-	-
I must be able to show or hide availability indicators: ICU beds, regular beds, emergency department, and many more.	-	-
I must be able to see the name of each emergency location in the list view.	-	-
I must be able to see the city and the distance of each emergency location in the list view.	-	-
I must be given an option to see the capacity of each emergency location when I select them from the list view or map view.	-	-
After scrolling down through the list view, I must be given an option to automatically scroll up to the top of the list.	-	-
I must be able to see the information of the legends and bed availability statistics.	-	-
I must be able to zoom in on the map view.	-	-
When zooming in, I must be able to see each emergency location with availability indicators shown.	-	-

5. Frequently Asked Questions
#6.0 FAQ

As a user, I need to be able to see an overview of Frequently Asked Questions (FAQ), so that I can easily find answers to my questions about the website.	8	3
I must be able to see a list of the FAQ.	-	-
I must be able to expand the dropdown of each FAQ to see the answer.	-	-

6. Contact
#7.0 Contact

As a user, I need to be able to see the contact info of the platform so that I can call or send an email to the platform.	5	3
I must be able to email address of the platform.	-	-
I must be able to see the phone number of the platform.	-	-
I must be able to enter a message in a form format and send it via email.	-	-

7. Settings
#8.0 Settings

As a user, I need to be able to manage my settings so that I can keep my app preferences up-to-date and find more information about the app.	13	5
I must be able to adjust the size of the letter in the website.	-	-
I must be able to choose my language preference: English and Dutch.	-	-
I must be able to select the profession group.	-	-
I must be able to manage my push notification settings.	-	-
I must be able to see more information about the app.	-	-
I am able to view the privacy policy of the app.	-	-
I must be able to log out.	-	-
I must be able to delete my account.	-	-

8. Error
#9.0 Error

As a user, I need to be able to get notified for any error states, so that I can understand which action I need to do based on the error states.	8	3
I must be able to get notified when the website is currently in maintenance.	-	-
I must be able to get notified when there's no internet connection.	-	-
I must be able to get notified when there's a new version of the website.	-	-

9. Unsubscribe
#10.0 Unsubscribe

As a user, I need to be able to unsubscribe the platform so that I can stop getting notified from the platform activities.	3	2
I must be given an option to unsubscribe from the platform.	-	-
I must get a confirmation message if I have successfully unsubscribed the platform.	-	-

10. Statistics
#11.0 Statistics

As a user, I need to be able to see the statistics of the platform, so that I can get insights on the performance within the platform.	34	13
I must be able to see the total amount of the hospitals.	-	-
I must be able to see the total amount of the bed.	-	-
I must be able to see the total amount of the bed capacity for COVID patients.	-	-
I must be able to see the total amount of the bed capacity for Non-COVID patients.	-	-
I must be able to see the total amount of the bed with capacity.	-	-
I must be able to see the total amount of the bed without capacity.	-	-
I must be able to see the statistic of hospital per region: all regions, ROAZ, IC region, security region.	-	-
I must be able to see the statistics of registered hospital per region: all regions, ROAZ, IC region, security region.	-	-
I must be able to see the statistics of the bed amount: regular and IC beds.	-	-
I must be able to see the statistics of bed capacity of each date in a week.	-	-
I must be able to see the amount of available and unavailable services/facilities.	-	-
I must be able to filter the statistics overview based on a date duration: last 7 days, last 30 days, custom (start and end date using a calendar picker).	-	-

Enrichments		
Messages for the benefit of user-friendliness	2	-
Image optimiser*	-	0
Caching logic to limit network data usage and improve the user experience*	2	-

Data driven development*		
Firebase Analytics - page tracking	2	-
Firebase Analytics - KPI research	16	-

Fundamentals		
PWA/API development and staging environment setup	3	3
PWA/API development and staging environment security and control	3	3
Database setup/composition	-	8
Crashlytics for the purpose of detecting bugs	1	-
Crash information pop-up mechanism	1	-
Technical documentation	5	8

Test driven development*		
Implementation of integration test for the core API('s)	-	8
Implementation of UI tests for the core web application(s)	13	-

Total hours development for each platform	300	129

Total development	**429**	
PWA development	300	
API development	129	
Design	**8**	
Design documentation for development	5	
Writing or updating the user stories	3	
Project management*	**66**	
Quality assurance*	**66**	
Total hours	569	
Total price	€76 246	

Hourly rate	€134,00

Estimate terms and condtions*

Glossary

Agile ceremonies

Agile ceremonies are meetings that allow us to plan, analyse and track the development status and progress. Our ceremonies include a sprint planning, a sprint review, a retrospective, and daily stand-ups with the entire team.

Project management

It is the responsibility of the project manager (or, 'PM') to ensure that all team members work together in an effective and efficient manner. The PM's daily tasks include setting priorities for the team, performing resource allocation, initiating agile ceremonies, communicating with the client, and ensuring everyone is working towards the same goal with the same information and priorities.

Quality assurance

DTT has a dedicated team for Quality Assurance (or, 'QA'). It is the responsibility of this team to continuously test the deliveries of our development teams. Our QA engineers employ unit tests, integration tests and automated user testing to assist them in assuring the quality of our solutions. Additionally, they also ensure the solution adheres to guidelines and best practices. Before a solution is delivered to our clients, it must first be approved by our QA engineers.

Bug fixing and revising

Bugs are issues in software that cause incorrect or unexpected behaviour. These issues can be introduced during software development, but can also occur due to changes in third-party dependencies or other external influences. When a bug is fixed, we redesign the functionality to prevent it from happening again - this is called 'revising'. Fixing bugs and revising the codebase are an integral part of software development.

CMS (Content Management System)

CMS stands for 'Content Management System'. The CMS is an (often web based) environment which provides an administrator with tools to manage content in a solution.

API

API stands for 'Application Programming Interface'. An API connects the mobile and/or web application with the back-end solution, often to facilitate communication with the database.

Caching logic

Caching is a technique where data is stored after it is retrieved for the first time. This allows for a faster retrieval of this data every next time it is required, which significantly reduces load times and improves the overall user experience.

Image optimiser

This tool optimises the resolution of (downloaded/uploaded) images to ensure a higher image quality at a lower file size. This results in better looking images, faster loading times, and reduced upload/download bandwidth. DTT implements this tool by default in all her projects.

Technical documentation

Technical documentation refers to any form of documentation that describes the use, functionality, or architecture of a solution. It helps to increase the maintainability, resource scalability and technical communication of all members involved. DTT designs extensive technical documentation for her solutions, including functional design, user stories, code architecture, class diagrams, flowcharts, and API documentation.

Test Driven Development

Test Driven Development (or, 'TDD') is a development methodology that puts an emphasis on the automated testing of code. Often, the test is even written before the code. The test is then used as a 'check' to verify that the code is both complete and functional. If something 'breaks' in this code, the developer will be notified by the failing test and prevent unneeded test cycles by the QA team and the client. TDD results in highly tested and stable code, which improves the quality of the codebase and the stability of the solution.

Auto review mechanism

This UI/UX mechanism is designed to receive feedback from users in an effective and non-intrusive manner. Users are asked if they are happy about the solution. Based on their answer, the users are kindly requested to provide additional feedback via email, or as a rating/review in the app store.

Data Driven Development (analytics)

User feedback and analytics provide insight into how a solution is used by its users. When we shape new features and optimisations based on these insights, we speak of 'data driven development'. Measuring user behaviour is essential for focussing the development phases of a solution after its publication, as it allows us to make informed decisions on improvements, priorities, and optimisations. To measure user behaviour, we advise the implementation of Google Analytics for Firebase, which additionally tracks a wide variety of standard KPI's and user information, including demographics, countries of origin, session duration, growth and retention.

Funnels

A funnel is a measurement technique that tracks user behaviour according to a predetermined process (or, customer journey). Google Analytics for Firebase allows you to track: i). how often a process is started, ii). how often a process has been completed, and iii). at which point a process has been stopped. To illustrate the insights provided by a funnel, let's imagine a funnel for a web shop which tracks: i). when a product has been selected, ii). when the selected product has been added to the shopping cart, iii). when the user proceeds to the payment step, and, finally, iv). when the user has confirmed their purchase. In this example, knowing the amount of users that reach each step of the purchasing process, and knowing the percentage of users that proceed to the next step, provides us with valuable insight into where users drop off during this customer journey. These insights can be used to prioritise which parts of the purchasing process need to be optimised first.

Estimate terms and condtions*

All prices are excluding VAT. Our hourly rate is €134,- but might differ dependent on the complexity, volume and urgency of the project. This estimation is valid for a period of 14 days.

The hours estimated will be invoiced at the communicated rate. The provided price represents the minimum fee to be invoiced for the work as outlined in this offer document. Achieving a high-quality solution often necessitates multiple rounds of optimization. In cases where the hours required to realize the described and estimated work surpass the initial estimate, any additional necessary hours will be offered at a reduced rate of €99,- per hour. By providing this reduced rate for exceeded estimated hours, DTT aims to find a balance between the interests of our clients and those of the contractor. If additional hours become necessary, DTT will proactively communicate the status of the hours spent and required. It's worth noting that the same functionality may be mentioned multiple times in the estimate. The initial mention of a functionality will carry a higher estimate, while subsequent mentions will receive discounted hours.

The required hours for realisation can deviate from the provided estimation when the completion is depended upon a third-party, this includes when DTT; i. works with a third-party API, ii. works with an unfamiliar hosting environment, iii. has to rely on third-party hardware or software.