

# Product Planning

*Games Context Group 1 (a.k.a. Funky Donkey Studio)*

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# Introduction

Standing in a queue, a boring experience. Everybody knows what it's like and does it probably a few times a day. In fact, the average person spends 273 days of his life waiting in line!<sup>[1](swns,2012)</sup> We are designing a game that will completely change the way people experience a queue. The game will allow you to use your body to manipulate a curve on which a ball will roll. Queue participants will have to work together to reach targets and avoid obstacles.

When you reach a certain part of the queue you will see a screen with a curve and balls rolling over it. Together with people next to you, you will be able to create a slope that the ball will roll over, allowing you to guide the ball downwards or launch it into the air. As your position in the queue changes, the part of the curve that you can influence will also change. When you reach the game area, you can instantly join in. And when you leave the queue the game will go on with the people behind you. The difficulty of the game increases or decreases based on player performance (i.e. scoring combos) to keep things interesting and to provide an opportunity for new players to experience the game at the appropriate level.

A possible location for the game could be a theme park ride. Besides from making the line seem shorter the game would provide participants the opportunity to get to know the people you will share the ride with. Making the whole experience a lot more fun.

# Product

## High-level product backlog

We have structured the product backlog according to the MoSCoW method as follows:

- Must** have features. Minimal features required for the game to be playable
- Should** have features. The game should have all these features, but is technically playable without them
- Could** have features. These features can be implemented to make the game more fun, but can be scrapped if the project timeline or budget comes under pressure
- Would** have features. If an extension for the game is ever developed, or if we have more time than planned, these features would be implemented first.

## Must have

- As a user I want to be able to use my body to manipulate the wave
- As a user I want to be able to influence the ball's trajectories by manipulating the wave
- As a user I want physics to be available in the game to affect the object rolling on the wave
- As a user, I want new balls to continuously spawn at the start of the screen
- As a user I want to be able to play the game alone or with a variable amount of players
- As a user I want to have certain goals (targets) that I want to hit, so I can build up combos, which influence the game

## Should have

- As a user I want there to be obstacles that hinder the movement of the ball
- As a user I want to be able to score a combo by hitting multiple targets in a row, which increases the difficulty
- As a user I want to be able to lose the combo progress that was achieved when a target is missed, which lowers the difficulty
- As a user I want audio and visual feedback on the state of the game, like cues when I maintain or lose a combo
- As a user I want the game to be aesthetically pleasing, including proper lighting, vibrant colors and interesting environments
- As a user I want the game to have a clear and visual theme that makes the game easy to understand

## Could have

- As a user I want to play with more people than the amount of people that fit on one camera view at the same time
- As a user I want to be able to activate several different power ups that change the game in a fun way
- As a player I want to see myself on screen influencing the wave

**Would have**

- As a player I want to be able to connect to the game with my phone and see the current game

## Roadmap

Sprint #2 1 - 8 mei 2015	Sprint #3 8 - 15 mei 2015	Sprint #4 15 - 22 mei 2015	Sprint #5 22 - 29 mei 2015	Sprint #6 29 - 05 mei / juni 2015	Sprint #7 05 - 12 juni 2015	Sprint #8 12 - 19 juni 2015	Sprint #9 19 - 26 juni 2015	Sprint #10 26 - 03 juni / juli 2015
Implement a ball with gravity	Implement a camera detection system	Implement hittable targets	Implement combo count	Add lighting to the game	Add good graphics to the game	Add multiple cameras	Implement the functionality to see yourself on screen	Implement mobile devices support
Implement a curved line over points	implement stream of balls rolling over the curve	Control curve with movement	Implement audio in the game	Choose a visual theme for the game	Add power ups			
		Implement obstacles		Make player controls feel more fluid	Make a GUI			
Release 1.0						Release 2.0		

# Product Backlog

## User stories of features

- As a user I want to be able to use my body to manipulate the wave
- As a user I want to be able to influence the balls' trajectories by manipulating the wave
- As a user I want physics to be available in the game to affect the object rolling on the wave
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- As a user I want to play with more people than the amount of people that fit on one camera view at the same time
- As a user I want to be able to activate several different power ups that change the game in a fun way
- As a player I want to see myself on screen influencing the wave
- As a player I want to be able to connect to the game with my phone and see the current game

## **User stories of defects**

-

## **User stories of technical improvements**

-

## **User stories of know-how acquisition**

- As a developer i want to study the jMonkeyEngine documentation so that I have a better understanding of the game engine. Pertaining:
  - audio
  - graphics
  - physics + collision
- As a developer I want to read up on camera detection algorithms (openCV) so that i can use this in the game to detect people their heights



## Initial release plan

For our initial release (version 1.0) the basic features of our game are fully implemented. At this stage the game should be working good and it should also look nice. Our objective is to make the first version of the game in a total of 7 weeks / 7 sprints.

There are a few features that aren't in the initial release. We do think that these features are a great addition the game but aren't required to make an fully functional entertaining game. At the moment the 3 features that aren't planned for the initial release are the following features:

1. *multiple camera's*. With this feature more people can play the game at the same time. It is fun to play the game with more players, however it is not mandatory for our first release.
2. mobile devices support. With this feature it will be possible to see the game on a mobile device. This is a really useful feature as the screen displaying the game might not always be that easy to see in some environments. In most cases the screen will be easy to see so this feature is not in our first release.
3. see yourself on the screen functionality. With this feature participants can see themselves in the game influencing the wave. This feature doesn't really add more to the game other than more clarification, that is why this feature is for the second release.

## Definition of done

### Feature level

- ☐ Passing tests (and > 75% coverage)
- ☐ All tools (PMD, checkstyle, findbugs) report 0 errors/warnings.
- ☐ Documented code (javadocs & comments)
- ☐ All feature-specific acceptance criteria pass (basically all tasks are implemented)
- ☐ Merged feature has been play-tested

### Sprint level

- ☐ Play-tested newest build
- ☐ No known game-breaking defects
- ☐ All scheduled user stories/tasks are either implemented or deferred to the next sprint
- ☐ Architecture design (EAD) document has been updated

## References

- [1] (SWNS, September 2012) “Wait in line: Nearly a year of our life is spent in QUEUES”  
<http://swns.com/news/wait-in-line-nearly-a-year-of-our-life-is-spent-in-queues-24514/>