

Product Planning StandUp Game

f 15th May 2015

Delft University of Technology

Nick Cleintuar	4300947
Martijn Gribnau	4295374
Jean de Leeuw	4251849
Benjamin Los	4301838
Jurgen van Schagen	4303326

Contents

1	Introduction	2
2	Product	2
2.1	Target Audience	2
2.2	Addressing Customer Needs	2
2.3	Requirements	3
2.4	Gameplay Description	3
2.5	High-level product backlog	3
3	MoSCoW & Product Backlog (User Stories)	4
3.1	Must have	4
3.2	Should have	4
3.3	Could have	5
3.4	Won't have	5
4	Roadmap & Release Plan	6
4.1	Initial release plan	7
5	Definition of Done	7
	Glossary	8

1 Introduction

It is important for companies to keep the health of its employees in mind. Especially in office workplaces, which have a sedentary nature, there are increasing concerns to employee health (Marshall and Ramirez, 2011). Most of the employees in an office spend almost two-thirds of their time sitting (Clemes, Patel, Mahon and Griffiths, 2014).

Excessive sitting during the day can however lead to medical problems. Studies have shown that sitting for most of the day can lead to an increased risk factor for cardiovascular disease, type 2 diabetes, premature mortality as well as some cancers (Gierach et al., 2009; Thorp, Owen, Neuhaus and Dunstan, 2011). This risk factor is independent of how physically active this person is (Bankoski et al., 2011).

The problem is not just with sitting most of the day while executing your daily obligations. As can be read in Clemes et al., 2014, even during lunch breaks the 'high work-time sitting' employees tend to walk little. This means that an employee that is more sedentary moves even less, even though especially that person needs to move around more.

Our product aims to be a tool that can help motivate people to regularly take breaks during the day. This is done through gamification. Gamification uses game elements to encourage non-game activities ranging from being more productive to living healthier (Deterding, Dixon, Khaled and Nacke, 2011).

2 Product

2.1 Target Audience

We envisioned our target group to consist of people who remain inactive for prolonged periods of time. The users of the application will be people who know that living a sedentary lifestyle is bad for their health and seek to change. They just need a little push or reminder.

This is exactly what our game offers. Hourly reminders to get up for 5 minutes and be active, and rewards for doing so. This will make the people feel proud of themselves for actively changing their lifestyle to a more healthy one and it will be the reason why people will keep using our game.

By having the possibility to organise groups with friends we hope that even the unmotivated as well as those who are unaware of the benefits of regularly moving will pick up our game.

2.2 Addressing Customer Needs

The primary customer need that our product will address is motivation. The game encourages people to keep exercising and moving for five minutes after every hour. By using reminders we increase the awareness of sedentary habits for our users. At the same time users are encouraged to play a fun game which rewards them for healthy behaviour. The

game should not feel as a chore that has to be completed every hour but rather as a fun and welcome break in your daily routine.

2.3 Requirements

The game can be played everywhere and anytime, requiring only a smart phone and a small amount of willpower from the players to actively better their sedentary lifestyle.

2.4 Gameplay Description

Every hour, the player can go on a new stroll. When the player starts a new stroll, a 5 minute timer starts. While the player is walking during these strolls, there exists a chance that an event occurs. These events are small challenges that the player has to complete and for which he or she will be rewarded. The more challenges the player is able to complete during these five minutes, the more rewards. When the timer hits zero, the stroll ends and the player has to wait another hour before starting a new stroll.

The rewards consist of collectibles of different rarities, and can be shown off both in and out of game to peers.

2.5 High-level product backlog

Stroll A player must be able to enter a state (the stroll) for five minutes. This happens once every hour and in this state the player can encounter events that have to be completed.

Events A player must be able to complete different types of physical challenges called events during a stroll.

Timer A timer that keeps track of the time to the next stroll and the time passed during a stroll.

User Interface A user interface that requires zero training or experience to use.

Rewards Rewards in the form of collectibles of different rarities

Groups Player groups that enable more rare rewards if the players in said group cooperate.

Collection Screen A screen where the most rare rewards of the players of the group are displayed.

Settings Menu A screen where several options can be adjusted to match the players wishes (e.g. notifications and volume).

3 MoSCoW & Product Backlog (User Stories)

3.1 Must have

These features must absolutely be implemented in the game. They are essential to our game because without them the game does not fulfill the needs of the target audience and the game would be unplayable.

- A player can go on a stroll at maximum once per hour.
 - As a player, I want to be motivated to move once per hour, so that I can refresh my body.
- Only during a stroll can a player receive an event.
 - As a player, I only want to be able to receive events when I am walking during a stroll, so that I am motivated to exercise.
- An event has to be playable.
 - As a player, I want to be able to play the received events, so that I can complete them and get rewards for my effort.
- The player is rewarded for the events completed.
 - As a player, I want to receive reward for my efforts, to help me stay motivated to better my lifestyle.
- The game must contain visual components.
 - As a player, I want to play a fun and engaging game, so that I want to keep on playing

3.2 Should have

These are the features we would like to see in the final version of the game. They are not essential but they add a lot of value in terms of fulfilling the needs of the target audience.

- A player should be able to see his/her rewards
 - As a player, I should to be able to see which rewards I have obtained over time, so that I have a feeling of progress.
- The game should contain a collaborative element.
 - As a player, I would like a collaborative element, because it is fun to play with other people and will keep me more motivated.
- The game should contain sound effects.
 - As a player, I would like sound effects, so that the game feels more interactive.

3.3 Could have

These are the features that would be nice to have in the game, but are not essential and should only be considered when everything else is done.

- A player could reset his/her progress
 - As a player, I might want to reset my progress, so that I can start over.
- A player could play competitive against someone else.
 - As a player, I might want to be able to play competitively against other players, so that I feel even more accomplished when I succeed.

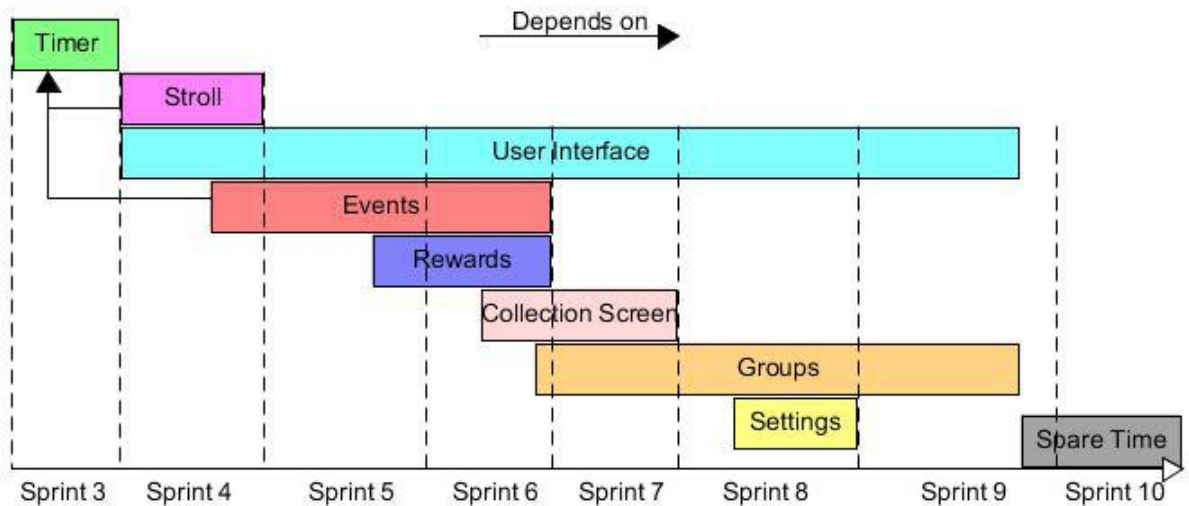
3.4 Won't have

These are the features we decided upon that our game definitely won't have. The reasons vary per feature.

- We won't use geo-location to find nearby players.
 - As a developer, I do not want to use geo-locations. Calculating distance between players has to be accurate. GPS or localisation based on IP address are insufficient for this purpose. It complicates the implementation of the game by a lot, and neither is this the focus of our application.

4 Roadmap & Release Plan

Now that the features are defined of what must, should, could en won't be in the game, we can create a rough visual of how long we expect to work on each task and in which order. Please keep in mind that the following milestones are still subject to change.



Sprint 3 During this sprint we want the timer to function, since this is an element that belongs to the core of the game and therefore a lot of other functions rely on it. Especially the strolls and the events.

Sprint 4 During this sprint we hope to start and finish the strolls, start working on the GUI and also make a start on the implementation of the events.

Sprint 5 During this sprint we continue working on the GUI and the events, and make a start on the reward. If we work efficiently we might finish the events this week.

Sprint 6 If the events are not finished yet, then they should be finished this week. The rewards should also be done this week and we start working on the collection screen.

Sprint 7 The collection screen should be finished and we start working on groups.

Sprint 8 We continue working on groups and the settings menu should be made and completed.

Sprint 9 Finish the groups and the GUI. There should also be some time left that might be needed for unexpected delays.

Sprint 10 Polish and finish the game.

4.1 Initial release plan

Please keep in mind that the following releases are still subject to change.

Sprint 3 The timer should be working and counting down on the main menu. The game should also be able to go to the settings menu and back.

Sprint 4 Players should be able to go on a stroll every hour, and a notification should pop up every time an event is encountered. Encounters do not do anything else other than showing a pop up.

Sprint 5 Events should be playable and rewards can be given at the end of a stroll.

Sprint 6 Rewards and events should fully work.

Sprint 7 The collection of rewards should be accessible and inspected.

Sprint 8 The settings menu should be accessible and functioning.

Sprint 9 Groups and the GUI should be completely done.

Sprint 10 Final product

5 Definition of Done

A feature of our game is considered to be done when:

- The feature behaves as defined in its requirements.
- Every method and every class has javadoc-style commenting.
- Code coverage that can be programmatically tested (e.g. non-GUI) exceeds 75%.
- It has been reviewed by at least two people other than the creator.
- It should pass Checkstyle, PMD and FindBugs within reasonable context.

Glossary

event A small challenge that the player has to complete. 3, 4

reward Collectibles of different rarities to stimulate the player.. 4, 6

stroll A 5 minute walk. 3, 4

References

- Marshal, S. & Ramirez, E. (2011). "reducing sedentary behavior: a new paradigm in physical activity promotion". *American Journal of Lifestyle Medicine*, 5(6), 518–530.
- Clemes, S., Patel, R., Mahon, C. & Griffiths, P. (2014). "sitting time and step counts in office workers". *Occupational Medicine*, 64(3), 188–92.
- Gierach, G., Chang, S., Brinton, L., Lacey, J., Jr, Hollenbeck, A., Schatzkin, A. & Leitzmann, M. F. (2009). "physical activity, sedentary behavior, and endometrial cancer risk in the nih-aarp diet and health study". *International Journal of Cancer*, 124(9), 2139–47.
- Thorp, A., Owen, N., Neuhaus, M. & Dunstan, D. (2011). "sedentary behaviors and subsequent health outcomes in adults a systematic review of longitudinal studies, 1996-2011". *American Journal of Preventive Medicine*, 41(2), 207–215.
- Bankoski, A., Harris, T., McClain, J., Brychta, R., Caserotti, P., Chen, K., . . . Koster, A. (2011). Sedentary activity associated with metabolic syndrome independent of physical activity. *Diabetes Care*, 34(2), 497–503.
- Deterding, S., Dixon, D., Khaled, R. & Nacke, L. (2011). "from game design elements to gamefulness: defining 'gamification'". *In Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, 9–15.