

APPS WEB GAMES				
Functionalities	Flutter	Web	API*	CMS*
APP				
SPLASH SCREEN	-	-	-	-
As a user, I need to be able to see the splash screen so that I know the app is loading to open.	1	-	-	-
I must see the splash screen image for a few seconds when the app is launching.	-	-	-	-
SIGN UP	-	-	-	-
As a user, I need to be able to choose between login or sign up so that I can be directed to the correct screen.	3	-	-	-
I must see a welcome message.	-	-	-	-
I must see the 2 options: get started and login.	-	-	-	-
Clicking get started will direct me to the onboarding screen.	-	-	-	-
Clicking login will direct me to the login screen.	-	-	-	-
As a user, I need to be able to select and search a club so that I can join a specific club.	5	-	3	-
I must be able to see the name and logo of all available clubs.	-	-	-	-
The clubs are retrieved from the CMS.	-	-	-	-
I must be able to search for a club.	-	-	-	-
I must be able to select one club.	-	-	-	-
As a user, I need to be able to select and search a group so that I can join a specific group.	5	-	3	-
I must be able to see an overview of all groups that are part of the club I selected.	-	-	-	-
I must be able to see the name and logo of each group.	-	-	-	-
The groups are retrieved from the CMS.	-	-	-	-
I must be able to search for a group.	-	-	-	-
I must be able to select one group.	-	-	-	-
As a user, I need to be able to sign up for an account so that I can gain access to the app.	5	-	3	-
I must enter my name.	-	-	-	-
I must enter a valid email address.	-	-	-	-
I must enter a password and confirm it again.	-	-	-	-
I am able to read and agree to the Terms and Conditions and Privacy Policy of this app.	-	-	-	-
I must see an error message if the email address is already taken.	-	-	-	-
I must see an error message when the email and password do not match.	-	-	-	-
I must see an error message when I have not agreed to the Terms and Conditions and Privacy Policy.	-	-	-	-
I must see an error message when a mandatory field is left empty.	-	-	-	-
As a user, I need to enter my personal information so that I can further personalise my profile.	3	-	2	-
I must indicate my gender by means of radio buttons.	-	-	-	-
I must enter my weight in kg.	-	-	-	-
I must enter my height in cm.	-	-	-	-
I must select my birth date via native date picker.	-	-	-	-
I am only able to proceed when all mandatory fields have been filled in.	-	-	-	-
As a user, I need to be able to turn on my GPS location while I am using the app so that the app can track my session route and statistics.	3	-	-	-
I must be able to read information about why I need to turn on location services.	-	-	-	-
Native pop-up will appear to allow the app access to my GPS.	-	-	-	-
If I haven't turned on GPS location, only steps will be measured during the sessions.	-	-	-	-
LOGIN	-	-	-	-
As a user, I need to be able to log in so that I can gain access to the app.	3	-	3	-
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 ranking screen of the app.	-	-	-	-
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 app.	-	-	-	-
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.	5	2	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.	-	-	-	-
After successfully resetting my password, I will see a confirmation pop-up and I can go back to the login screen.	-	-	-	-
TUTORIAL	-	-	-	-
As a new user, I need to be able to learn about the main functionalities of the app so that I can understand how the app works.	3	-	-	-
I must be able to read how the different functionalities of how the app works. The tutorial will be presented in a pop-up, with a background overlay that highlights the functionality in the navigation bar.	-	-	-	-
I must be able to swipe between the different pop-ups of the tutorial.	-	-	-	-
RANKING	-	-	-	-
As a user, I need to see a ranking overview of all clubs so that I can gain insights in the top scores and my own club's position.	13	-	8	-
I must be able to see the ranking position, name, logo, total amount of points, and total number of players per club.	-	-	-	-
The ranking is based on points earned per football season.	-	-	-	-
Scores will be reset every football season.	-	-	-	-
I must be able to see my own club's logo, ranking, points, and number of players at the top.	-	-	-	-
My club will be highlighted in the ranking list.	-	-	-	-
I must be able to see the groups ranking within a club when clicking on a club.	-	-	-	-
As a user, I need to be able to filter the club ranking so that I can see ranking within the national or international scope.	5	-	5	-
I must be able to filter the timeline by 'National' or 'International' through tabs.	-	-	-	-
If it is set to 'National', I will be able to see the ranking of clubs within the country (Netherlands).	-	-	-	-
If it is set to 'International', I will be able to see the ranking of clubs internationally (Europe).	-	-	-	-
As a user, I need to be able to filter the players ranking so that I can see ranking within the club, national, or international scope.	3	-	8	-
I must be able to filter the timeline by 'My club', 'National' or 'International' through tabs.	-	-	-	-
If it is set to 'My club', I will be able to see the ranking of players within my club.	-	-	-	-
If it is set to 'National', I will be able to see the ranking of players within the country (Netherlands).	-	-	-	-
If it is set to 'International', I will be able to see the ranking of players internationally (Europe).	-	-	-	-
CLUB CHAT	-	-	-	-
As a user, I need to be able to send a message in the club chat so that I can interact and communicate with fellow club members.	21	-	21	-
I must be able to see the name and the logo of the club I am in.	-	-	-	-
I must be able to type and send messages in the chat.	-	-	-	-
I must be able to view messages sent by other users; I must see the username of the user who sent the message, the profile picture (if any), and time when it was sent.	-	-	-	-
Closing the chat page will direct me back to page I visited last.	-	-	-	-
As a user, I need to be able to flag a message so that I can block out inappropriate messages in the chat.	5	-	3	-
I must be able to flag messages sent by other users who show unacceptable or inappropriate behaviour.	-	-	-	-
I must first confirm that I want to flag a message.	-	-	-	-
A flagged message will show a flag indicator/icon.	-	-	-	-
If the message has been flagged 3 times, the message will automatically be removed.	-	-	-	-
As a user, I need to be able to see information about the chat so that I know more about the flagging functionality.	2	-	-	-
I must be able to open and read more information about flagging a message through an info pop-up.	-	-	-	-
I must be able to close the pop-up and be directed back to the chat.	-	-	-	-
SESSIONS	-	-	-	-
As a user, I need to be able to view my latest session so that I look back into my performance in that session.	13	-	16	-
It will show the details of yesterday's session.	-	-	-	-
I must be able to see the date of the session.	-	-	-	-
I must be able to see whether I was walking alone or in a group.	-	-	-	-
I must be able to see the total amount of steps, calories, and distance travelled in that session.	-	-	-	-
I must be able to see the amount of points I earned from that session.	-	-	-	-
If I walk in a group, I must earn extra social bonus points.	-	-	-	-
If the session was done during a game match day, I must earn extra game match bonus points.	-	-	-	-
I must be able to see a map of the route taken during the session.	-	-	-	-
I must see an empty state of the page when there is no data available yet.	-	-	-	-
If my GPS was off during the session, I will only be able to see the amount of steps, a warning message about this, and a call-to-action to turn on GPS.	-	-	-	-
As a user, I need to be able to share a session so that people outside the app can know about it.	5	-	-	-
The sharing will be done via native share.	-	-	-	-
When I share the session, I must see a default sharing message, the session route map (if available), and a deep-link to the post.	-	-	-	-
The map will contain a watermark that shows the app logo, club logo, group logo (if available), date of session, amount of steps, calories, distance, and points.	-	-	-	-
If someone does not have the app yet, they will be directed to download the app on the app store.	-	-	-	-
If someone already has the app, they will be directed to the post in the app.	-	-	-	-
SETTINGS AND INVITATION	-	-	-	-
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.	3	-	2	-
I must be able to manage my push notification settings.	-	-	-	-
I must be able to see more information about the app.	-	-	-	-
As a user, I need to be able to manage my push notification settings so that I can indicate which notifications I want to receive.	8	-	8	-
I must be able to enable/disable notification for new messages in the chat.	-	-	-	-
I must be able to enable/disable notification for new messages from my club.	-	-	-	-
I must be able to enable/disable notification for new messages from EFDN.	-	-	-	-
I must be able to enable/disable notification for new successful invitations.	-	-	-	-
I must be able to enable/disable notification for new earned badges.	-	-	-	-
I must be able to enable/disable notification for monthly weight update reminder.	-	-	-	-
As a user, I need to be able to invite friends to join the app so that I can spread the word and other people can use the app.	2	-	5	-
I must see an explanation message about the inviting feature.	-	-	-	-
The sharing is done via native share.	-	-	-	-
When I share the app, I must see a default sharing message and a link to download the app.	-	-	-	-
For every new user that creates an account through my link, I will earn 2 points.	-	-	-	-
CMS*				
LOGIN	-	-	-	-
As an admin I need to be able to login so that I gain access to the CMS.	-	-	2	3
I should have already received and known my login credentials (via email).	-	-	-	-
I should be able to login with my email address and password.	-	-	-	-
I should be able to indicate if the system should remember my login details the next time I open the CMS.	-	-	-	-
I should not gain access to the app if I enter incorrect username and/or password.	-	-	-	-
As an admin I need to be able to reset my password so that I can still gain access to the CMS even when I forget my password.	-	-	2	3
I should be able to enter my account email address.	-	-	-	-
Once I enter my email address, I should receive a password reset link via email.	-	-	-	-
When I click the link in the email, I am directed to the reset password screen, where I should be able to enter a new password.	-	-	-	-
My new password cannot be confirmed if I enter passwords that do not match.	-	-	-	-
MANAGE FOOTBALL CLUBS (SUPER-ADMIN)	-	-	-	-
As a super-admin I need to be able to view all football clubs so that I have a clear overview of which football clubs are active/included in the app.	-	-	3	5
I should be able to see an overview of all football clubs; I can see the name of the club, the club logo, total number of members, country, and email address of the responsible football club admin.	-	-	-	-
As an super-admin I need to be able to export the football clubs data so that I can share or print it.	-	-	3	5
I can export all club details, which includes all information shown in the overview screen (excluding images), into a single CSV file.	-	-	-	-
As a super-admin I need to be able to add a new football club account so that it will appear in the app.	-	-	3	5
When creating a new football club account, I can enter the name of the football club, select the country of the club, add the club logo (1:1 ratio), enter the email address of the responsible contact person (to become the sub-admin), and generate a (random) password.	-	-	-	-
When I create a new football club admin account, the login details will be sent to the email address that I entered so they can login to the CMS.	-	-	-	-
PUSH PANEL	-	-	-	-
As a super-admin or football club admin I need to be able to see an overview of all sent push-notifications so that I can see what messages have been sent.	-	-	3	5
I should be able to see a list-view of all push-notifications that have ever been sent.	-	-	-	-
For each notification, it should display the message body and the date sent.	-	-	-	-
As a super-admin I need to be able to send a new push-notification to all app users so that I can directly reach the user and inform them via the app.	-	-	5	8
I should be able to write the message in a text field.	-	-	-	-
When the message has been typed, I can click the send button.	-	-	-	-
When the message has been sent, it will return back to the main push-panel screen and it will appear in the list of sent push-notifications.	-	-	-	-
All users (that enable push notifications) will receive the push-notification in the app.	-	-	-	-
Enrichments	-	-	-	-
Messages for the benefit of user-friendliness	2	-	-	-
Image optimizer*	-	-	0	-
Auto review pop-up mechanism*	0	-	-	-
Caching logics on behalf of limiting data usage and an improved user experience*	2	-	2	-
Data driven development*	-	-	-	-
Firebase Analytics - page tracking	1	-	-	-
Fundamentals	-	-	-	-
API/CMS development and staging environment setup	-	-	3	3
API/CMS development and staging environment security and control	-	-	3	3
Database setup/composition	-	-	5	-
Crashlytics for the purpose of detecting bugs	1	-	-	-
Crash information pop-up mechanism	1	-	-	-
Technical documentation	5	-	8	3
Test driven development*	-	-	-	-
Implementation of unit tests for the core functionality of the mobile application(s)	13	-	-	-
Implementation of integration test for the core API('s)	-	-	13	-
Implementation of UI tests for the core web application(s)	-	1	-	8
Total hours development for each platform	141	3	148	51
Total development	343			
Flutter app development	141			
Web development	3			
API development	148			
CMS development	51			
Design	27			
CMS workflow (functional design) and draft project documentation for development	21			
Design documentation for development	6			
Project management*	56			
Quality assurance*	56			
Total hours	482			
Total price	€ 61.214,-			
Hourly rate	€ 127,00			
All prices are excluding VAT. Our hourly rate is €127,- but might differ dependent on the complexity, volume and urgency of the project. This estimation is valid for a period of 14 days.				
The estimated hours are charged at the communicated rate, the indicated price concerns the minimal to be invoiced fee for the works as described in this offer document. Any surplus of hours after a successful completion of the described works will not be reimbursed or reserved as a credit. Realising a high-quality solution often requires multiple rounds of optimisation. When the hours for realising the described and estimated works exceed the initial estimate, additionally required hours will be offered at a reduced rate of €87,- per hour. By offering this reduced rate when the estimated hours are exceeded, DTT strives to compromise between the interests of our Clients and the interests of the Contractor. When additional hours are required, DTT will proactively communicate the status of spent and required hours. The described additionally required hours will be invoiced at the start of each month. Additional wishes and functionalities which have not been specified or estimated, fall outside of the scope of this estimate. In the estimation the same functionality can be mentioned multiple times. The first time a functionality is mentioned in the estimation it will be estimated higher, a functionality will receive discounted hours when mentioned again.				
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.				

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 all team members work together in an effective and efficient manner. The PMs 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.