

SPRINT 1 DOCUMENTATION

Group 15

Email: [capsulefy.communications@gmail.com](mailto:capsulefy.communications@gmail.com)

Website: <https://capsulefy02.herokuapp.com>

Cantón Fernández, Adrián

Carpio Camacho, Daniel

Fresno Aranda, Rafael

Rebollo Lobo, Pablo

Rodríguez Regidor, Juan

Index

[Business Idea 2](#_Toc3570668)

[Development team 2](#_Toc3570669)

[Minimum Viable Product 3](#_Toc3570670)

[Development planning 6](#_Toc3570671)

[Technology Stack 8](#_Toc3570672)

[Application Lifecycle Management 8](#_Toc3570673)

[Viability study 10](#_Toc3570674)

[Pilot users 12](#_Toc3570675)

[Competitors analysis 13](#_Toc3570676)

[Innovation 13](#_Toc3570677)

[SWOT Analysis 13](#_Toc3570678)

[Strengths 13](#_Toc3570679)

[Weaknesses 14](#_Toc3570680)

[Opportunities 14](#_Toc3570681)

[Threats 14](#_Toc3570682)

[Cost estimation 14](#_Toc3570683)

[Risk analysis 16](#_Toc3570684)

[Pricing 17](#_Toc3570685)

[Profit estimation 17](#_Toc3570686)

[Conclusions 19](#_Toc3570687)

# Introduction

The aim of this document is to provide information about the planification for this first sprint, the tasks that have been carried out and their results, as well as the conclusions the development team has arrived to after these two weeks. A quick overview of the business idea , team roles and costs is also provided, but for more extensive information about this topic please refer to the “Devising a project” document.

# Business Idea

Capsulefy is an online time capsule that allow users to store their memories and share them in the future. Users will be able to create a time capsule, attach a message to it, load files such as videos or images into it and set a date when they want the capsule to be released.

The capsules can also be connected to the user’s social networks so that a message is automatically posted when the capsule is published. Users will also be able to select a list of emails that will receive a notification message.

One of the main selling points of our product is allowing people to leave a message behind in case they pass away. For this reason, we will offer a dead-man switch option that once activated, will automatically release the capsule regardless of its publication date if the user hasn’t refreshed the counter after a certain period of time.

Our capsules also offer extra features such as the possibility of splitting them into different modules, each of them with a different release date, or making them private so that they won’t appear when listing the capsules.

We will be offering two different types of capsules: Free and premium capsules.

Each registered user will be able to create free capsules and upload files to them up to a maximum of 20mb in total. These capsules can be scheduled up to one year in the future and will be deleted 6 months after their release. These capsules can’t be made private, split into modules or have a dead-man switch set up

Premium and modular capsules will cost 11.99 € each, can store up to 500mb of files and will not have a limit on how far into the future they can be scheduled, nor will they disappear after being released.

# Development team

Our team is composed by five members, each one with different roles and responsibilities:

* Pablo Rebollo Lobo. His roles are project manager and backend developer. His main technological competencies are Spring, Django and PHP.
* Adrián Cantón Fernández, whose roles are business manager and full-stack developer. His main technological competencies are Django, Java and Bootstrap.
* Daniel Carpio Camacho, analyst and frontend developer. His main technological competencies are Django, JavaScript and Bootstrap.
* Juan Rodríguez Regidor, whose roles are requirements engineer and backend developer. His competencies are Django, Python and Bootstrap.
* Rafael Fresno Aranda. His role is backend developer and will also be in charge of the interaction of our product with other applications. His main technological competencies are Node.js, Django and PHP.

Our commitment as a team is to develop our business idea in order to create a minimum viable product in a good enough state so that it can receive appropriate feedback to decide whether or not release the full version to the market and apply that feedback to improve our product.

To reach this goal, we are compromised to meet the deadlines, listen to the feedback and cooperate within the team so that we can provide a product that meets our quality standards.

# Competitors analysis

We did a market research in order to determine which existing online services our product will be competing with, which are their main features and what makes our product different from them. We found 4 other similar services. The results of comparing them to our product are the following:



We reached the conclusion that we are treading into an already existing market, but an undeveloped one, where we can offer features that makes us distinct from our competitors, such as the interaction with social networks and the publication of content in case the user has not logged in for a very long time.

There are other indirect competitors, such as official last wills or more traditional methods of sharing memories like photo albums, but they won’t be able to offer the possibility of quickly sharing their contents online.

The innovation of our app are these two features no other application similar to us provides: The dead man switch and social network interaction. While the development of these features does not imply that we are innovating from a technological viewpoint, since we will be using already existing technologies (OAuth, API calls…), the way we are incorporating them into our business model is something new that has not been tried by our more direct competitors. Thanks to these features, our service is highly customizable so that every user can tailor their time capsules to their needs.

# Cost estimation

Because we will be using Google Firebase to store all the files our users will upload to our system, we need to take into account the individual cost per user. By using Amazon S3, we will be charged 0.026 USD per GB per month.

Assuming we will be offering 500mb of storage in each of our Premium/Modular capsules, the cost of maintaining each 500mb capsule yearly is 0.156 USD (0.14€).

Assuming free users have 20 mb of storage, the yearly cost of maintaining a free user will be of 0.00624 USD (0.0127€).

In order to decide our storage and hosting funds, we will consider the cost of maintaining 2,000 premium capsules and 20,000 free users for a year, as well as an estimation of the cost of hosting our website and our database.

Our team has come up with 4 different cost estimations: A pessimistic one, an optimistic one, and two realistic estimations. These estimations cover costs during the development of our product, whose duration will be of 4 months, and some funds which may be used in order to deal with the risks that appear during the development or to cover initial server and advertisement costs. The factors that will affect our budget are the following:

* Team members’ salaries.
* Hardware amortization.
* Advertising funds for the first 6 months.
* Storage and hosting funds for the first year.
* Risk prevention funds.
* Taxes.

Because we will be using Google Firebase to store all the files our users will upload to our system, we need to take into account the individual cost per user. By using Amazon S3, we will be charged 0.026 USD per GB per month.

Assuming we will be offering 500mb of storage in each of our Premium/Modular capsules, the cost of maintaining each 500mb capsule yearly is 0.156 USD (0.14€).

Assuming free users have 20 mb of storage, the yearly cost of maintaining a free user will be of 0.00624 USD (0.0127€).

In order to decide our storage and hosting funds, we will consider the cost of maintaining 2,000 premium capsules and 20,000 free users for a year, as well as an estimation of the cost of hosting our website and our database.

As for advertising funds, firstly we have to determine a target audience. Our product is targeted to people who regularly uses internet and social media. The age segments targeted are young people and middle-age people.

Our goal is to advertise ourselves on the internet. For that reason, we will be using google ads. Because we offer integration with Facebook and Twitter, reaching out to the users of these platforms is also considered a key aspect of our marketing strategy.

Google ads charge business for each time their advertising is clicked. Each business can set how much they can be charged, and depending the price set, their ad will be more visible.

Because we are a small company, we will be setting the cheapest price possible within the range of prices our possible competitors for that ad spot pay, which is one of around 220€ per month, with an estimated performance of 137‑229 clicks per month

Facebook also allows us to customize how much would be willing to spend on a weekly basis. We have decided to spend about 140€ monthly for a Facebook advertisement which targets people of between 18 and 50 years old.

Same as Facebook, Twitter allows us to set a daily price. We will be using a similar budget to the one for Facebook, 5€ daily, which means ~150€ monthly for an audience between 18 and 49 years old.

In conclusion, we will be spending approximately 510€ monthly in advertisement. If in our project costs we are going to include the cost for the first 6 months, we will have a total cost of 3060€.

After these first 6 months, we will evaluate how this approach is performing, and depending on that we will decide whether increase or decrease our budget.

# Development planning

We will develop our product following the SCRUM methodology. The development of our prototype will be split into three sprints. The results generated from each sprint will be the following:

* Sprint 1: Prototype with working core use cases and a piloting plan in order to start gathering feedback.
* Sprint 2. Full working MVP. This means that not only the core use cases will be implemented, but also the payment module, the registration module and the basic admin will be working. The core use cases may be to need adapted according to the feedback resulting from the previous sprint.
* Sprint 3: Polished MVP which will take into account all the feedback from previous sprints.

# Team members performance measurement

In order to measure our productivity, we will be using Toggl. At the beginning of each sprint, we will have the tasks with their corresponding time estimation. At the end of the week, the estimated time will be divided by the real time invested in that task. This will be the effiency ratio of this task. For each team member, the mean of their efficiency will be calculated, and it will be the member’s performance ratio. A ratio between 0.8 and 1.2 is considered the expected performance.

A ratio between 1.2 and 1.5 is considered as more efficient than expected, and a ratio bigger than 1.5 is considered more efficient than desired and the causes for this will be investigated.

A ratio between 0.8 and 0.5 is considered less efficient than expected, and a ratio smaller than 0.5 means that there have been major issues with that task and the reason why will be investigated.

Besides this ratio, it will also be taken into account whether or not a user has finished his tasks, and in case there are some tasks left unfinished, we will try to find out the reason and act accordingly.

We considered whether or not measure the project manager effiency using a different method. We came to the conclusión that it was better not to in order to maintain consistency with the other ratios, as he will also be doing tasks that can be measured in time and in their completion status, just as the other members.

Reasons why the performance may be better than expected:

* The tasks assigned to a member where easier than expected and therefore, took less time than the estimated. It will be taken into account so that he may receive a bigger workload in the future and the member will be suggested to review in depth the work he has carried out if he finishes it in less time than expected.
* Bad time estimation for that task. For the next set of similar tasks, their estimated time will be reduced until it is similar to the one that carrying out that task took.

If the performance is worse than expected, it is a bigger problem than taking less time than expected. The reasons why this may have happened are the following:

* Bad time estimation, just as when it takes less than it should. The same protocol previously mentioned applies to this case.
* A team member is not working properly. The member will be told that his attitude must change and will be closely monitored for the next set of tasks.
* Unexpected problems or the member did not have the skill required to complete the task in that timeframe. If there where unexpected obstacles, these problems and how they were solved will be written down in order to easily deal with them should the appear again. If the problem was that the team member was simply not able to do the tasks within the estimated time, it will be taken into account so that he is not assigned similar tasks and these are assigned to more efficient members.

An acceptable ratio is one whose value is between 0.5 and 1.5, if the performance of a member is not contained in that interval, we will know there is a problem that must be urgently dealt with. Regardless, the strategies available Will always be applied so that all the team can reach an optimal efficiency ratio, just with less urgency the closer their ratio is to the ideal.

# Sprint 1 initial planning

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sprint 1 | Group members | | | | | | |
| Week | Adrián Cantón | Daniel Carpio | | Juan Rodríguez | | Pablo Rebollo | Rafael Fresno |
| March 18-22 | Design of the data model. 2hx2 | | | |  |  | |
| Setting up the development environment 0,5hx5 | | | | | | |
|  | | Investigate how to implement angular in our website  1hx1 | | Data model implementation 2,5hx1 | Populate the database with testing data  2hx1 |  |
| Display capsule information, (Tests included) start piloting plan  2hx1 | Front end design, user interface  1hx1 | | User login, and listing capsules  (Tests included)  2,5hx1 | | Advertisement budget  1,5hx1 | Creation, edition and deletion of a basic time capsule (Tests included)  2,5hx1 |
| Weekly review meeting. 0,5hx5 | | | | | | |
| Generate documentation related to the sprint 0,5hx3 | | | | | Work on the PowerPoint slides and rehearsal. 1,5hx2 | |
| March 25-29 | Meeting in order to discuss the feedback received 1hx5 | | | | | | |
| Modular capsules, end piloting plan: 4hx1 | Search capsules(Tests included), user interface  4hx1 | | Make capsules private, email automation.  (Tests included)  4hx1 | | Deadman switch creation, modification and refresh(Tests included)  3hx1 | Social network integration (Tests included)  3hx1 |
| Sprint review meeting. 0,5hx5 | | | | | | |
| Generate documentation related to the sprint 0,5hx3 | | | | | Work on the PowerPoint slides and rehearsal. 1,5hx2 | |

# Sprint 1 state after Week 1(March 22th)

The tasks planned were carried out, although it is true that the tests were no implemented in time and some bugs may appear later during the development. The status of the tasks at the end of this first week were the following (meetings will be excluded from this analysis, as they all took place within the time estimated):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Task | Team member | Status | Time estimated | Time invested |
| Design of the data model. | Adrián C.  Daniel C. | Finished | 4h | 1.5h |
| Setting up the development environment | All members | Finished | 2.5h | 2.5h |
| Investigate how to implement angular in our website | Daniel C. | Aborted | 1h | 2h |
| Implement data model | Juan R. | Finished | 2h | 2h |
| Populate database with testing data | Pablo R. | Finished | 2h | 3.2h |
| Display capsules | Adrián C. | To be tested | 2h | 5h |
| Front end design and user interface | Daniel C. | In progress | 1h | 10h |