PSV Brainport Supporter Experience

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Intro

PSV and Brainport

PSV, also known as Philips Sport Vereniging, is a Dutch professional football club based in Eindhoven, Netherlands. Established in 1913, the club has a rich history of success in both domestic and international competitions, winning 24 Eredivisie titles, nine KNVB Cups, and one UEFA Cup.

Apart from its success on the field, PSV is also known for its innovative approach to technology and sports. The club has been working with the Brainport region in the Netherlands to create new ways of combining technology and sports to improve player performance and enhance the fan experience. One of the most exciting projects to come out of this partnership is the Brainport Experience Box.

The Brainport Experience Box is an immersive, multisensory experience that allows fans to feel like they are a part of the game. Using state-of-the-art technology, the box recreates the sights, sounds, and sensations of a live football match, giving fans a fully immersive experience that they can enjoy from the comfort of their own home.

The box uses a combination of virtual and augmented reality to create an experience that is almost indistinguishable from being in the stadium. Fans can see and hear the game as if they were sitting in the stands, while haptic feedback and other sensory cues give them a sense of being right in the middle of the action. The Brainport Experience Box also includes advanced analytics and statistics, allowing fans to gain a deeper understanding of the game and the players.

The project is a collaboration between PSV, the Brainport region, and several technology companies, including Philips and ASML. It represents an exciting step forward in the use of technology to enhance sports and entertainment experiences. The Brainport Experience Box is just one example of how PSV and the Brainport region are pushing the boundaries of what is possible in sports and technology, and it is sure to be a hit with football fans around the world.

Small disclaimer:

The Brainport Experience Box served as a central location for testing innovations, but it was discovered that it is not ideal to restrict innovations to one specific place. Instead, it is better to expand innovations to reach a broader audience. Even though the underlying concept remains the same, the entire stadium should become a platform for innovation.

The company

Philips Sport Vereniging

In 1913 Philips established a football club for their employees: Philips Sport Vereniging. In its rich history, PSV celebrated multiple successes and became one of the most successful clubs in the Netherlands.
PSV distinguishes itself from other clubs through exceptional scouting and breakthroughs from the youth academy. Examples are Romario, Ronaldo, Memphis and Gakpo. With this philosophy the club has grown into the major club it now has become.

Philips Stadium

Located near the city centre of Eindhoven, PSV plays their games in the Philips Stadium. The unique look of the stadium is not the only remarkable thing: The place where the stadium was built is exactly the same as where it all began almost 110 years ago.
With 35.000 seats, the Philips stadium is one of the biggest stadiums in the Netherlands. With a special side for the most enthusiastic fans and the seats close to the pitch, a great atmosphere is ensured.

Brainport Eindhoven

In 2019, PSV signed a unique new premium partnership. As the first football club in the world, it assembled a sponsorship with multiple regional and prominent companies, called Brainport Eindhoven. This means ASML, CSU, Jumbo, VDL, Philips, Royal Swinkels Family Brewers and VDL work together with PSV to put the region on the map as a world leader in knowledge, high-tech and innovation. Herewith, the club can rely on their knowledge, working as a team to grow and celebrate successes together.

Innovation

PSV always tries to look forward and be innovative. The Brainport Experience Box is not the only innovation in which this is displayed. In 2015 for example, PSV was one of the first football clubs with new LED lightning ArenaVision, which improved the atmosphere and experience in the stadium. In 2019, PSV set up a collaboration with St. Anna Ziekenhuis and Philips. The so-called 'Top Performance Center' is an open network organization in which various experts cooperate to innovate in sport and health. Main goal of the initiative is to enhance the performances of (top)sporters. Lastly in 2020, PSV worked together with FreeKickPro to design a wall to train free kicks.

Assignment

Project Assignment

Improving Interactivity with Supporters in the Stands for the Football Club PSV.

The objective

The objective of this project is to develop a comprehensive plan for PSV to improve the interaction with its fans during matches at the stadium. The plan should aim to enhance the match-day experience for supporters, increase their engagement, and create a more positive and exciting atmosphere overall.

Betting application (existing)

"The PSV Wager" is an app that will be used during PSV matches that can be played in the Brainport Experience Box in the PSV stadium by 13 people.

The app allows the users to answer a series of questions such as "which player is going to score a goal in this match" and bet points on these questions.

During the match, the app will show live data about the match and percentages like "you have a 43% chance to win the most points today" to keep the user engaged with the match and statistics on his screen.

A live points leader board will also be shown during the game to see how the others in the experience box are doing compared to you.

The person with the most points at the end of the match will win a prize, and all 13 people will have their points stored in a leader board that will be updated throughout the season, with new players being added in every match.

Continuing

We want to continue with one of already existing projects, the betting application. With this application we want to add some of our new ideas and maybe create a business plan around it to make it profitable. We do want to implement new features.

The first step in continuing with the existing betting application is to evaluate its current state and identify areas that need improvement or expansion. This can be achieved by conducting market research to determine the preferences and needs of potential users, as well as analysing the app's performance metrics and user feedback.

Our goal is to enhance the betting experience for soccer fans by offering visually attractive options such as heatmaps, area selection, goal position, and player tracking. By presenting these betting options in a visually appealing manner, we aim to increase the likelihood of supporters participating in them. In addition, we plan to establish a progression system that allows users to earn points by playing various games. These points can eventually be redeemed for digital prizes.

Problem analysis

Context

Phillips Sport Vereniging (PSV) is a professional football club from Eindhoven. PSV wants to provide fans with an immersive and engaging way to experience the stadium and the game. In the past PSV tried to achieve this by experimenting with different technologies in the *PSV Experience Box.* This small but unique area in the stadium has been used by supporters to get a sneak preview of the future technology, sport-innovations, and fan engagement. On the other hand, PSV indicates that they would like these innovations not to be limited to the small (and inconvenient) Experience Box area.

Problem statement

The virtual box has been around for several years now, but PSV now faces the problem of not knowing what else they can add to improve the user experience / football experience in the Experience Box. PSV does not want to keep this experience only with the 13-seater box, but rather spread it to the entire stadium.

During the match, the live player information is available to the participants in the box that is normally only available to coaches and analysts. But how can we present this more attractively so that fans can also enjoy the game and experience technology at the same time? There is a lot of data available, but what we can do with that data is not very clear and we will work on that as a group.

Research questions & methodologies

1. When is the best time during a football match to direct spectators to use their phones?
2. How do we reach the target group through gamification?
3. What are the current tools used to engage fans?
4. If we take over the app that is already in development, how can we make it more interactive?
5. How can we use the concept of "betting app" in such a way that it is not gambling but more of gaming/challenging experience?
6. How can we create an innovative betting-experience, which is different from competitors?

Strategy -> Design Thinking

During this project we will make use of the design thinking methodology. Most importantly this will mean that the product will be built around the requirements of the end users. While using design thinking, we will use the model Double Diamond. This model breaks up the project in four primary phases:

- Empathize
- Define
- Ideate
- Prototype
- Test

Using this model, we hope to create a more organised view of our project, by grouping the different project parts in these four phases. The Double Diamond is not a linear process, so these phases will not be filled chronologically/

Requirements (MoSCoW)

To explain the scope of the project we used the MoSCoW method. This provides an overview of the requirements of the project. MoSCoW is a prioritization technique to help understand and manage priorities. The letters stand for:

- Must Have: these tasks are indispensable for the success of the project.
- Should Have: important but not essential.
- Could Have: wanted or desirable but less important.
- Won't Have: superfluous (for this time) / not a priority / not necessary at all.

Priority	Task	Must	Should	Could	Won't
1.		X			
		X			
		X			
		X			
		X			
			X		
				X	
					X
			X		
			X		
			X		
			X		
			X		
			X		
Documents		X			
		X			
		X			
		X			

User stories

- As a PSV fan, I want to be able to place bets on upcoming matches and events, including real-time odds and betting options in a way of gamification, so that I can engage with the team in a more exciting way and potentially earn some winnings.
- As a PSV fan, I want to be able to track my betting/gaming history, including my wins and losses, so that I can improve my betting strategy and make more informed decisions.
- As a PSV fan, I want to be able to access the latest match scores, player and team statistics, so that I can stay informed and engaged with my favourite team.
- As a PSV fan, I want to be able to access exclusive content and promotions through the progress achievement tracker, including discounts on team merchandise, access to special events and experiences, and other rewards, so that I can feel valued as a loyal fan.
- As a die-hard PSV fan, I want to use the PSV betting app to place visually engaging bets on my favorite team's matches, so that I can have more fun watching the games and feel more connected to the team.
- As a casual football fan &/or sports betting enthusiast, I want to use the PSV betting app to visually predict the outcome of matches, so that I can engage with the sport in a more interactive way and potentially win prizes.
- As a PSV fan who attends matches, I want to use the PSV betting app to visually predict the outcome of the game and place bets in real-time, so that I can make the most out of my experience and potentially win prizes.
- As a PSV fan who watches games from home, I want to use the PSV betting app to visually engage with other fans and bettors during the match, so that I can feel more connected to the community and the team.

Stakeholders & communication

Stakeholders

Stakeholders are individuals or groups who have an interest in the project's outcome. They may include end-users, customers, investors, or management. Communication with stakeholders is critical to ensure that the project meets their needs and expectations.

- **Customer**
  Victor Donker (Innovation Manager at PSV)
  v.donker@psv.nl
  0625066457

- **Investor (1)**
  Erik Heijligers (Teacher at Fontys)
  e.heijligers@fontys.nl

- **Investor (2)**
  Bardt Dennen (Teacher at Fontys)
  b.vanderdennen@fontys.nl

- **Management**: consists of 6 semester six students from bachelor's in computer science at Fontys Hogescholen.

  Hristo Koltchakov
  Zjuul Rovers
  Umair Saeed
  Thom Schneider
  Thijs de Veth
  Jaap Wouters

- **End users**
  The visitors of the stadium specifically the PSV fans.

Means of communication(online)
Microsoft Teams
For serious topics and meetings, MS Teams is used if it is not possible to hold the meetings at the office/campus.

WhatsApp
We will use WhatsApp for mobile communication. This will be used to quickly pass the messages to the team.

E-mail
Communication by email will be the least common, except with the client. If there is communication with the client, this will largely take place via email.

Means of communication(offline)

TQ

Every week at least 1x on Tuesday, Wednesday, or Thursday we will go to our campus (TQ) to work there. Tuesday is also the day that all teachers are present on location. This day will be used optimal to collaborate and gather information (feedback) from teachers.

https://goo.gl/maps/bjqbu3PHpgJiNswD6

PSV Stadium

The PSV Stadium is located close to the school building. When necessary, we will also go there and with how many men do we go or when do we go will be discussed with Viktor.

https://goo.gl/maps/iPAGasV5bLevkXUv5

Communication planning

During the project we will personally stay in touch with Viktor at the office(stadium) and via Microsoft Teams. Here we will ask for feedback on documents, products and decide for visits, etc. We will have verbal contact with our supervisors from Fontys during the project and provide weekly updates. Communication is done via Microsoft Teams. The update meetings will take place every week. Every week we will determine our personal sprint goal(s) and every morning we will review what we will be working on that day. During the week we will ask for feedback as we feel that we need this.

Agreements

During this project, agreements will be made with the client, but also between our group members.

Communication

As a group we will communicate on daily basis, to let each other know what we are individually working on. These communication moments can take place in different ways, like a stand-up at the start of the day or an update meeting during the day. The group members will be physically available at the Fontys building 3 times a week (Tuesday, Wednesday and Thursday).

Communcation with the stakeholder from PSV will take place at least one time a week. We planned a weekly meeting to let him know the details of our progression. Next to this, we will communicate with the stakeholder in forms of pitches, presentations etc. Our goal is to always give the stakeholder an idea what our group is currently working on.

Roles

In the group, certain roles will be assigned to divide certain work. During this project, we will make use of Scrum. In the group we will assign a scrum master and a product owner per sprint. The Scrum master will mostly be in charge of making sure everyone has work to do / is doing their work. The product owner will mostly communicate with stakeholders regarding this project. After each sprint there will be the option to change the persons assigned with these roles.

Which work will be assigned to which group member will also be decided by each member's skills. This will mostly play a role during the develop phase of the project. Currently the skills in our group are divided like this:

- **Umair Saeed**
  Front-end development: HTML, (S)CSS, Bootstrap, Foundation, Vue, JavaScript, SwiftUI, jQuery.
  Back-end development: Laravel, PHP, SQL, Kotlin, C#, C++, Git, SwiftUI
  Design tools: Figma, Adobe XD & Canva

- **Zjuul Rovers**
  Front-end development:
  - CMS: Drupal
  - Frameworks: BootStrap, Twig,
  - Languages: SCSS, PHP, HTML, jQuery
  - Version control: Git (Bitbucket, Gitlab, GitHub)

  UX Design

  - Design tools: Adobe XD, Adobe Illustrator, Adobe Photoshop

- **Thom Schneider**
  Front-end development: HTML, SCSS, Bootstrap, JavaScript.
  Back-end development: PHP, Laravel, SQL.
  Design tools: Figma, Adobe XD, Canva.
  Version control: Git (Gitlab, GitHub, Gitkraken)

- **Thijs de Veth**
  Front-end development (HTML, CSS)
  Design (Adobe XD, Adobe Illustrator, Figma, Sketch)

- **Jaap Wouters**
  Front-end development:
    - CMS: Drupal
    - Frameworks: Bootstrap, Twig.
    - Languages: HTML, (S)CSS, PHP, JavaScript.

  UX Design

    - Design tools: Figma, Adobe XD, Adobe Photoshop, Adobe Premier Pro, Adobe InDesign, Adobe Lightroom
    -
- **Hristo Koltchakov**
  Front-end development (HTML, CSS, JavaScript)
  Back-end development (Python)
  UX Design (Figma, Adobe XD, Adobe Photoshop, Canva)

Testing

Testing strategy

This section is going to include what we are planning to test and which testing methods we are going to be using.

We are going to be creating prototypes and different iterations of our idea and we are going to test every iteration on potential users. The methods we are going to be using for these testing is going to be:

- Observation (Using the product while team members are watching and taking notes)
- A/B testing (Provide users with different versions of the prototype and see which is better received)
- Think aloud testing (The users are sharing their though process while using the app)

With Observation we want to see how users are using the app without any help from the outside world thus providing evidence whether the UI/UX Design flows well.

A/B testing is going to easily decide which practices in each version are better and help us focus on them.

Think aloud testing is going to showcase us any difficulties users are experiencing while using the application.

Testing methods

1. Unit Testing: This method tests individual units or components of the software to ensure that each one is functioning correctly.
2. Integration Testing: This method tests how different modules or components of the software work together to ensure that they are integrated properly.
3. Usability testing: This method tests the software's ease of use, accessibility, and user-friendliness.

Risks

Risks and Prevention activities

Risk	Prevention activities
Time management	*We have 12 weeks for the completion of the whole project. This includes research as well as actually creating a working product that should be tested on the stadium. In order to keep in line, we'll have a rough plan for how things should go and weekly meetings with the stakeholders.*
Communication	*Not being able to communicate what we could provide and what the stakeholders have in mind may prove problematic. Also, there may be problems inside the group if not everyone is up to date with everyone else's work. Making sure everyone is doing fine and offering help could easily solve the issue. Meetings could help with it as well.*
Miscommunication	*Asking questions and explaining when something is not clear. Setting goals in the beginning. Participation in the meetings.*
Travelling	*All of us are traveling by public transport. Anything could happen on public roads. Strikes, traffic jams, etc.*
Online working	*We are already quite used to working online because of the last few years, however, it could prove to be a risk as it all depends on an internet connection. This way of working could create more prerequisites for the risk of miscommunication.*

Planning

Define Project Scope 13th of March till 6th of April (Fontys week 5-8)

- Establish project goals and objectives.
- Determine app features and functionality based on research and user feedback.
- Develop a project plan and timeline.
- Gather feedback/testing.

Design and User Experience 11th of April till 21st of April (Fontys week 9-10)

- Develop user personas and user stories.
- Research implementation.
- Create wireframes, mock-ups, and prototypes.
- Conduct user testing and gather feedback.
- Refine design and user experience based on feedback.

International Project Week / May Holidays (Fontys week 11-12)

- NO GROUP PROJECT.

Development 15th of May till 9th of June (Fontys week 13-16)

- Develop the product backend and frontend.
- Implement user interaction.
- Test product functionality and performance.
- Refine and optimize product code.

Testing and Deployment 12th of June till 21st of June (Fontys week 16-18)

- Conduct thorough testing of the product.
- Fix any bugs or issues discovered during testing.
- Prepare the product for deployment.
- Deploy the final product.
- Gather feedback about the performance.

16 June 2023: Deadline handing in all documentations (individual + group project)
22 June 2023: Group project presentation

Note that this is just a general guideline, and the actual timeline may vary based on the complexity of the project, available resources, and other factors. It's also important to regularly review and update the plan as the project progresses to ensure that it stays on track and meets the desired outcomes.