

Boundless Charging Report

**Table of content**

**Project Overview …………………………………………………………………. 2**

**Chosen agile project management methodology ………………………….. 3**

**Project Charter…………………………………………………………………….. 5**

**Gantt Chart…………………………………………………………………………. 10**

**User Documentation of Website ………………………………………………. 11**

**User Documentation of Prototype ……………………………………………. 17**

**Reference List ……………………………………………………………………. 20**

**Project Overview**

**Introduction:**

This report will give an overview of the E-commerce business idea Boundless Charging. Wireless solutions have become a popular trend in the smartphone industry together with portable charging through the utilisation of power banks. Both these ideas have made charging our smartphones more convenient; however Boundless Charging has identified a problem and gap which it aspires to fill. As innovative as these smartphone charging tools are, they still have one flaw which is that they are not completely wireless and still require a power cord in order to be operational and this is where Boundless Charging comes into play.  Boundless Charging is a start-up idea that will revolutionize the mobile charging industry by combining wireless charging technology with portable power supply. This idea will be in the form of clothing items which will utilise kinetic energy generated when worn and in motion to charge your smartphone from the comfort of your pocket.

The report will further define the tools, techniques and documentation that will be required to develop a functional website and mobile application prototype for Boundless Charging.

**Business case:**

This project entails developing a fully functional website and mobile prototype for our business. The main purpose of the implementation of the website and prototype is so that we can increase the awareness of our product which in turn increases our profitability. In addition, the website would be integrated with a backend server side.

**Project Objectives:**

The main objectives of this project are:

* Increase customer retention
* Increase market share
* Reduce advertising and increased profitability
* Improve customer Experience

**Deliverables:**

Tasks that we will be completing throughout this project:

* Identify and obtain resources
* Project documentation
* Develop a website using Visual Studio Code
* Set up Firebase Realtime database and Authentication
* Develop a mobile application using Figma

**Risks**

Risks that might affect the progress of the website:

* Unexpected bugs on the website
* Hardware/Software failure
* Scope creep
* Communication risk

**Chosen Agile project management methodology**

Project Management Methodology is the combination of logically related principals, methods and processes that determine how a project can be planned, developed, controlled and delivered throughout its implementation process until it is complete (teamwork,2021).

The purpose of implementing a project methodology is for our team to determine the best approach to be taken in order to develop a website and mobile application prototype for boundless charging. The agile project methodology we have chosen to use is SCRUM, which is a framework that supports the agile approach. According to (), “Scrum is a framework of rules, roles, events, and artifacts used to implement Agile projects. It is an iterative approach, consisting of sprints that typically only last one to four weeks. This approach ensures that your team delivers a version of the product regularly.” This quote implies that by utilizing the scrum methodology work will be divided into smaller chunks known as sprints, in which boundless charging’s website and prototype will be built within a period of a few weeks and then assessed by the relevant stakeholders, with the possibility to inspire changes for the project's future. According to (),“Similarly, the scrum in IT believes in empowered self-managed development teams with three specific and clearly defined roles. These roles include – Product Owner (PO), Scrum Master (SM) and the development team consisting of the programmers and testers.”

We believe that this approach is most suited to our project and the following criteria was taken into consideration when selecting this methodology:

**Project Scope**

This project requires our team to create and develop a functional website, database, and a mobile application prototype. Utilizing scrum will ensure that our deliverables are broken down into manageable sprints thus assisting us in completing our deliverables in a timely and effective manner.

**Flexibility**

Scrum projects encourage frequent check-ins, updates and feedback from team members and relevant stakeholders after each sprint therefore change can be implemented quickly without losing weeks of work.

**Visibility**

The scrum methodology enables our team to track the project's progress throughout its duration thus making collaboration easier and ensuring that each team member is involved in the development of the project from start to finish.

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| **The following is a formal documentation that will be used to officially recognise the project's existence.** | | | | | | |
| **Project Title: Boundless Charging** | | | | | | |
| **Project Champion** | Tanweer Hamdulay | | | | | |
| **Project start date:** | 25 May 2022 | **Project end date:** | 24 June 2022 | | | |
| **Authorisation Date:** | | 31 May 2022 | | | **Project Champion Email:** | 4030362@myuwc.ac.za |
| **Business Problem** | | | | | | |
| (This section of the charter explains what business problem is being solved with the project. It addresses the question of why the e-commerce project is being undertaken. The project manager needs to know this, as he or she will need to make many day-to-day decisions, keeping the business case in mind.)  Wireless charging is not completely wireless because a power cord is still required. When heading out, it's simple to forget about this cable and it requires effort to carry it around with you. Damage to the cable might potentially slow down charging speeds or prevent it from working altogether. Furthermore, in order to be a reliable source of power for mobile devices, portable chargers such as power banks must always be charged, which takes a while and is something extra you have to keep track of. | | | | | | |
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| **Project objectives:**  This section addresses how the project ties into the group's strategic e-commerce goals and includes the project objectives that support those goals. | | | | | **Benefits:** Benefits to potential stakeholders by doing the project. | |  |
| 1. Customers retention | | | | | 1. By offering our consumers discounts on our products and free shipping, we would be able to retain our consumers. In addition, we will ensure that we retain our consumers, we would reduce our customers response times. This would also increase our customer experience. | |  |
| 2. Increased market share | | | | | 2. Due to the unique value proposition that we offer to our consumers our business would have a competitive advantage over our competitors (Nike, Adidas, H & M and Mr Price, among other clothing stores). The wireless charging clothes we sell at our store would increase our market share. Product differentiation amongst competitors | |  |
| 3. Reduced advertising costs and increased profitability | | | | | 3. As a result of having our own e-commerce website and mobile applications our business would save funds as we would not solely rely on promotions and advertisements. Additionally, reducing the advertising costs would increase our revenue and profitability. | |  |
| 4. Improve consumer convivence | | | | | 4. Consumers that have the luxury of purchasing this product would have the ability to charging their phone from literally anywhere in the world. All that is required from them is to generate kinetic energy. | |  |
| **Stakeholder Requirements:** | | | | | **Project stakeholders:** | |  |
| Project stakeholders Tanweer, Aaliyah, Abdul Qadir and Dakalo will develop an e-commerce website and mobile application for Boundless charging will be developed in order to showcase and have customers purchase the products on display. Furthermore, both the website and application would need to be user friendly and adhere to modern UX/UI design principles. The website and application will allow the user to login, browse through a product catalogue, add items to cart, and finalize their purchase through a checkout process that offers both online payment as well as cash on delivery. Finally, delivery will be done through an external company with tracking details provided to the client on the Boundless charging page. | | | | | Tanweer (Project manager) Aaliyah Abdul-Qadir Dakalo End user – consumer/client Investors Material suppliers | |  |
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| **Deliverables:** List the core requirements of your e-commerce website. This includes functional and non-functional requirements. | | | | | | |  |
| 1. Identify and obtain resources | | 2. Project documentation | | | 3. Website creation using Visual Studio Code | 4. Set up firebase Realtime database |  |
| 5. Mobile application creation using Figma |  |  | | |  |  |  |
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| **Roles and responsibilities:** | | | | | | |  |
| **Name** | **Surname** | **Student number** | **Role** | **Cellphone** | | **Email** |  |
| Aaliyah | Ajouhaar | 3918958 | Software Tester | 0658202555 | | 3918958@myuwc.ac.za |  |
| Tanweer | Hamdulay | 4030362 | Project Manager | 0762560452 | | 4030362@myuwc.ac.za |  |
| Abdul Qadir | Ebrahim | 4051626 | Software developer | 0815389165 | | 4051626@myuwc.ac.za |  |
| Dakalo | Makatu | 3953121 | Business Analyst | 0608239579 | | 3953121@myuwc.ac.za |  |
| **Scope:** | | | | | **Out of Scope:** | |  |
| The outcomes that must be achieved (Core functionality) Register and sign in – Users will be able to create their personal user login or sign in after they have been through the registration process.  Browse and purchase products - Easy to use fully functioning application where customer will be able to login, add to cart, check out and pay for products purchased online. | | | | | The outcomes that could be achieved (Functionality you could add given resource constraints) A chatbot that will assist with queries, complaints or suggestions made by customers. Furthermore, the chatbot will be pre- loaded with responses to a set of queries such as a welcome message etc. | |  |
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| **Risks:** | | | **Constraints:** | | | **Mitigation:** |  |
| - Not providing sufficient usage of charging materials on clothing items. - Inability to provide cost- effective clothing items. - Time constraints (Not sticking to allocated timeslots for project deliverables). - Communication risk -Scope creep - Insufficient research on health and safety in the usage and manufacturing of the product. - Inability to create an effective, easy to use Website and application. | | | TIME - The project has an allocated period in order for all deliverables to be completed.  SCOPE - The scope of the project is specific and should not be derailed or overlooked by other additional tasks with little relevance to the successful completion of the project.  QUALITY – The project requires much research and resources in order to reach successful quality deliverable completion. - Clothing charging ability  - Wash instructions would need to be strictly followed  - Material safety (Non-hazardous to the client or belongings)  COST - Material costs | | | - Prioritize and report potential risks to all project members  - No limitation to idea generation process when encountering an obstacle  -Research project materials for the best quality and cost  - Project members will take responsibility for their actions and work timeously toward deliverable deadlines.  -The project team will make use of Trello and Team Gantt to ensure that specific tasks for the project are completed by their appropriate due dates.  -The project will have weekly meetings on Google Meet to ensure communication within the group is active. As well as to ensure everyone has the same agenda with regards to the project objectives to avoid scope creep. Further communication will take place via a WhatsApp group chat. |  |
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| **Assumptions:** Known factors about the project that are not flexible. | | | | | | |  |
| 1. The scope of this project will not be changed. 2. The project end date will not be changed. 3. The implementation of the e-commerce website and mobile application will increase the prospective consumers which would increase the revenue | | | | | | |  |
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| **Comments/Notes:** | | | | | | |  |
| From a systems perspective both our website and mobile application platform will be delivered with simplicity to ensure users navigate with ease. The success criteria for this project will be established once both the website and mobile application features meet the projects objectives as well as when the projects deadline is adhered to. | | | | | | |  |
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| **Client sign-off:** | | | | | | |  |
| **AQ.Ebrahim T.Hamdulay A. Ajouhaar D.Makatu** | | | | | | |  |

**Gantt Chart**

The following is a Gantt chart that the Boundless Charging project team utilised as a schedule processing tool that aided in visualising the breakdown of the project’s deliverables into assigned tasks.

**User Documentation of Website**

**Register Screen:**

New users are required to register if they do not have an account.

A picture containing text, outdoor, person, sign

Description automatically generated

**Login Screen:**

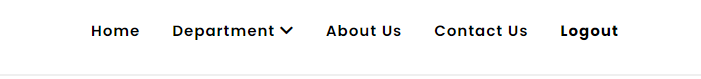
Existing users are required to enter their email and password to login.

A picture containing text, outdoor, tree, grass

Description automatically generated

**The navigation bar consists of:**

 Home, Department (Men’s, Women’s, Kid’s), About Us and Contact Us.

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**Navigating to various clothing departments:**

Users can navigate to the different departments using the navigation bar.

**Graphical user interface

Description automatically generated with low confidence**

**Adding products to cart:**

When a user clicks “Add to cart” a message appears which tells the user an item was added to their cart. The user can then view their selected item/s in the cart located in the top right corner.

**Graphical user interface, website

Description automatically generated**

**Alert on cart when product is added to cart:**

After an item was added to the cart, the cart will display a red alert. The alert will disappear once the user opens the cart.

A picture containing table

Description automatically generated

**Shopping Cart:**

Users can view their selected products in the shopping cart respectively. If the user is satisfied with the list of products the user can proceed to the checkout page. Note: a user will only be able to checkout if they are logged in if and there is at least one item in their cart.

Graphical user interface, application, website

Description automatically generated

**Buying a single product:**

If a user is only interested in buying one product, the user can click on the “Buy Now” button, which will direct the user to the checkout page. Note the user will only be directed to the checkout page if the user is **logged in**.

**Graphical user interface, website

Description automatically generated**

**Checkout form:**

The Checkout form displays a payment summary indicating the amount the products costs as well as the amount including VAT.

**Graphical user interface, application

Description automatically generated**

**Contact us:**

If a user wants to reach out to us, the user can navigate to the Contact Us page where the user can either use the google maps to locate our business or send us their queries by filling in the contact form.

**Map

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Graphical user interface, text, application, email

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**About Us:**

This page displays the team members involved in the implementation of this website.

Graphical user interface, application, timeline

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**Subscribe section:**

If the user is interested in receiving updates about our products, they can enter their name and email. Weekly updates will be sent to their emails

Graphical user interface, application

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**User Documentation - Prototype**

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| **A picture containing text, phone, cellphone, black  Description automatically generated**   1. **Sign-Up / Log-in**   Users are presented with a sign-up or log-in button options when they open Boundless Charging’s mobile application. If the user already has an existing account, they are instructed to log-in and if they are new to our platform, they sign-up. | | **Graphical user interface, text, application  Description automatically generated**  **2. Sign-Up**  When the sign-up button is selected, new users are navigated to a sign-up page where they are required to add in their details in order to be registered onto the system. |
| **Graphical user interface, application  Description automatically generated**  **3. Sign-In**  When the Log-in button is selected, existing users are navigated to a sign-in page where they are required to add in the required details in order to log into the mobile application. | |

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| **A picture containing text, bus, van  Description automatically generated**  **4. Home Page**  After the sign-in and log-in in process users are navigated to the home page which showcases the various departments Boundless Charging has to offer. | **Graphical user interface, application  Description automatically generated**  **5. Departments**  Users can browse between the four departments our online store has to offer, choose items and add them to their cart. |
| **A picture containing text, monitor, cellphone, kitchen appliance  Description automatically generated**  **6. Order Summary**  Once items are added to the cart users can view a detailed order summary of the items they are about to purchase. | **Graphical user interface, application  Description automatically generated**  **7. Delivery Details**  The user then proceeds to the delivery details page where they are asked to choose between two delivery options as well as fill in their shipping and billing details. |

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| **Graphical user interface, application  Description automatically generated**  **8. Payment**  Once delivery details are filled and completed the user then continues to payment. Here the user chooses between our various payment options. | **Graphical user interface, application  Description automatically generated**  **9. Submit Order**  The final step of placing an order through our mobile application includes users being navigated to a submit page where they confirm their order with us. |
| **Graphical user interface, text, application, chat or text message  Description automatically generated**  **8. Contact Us**  Users have the option to get in touch with us if they have any queries or concerns as well as browse our frequently asked questions section which we have provided answers for. | |

**Reference List**

Oosthuizen, T. and Venter, R., 2018. *Project management in perspective*. 2nd ed. Cape Town: Oxford University Press.

Teamwork.com. 2022. *Project Management Methodologies - Everything You Need To Know*. [online] Available at: <https://www.teamwork.com/project-management-guide/project-management-methodologies/> [Accessed 24 June 2022].