

**Jaypee Institute of Information Technology**  
**Department of Computer Engineering & Information Technology**



**Industrial Internship Project**  
**Topic - Outdoorsy Venture Design Using**  
**Agile Methodology**

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## **Abstract**

**Whenever we plan to travel somewhere, we visit numerous different websites searching for famous places, fun activities, adventure, food and shopping. We look for best accommodation location and everything on a budget. After we reach the location, either we hire a guide that takes us everywhere we must or Google maps are our last resort.**

**Outdoorsy is just an upcoming travel application for that. This application contains the information about the area one would choose to go to. It uses your phones' built-in GPS as well as offline maps of cities and travel destination to provide you with the tourist places and must go locations even when you are offline. Along with information about the city and its culture, things to do, food specialities, activities, where you can rent a vehicle and best locations for stay. You can book a hotel, rent vehicles from the app. The feature that makes it different is that, you won't need to search and visit millions of websites to do so or use different applications. It's a complete travel application.**

**This project is currently a Ventures Design and as we process on with it, a blueprint of the project will be created for software development according to the Agile Methodology.**

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## **INTRODUCTION**

Agile is the ability to create and respond to change. It is a way of dealing with, and ultimately succeeding in, an uncertain and turbulent environment. The authors of the Agile Manifesto chose “Agile” as the label for this whole idea because that word represented the adaptiveness and response to change which was so important to their approach. It’s really about thinking through how you can understand what’s going on in the environment that you’re in today, identify what uncertainty you’re facing, and figure out how you can adapt to that as you go along. Agile software development is more than frameworks such as Scrum, Extreme Programming or Feature-Driven Development (FDD). Agile software development is more than practices such as pair programming, test-driven development, stand-ups, planning sessions and sprints. One thing that separates Agile from other approaches to software development is the focus on the people doing the work and how they work together. Solutions evolve through collaboration between self-organizing cross-functional teams utilizing the appropriate practices for their context. There’s a big focus in the agile software development community on collaboration and the self-organizing team.

When you want to understand Agile project management, ask “How might we perform project management in a way that allows us to create and respond to change and deal with uncertainty?” Agile Alliance and Project Management Institute (PMI) explored this question through a joint effort to create the Agile Practice Guide (Available to Agile Alliance Members).

When you want to understand Agile business analysis, ask “How might we perform business analysis in a way that allows us to create and respond to change and deal with uncertainty?” Agile Alliance and International Institute of Business Analysis (IIBA) explored this question through a joint effort to create the Agile Extension to the Business Analysis Body of Knowledge.

As Agile Software Development became more popular, people that were involved with software development activities but who didn’t personally develop software looked for some way to figure out how these Agile ideas applied in their line of work. When you think of Agile as a mindset, that mindset can be applied to other activities. When you do that, Agile becomes an adjective. It describes the way in which you perform some activity. It does not create a new methodology.

The two concepts noted above are examples of an attempt to move Agile “outside of software.” Those efforts have resulted recently in the Business Agility movement. If you extend the idea of Agile as a mindset, then people seeking Business Agility ask themselves, “How might we structure and operate our organization in a way that allows us to create and respond to change and deal with uncertainty?” You might say that business agility is a recognition that in order for people in an organization to operate with an Agile mindset, the entire organization needs to support that mindset. Agile software development was never truly Agile until the organization changed its structure and operations to work in an uncertain environment.

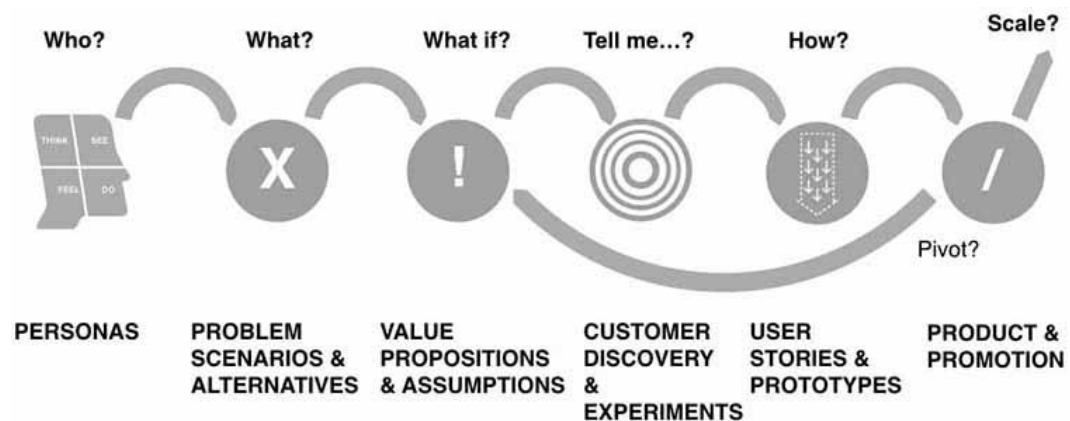
## **About Venture Design**

Venture Design solves two problems common to entrepreneurs, intrapreneurs and other innovators:

A) *I know that writing a traditional business plan on the one hand probably won't help me think through a lot of what's critical with my new venture, and on the other hand will take a lot of time and probably go mostly unread.*

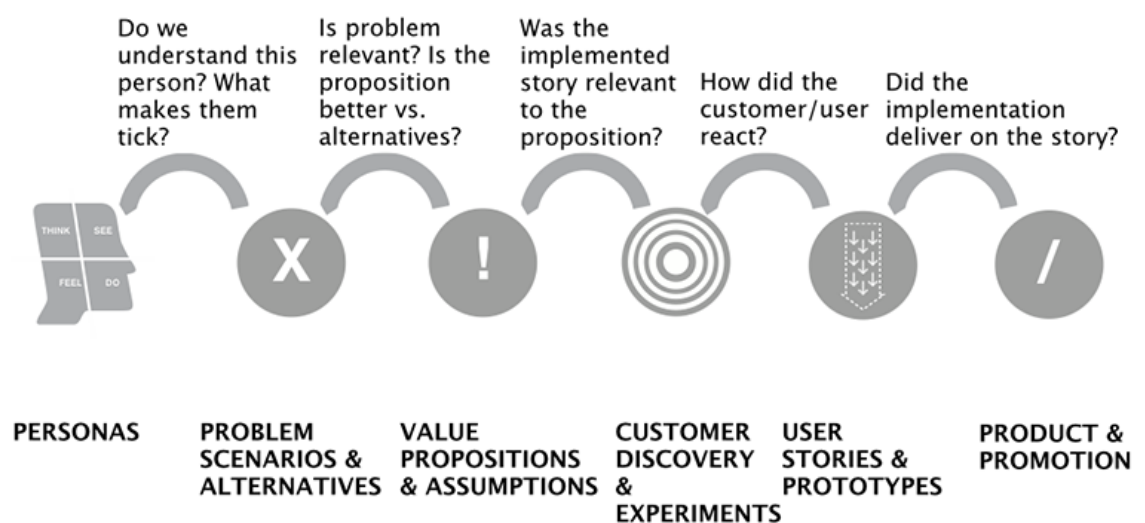
B) *I keep hearing how (the practices below) will help me with my new venture but it's a lot of stuff and I have little time. How do I engage?*

What you'll get with Venture Design is an actionable view of how to focus and propel your venture using today's most effective practices. The material is organized into tutorials, examples, and templates. Most users review the tutorials and examples, and then use the templates to apply the techniques to their venture. There are also workshops you can step through or do with a team. It's a step by step process that follows agile methodology to create a venture design and go on with it an easy iterative process



We start with,

Figure 1.0



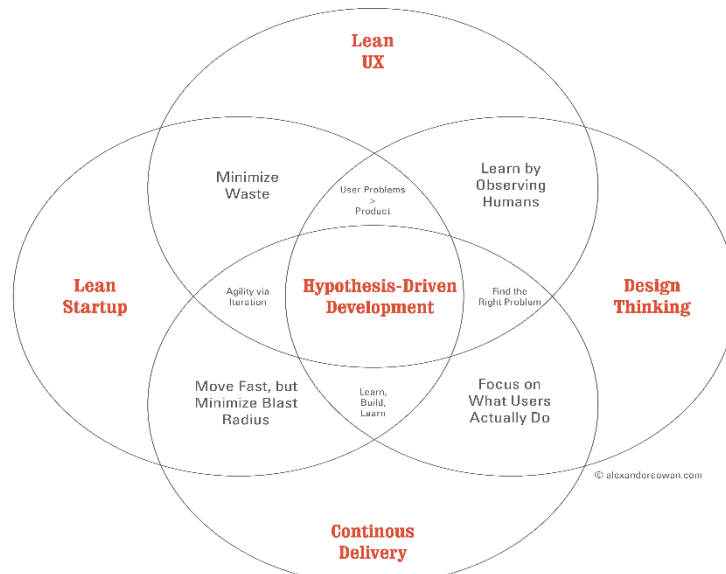
If in the middle,

copyright 2014 Cowan Publishing

Figure 1.1

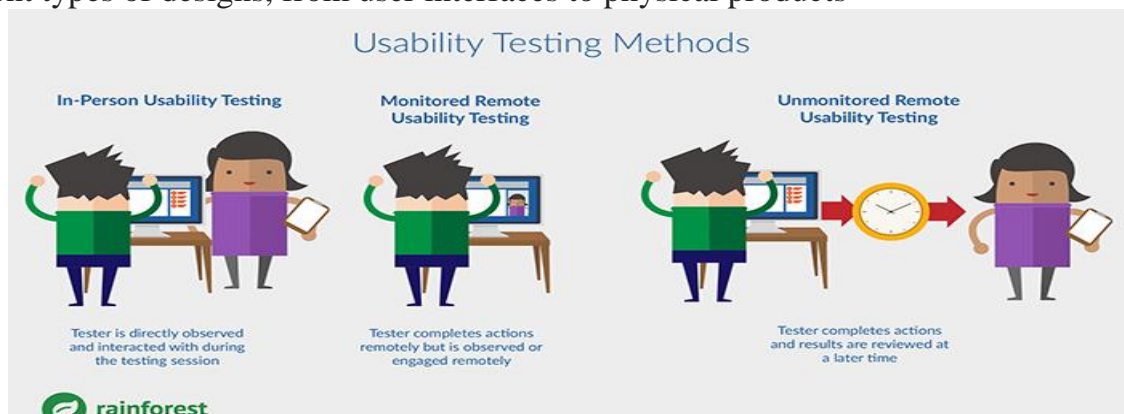
## TOOLS & METHODS LEARNED / PRACTICED

- Agile Software Development - Agile software development comprises various approaches to software development under which requirements and solutions evolve through the collaborative effort of self-organizing and cross-functional teams and their customer/end user
- Hypothesis Driven Development - Hypothesis-driven development is based on a series of experiments to validate or disprove a hypothesis in a complex problem domain where we have unknown-unknowns. We want to find viable ideas or fail fast



## Figure 2.0 Hypotheses Driven Development

- **Design Thinking** – Design thinking refers to the cognitive, strategic and practical processes by which design concepts are developed.
- **Product Management** - Organisational function within a company dealing with new product development, business justification, planning, verification, forecasting, pricing, product launch, and marketing of a product or products at all stages of the product lifecycle
- **Usability Testing** - Practice of testing how easy a design is to use on a group of representative users. It usually involves observing users as they attempt to complete tasks and can be done for different types of designs, from user interfaces to physical products



### Figure 2.1 Usability Method

## Tools Used

- Agile Bench - The tool is a hosted platform that emphasizes tracking the work assigned to each individual. The release schedule begins as a backlog of user stories and other enhancements. As they're assigned, the team must gauge both the business impact and the cost of development by assigning an estimate of the complexity of each task in points. The dashboard tracks both of these values so that members can tell who is overloaded and which tasks are the most important.
- Telerik Team Pulse - Telerik is known for its numerous frameworks for creating apps for the mobile marketplace. They've bundled much of that experience from creating their own code into Team Pulse, a tool they use to track projects. The main screen displays a page full of tasks that need to be completed and follows the team as it progresses. The menus offer configuration options and a wide variety of reports showing how the project is evolving toward completion. It also works with Telerik's other tools for building and testing code.
- Balsamiq - This wireframes is a rapid low-fidelity UI wire framing tool that reproduces the experience of sketching on a notepad or whiteboard, but using a computer. Wireframes is FAST: you will generate more ideas, so you can throw out the bad ones and discover the best solutions.

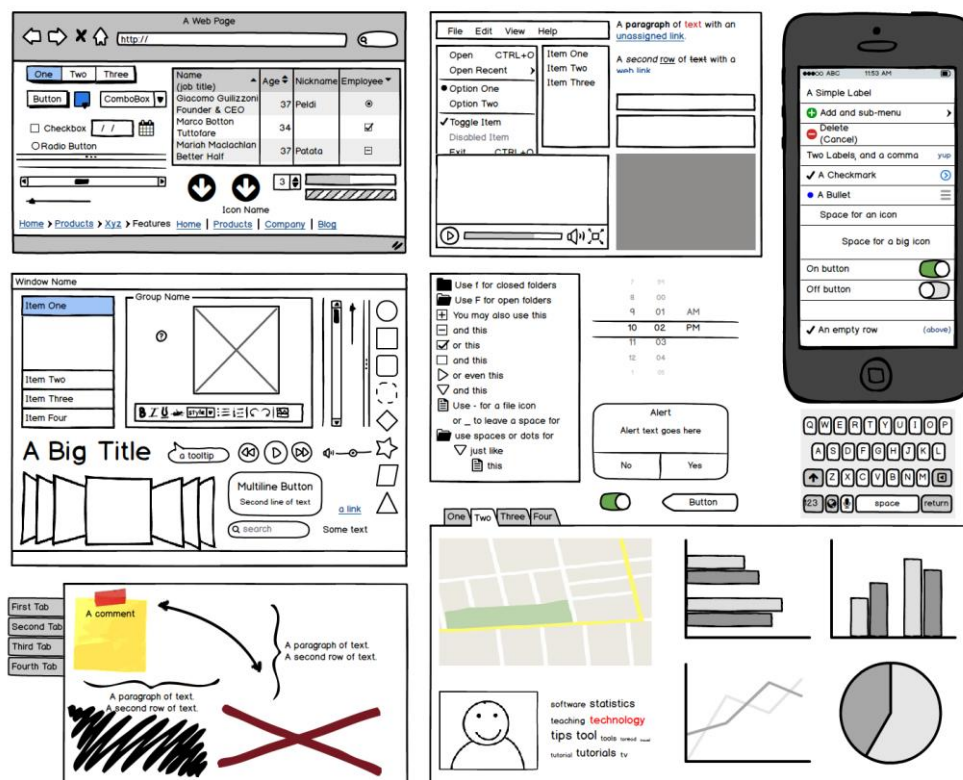


Figure 3.0

- Google Adwords - Google's advertising system in which advertisers bid on certain keywords in order for their clickable ads to appear in Google's search results. Since advertisers have to pay for these clicks, this is how Google makes money from search.

## **Problem Statement**

This project is an implementation of Agile Methodology, according to which a venture design has been created for an upcoming app “Outdoorsy”. Different concepts of product management and agile methodology has been used with customer feedback and value hypothesis and testing along with user stories and prototypes.

Its an app for outdoor men and women who likes to travel on State and Federal Land. It’s a mobile application that utilizes your phone’s built-in GPS and our own offline maps to increase safety and a positive experience in their outdoor enjoyment. Unlike confusing trail maps and public rules and regulation book, this app provides all the current relevant information along with Federal and State land maps and direction all in one app.

## **Working Approach**

- Select a positioning statement for a business  
Initially we start with the positioning statement which describes what the venture or business is about and how will it be used for betterment of current design or a new application.
- Personas, Problem Scenarios and Propositions  
Here we create a humanized view of who our customers are, be they buyer and/or user of the product. We also hypothesize what’s important to them with problem scenarios, what they’re doing about it now with alternatives and what they’re going to do with value propositions.
- What and for whom are we solving this for?  
We know our customers and their needs and want to understand them better and what exactly they are looking for in the product
- Customer Interview Guide  
Here we’ll lay out the questions you’ll use to go out and really discover/test your ideas about personas, problem scenarios, and alternatives.
- Value Hypothesis and Testing  
Here we’ll work through value proposition design, linking in the testable idea about why your customer is going to buy/use what you’re creating (aka Lean Start-up).
- Experiment Design (Customer Motivation)  
We lay out effective experiments to testing out proposition and make sure we’re building something that someone wants.
- User Stories & Prototype



We translate what we've learned and what's right for the product into testable narrative you can use to drive high quality collaboration with your agile development team. We create child stories, epic stories and comparables to get a better understanding of the product and generate prototypes.

➤ Business Model

➤ Customer Discovery Notes

Noting down the finding from out interviews and screening of the customers and implementing them while the development of the final product.

➤ Usability Testing

Here e lay out effective testing of the user interfaces. For example, the purpose of this test is to access whether the test subjects recognize and add friends app, the subject are outdoor persons who already own a smart-phone and are aware of how many apps function normally.

➤ Relevance Check-In

The purpose of this exercise is to diagnose and focus their executions (be those product or promotions) and decide where and how to best invest their time and effort on subsequent iteration.

➤ Proposition Smoke Test via Google Ad words

## **Background Study - Literature Survey**

### **Research Paper 1**

Title of Paper	Exploring Agile Mobile App Development in Industrial Contexts: A Qualitative Study
Author	Ali Asfour , Samer Zain , Norsaremah Salleh, John Grundy
Year of Publication	2019
Web Link	<a href="https://sci-hub.tw/https://www.learntechlib.org/p/207266/">https://sci-hub.tw/https://www.learntechlib.org/p/207266/</a>
Summary	Mobile app development is different and more complex than traditional web and desktop contexts. We found that agile methods have to be tailored in order to be adopted for mobile app development. This study presents more in-depth understanding of how mobile app industrial teams approach agile development and the challenges they are facing. The results will help in better understanding of how agile principals are applicable to mobile app development contexts and highlight particular challenges faced by the developers. We argue that not all agile development principals can be directly applied at mobile app development projects. Further, mobile app development teams face additional challenges such as work stress, inappropriate automation tools, and very tight time-to-market. In future work, we intend to develop a new agile method for mobile app development based on the results of this study and then validate the effectiveness of this method in the real world.

### **Research Paper 2**

Title of Paper	An Industrial Investigation into Effort Estimation Predictors for Mobile App Development in Agile Processes
Author	Abdullah Altaleb, Munna Altherwi, Andy Gravell
Year of Publication	2020
Weblink	<a href="https://sci-hub.tw/https://ieeexplore.ieee.org/abstract/document/9080362">https://sci-hub.tw/https://ieeexplore.ieee.org/abstract/document/9080362</a>
Summary	This study has presented the comprehensive factors and predictors that drive the assignment of the estimation value for a user story. These factors have been collected from previous studies that are related to the Agile process and mobile app development. The study has evaluated the estimation factors and examined their validity in mobile app development in terms of the Agile process. The investigation involved 20 practitioners in multiple roles from 18 organisations in the software development field. In addition, the study provided 11 additional factors that software developers, project managers and QA teams rely on in their estimation. These factors have been explained and defined based on the practitioners' beliefs and experiences. The investigation resulted in some critical factors that influence estimation accuracy, such as: supporting platform type; library and tool availability; understanding the transaction journey; whether the developer has done a similar task before; local DB storage and the structure of mobile storage; UI design and complexity, and backend configuration and availability factors.

### **Research Paper 3**

Title of Paper	Mobile Testing in Software Industry using Agile: Challenges and Opportunities
Author	Andriea Santos, Igor Correia
Year of Publication	2017
Weblink	<a href="https://sci-hub.tw/https://ieeexplore.ieee.org/abstract/document/7102625">https://sci-hub.tw/https://ieeexplore.ieee.org/abstract/document/7102625</a>
Summary	Mobile app testing challenges present us with tradeoffs that we should consider to make the right selection of testing methods and techniques to ensure that we achieve the level quality to our users have come to expect. Most teams must create or adapt their own strategy based on their unique situation. However, even in the best situation where the agile team is using TDD (test driven development), for example, and have automated much of their unit and regression testing, the team cannot usually conduct full system integrations, large scale performance, and security testing without help.

### **Research Paper 4**

Title of Paper	Reviews on Agile Methods in Mobile Application Development Process
Author	Dewi Mariati Mahmud, Nur Atiqah Sia Abdullah
Year of Publication	2015
Weblink	<a href="https://sci-hub.tw/https://ieeexplore.ieee.org/abstract/document/7475214">https://sci-hub.tw/https://ieeexplore.ieee.org/abstract/document/7475214</a>
Summary	Need a new approach in delivering their quality products. Most of the mobile application developers use agile methods to develop and fulfill the customers' demands. This paper highlights the types of mobile application and its characteristics. Besides, agile software development has its potential to be fit in the mobile application development. Previous studies about agile development methodology in mobile application development process have been analysed to show the gap and potential of agile methods in mobile technology. From the discussion, DSDM is the only agile method that used in large scale mobile application due to large team and mobile application characteristics. Some recommendations are highlighted to enlighten the mobile application developers to take into considered when choosing a right agile method.

### **Research Paper 5**

Title of Paper	ADOPTING AN AGILE APPROACH FOR THE DEVELOPMENT OF MOBILE APPLICATIONS
Author	Harleen Kaur Flora
Year of Publication	2012
Weblink	<a href="https://shodhgangotri.inflibnet.ac.in/bitstream/123456789/5451/1/synopsis.pdf">https://shodhgangotri.inflibnet.ac.in/bitstream/123456789/5451/1/synopsis.pdf</a>
Summary	The research proposal demands responses to the questionnaire from Developers and Managers of few mobile development companies which can be taken through contact in person and may be supplemented by online questionnaires. The workplace would be the computer laboratory of SBBS Post Graduate College for designing of the questionnaire for field work and analysis after taking responses from about 100 persons. The proposed improvement through the proposed Agile technique will be empirically tested in 3 to 5 mobile companies

### **Research Paper 6**

Title of Paper	Agile Business Model Innovation in Digital Entrepreneurship: Lean Startup Approaches
Author	Antonio Ghezzi, Angelo Cavallo
Year of Publication	2016
Weblink	<a href="https://www.sciencedirect.com/science/article/abs/pii/S014829631830300X">https://www.sciencedirect.com/science/article/abs/pii/S014829631830300X</a>
Summary	The resulting value for practice takes the form of identifying the core steps and constituent elements that digital entrepreneurs should consider carefully and deploy in the early stages of their startup's development. Learning how these steps and the elements of value creation, delivery and capture become more or less relevant as the context changes can help entrepreneurs to direct their efforts and allot their traditionally scarce resources effectively. Moreover, by recognizing that they can select from a pool of combinable lean and agile approaches and methods - e.g. MVP and minimal upfront testing; iterative “feedback and change” loops; and Scrum's sprints to restrict the duration of MVP testing by introducing a time box - to support innovation not only to their products, but also to their business model, offers digital entrepreneurs a wider range of operational and strategic options that can be put to use in the practice of both operational and Strategic Agility.

### **Research Paper 7**

Title of Paper	Design, User Experience and Useability
Author	Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen
Year of Publication	2018
Weblink	<a href="https://sci-hub.tw/10.1007/978-3-319-91797-9">https://sci-hub.tw/10.1007/978-3-319-91797-9</a>
Summary	<p>The aim of this work is to provide recommendations in the form of artefacts to developers and the policy makers of big data enterprises especially from the government sector that fund CI projects, so that they are able to develop and design UI in CIs that are eventually usable by the users and offer better UX for future. The recommendations in the form of artefacts can be bundled in a proposed framework called e-Science UI usability (eUIu) model and then it can be compared with the usability guidelines for non CI applications. This model can provide significant input to the enterprise model and the business model of CIs and other enterprises. With this model both the developers of CI and developers of other infrastructures will benefit. Moreover, they will be able to enable better UX and usability for users in various domains of data science such as climate science, medical science, physics and others. Besides, a set of proposed web-based UI prototypes and visualization environments shall be created by the developers to support better UX in CIs. Furthermore, it is expected that a shared understanding amongst developers about the user's point of view will be developed, facilitated by the artefacts.</p>

### **Research Paper 8**

Title of Paper	CrowdRec: A prototype recommendation system for crowdsourcing platforms using Google Venture Design: Google Venture Design Sprint
Author	Tiago Moreas Ferriera, Alison Borges Zanniti, Alexandre Lazaretti Zannata
Year of Publication	2019
Weblink	<a href="https://sci-hub.tw/https://dl.acm.org/doi/abs/10.1145/3330204.3330235">https://sci-hub.tw/https://dl.acm.org/doi/abs/10.1145/3330204.3330235</a>
Summary	<p>Collective intelligence is an interdisciplinary topic that has been explored by different areas of knowledge, like information systems, being a common practice of knowledge exchange through new forms of organization and flexible coordination in real time. Crowdsourcing emerges in this context as an act of externalizing, through the Internet, a task traditionally done internally in the organization for an undefined (and often large) group of people. However, one of the challenges found in this model is how users select and interact with available tasks for execution. Therefore, this work presents a prototype task recommendation system tool, with user experience-oriented design (UX), called CrowdRec, executed through the Google Ventures Design Studio method in conjunction with the Quant-UX tool. To evaluate the results, the TAM analysis with a five-point Likert scale was used. The results show positive interactions in the prototype.</p>

### **Research Paper 9**

Title of Paper	An Agile Software Engineering Method to Design Blockchain Applications
Author	Michele Marchesi, Lodovica Marchesi, Roberto Tonelli
Year of Publication	2018
Weblink	<a href="https://dl.acm.org/doi/abs/10.1145/3290621.3290627">https://dl.acm.org/doi/abs/10.1145/3290621.3290627</a>
Summary	<p>Some people have come to the point of saying that the "Blockchain revolution" can be compared to that of Internet and the Web in their early days. As a result, all the software development revolving around Blockchain technology is growing at a staggering rate. The feeling of many software engineers about such huge interest in Blockchain technologies is that of unruly and hurried software development, a sort of competition on a first-come-first-served basis which does not assure neither software quality, nor that the basic concepts of software engineering are taken into account. This to cope with this issue, proposing a software development process to gather the requirement, analyze, design, develop, test and deploy apps. The process is based on several Agile practices, such as User Stories and iterative and incremental development based on them. However, it makes also use of more formal notations, such as some UML diagrams describing design of system, with additions to represent specific concepts found in Blockchain development.</p>

## Workflow Diagram

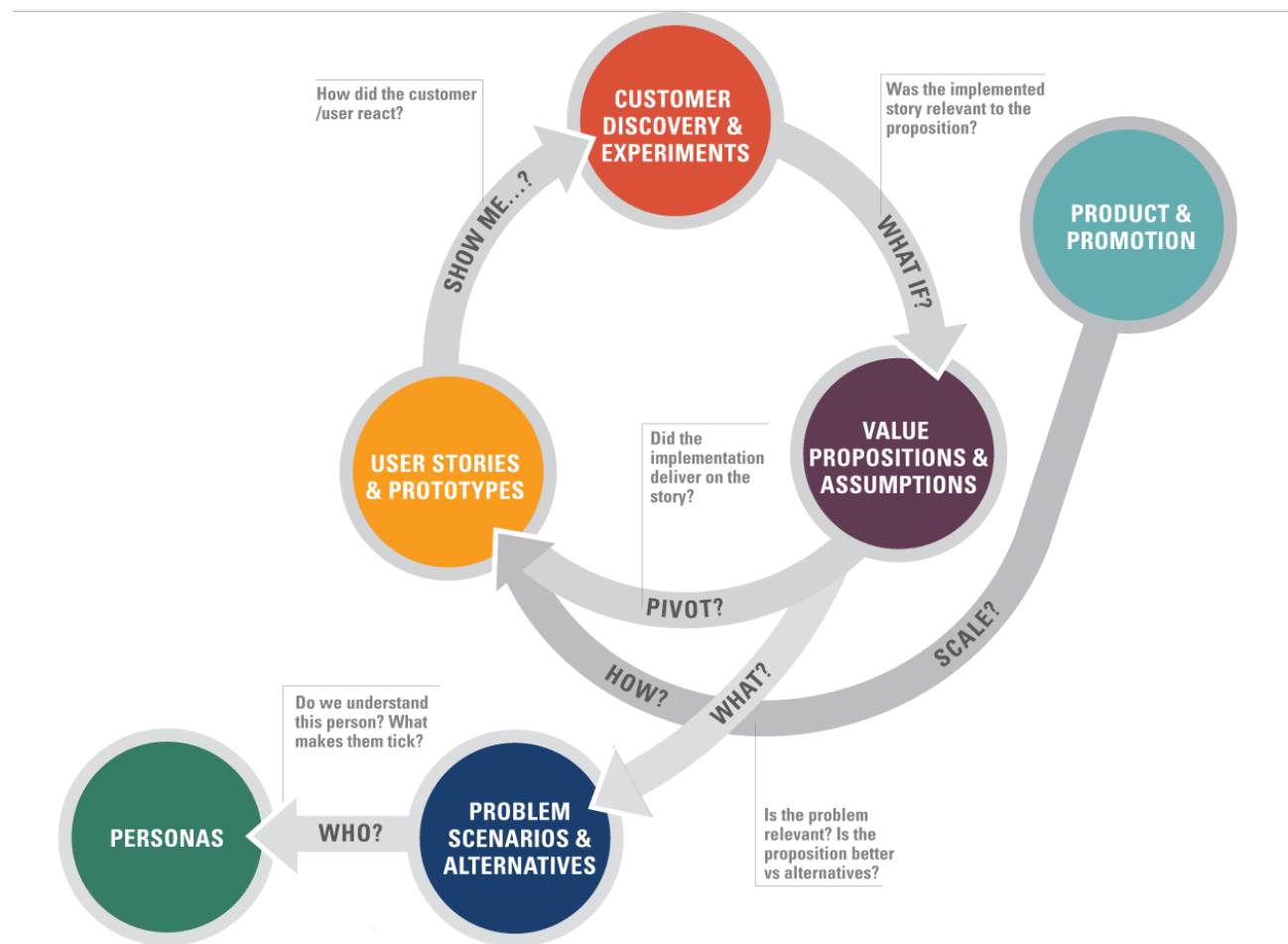


Figure 4.0 Flowchart of the venture design

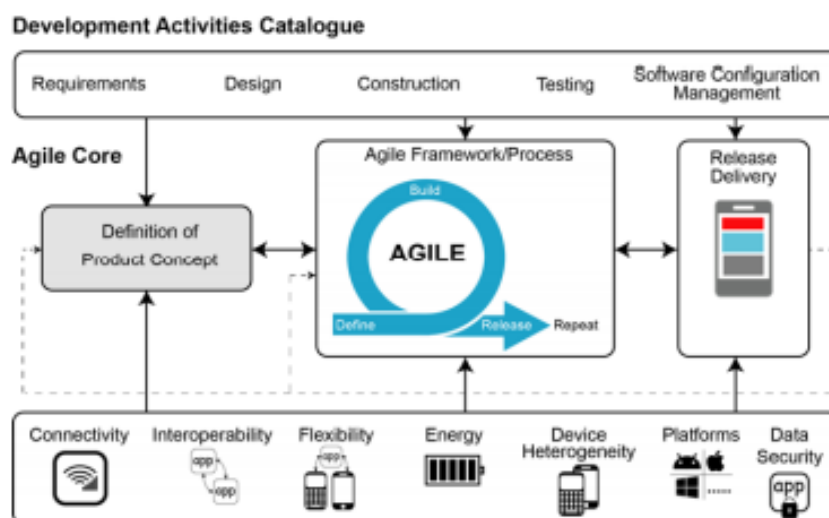


Figure 4.1 Integrated Framework for mobile application development

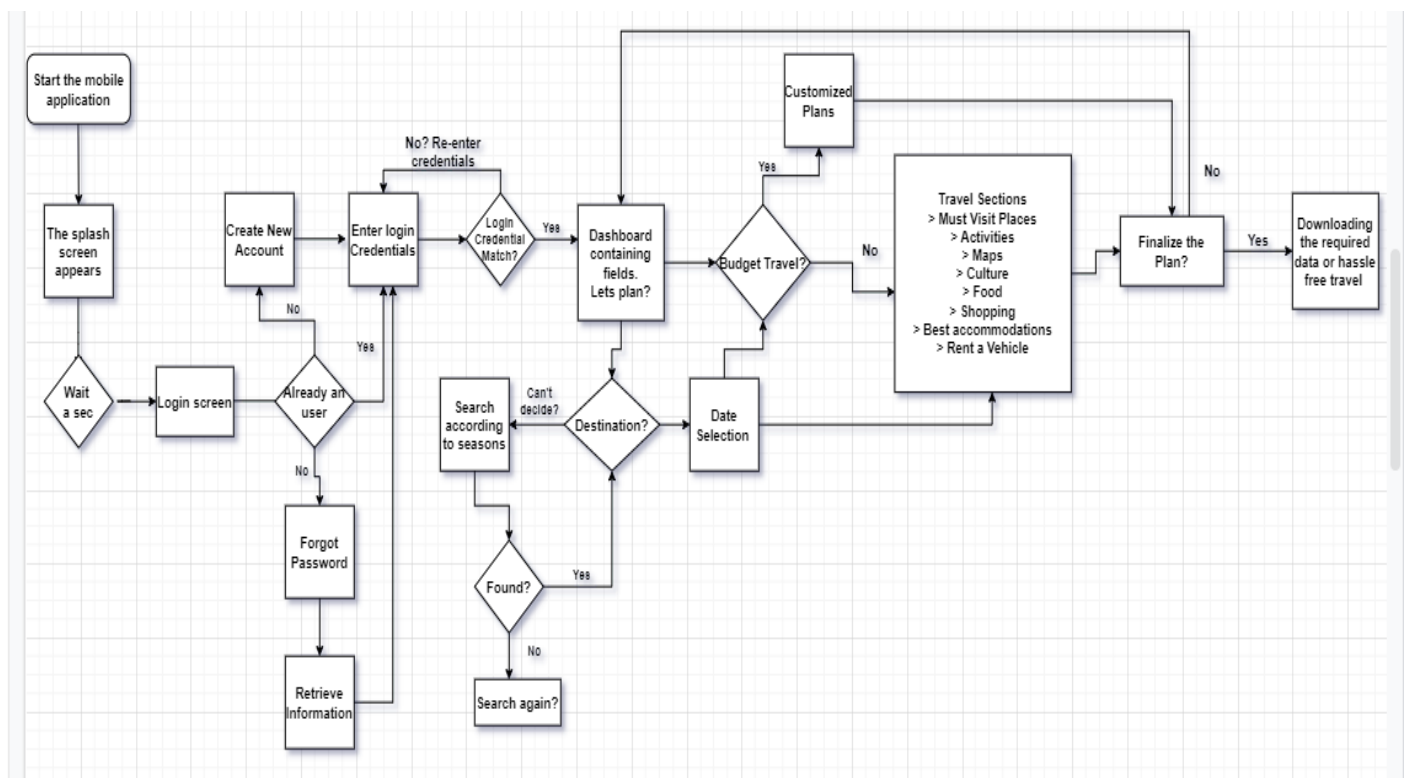


Figure 4.3 Flowchart of the application



## **Implementation**

### **INTEGRATED FRAMEWORK FOR MOBILE APPLICATION DEVELOPMENT**

The proposed integrated framework is composed of a software development activities catalogue, an agile core, and Mobile Ilities, which are transversal to development activities.

#### **A. DEVELOPMENT ACTIVITIES CATALOGUE**

In order to select and structure the software development activities catalogue, we followed a process to combine the activities and techniques from the different sources mentioned in section 2 (SMS, survey and expert evaluation) with the results of the evaluation of the first version of the framework. The process for the development of the final catalogue is detailed in [16]. The resulting set is shown in Table I.

Activity Type	Activity	Task
Requirements	Elicitation	User Stories, Facilitated Meeting, Interview, Prototype, Competitor Analysis, Storyboarding, Survey, Scenarios
	Analysis	Requirements classification, Architectural design, and requirements allocation
	Validation	Prototyping
Design	Structure and Architecture	Architectural Design implications, Design Patterns
	User Interface Design	User Interface Design
Construction	Practical Consideration	Construction Testing
	Technology	API design and use
Testing	Test Technique	Thinking aloud, Usability test, Survey, Satisfaction Questionnaire, Heuristic evaluation
Software Configuration Management	Software Release Management and Delivery	Software Release Management

TABLE I SOFTWARE DEVELOPMENT ACTIVITIES CATALOGUE

#### **B. AGILE CORE**

The agile process is iterative by nature. It requires an initial definition of the product concept, which focuses on activities and development tasks around analysis and, to a lesser extent, design. Once the basic concept of the product has been established, the application development sprints proceed, with some analysis and design activities, but a greater predominance of activities related to implementation and testing. The final part in the life cycle of app construction is the Release Delivery stage, when the app is distributed via application stores (when appropriate). Each of these stages is described below.

**1) DEFINITION OF PRODUCT CONCEPT** - The basic idea around which the app will work is defined at this stage. It is based on an understanding of customer needs and a conceptualization of how a mobile app can offer a solution. This task involves key stakeholders in the development process, such as end users, the project sponsor, the project manager and members of the development team.

**2) AGILE PROCESS** - The proposed framework has been designed to eschew a specific agile methodology, thus facilitating its usage by diverse software development organizations. The agile process is carried out iteratively, according to the chosen agile approach, to create a mobile app that manifests the product concept.

**3) RELEASE DELIVERY** - The release is triggered when the necessary iterations have been fulfilled to obtain a product that meets the user's requirements. The app is then distributed through the application stores of the different platforms (when applicable). This task is directly linked to the activities of Software Configuration Management, especially for managing the various app releases. Tasks to be performed at this stage are the selection and packaging of the files to be uploaded, Configuration Management, and the actual upload to the application store(s) of choice. Most mobile applications follow a continuous delivery approach, in which new versions are continuously designed and coded to keep up with evolving customer needs. Launching an application is then the starting point for a new iteration that will produce an enhanced version of the application.

## **C. MOBILE UTILITIES**

Based on our initial studies, we identified a set of mobile software attributes that the authors and experts concur directly condition mobile app design decisions. They impose restrictions on the possible design solutions and were highlighted as elements to carefully consider during the development of a mobile app. Our strategy was to select, from among the diverse attributes, the ones most mentioned and with a greater incidence throughout development, according to the experts interviewed. We then grouped the attributes that addressed similar concerns and chose a name for each group. We named them Outdoorsy, as mentioned above, since they consolidate the most relevant specific characteristics of mobile apps that may affect the quality of the resulting product. Every mobile development project has its own specificities that require careful consideration of the activities each Mobile needs to address. For this reason, the development team must decide which specific Mobile utilities are relevant for each sprint and activity.

## **FRAMEWORK USE**

Framework application requires instantiation of the specific characteristics of a project and the software development organization. The selection of the agile process will often depend on the experience and knowledge of the development team, the delivery time of the application, or simply the preference of the development team. As a case study, a development team formed by Bachelor level computer science students applied the framework to the development of an Android app for management and search of lost items on a University campus. Scrum was chosen as the agile method for the project, to instantiate IFMAD as seen in Fig.5. The case

study was developed as a course assignment. During class, they were instructed in agile development and during extracurricular hours, they were trained in the use of the framework.

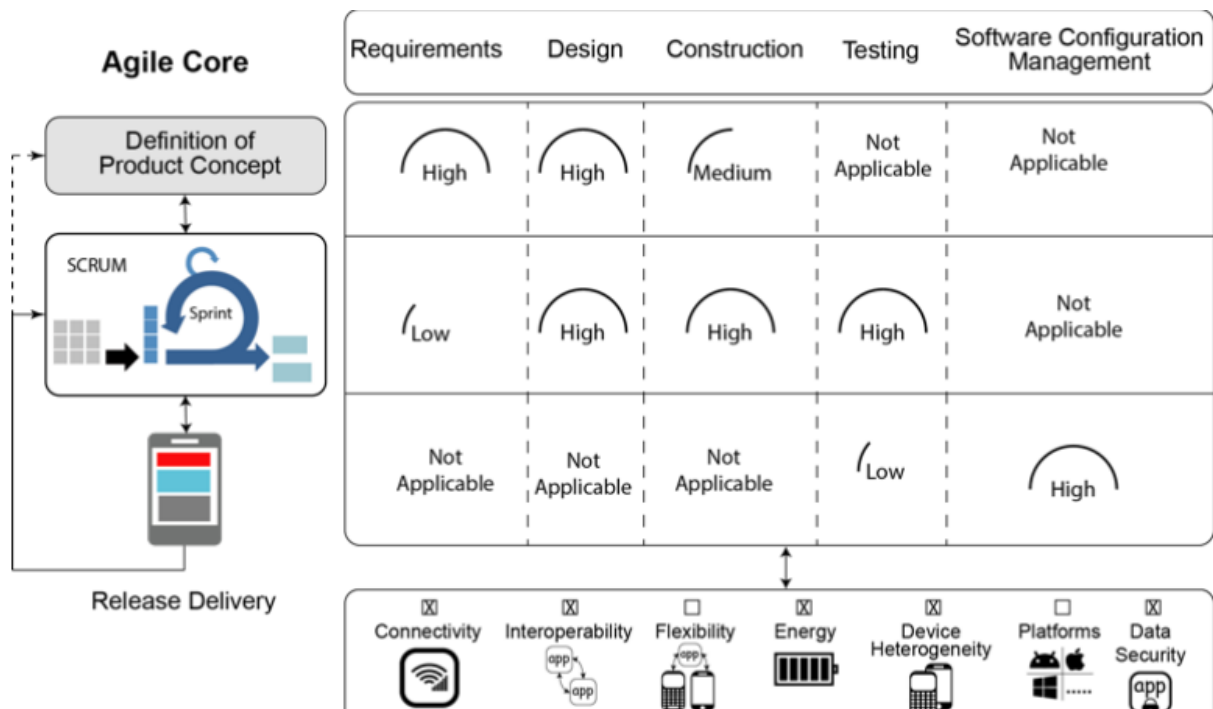


Figure 5 Development Activities Catalogue

## A. DEFINITION OF PRODUCT CONCEPT

The process starts with the definition of the product concept during which the general vision of the application is defined, focusing on the user expectations for the app. This task mainly consisted of requirements and design activities. Android was chosen as the development platform after a survey of prospective users. Every activity undertaken during development, even during the early stages, should consider the potential applicable to Outdoorsy. We propose an extended version of US (User Stories). Developers must consider which might be relevant for the User Story being described and must detail the acceptance criteria for each choosing the same. When a US is tackled in a sprint, this information will be used to ensure that these specific mobile constraints are properly addressed. The development team of the case study used this extended format to detail US, considering the applications and their acceptance criteria. As a result of this task, the Product Backlog was produced.

## B. AGILE CORE

Once the development team shares the common concept of the product, the agile iterative process starts, executing design, coding and testing activities in most iteration, as well as requirements activities in a few cases. In Scrum, the process to generate the Sprint Backlog starts with the selection of a “pivot” story of medium complexity that serves as a reference for estimating the

history points of the remaining US. In our case study, Poker Scrum technique was considered for estimation purposes. USs were prioritized and grouped, so that a release containing a complete transaction was obtained at the end of each sprint. During the execution of a sprint, the development team implemented each functionality, selecting the catalogue activities and tasks to be carried out, while taking into account the things identified on the corresponding US card. For this purpose, the development team must fill in a table at the beginning of every sprint in which features, tasks and are linked.

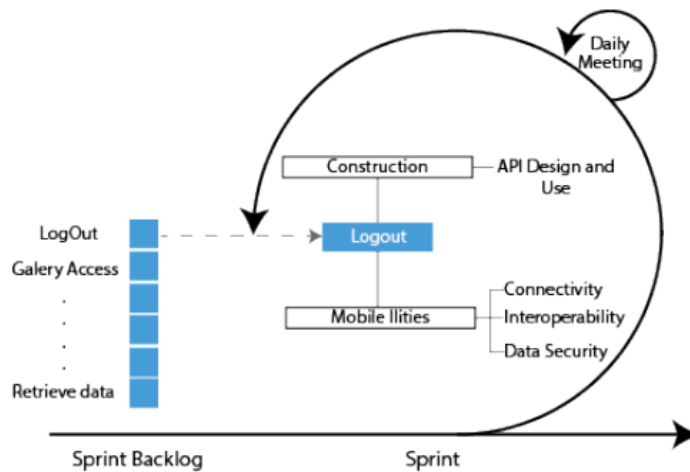


Figure 6. At every sprint, each activity to be under taken

### C. RELEASE DELIVERY

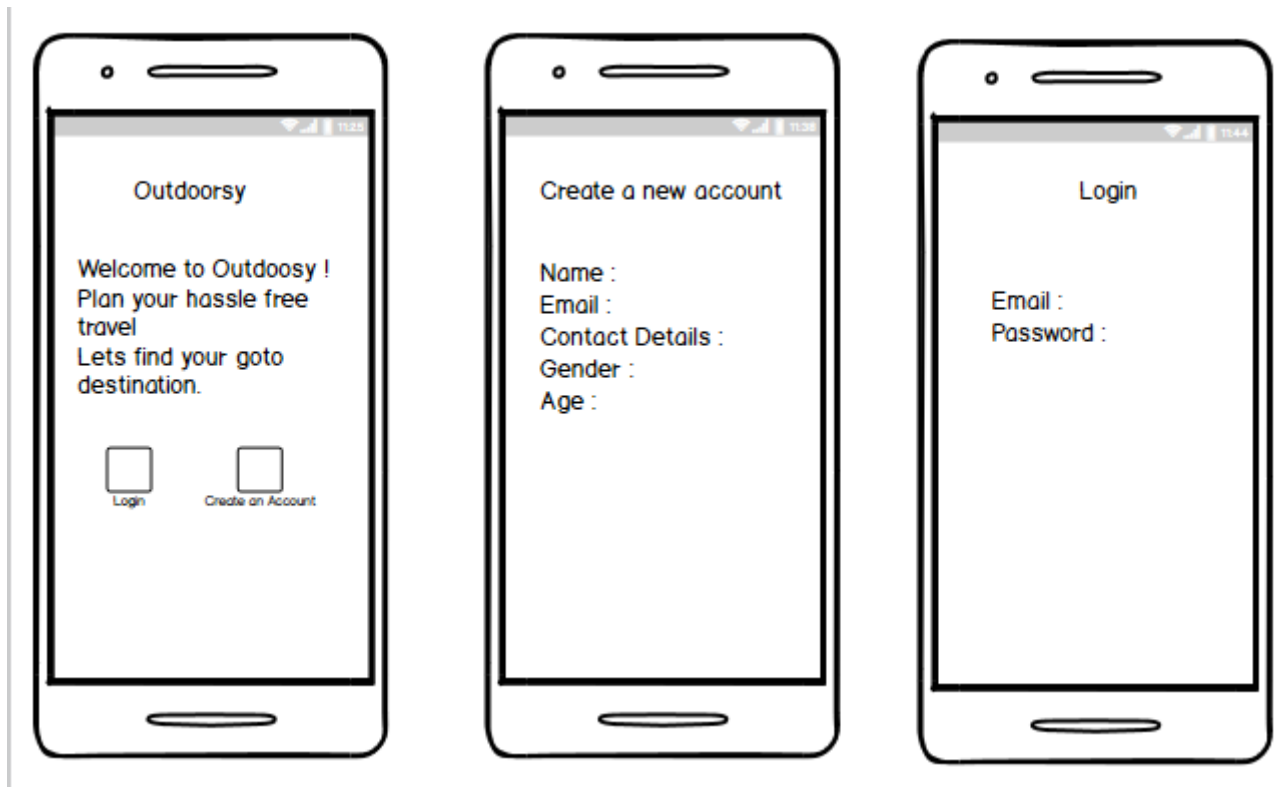
Once the functionalities of the application were implemented, developers proceeded to pack the necessary files to create the APK file and gather all the materials required by Google Play. The app was published, succeeding in passing all the requirements checked by Google Play. Since IFMAD makes the development team focus on some of these non-functional requirements, like some aspects of device heterogeneity, the application of the proposed framework may have positively contributed to the successful results of this activity. With the full development of the app in this case study, the feasibility of the proposal has been confirmed.

SPRINT EXECUTION				
	Feature	Activity	Task	Mobile Ilities
Sprint 1	App Login using Facebook account	Construction	API design and use	Connectivity Interoperability Data Security
	App Logout using Facebook account	Construction	API design and use	Connectivity Interoperability Data Security
Sprint 2	Offline inserts in Firebase database	Construction	Coding	Connectivity
	Access to the device's image gallery	Construction	API design and use	Interoperability Data Security
	Color scheme for energy saving	Design	User Interface Design	Energy Device Heterogeneity
	Information retrieval from an online database	Construction	Coding	Connectivity Interoperability
	Show publication information using the device cache.	Construction	Coding	Connectivity
Sprint 3	Sending messages through WhatsApp	Construction	API design and use	Connectivity Interoperability
	Voice call using the telephone line	Construction	API design and use	Interoperability
Sprint 4	Programming to retrieve information from the Firebase database	Construction	Coding	Connectivity

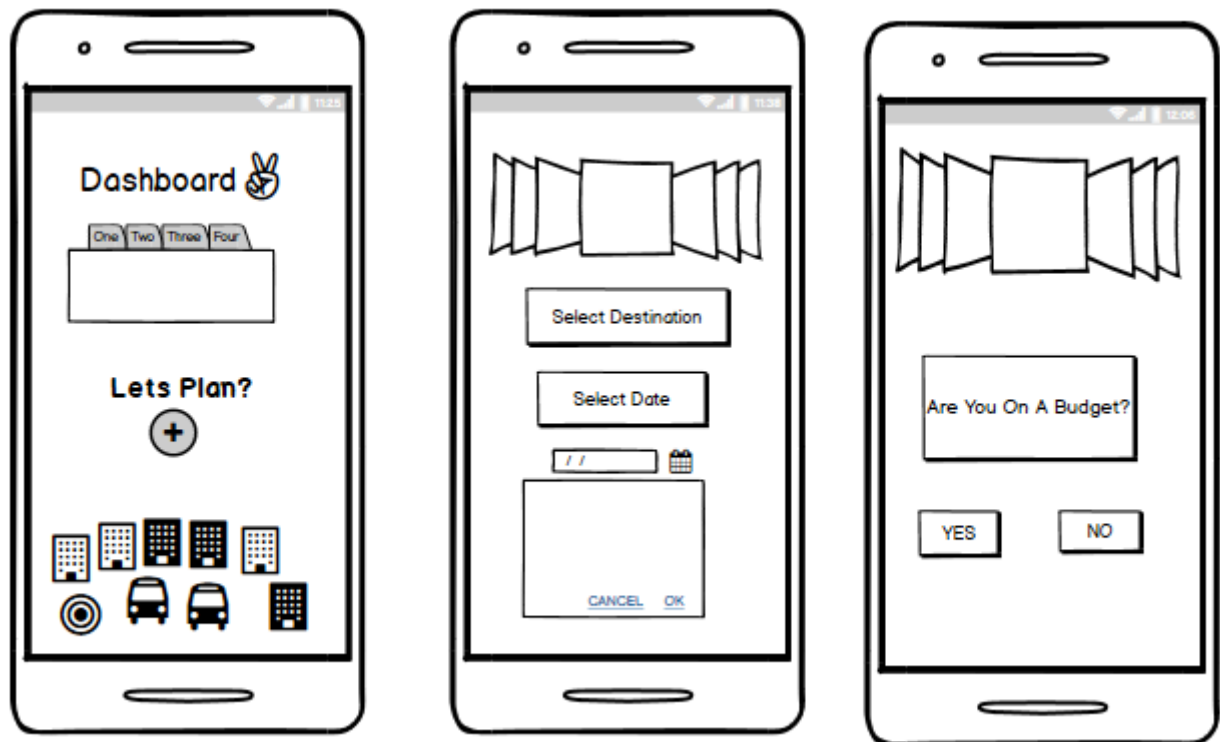
TABLE II SPRINT EXECUTION

## Result

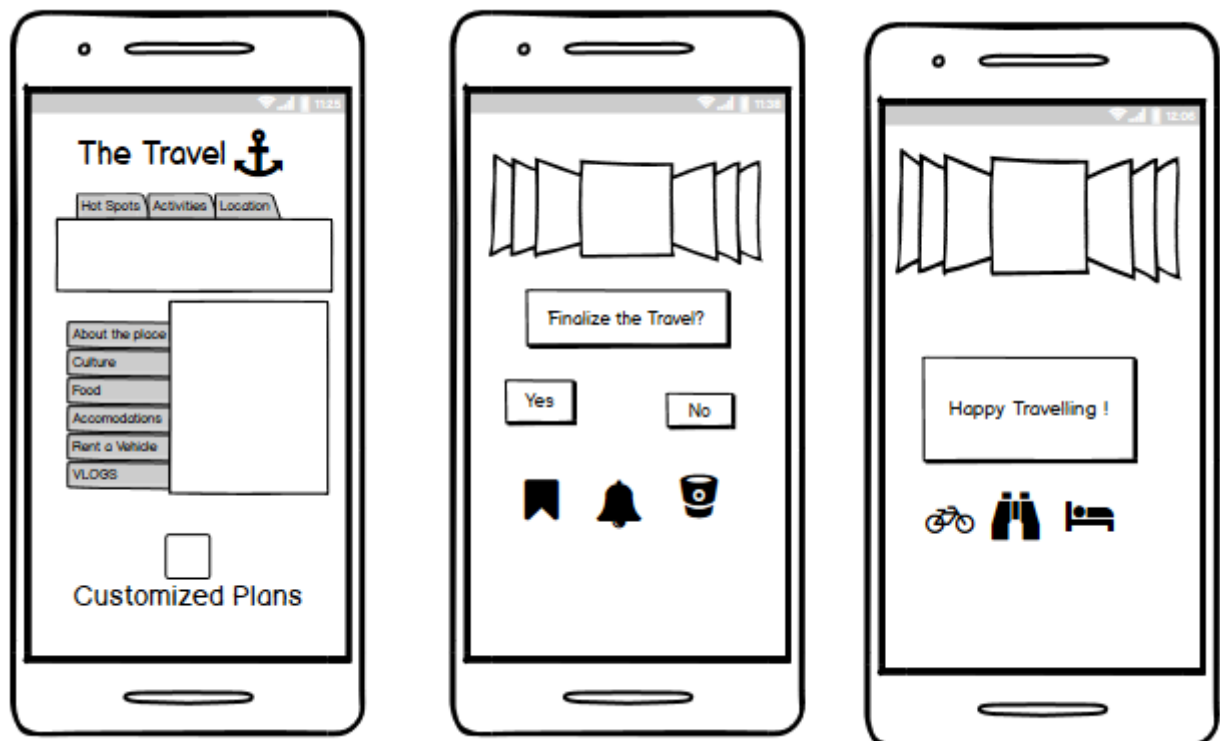
Here a sample of the application is being depicted which created using Balsamiq Wireframes that's helps is creating the UI/UX design of an application.



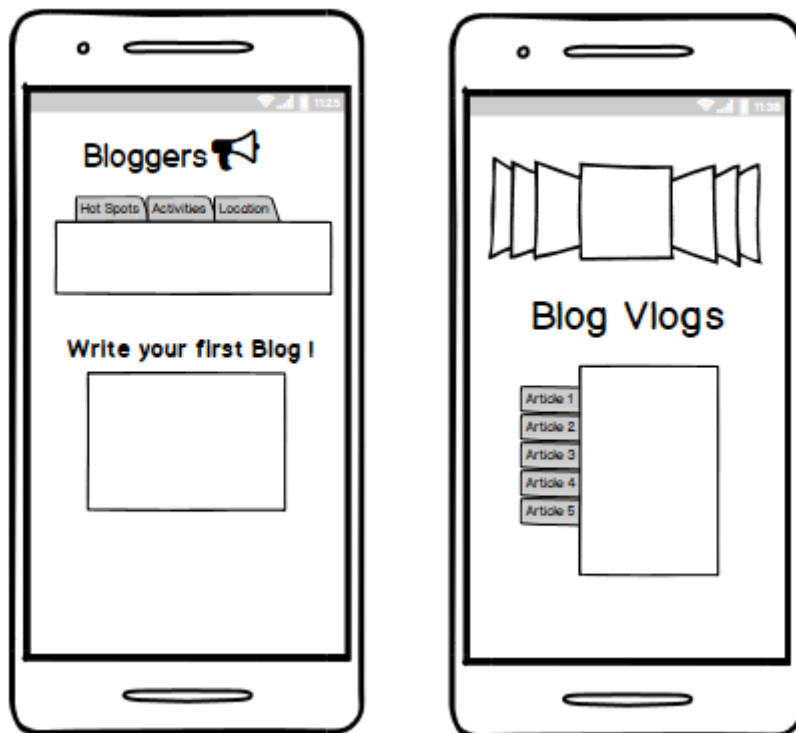
The Main page and login credentials page



Dashboard and the follow ups for planning the travel



The travel section area where you can find you can create your own plans or select for customized plans



Travel Bloggers or people who want to share their experience can write articles and also the customers can read them to know about their desired destination

## **Conclusion**

A travelling application venture design named OUTDOORSY is created with the help of Agile Methodology. It's a business model, the initial step for creating a product in a company. This application differs from others in the aspect that it contains almost everything a traveller looks for and searches in different websites. A unique feature about the application is that one can even write blogs and earn here. Travel Blogging will not only give a clearer picture to the customers but also will prove as a earning medium by only sharing once experience.

## **Future Works**

- Enhancing UX/UI Experience
- Adding more features
- Customer Care and Support
- Testing
- Feedback
- Applying in Other platforms of Mobile Development



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