Project plan – PSV Project

Versions

Version	Date	Author(s)	Description	Status
V 0.1	13-10-2023	Ryan Houben	Initial creation	Initial
V 0.2	23-10-2023	Ryan Houben	Fixing typos	Initial

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The company

About the company

PSV, short for "Philips Sport Vereniging," is a prominent professional football club based in Eindhoven, Netherlands. Founded in 1913, it is one of the most successful and historic clubs in Dutch football. The team plays its home matches at the Philips Stadion, which has a seating capacity of over 35,000 spectators. PSV has won numerous Eredivisie titles and KNVB Cups, making it one of the top clubs in the country. The club also has a strong youth development program and has produced several notable Dutch talents who have gone on to have successful careers in both domestic and international football.

Philips stadium

It is one of the oldest stadiums in the Netherlands, with a rich history dating back to its inauguration in 1913. The stadium has a seating capacity of approximately 35,000 spectators, making it one of the largest in the country. It is known for its vibrant and passionate atmosphere during matches, with dedicated fan sections contributing to the electric environment. The stadium is named after the Dutch multinational corporation Philips, which has been a long-standing sponsor and supporter of PSV.

Brainport experience

The Philips Stadion introduces the Brainport Experience Box, an innovative seating area that allows invited guests to explore cutting-edge technologies developed in the Brainport region on match days. Thirteen guests per game are given the opportunity to test innovative technologies, such as live player data typically accessible only to coaches and analysts, enhancing the match experience. The initiative encourages regional businesses to contribute more innovations for testing within the box. Residents and employees from the region will experience technological advancements during the upcoming season, including a glimpse of 5G technology's capabilities and detailed player information. This project aims to connect technology and people while enriching the stadium's viewing experience. Companies in the region are invited to submit their innovations for potential inclusion in or around the stadium, with a focus on fan engagement, mobility, energy, (agri)food, and security. Sadly, the experience box has been shut down.

Vision

With the closure of the Brainport Experience Box, PSV is seeking a new avenue for testing innovative concepts. Their proposal is to integrate these experiments within the official PSV app. However, a challenge lies in the absence of a testing mechanism for these innovative ideas before their official launch. As a solution, PSV has approached Fontys to develop a system that allows for the testing of these innovative ideas prior to their incorporation into the official PSV application.

Assignment

Context

PSV continually seeks fresh and innovative methods to engage with their fans. Several years ago, they initiated a concept called "The Brainport Experience Box." It comprised a small section in the stadium where select individuals were invited to test novel innovative ideas using tablets or VR glasses. Over time, this space was discontinued, with the aim of reaching a broader fan base through these innovative solutions.

To achieve this, PSV intends to introduce these ideas within their official PSV application. This application will allow users to interact with these concepts both within the stadium and from the comfort of their homes. By doing so, they aim to engage nearly all their fans, not limited to the original 13 seats in the experience box.

Furthermore, PSV plans to develop certain ideas exclusively for commercial use, allowing them to charge a nominal fee and generate additional revenue.

Problem statement

At present, PSV lacks a solution for pre-testing new innovative ideas before their integration into the official PSV app. Additionally, there is no platform in place for obtaining insights on tested results or collecting feedback.

Goal

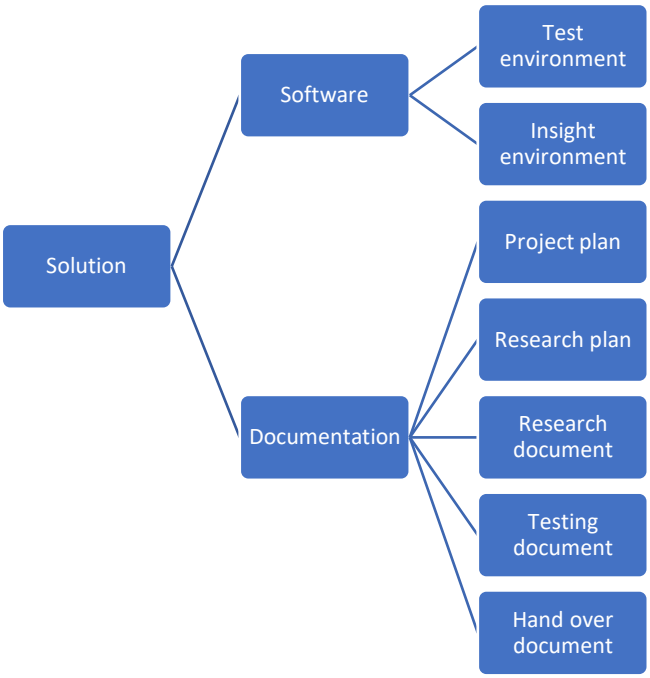
Assist PSV in creating an all-in-one testing environment where testers can evaluate new innovative ideas and provide feedback. Additionally, support PSV in developing a tool to gain insights from the collected testing information and feedback.

Scope

Includes	**Excludes**
A working test environment for testers to test now innovative ideas.	UI and UX research (this will be done by the media group).
A place where the PSV staff can monitor the gathered test results and feedback.	Full new integrated testable innovations.
Proper documentation on the delivered products so other teams can work on it in the future.	

End deliverables

Upon the project's conclusion, we will provide the following deliverables:



Research questions / Design challenges

To obtain accurate information and gain comprehensive insights into specific domains, we will conduct research and base our decisions on the findings of that research. All research will adhere to the DOT framework and utilize the triangulation method to validate the research results.

Main research question / design challenge:

How to create a native mobile solution allowing app developers to seamlessly integrate their modules and enabling PSV test users to test these modules, prioritizing user-friendly experience, and emphasizing security measures.

Sub research questions / design challenges:

Sub research question / design challenge 1

Which native solutions is best for testing the integrated modules?

- Must work together with the current PSV application.

Sub research question / design challenge 2

How to make a plugin system that enables app developers to easily intergrade their modules inside the test app.

- Defined plugin template for new modules.
- Module should be plug and play.

Sub research question / design challenge 3

How to make a native mobile application that enables PSV test users to test and vote on modules?

- Passed modules is 80%+ votes.

Sub research question / design challenge 4

How to gather useful feedback for the PSV innovation staff, out of the test users on a native mobile application?

- Find at least 3 solutions to gather feedback other than rating.

Approach

we will employ the Scrum agile project management system due to its time-boxed iterations and incremental build structure as a working methodology. The Scrum system divides the work into goals, which must be accomplished within iterative cycles known as "Sprints." Additionally, the system's emphasis on continuous feedback and flexibility enables a dynamic, partially unplanned approach, permitting stakeholders to adapt requirements as the project progresses.

Testing

The code will undergo testing in various scenarios:

1. Unit testing
    a. Unit testing is important because it helps identify and fix bugs and issues in individual components of software, ensuring that each part of the system functions correctly in isolation. Additionally, it provides developers with rapid feedback, making it easier to maintain and enhance code while preventing regressions.
2. Integration testing
    a. Integration testing is crucial because it verifies that different components or modules of a software system work together harmoniously. It helps detect issues that may arise when these components interact, ensuring that the entire system functions as intended.
3. End-to-End (E2E) testing
    a. End-to-End (E2E) testing is crucial as it evaluates the entire system's functionality by simulating real user interactions, ensuring that different components and services work together as intended. It helps identify integration issues, verifies the system's overall performance, and ensures a seamless user experience.
4. Load testing
    a. Load testing is important because it assesses how well a system performs under expected or peak load conditions, helping to identify performance bottlenecks and scalability issues. It ensures that a software application can handle the anticipated user traffic without degradation in response time or functionality.

This comprehensive testing regimen ensures that the code functions as intended. The testing phase is also crucial for ensuring the reliability of the module developers, as it provides assurance that their code is secure and functions correctly.

Planning

Breakdown

Empathize: The "empathize" phase in design thinking is the stage where designers and problem solvers aim to gain a deep understanding of the people they are designing for, often referred to as the "users" or "end-users." It involves developing empathy for the users' needs, feelings, challenges, and perspectives. During this phase, designers engage in activities such as observing, listening, and interacting with the target audience to gather insights into their experiences and emotions.

Define: The "define" phase in design thinking is the stage where designers and problem solvers define the problem or challenge that they aim to address. It follows the empathize phase, during which designers gain a deep understanding of the users' needs, behaviors, and perspectives. In the define phase, the goal is to synthesize the insights and observations gathered during the empathize phase to clearly articulate the problem or design challenge.

Ideation: The "ideation" phase in design thinking is the stage where creative brainstorming and idea generation occur. It follows the empathize phase, where designers have gained a deep understanding of the users' needs and problems. In the ideation phase, the goal is to generate a wide range of innovative and diverse ideas for potential solutions to the identified problems or challenges.

Prototype: I In design thinking, a "prototype" is a tangible, often simplified representation of a design concept, idea, or solution. It is created to visualize and test the proposed design in a practical and concrete way. Prototyping is a central element of the design thinking process, and it serves several important functions:

Test: In the design thinking process, the "test" phase is one of the key stages, often referred to as "Test & Iterate." During this phase, designers and problem solvers take the prototypes or proposed solutions that they have developed and put them to the test. The primary goal is to gather feedback and insights from real users, stakeholders, or target audiences to evaluate the effectiveness and desirability of the design concept.

Delivery: In the delivery phase, we will prepare our product for delivery and handover. It's important to note that not everything will be completed by the end of the project. Therefore, the creation of a comprehensive handover document is essential to guide future development.

Time plan

Phase	Effort	Start	End
Sprint 1		02-10-2023	13-10-2023
Autumn Holiday		16-10-2023	22-10-2023
Sprint 2		23-10-2023	10-11-2023
Sprint 3		13-11-2023	24-11-2023
Sprint 4		27-11-2023	08-12-2023

Sprint 5		11-12-2023	22-12-2023
Christmas holiday		25-12-2023	05-01-2024
Sprint 6		08-01-2024	12-01-2024
Final assessment		?	?
Sprint 7		15-01-2024	18-01-2024
Sprint 7 Presentation			
Portfolio deadline		19-01-2024	19-01-2024

Project organization

Team members

Name	Contact	Role	Availability
Victor Donker	v.donker@psv.nl	Project owner	
Erik Heijligers	e.heijligers@fontys.nl	Semester coach	
Ruud		Semester coach	
Branimir Borisov	Boris.borisov@student.fontys.nl	Smart mobile	
Ryan Houben	r.houben@student.fontys.nl	Smart mobile	
Frank van Hassel	462169@student.fontys.nl	Media	
Hajar Salam Al Kindi	464734@student.fontys.nl	Media	
Maud Saris	394113@student.fontys.nl	Media	
Fleans Metsi	435621@student.fontys.nl	Media	
Christian Stricker	469691@student.fontys.nl	Media	

Communication

We will schedule bi-weekly meetings with Victor, and in case of any need, we can always reach out to him via messages or emails. These meetings will occur either at Strijp-TQ, online, or at the PSV Stadium.

Branimir and I will dedicate our project work to Mondays and Fridays, while we will also participate in meetings with the other group throughout the week.

We maintain a WhatsApp group chat with all members to keep each other updated on our progress, discuss any issues, arrange meetings, or seek assistance. This chat serves as a convenient and informal communication platform for all members and is used almost daily.

Test environment

For local development, we will utilize our personal machines. We intend to containerize everything using Docker to ensure compatibility across different machines.

For public testing and stakeholder demos, we will employ a server and database from the FHIT Selfservice.

Configuration management

Throughout the development phase of the testing and insights environments, we will employ Git as our version control system. All code will be stored in Git repositories. Utilizing feature branches will help reduce the likelihood of code breakages on the main branch and merge conflicts. Pushing to the main branch directly is not permitted; this should be accomplished through pull requests with code review.
To minimize the risk of exposing sensitive data, secrets are stored in environment files and are not pushed to the repository.

Finance and risks

Cost budget

Currently, there is no allocated financial budget for this project. We can utilize our personal hardware and, if necessary, borrow hardware from the IISD. When it comes to server environments, we have the option to utilize the FHICT self-service servers.

For the purpose of testing, the release of apps to the App Store can be facilitated through the Fontys Apple and Android accounts.

Risks and fallback activities

Risk	Prevention	Fallback activity
Illness team	All the work is stored in the cloud. So, if someone gets sick another team member should be able to take over easily.	Flexibility.
Illness stakeholders	Teachers can guide us at that time.	The teachers will be our temporary stakeholders.
Hardware malfunction	Try to lend new hardware at the IISD.	Go to IISD.