

ROOM17



Room17 Digital Entertainment

Area54

Business Case



Software Project Management

University of Bucharest

2016

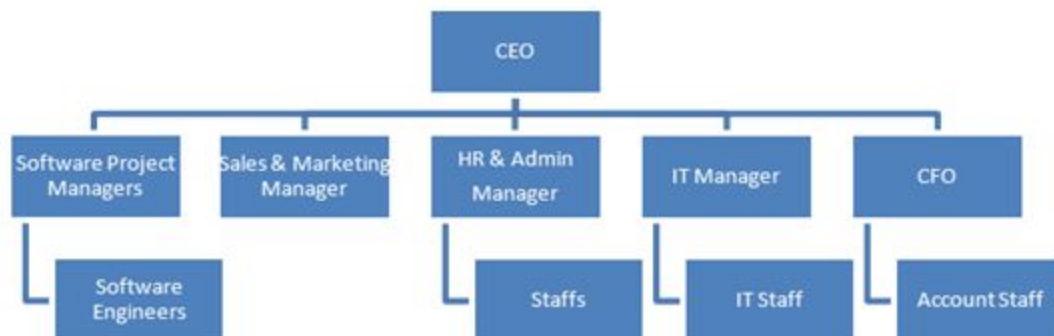
1 Executive Summary

This document aims to analyze the opportunity to develop a game software for PS4 and Xbox One, codename Area54, of RPG type (role playing game) which wants to impose on the market thanks to new ideas introduced in this universe such as isometric gameplay, captivating story, a set the phenomenal player's skills and very bizarre characters inspired by "Revenge of the Shaman" by C. Caruceru.

2 Business Needs and Desired Outcomes

2.1 Organizational Overview

- **Mission**
Our mission is to bring to market a game that will catch the interest of RPG players with its captivating story and attract other casual players in this universe.
- **Vision, Goals, Objective**
The inspiration from the novel "Revenge of the Shaman" brings the extra creativity and uniqueness required for the game.
Our goals will be, but not limited only to: reaching the top 10 RPG games on IGN, GameSpot, and GameRankins and top 20 games of the year; bringing a profit of \$ 200,000 per month in the first four months; establishment of a sequel by altering the story of the book in order to establish a long-term business
- **Current Activities, Key Stakeholders and Clients**
Currently the Room17 company has developed "World of Roberto", "Vraciovici" and "Centauria", all being games inspired from books, the key element of success of these titles; public being very interested in the book – game pair.
Key stakeholders and clients are: SCEE, SCEUS, SCEJ and Microsoft Studios.
- **Organizational Structure:**



- **Existing capacity**
Currently the project has allocated \$ 1,380,000 for its development for a period of one year and a half and has the following staff: 9 SEs, 1 GD, 1 TA, 1 AA, 2 PMs, 2 QAs.

2.2 Business Need

Based on the success and the positive reaction of consumers compared to other developed titles, Room17 has the opportunity and resources to develop another title, market still allowing the entry of a new game.

2.3 Business Outcomes

The following results are being expected at the completion of the project: impositioning of the company in the market of video games among other top video game companies, financial gain brought much over investment and gaining many players sympathy toward Room17 games products.

2.4 Prioritized Requirements

Number	Core	Desirable	Optional
1. Create an attractive demo		✓	
2. Respect timeline	✓		
3. Deliver a very stable game		✓	
4. Interaction with user though console technologies			✓
5. Taking into account customer feedback			✓
6. Close interaction with 1st Party	✓		
7. Obtain legal permissions from book author	✓		

2.5 Assumptions

It is assumed that:	Effect:	Reliability Level: High/Medium/Low
1. Import of previous game parts will be easy	M1 milestone will be achieved	Low
2. Equipment already exists	SEs and QA are ready to test the game at any moment	High
3. No more personnel is needed	Every part in the project planning is achievable	Medium

4. Main game story is already set	Can jump directly to product development	High
5. Similar game will not be released at the same time	Targeted customers will want to purchase the game	High
6. Consoles market will not drop	The investment is justified and will generate profit	High

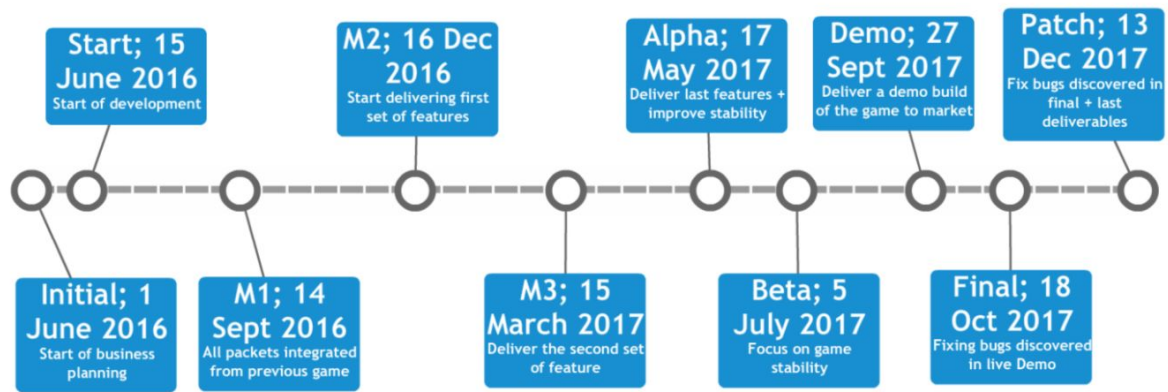
2.6 Constraints

Constraint:	Category
Current hardware is sufficient	Resources
Engineers are able to understand main vision of the game	Business
Milestones will not be exceeded	Deadline
No personnel will resign	Resources
1st Party certification will pass	Legal requirements
No secrets will be disclosed	Privacy
1st Party will handle the exclusive distribution of the game	Business

3 Analysis

3.1 Proposed implementation plan (high level)

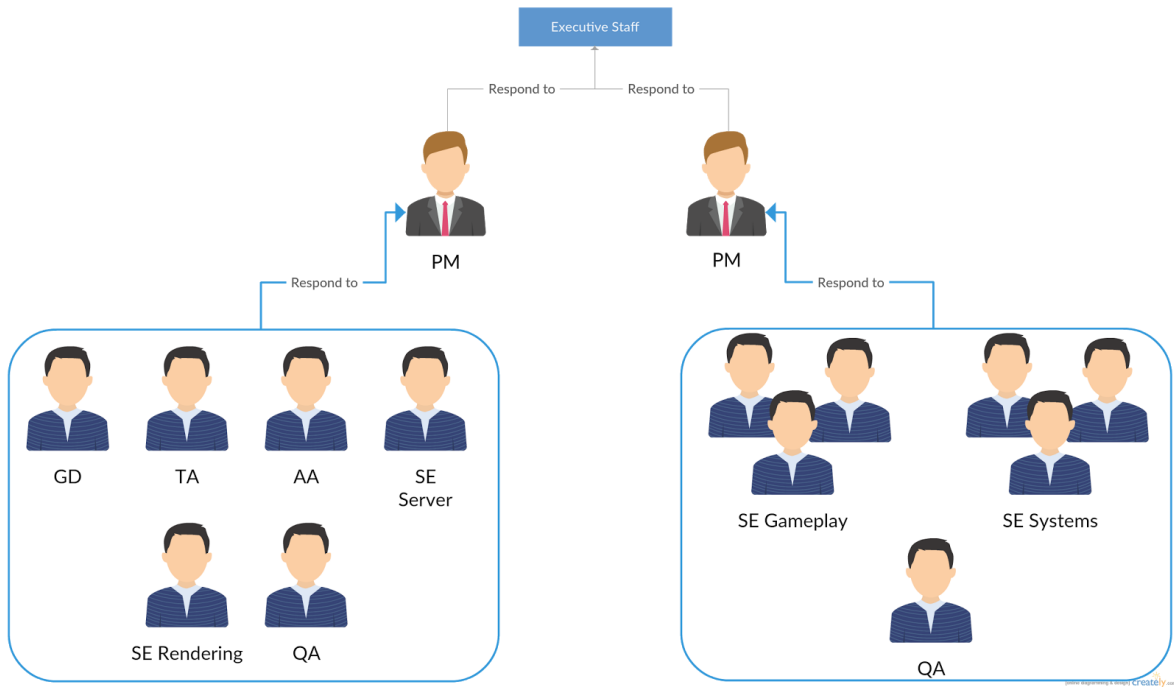
The duration of a year and a half will be divided into intervals called milestones. Milestones will mark specific points along the project timeline in order to keep track of major progress moments that must be reached to achieve completion.



Agile methodology will be used mainly used and, between two milestones, work period is divided into one week sprints, as follows:

Day time	Monday	Tuesday	Wednesday	Thursday	Friday
■	Stand-up 30m	Stand-up 30m	Stand-up 30m	Stand-up 30m	Stand-up 30m
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					Sprint review + planning 1h

In addition, staff will be divided into the following teams:



3.2 SWOT analysis



3.3 Similar game companies

Reducing the market video games only for RPGs, main competitors are limited to:

Name	Title	Year	Sales
CD Projekt RED	The Witcher III	2015	10M
Bethesda Game Studios	The Elder Scrolls: Skyrim	2011	20M
Electronic Arts	Dragon Age: Inquisition	2014	6M

Blizzard	Diablo III	2013	10M
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Compared with the above titles, games Room17 products have the following status:

Title	Year	Sales
World of Roberto	2012	1M
Vraciovici	2014	0.8M
Centauria	2016	80 000 first day

3.4 Market comparison

The main similarities and differences between Area54 and main competitors at this moment are:

Title Aspect	Area54	The Witcher III	The Elder Scrolls: Skyrim	Dragon Age: Inquisition	Diablo III
Dark fantasy		✓	✓	✓	✓
Action	✓	✓	✓	✓	✓
Open World		✓	✓		
Novel based	✓	✓			
Multiple classes	✓		✓	✓	✓
3rd Person	✓	✓	✓	✓	✓
Control party				✓	
Multiplayer				✓	✓
ESRB T Rating	✓*				

* targeted rating

Compared to the games listed above, Area54 has the following advantages:

- Targeting a larger market compared to the competitors due to low ESRB rating (T instead of M)
- Increased simplicity to attract unaccustomed players to RPGs
- Classes of characters much different than a regular RPG

In addition, the aforementioned game presents the following disadvantages:

- Simplicity can raise dissatisfaction among "hardcore" players
- Lack of an open world environment
- Absence of Dark fantasy type approach, with which players have become accustomed

3.5 Expenses known for sure

The below table there can be found licenses that have to be renewed and new subscription that needs to be done:

Product	Company	Units	\$ Price/unit	Validity/unit	\$ Total	Note
Unity with RPG Kit	Unity Technologie	18	75	1 month	1,350	
Photoshop	Adobe	18	13.63	1 month	245.34	
Audition	Adobe	18	27.27	1 month	490.86	
Maya	Autodesk	1	3,200	2 yrs	3,200	
Xbox One game license	Microsoft	1	100	∞	100	6% Microsoft profit
PS4 game license	SCE	1	200	∞	200	8% SCE profit
Bitbucket	Atlassian	18	25	1 month	450	
VS	Microsoft	18	30	1 month	540	
Grand total: \$ 6,576.2						

3.6 Needed technologies

Besides what it can be deduced from the above table, main technologies used for Area54 development are:

Name	Type	Paid?	Already exists?
PS4 SDK	Software	No	Yes
XDK	Software	No	Yes
PS4 Dev Kit	Hardware	Yes	Yes
Xbox One Dev Kit	Hardware	Yes	Yes
Windows	Software	Yes	Yes
PC	Hardware	Yes	Yes
Git	Software	No	Yes
Jenkins	Software	No	Yes
Unity	Software	Yes	Need renew
Unity RPG kit plugin	Software	Yes	Yes
Photoshop	Software	Yes	Need renew
Audition	Software	Yes	Need renew
Maya	Software	Yes	Need renew
Bugzilla	Software	No	Yes
Bitbucket	Software	Yes	No
Visual Studio	Software	Yes	Need renew

3.7 Risks

3.7.1 Qualitative

Risk	Type	Impact	Probability	Countermeasure
1. Public will not “embrace” the game	Project	High	V Low	-
2. Too many bugs found at the Demo	Technical	Med	Low	Invest in an automated tests framework, letting QA focus on details

3. Most of milestone deliverables will not be shipped	Project	High	V Low	Plan a buffer interval of about two months before launching the game
4. Game will have too many processor spikes and will drop frames	Technical	Low	V Low	Analysis of each incremental build of the game for measuring frames frequency
5. There will be no user interaction using console accessories	Project	Low	High	Sets a SE/SEs to train and develop a way of interacting in the early period of development
6. Legal permission from book author will not be granted	Business	High	V Low	Change every name used in the book with something else
7. One of the few consoles dies	Technical	High	Med	Plan a budget for acquiring new consoles
8. One of the employees becomes unavailable for a significant time	Project	High	Med	If it is a SE a budget is established for a new position and communicate the HR department to seek personal. In any other case, a contractor will be hired.
9. Too much storyline to reproduce into gameplay	Technical	Med	Low	Cut scenes more pronounced on dialogues, get over insignificant scenes
10. Competitors launches a similar game	Business	High	V Low	-
11. Gaming consoles will disappear from the market	Business	High	V Low	-
12. Information leakage	Business	Med	V Low	Security audit at regular intervals
13. 1st Party rejects game submission	Project	High	Low	Paid overtime work to fix as soon as possible
14. Financial gain power lower than expected	Business	High	Low	Marketing invest: advertisements and promotional packages

3.7.2 Qualitative

Risk	Impact	Probability	Score (I x P)
7. One of the few consoles dies	5	3	15
8. One of the employees becomes unavailable for a significant time	5	3	15
13. 1st Party rejects game submission	4	2	8
14. Financial gain power lower than expected	4	2	8
2. Too many bugs found at the Demo	3	2	6
9. Too much storyline to reproduce into gameplay	3	2	6
11. Gaming consoles will disappear from the market	5	1	5
3. Most of milestone deliverables will not be shipped	5	1	5
6. Legal permission from book author will not be granted	5	1	5
1. Public will not “embrace” the game	4	1	4
5. There will be no user interaction using console accessories	1	4	4
10. Competitors launches a similar game	4	1	4
12. Information leakage	3	1	3
4. Game will have too many processor spikes and will drop frames	2	1	2

3.8 Positive/Negative effects

By investing in this project, our company enjoys the following benefits:

- *increase company notoriety among players and other companies*
- *adding another title to the portfolio*
- *job retention of current employees*
- *keeping current technologies leads to directly jump into development.*

Although there are many positive influences on the company, there are some negative effects the proposed project brings, namely:

- *developing a new title brings massive costs*
- *with the launch of the new game company expanding cannot be postponed*
- *competition will follow our movements more closely*
- *focusing activity on one area (RPGs) is not a very good strategy to redirect ourselves with market preferences in the future*

3.9 Business impact

Like any other projects, putting it into action will bring the following changes:

- *hiring more people*
- *acquisition of new hardware*
- *updating market strategies*
- *secure the future of the company by reorienting the management departments into to do a deeper analysis and understanding of the competition and understanding of the market trends*

3.10 Costs

Besides expenses presentation in section 3.5 without whom we cannot afford developing the current project, there are some costs associated with implementing the action plans for risks, auxiliary, staff salaries, etc., as follows:

Name	Category	\$ Price / Unit	Units	\$ Total	Notes
GD	Payment	2,260	18	40,680	1 unit = 1 month
TA	Payment	3,736	18	67,248	1 unit = 1 month
AA	Payment	2,691	18	48,438	1 unit = 1 month
SE Server	Payment	4,408	18	79,344	1 unit = 1 month
SE Rendering	Payment	4,641	18	83,538	1 unit = 1 month
SE Gameplay	Payment	5,709	18	102,762	x 3 prs; 1 unit = 1 month
SE System	Payment	5,709	18	102,762	x 3 prs; 1 unit = 1 month
QA	Payment	2,184	18	39,312	x 2 prs; 1 unit = 1 month
PM	Payment	7,733		139,194	x 2 prs; 1 unit = 1

					month
				Total payment: \$ 1,292,832	
Risk #7	Investment	1,000	4	4,000	2 Xbox One + 2 PS4 dev kits
Risk #8	Risk Reduction	5,700	16	91,200	1 new SE hire; 1 unit = 1 month
Risk #8	Risk Reduction	3,500	8	28,000	1 contractor of any kind; 1 unit = 1 month
Risk #13	Contingency Plan	427.52	8	3,420.16	Unit = day
Risk #14	Investment	-	-	-	Out of scope; Marketing field
Risk #2	Investment	-	-	-	Part of development
Risk #9	Risk Reduction	-	-	-	Part of development
Risk #3	Investment	21,335	1	21,335	1 month buffer only with core of the team: 1 SE Gameplay, 1 SE Systems, 1 QA, 1 PM; 1 unit = 1 month
Risk #6	Contingency Plan	-	-	-	Will be deal on the spot
Risk #5	Investment	-	-	-	Part of development
Risk #12	Risk Reduction	656	1	656	Acquire Bitdefender Gravity Zone for 2 years for 14 PCs
Risk #4	Risk Reduction	-	-	-	Part of development
				Total payment: 167,411.16	

	Grand total: \$ 1,466,819.36	plus needed expenses from section 3.5
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As can be seen above, expenses exceed doesn't exceed the allocated budget so much, due to the extra cost brought risk planning. The budget is exceeded by \$ 86,819.36 but since this sum consists almost only with risks, this amount is tolerable because the chances that every risk manifests at the same time are negligible.

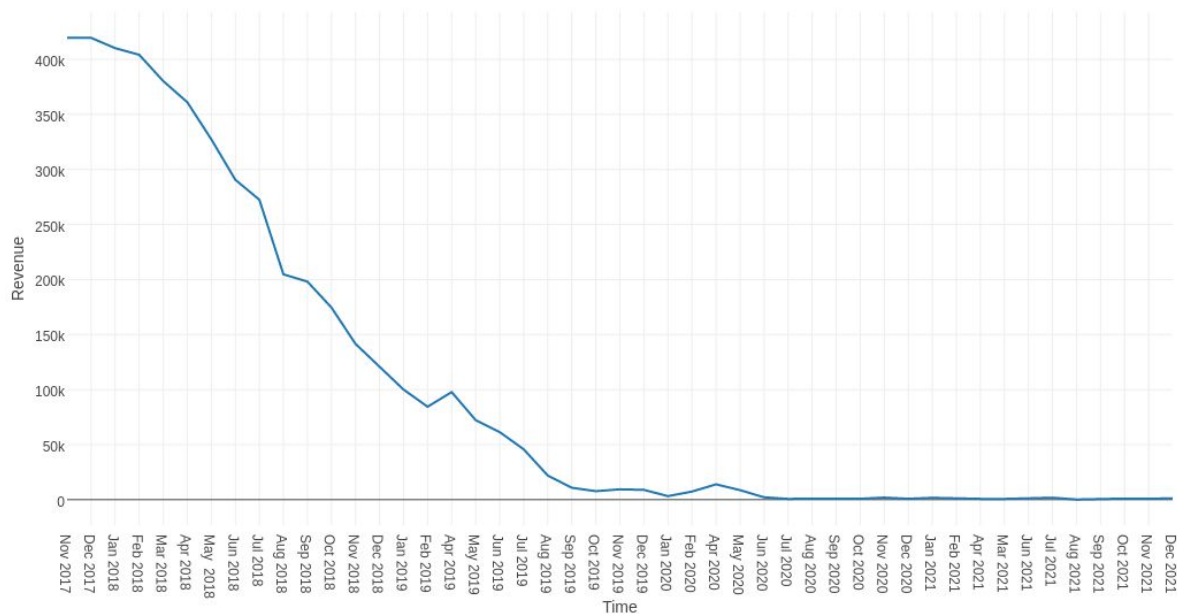
3.11 Starting Price

Depending on how well the development cycle performs, of risks surpassed and number of features delivered in the game, the initial price of the game in the first month will start at \$ 50 for Xbox One (\$ 47 company revenue, \$ 3 Microsoft) and \$ 50 for PlayStation 4 (\$ 46 company revenue, \$ 4 SCE). The price after release is in marketing department hands.

3.12 Predictions and cost benefits

3.13 Graph simulation

Area54 financial prediction



As seen in the above chart, designed based on simulations with data from previous years, it is observed that **payback period** is 4 months and, long-term, total earnings reach somewhere between \$ 4.7 million and \$ 4.5 million approximately.

3.14 ROI

$$ROI = \text{average annual profit} / \text{total investment} * 100$$

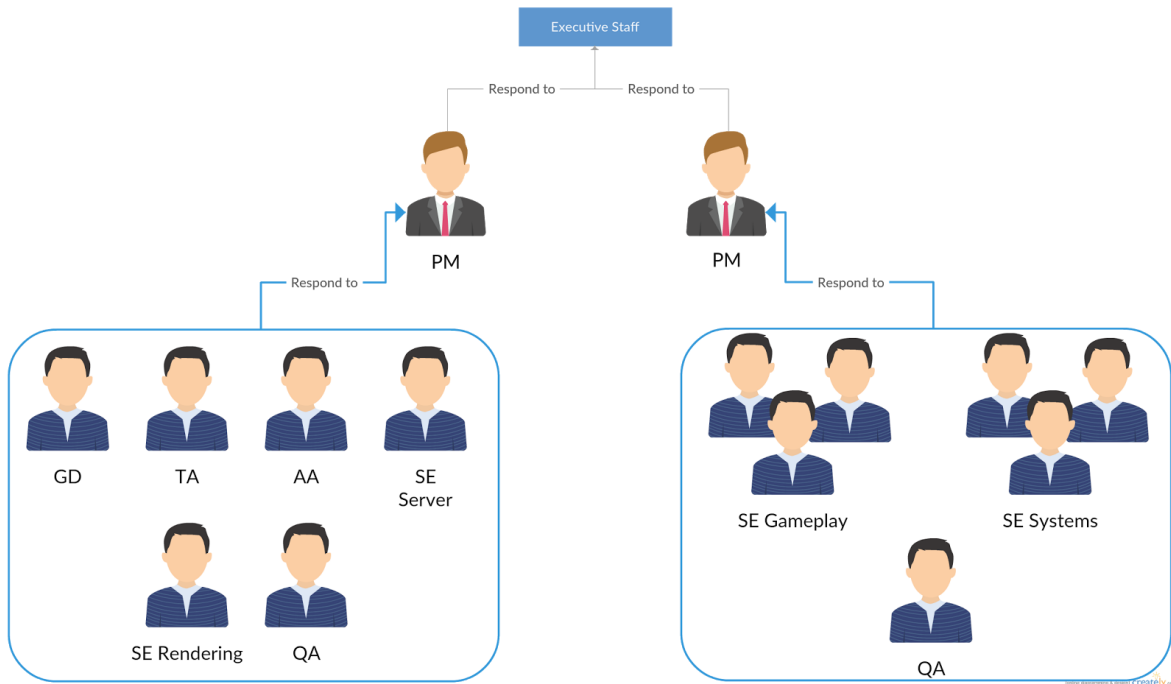
total investment = 1380000

average annual profit = 4696493 / 5 = 939298,6

*ROI = 939298,6 / 1380000 * 100 = 68.06*

3.15 Conclusion

Following debates carried to the present project, discussion with the executive committee, analysis of the pros and cons against its implementation and risks brought to it, investment in the game “Area54” is determined, with minimum chances of failure and a significant monetary benefit brought.



6 Analyse project characteristics

6.1 Distinguish the project as either objective- or product-driven

“Area54” is an objective-driven project because it is an internal project, developed by our team following our internal strategies. Also this project does not have stakeholders in the real sense of the word, and this aspect makes it an objective-driven project. Being that, team has flexibility to choose implementation strategies and also have possibility to change objectives in plain process of development if necessary.

6.2 Analyse other project characteristics

“Area54” is not a project that involves safety-critical requirements because it is just a console game destined for entertainment. Because it contains in-app purchases the project will handle sensitive data like user’s payment credentials. So, the team will make sure sensitive data are kept and used in condition of maximum safety.

Project will use 5.8 Gb of storage space, will need 8 Gb of RAM. For communication with server is needed minimum a 200 Mb/s internet connection.

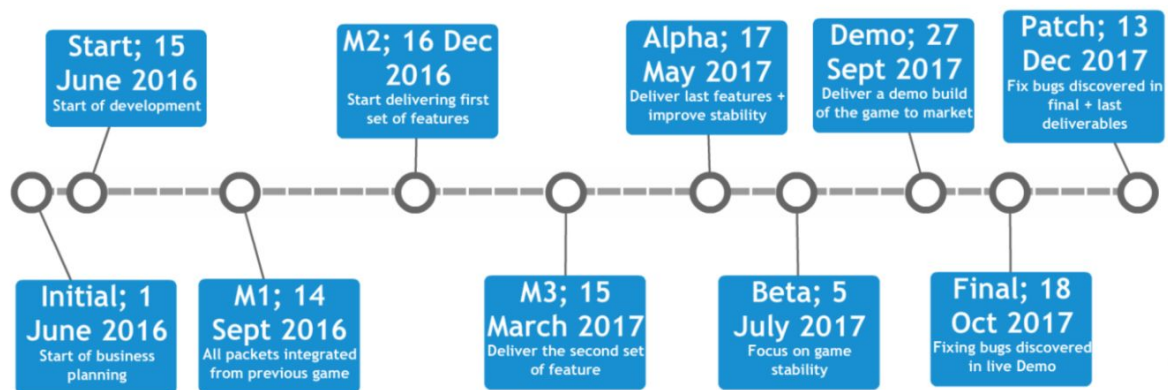
6.3 Identify high-level project risks

Risk	Type	Impact	Probability	Countermeasure
1. Public will not “embrace” the game	Project	High	V Low	-
2. Too many bugs found at the Demo	Technical	Med	Low	Invest in an automated tests framework, letting QA focus on details
3. Most of milestone deliverables will not be shipped	Project	High	V Low	Plan a buffer interval of about two months before launching the game
4. Game will have too many processor spikes and will drop frames	Technical	Low	V Low	Analysis of each incremental build of the game for measuring frames frequency
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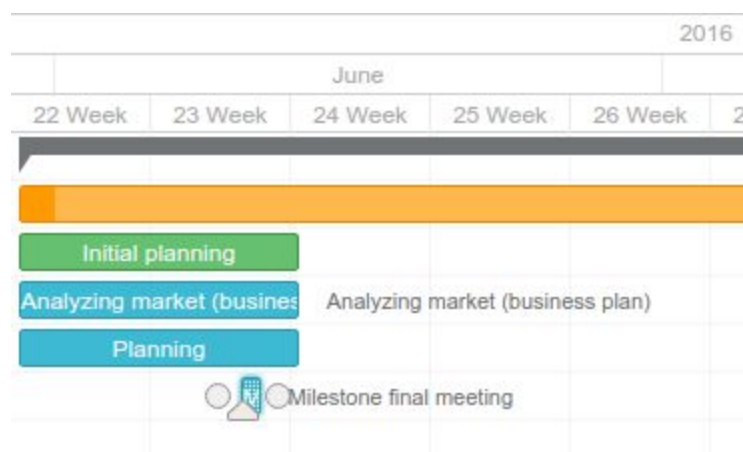
12. Information leakage	Business	Med	V Low	Security audit at regular intervals
13. 1st Party rejects game submission	Project	High	Low	Paid overtime work to fix as soon as possible
14. Financial gain power lower than expected	Business	High	Low	Marketing invest: advertisements and promotional packages

6.4 Select general life-cycle approach

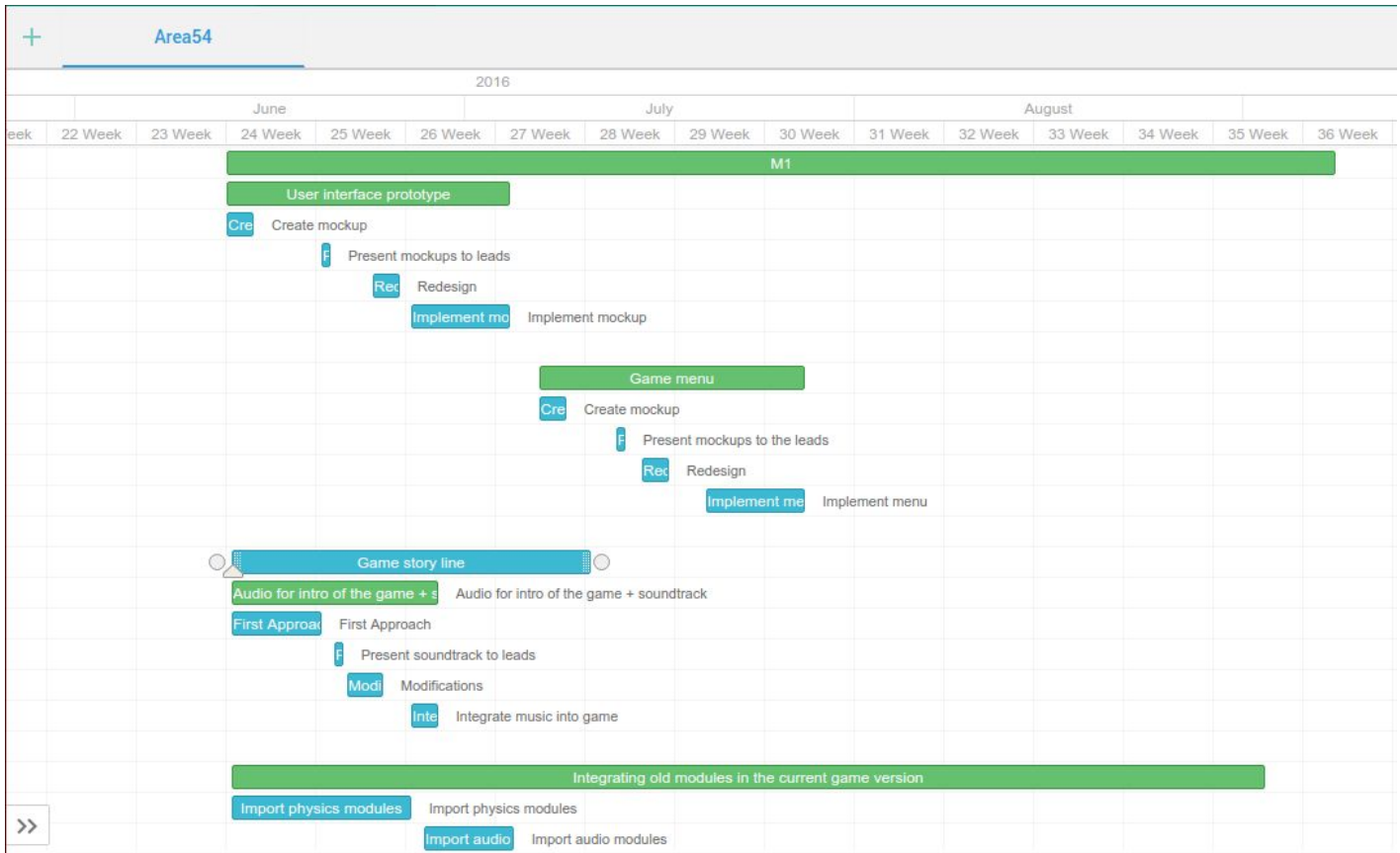
Project will be developed using agile methodology. In this case the development process will be splitted in 10 milestones and each milestone will be splitted in sprints.

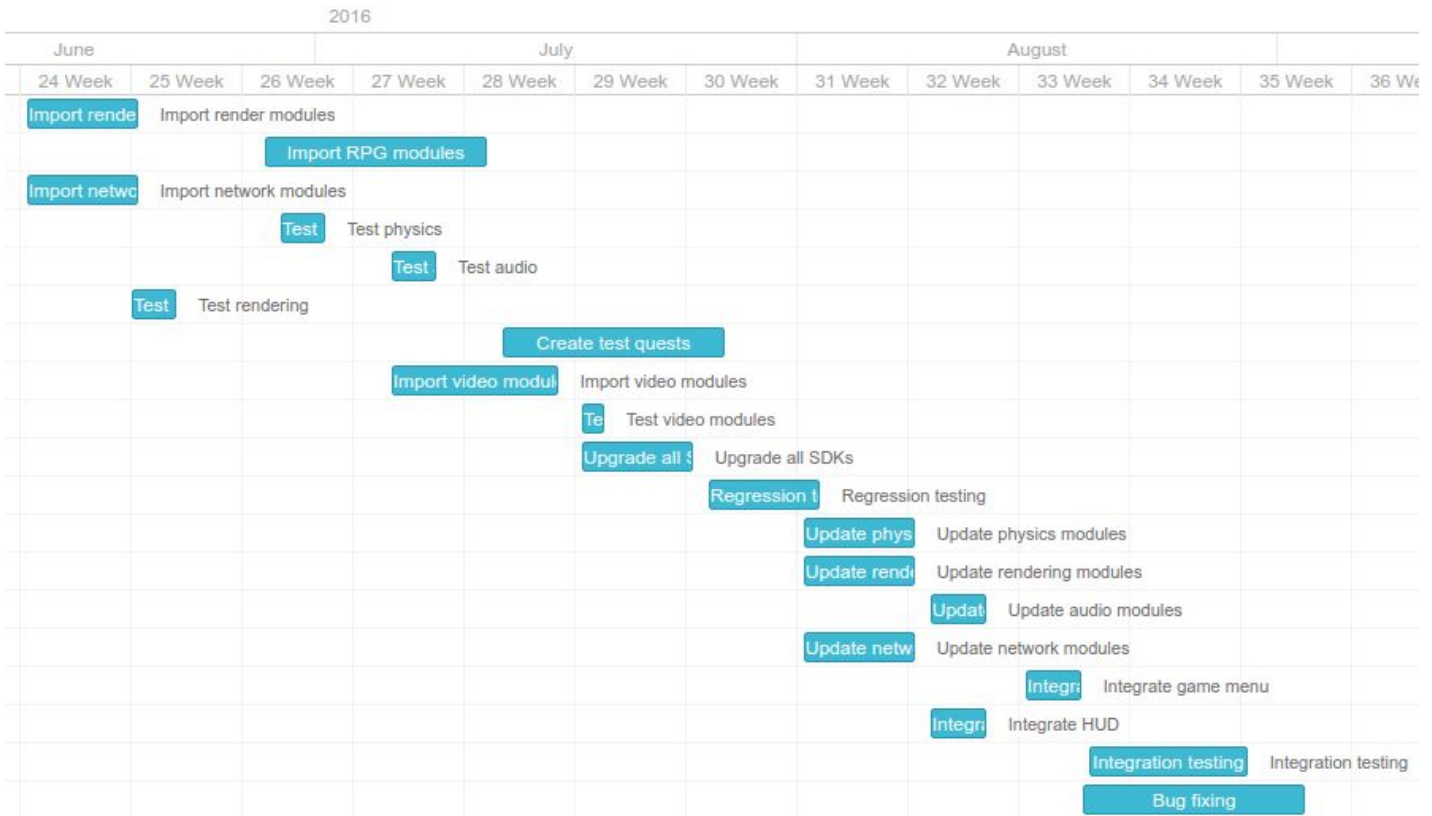


6.4.1 Initial milestone



6.4.2 Milestone 1 (14.09.2016 - 15.12.2016)





6.4.3 Milestone 2 (16.12.2016 - 14.03.2017)

6.4.4 Milestone 3 (15.03.2017 - 16.05.2017)

6.4.5 Alpha

6.4.6 Beta

6.4.7 Demo

6.4.8 Final

6.4.9 Patch

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7 Estimate effort for each activity and Allocate resources

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