MAY 2019

Games Management

V8192218

PERIKLIS PASCHALOGLOU

Contents

1. Executive Summary

Our studio, with a core team of well-trained and talented people, constantly performs at high standards to create the best product possible. We are now taking up the port of Pang, an arcade game, into mobile. We are seeking an $159,650 investment to complete the port into Android and iOS in 5 months. The game will have renewed 2D art and level design as well as animations. As a second phase, in order to further rocket its success, we are planning to add features like multiplayer, team creation and tournaments which will be done in 3 months with an additional investment of $103,800.

Researches from statista.com and ukie.org.uk indicates that most gamers now are people over 35 which helps us because that target group is what we are aiming for. Our marketing team will make sure that the port will crack its way to the top of the charts in its category. In Phase Two, marketing will focus on multiplayer and on the tournament where players may win prizes.

Launching the game in both Android and iOS at the price of $1, we are projecting to break even before the phase two releases, which means that clients will make profit by the second release. That will be achieved by earning 33% of the $1 and the $0,10 of the tournament entry.

This project will be added to our portfolio and we are hoping to boost our studio to a great success. When that happens, we will grow our company by hiring more talented people and paving the way to become a big AAA studio.

2. Business Plan

2.1 Objectives

Game-O-Philia is a game development studio formed by highly skilled veterans with programming and designing background. Game-O-Philia provides porting, multiplatform game development and support, as well as, 2D/ 3D art and visual effects. Game-O-Philia is committed to high quality, cutting-edge and successful games.

Porting Pang (1989, Mitchell) into Android and iOS is a task that our company will take seriously providing the best service possible. The cost of this Android and iOS port amounts to $159,650 for a completely new feeling of the old arcade game keeping it up to date. The port will be done in 5 months. As a second phase, our team is bound to rocket the game by adding additional features. The second phase will last 3 months, and its cost is $103,800, making a cumulative cost of both phases at $263,450.

2.2 The Market

According to a report from statista.com (*Figure 1: General Mobile Market*), mobile games now account 51% of global revenues in gaming industry with an estimated increase to 59% by year 2021. The gaming industry is a strong economic force ranking #1 in market value at $63bn Newzoo *(Figure 2: Game Industry Value - General)* forecasts.

Nowadays we come across many forms of rebooting or remaking of old genres of entertainment, including movies, music covers, and most importantly games. Based on that,

arcade games now rank #2 in the top mobile gaming genre in 2018 (*Figure 3: Game Genre by Penetration*). By porting a retro arcade game into mobile the immediate target group is anyone 30 - 35+ who experienced the coin-up arcade machines. As of 2018, the demographic for 35+ gamers is 57% of global mobile gamers, which indicates that our port will be attractive (*Figure 4: Mobile Gamer Demographics*).

Coin-up arcade machines in Asia still producing more than $700m annually (Sambe, 2009)[1] and gamers in Asia gravitate towards this genre of mobile games. This generates a potential appeal of a retro arcade game ported in mobile. Asia is leading with 45% of the global gaming market followed by North America at 23% and Western Europe at 20% (*Figure 5: North America Infographic, Figure 6: Western Europe Infographic, Figure 7: Asia Infographic*).

2.3 What we will bring
- Game ports: From and to any platform.
- 2D/ 3D Design and art.
- Game concepts and development.
- Talented team with 40 years of experience combined.
- On time completion.

Our team consists of talented Programmers, Designers, Artists, Animators. Our team has created 5 successful and profitable games so far and outsourced development and design work for more than 10 companies.

2.4 The Product
As stated above, our company offers game ports, and this product is to port the game Pang (1989 Mitchell) into mobile. The complete port of the original game must be done in 5 months (Phase One) at the cost of $159,650 with a complete and fresh look keeping the main essence the same as the original.

For *Phase One* our team will make sure that the game will be adjusted to 2019. Better maps will be created leaving behind the "undetailed" one (see Image 1), smoother and more realistic characters (player, animals) as well as background images will be created replacing the ones below (see Image 2 and 3).

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[1] Sambe Y. (2009) Japan's Arcade Games and Their Technology. In: Natkin S., Dupire J. (eds) Entertainment Computing – ICEC 2009. ICEC 2009. Lecture Notes in Computer Science, vol 5709. Springer, Berlin, Heidelberg

Image 1: World map from original game

Image 2: Early Stage

Image 3: Last Stage

We are offering bolt on features for an additional $103,800 which will be completed in 3 months (Phase Two).

Phase Two includes online multiplayer with the ability to create teams and fight 1 on 1 as well as participate on monthly tournaments where they will be able to win prizes such as vouchers or even real money. In order to enter the tournaments people will have to pay $0,10. Tournaments will take place occasionally (Halloween, Summer, Easter, Elections, etc.), being adapted design-wise each time to the specific event (see Image 4). The game will also have other in-app purchases like "unlocking countries" to start a "war" and eventually conquer the earth (see Image 5).

Image 4: Example of tournament taking place on Halloween
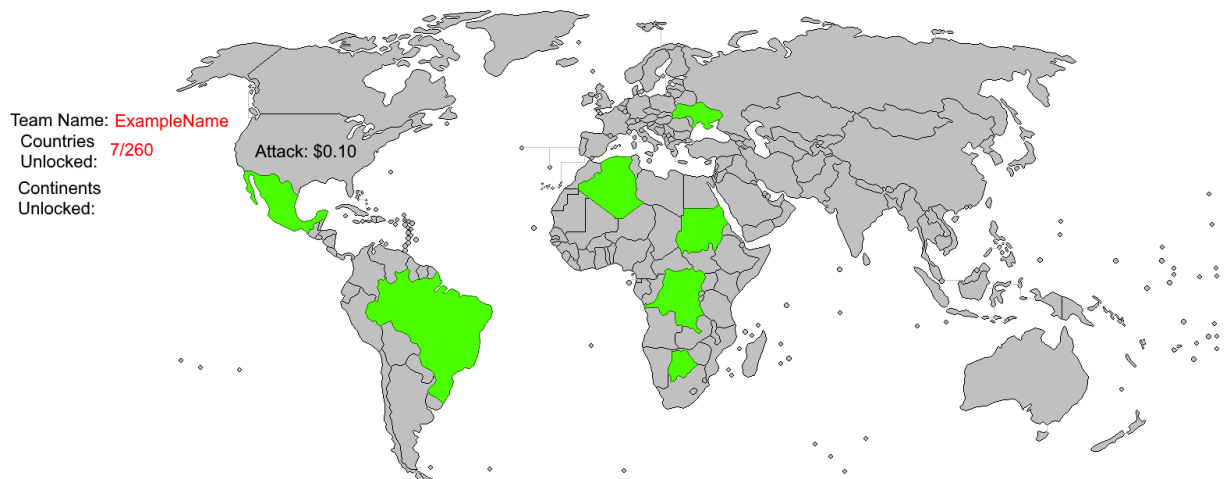
Image 5: Example of "Country war" in-app purchase.

This ported game differs than its rivals because there are limited retro arcade games implemented in mobile games that offer prizes too. And since the market we aim is 35+, most gamers now, it makes it easier for people to enjoy playing, paying as little as $0,10 for a tournament with the possibility to win prizes too.

2.5 Setting up the business

In order to create a well-established company that can become AAA in the future we will need to acquire the best team. Since the core team is very talented, we will eventually need young and talented people to join us in the journey to AAA. We will need to find and train people to become great leaders in their field.

Depending on the project, our well-trained marketing team will make good use of the funds to make sure out games will be heard and played by everyone. In *Phase One* and in *Phase Two*, marketing will cost $20,000.

A workforce of 12 people will be starting to work on this project and as the sales grow additional personnel will be added as needed. The Leaders of each field will be responsible for their team and to maintain their deliverables on time. Once a week a meeting will be held between the project manager and the leaders to report on the progress of the game.

We will use distinct processes to create and maintain Game-O-Philia' high standards, which means firing team members who cannot cope with company's progress. On the other hand, anyone who deserves it, will be rewarded for their involvement in our success.

Our team will have several meetings (internal milestones) to monitor the progress. Each internal milestone will take place 10 days before each milestone.

2.6 <u>Long term view and Financial Targets</u>

We are projecting to have flat sales the first two months of port launch (May) and then we project to attain 500,000 downloads the first two months and increase them by 10% each month. We are hoping to see a bigger raise of downloads around the end of the second phase of the game with multiplayer added and live tournament with prizes (September - October). With a good marketing will take advantage of Halloween by implementing it as a seasonal tournament, with more tournaments to come (Christmas, etc.).

The app will be available in Apple and Play stores for $1, of which, 30% is store's share and from the remaining $0.70 the investor will get 25%. Below is a chart with the investor's earnings projected via downloads, and it shows that the money invested for both phases of the port will be earned before the end of phase two. The investor will be also entitled to 33% of the $0,10 from the tournament's entry and 20% of "country unlocking" feature which will cost $0.50.

PROJECTED CLIENT'S REVENUE FROM DOWNLOADS

$310,000.00

$225,000.00

$105,000.00

$65,625.00

$28,125.00

$-

June   July   August   September   October   November

– – Play Store / Apple Store
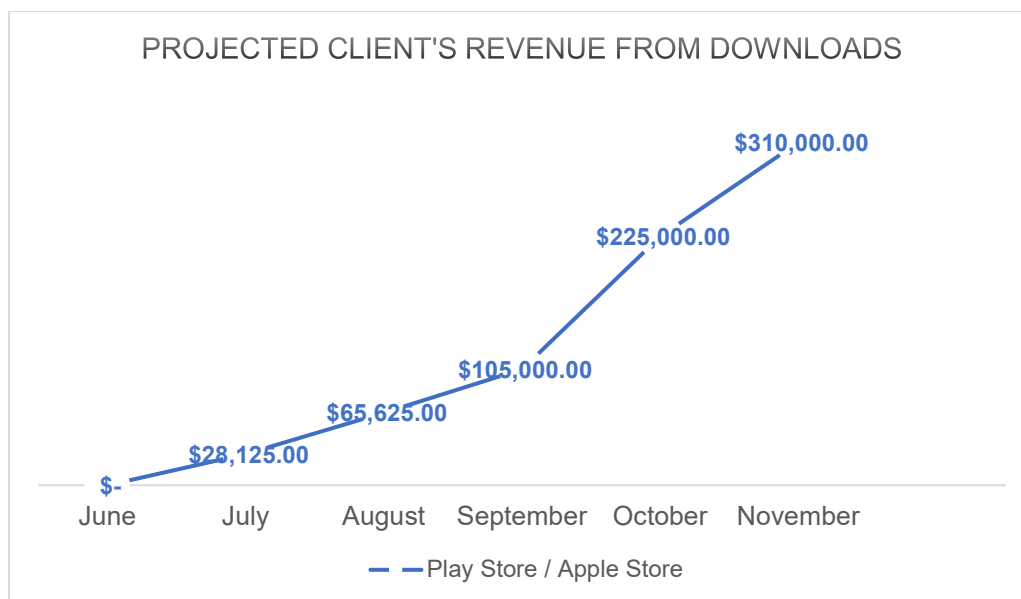
Chart 1: Revenue from Mobile downloads alone

2.7 Use of funds

The money invested to this Android and iOS port will be used to create the best product and market it accordingly. In Game-O-Philia we will make sure that while most of the money will go towards development, a good portion will be for marketing in order to spread the word of a retro arcade "revival" with possibility to win prizes too.

Money will be spent on Asian countries translation where the market is very big for these types of games.

When the company starts to grow, money will be used to relocate into a bigger commercial building in order to accommodate more people who will be essential to the growth. Better equipment will be bought, and broader marketing will take place.

3. Project Phases

3.1 Project Diagrams

3.1.1 Team Structure
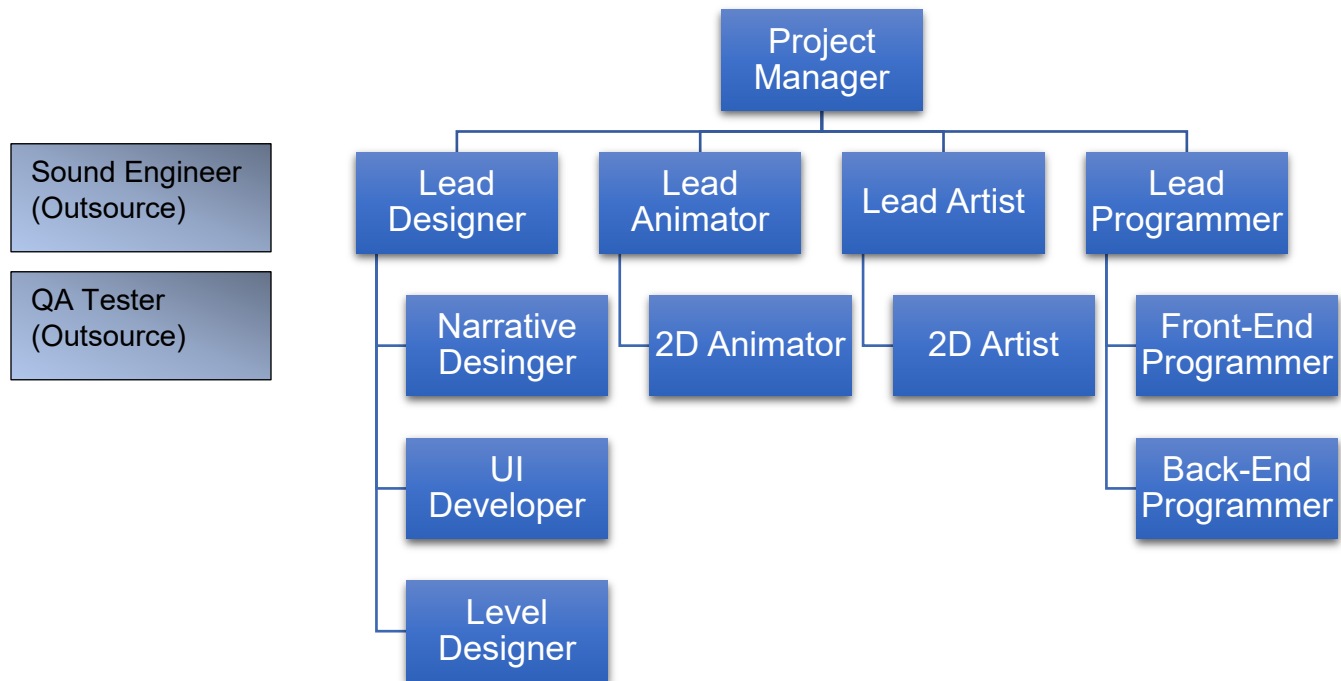
Chart 2: Team Hierarchy

3.1.2 <u>Product Breakdown Structure</u>
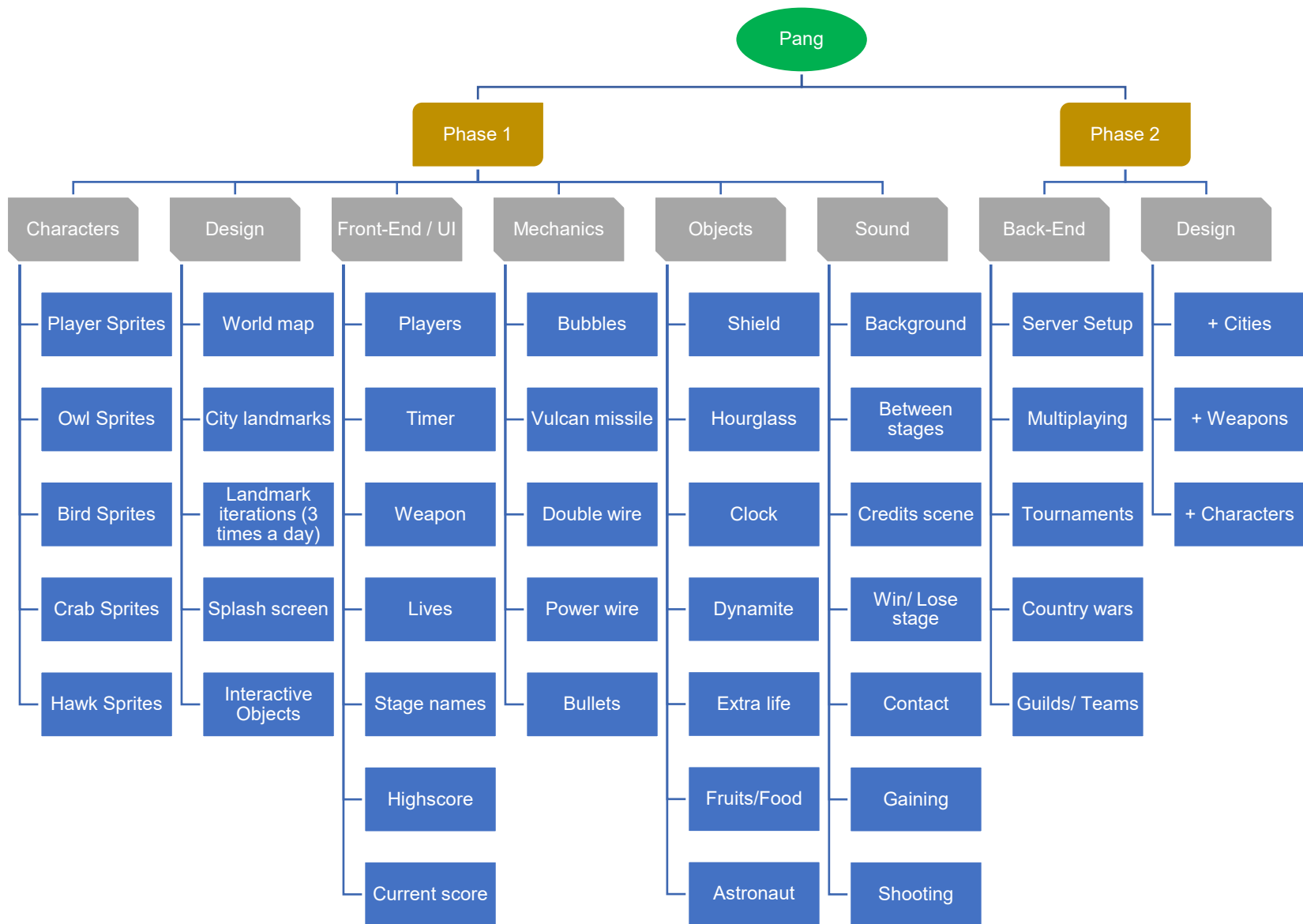
Chart 3: Product Breakdown Structure

3.1.3 Product Flow Diagram

Working vulcan missile — **Bullets**

Working Double wire — **Working Power wire**

Bird Sprites — **Hawk Sprites**

Owl Sprites — **Crab Sprites** — **Player Sprites**

Current weapon

Countdown timer — **Players' names** — **Current / High score**

Lives left — **Stages' names**

17 City Landmarks — **Ladders, breakable obj.**

Bubble Sprite

Art Pass

Weapons

Fruits/Food = extra points — **Extra life**

Finished Sprites

General World Map — **3 (times a day) * landmark** — **Splash Screen** — **Interactive objects**

Clock = time stop — **Bubbles bouncing** — **Hourglass = slow down**

Animation Pass

Design Pass

Win/ Lose stage

On Contact

Gain points, weapons

Shooting

Working mechanisms — **Sprite Animations** — **Finished Front-End** — **Finished Designs**

Effects — **Credits Scene**

Bug Fixing

Between stages — **Background**

To be done

Finished Stage

Checks

End Products

Finished Sounds — **Finished Assets** — **Finished Code**

Pang Phase One

Server Setup — **Multiplayer Connectivity**

Tournaments — **Country wars** — **Guilds/ Teams**

More Cities — **More Weapons** — **More Characters**

Customization

Back-End Connectivity — **More Designs**

Pang Phase Two

Chart 4: Product Flow Diagram

9

3.2 Phase One: Port

3.2.1 Employee costs

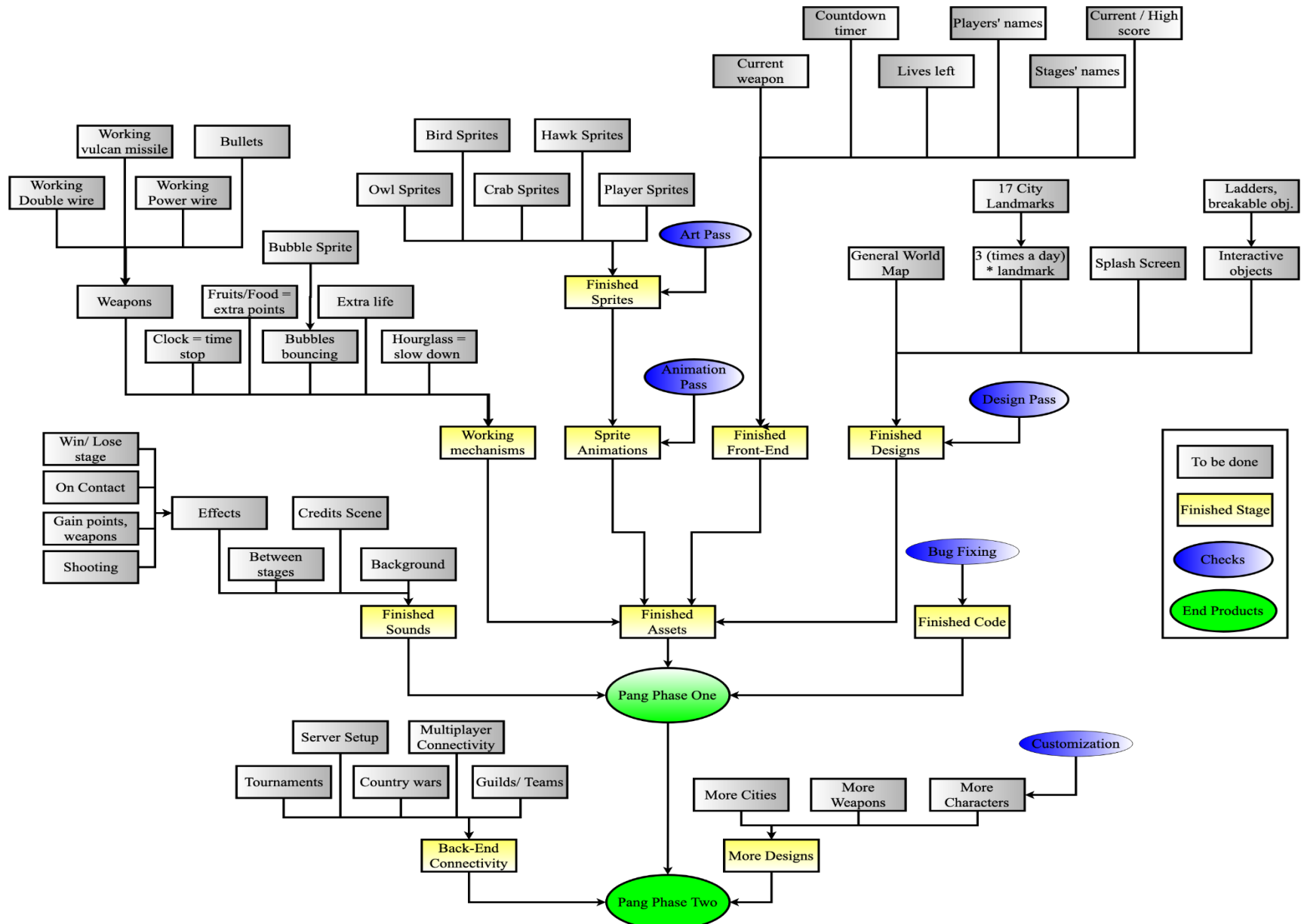| Phase One (Port)														
					NIC	13.8%		Pension	4%					
Positions	Annual Salary	Monthly Salary	February		March		April		May		June		Total Per Person	
			Work	Cost	Work	Cost	Work	Cost	Work	Cost	Work	Cost	Work	Cost
Project Manager	$ 40,000	$ 3,330	1	$3,923	1	$ 3,923	1	$ 3,923	1	$ 3,923	1	$ 3,923	5	$ 19,614
Lead Designer	$ 35,000	$ 2,920	1	$3,440	1	$ 3,440	1	$ 3,440	1	$ 3,440	0.25	$ 1,250	4.25	$ 15,009
Narrative (Temp)	$ 15,000	$ 1,250											0	
UI Developer	$ 16,000	$ 1,330					1	$ 1,567	0.25	$ 569			1.25	$ 2,136
Level Designer	$ 20,000	$ 1,670	0.75	$1,550	1	$ 1,967	1	$ 1,967					2.75	$ 5,484
Lead Animator	$ 35,000	$ 2,920			0.5	$ 1,980	1	$ 3,440	1	$ 3,440	0.25	$ 1,250	2.75	$ 10,109
2D Animator	$ 20,000	$ 1,670			0.5	$ 1,132	1	$ 1,967	1	$ 1,967			2.5	$ 5,067
Lead Artist	$ 35,000	$ 2,920	1	$3,440	1	$ 3,440	1	$ 3,440	0.25	$ 1,250			3.25	$ 11,569
2D Artist	$ 20,000	$ 1,670	0.75	$1,550	1	$ 1,967	1	$ 1,967					2.75	$ 5,484
Lead Programmer	$ 35,000	$ 2,920	1	$3,440	1	$ 3,440	1	$ 3,440	1	$ 3,440	1	$ 3,440	5	$ 17,199
Front-end	$ 23,000	$ 1,920			0.5	$ 1,302	1	$ 2,262	1	$ 2,262	0.25	$ 822	2.75	$ 6,647
Back-end	$ 20,000	$ 1,670											0	
Sound Engineer Ext	$ 22,000	$ 1,830			1	$ 2,156	1	$ 2,156					2	$ 4,311
QA Tester Ext	$ 20,000	$ 1,670									1	$ 1,967	1	$ 1,967
		Total		$17,342		$24,746		$29,568		$20,290		$12,651		$104,596

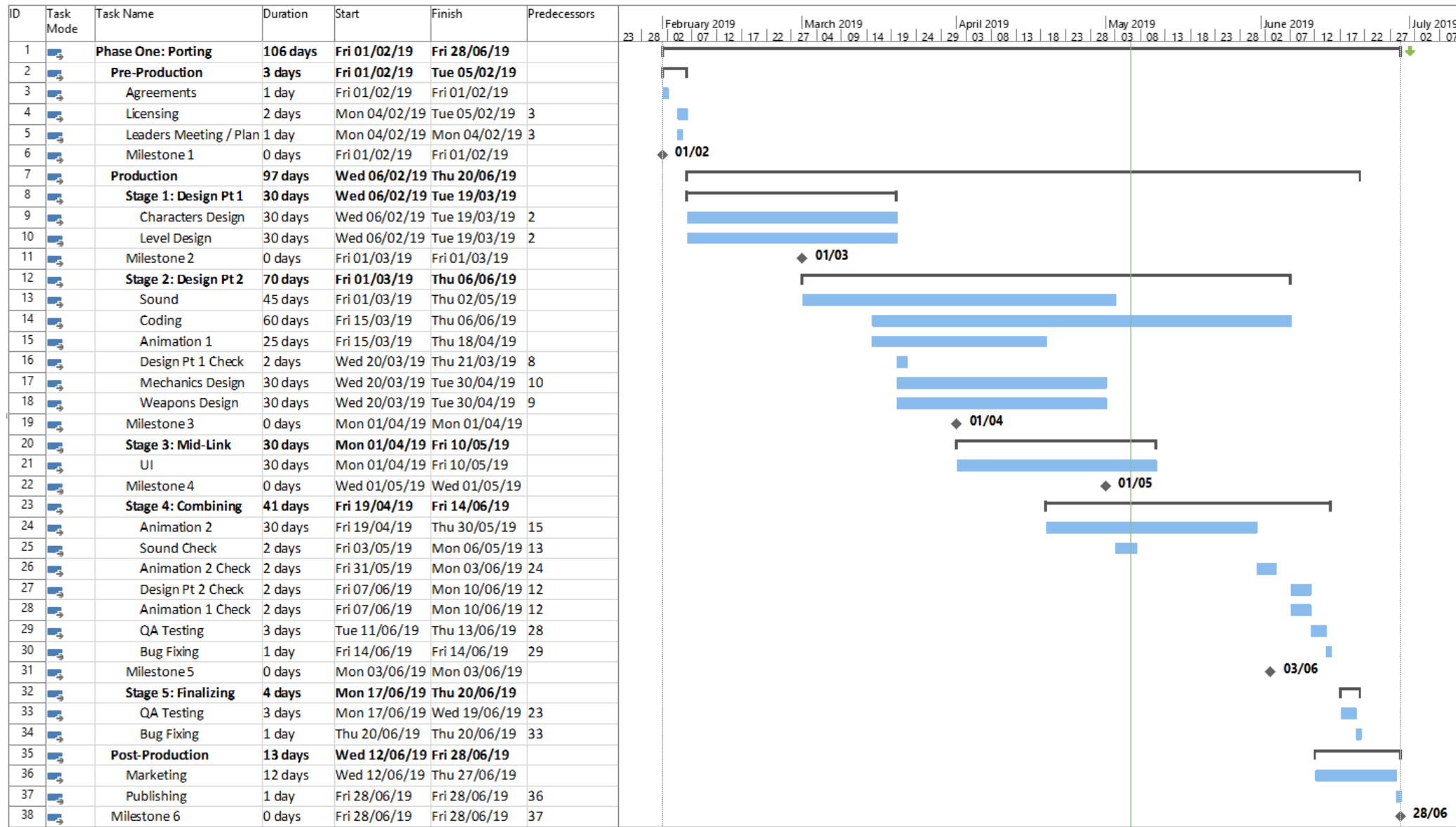*Table 1: Phase One schedule and costs*

3.2.2 Timeline

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors
1		**Phase One: Porting**	**106 days**	**Fri 01/02/19**	**Fri 28/06/19**	
2		**Pre-Production**	**3 days**	**Fri 01/02/19**	**Tue 05/02/19**	
3		Agreements	1 day	Fri 01/02/19	Fri 01/02/19	
4		Licensing	2 days	Mon 04/02/19	Tue 05/02/19	3
5		Leaders Meeting / Plan	1 day	Mon 04/02/19	Mon 04/02/19	3
6		Milestone 1	0 days	Fri 01/02/19	Fri 01/02/19	
7		**Production**	**97 days**	**Wed 06/02/19**	**Thu 20/06/19**	
8		**Stage 1: Design Pt 1**	**30 days**	**Wed 06/02/19**	**Tue 19/03/19**	
9		Characters Design	30 days	Wed 06/02/19	Tue 19/03/19	2
10		Level Design	30 days	Wed 06/02/19	Tue 19/03/19	2
11		Milestone 2	0 days	Fri 01/03/19	Fri 01/03/19	
12		**Stage 2: Design Pt 2**	**70 days**	**Fri 01/03/19**	**Thu 06/06/19**	
13		Sound	45 days	Fri 01/03/19	Thu 02/05/19	
14		Coding	60 days	Fri 15/03/19	Thu 06/06/19	
15		Animation 1	25 days	Fri 15/03/19	Thu 18/04/19	
16		Design Pt 1 Check	2 days	Wed 20/03/19	Thu 21/03/19	8
17		Mechanics Design	30 days	Wed 20/03/19	Tue 30/04/19	10
18		Weapons Design	30 days	Wed 20/03/19	Tue 30/04/19	9
19		Milestone 3	0 days	Mon 01/04/19	Mon 01/04/19	
20		**Stage 3: Mid-Link**	**30 days**	**Mon 01/04/19**	**Fri 10/05/19**	
21		UI	30 days	Mon 01/04/19	Fri 10/05/19	
22		Milestone 4	0 days	Wed 01/05/19	Wed 01/05/19	
23		**Stage 4: Combining**	**41 days**	**Fri 19/04/19**	**Fri 14/06/19**	
24		Animation 2	30 days	Fri 19/04/19	Thu 30/05/19	15
25		Sound Check	2 days	Fri 03/05/19	Mon 06/05/19	13
26		Animation 2 Check	2 days	Fri 31/05/19	Mon 03/06/19	24
27		Design Pt 2 Check	2 days	Fri 07/06/19	Mon 10/06/19	12
28		Animation 1 Check	2 days	Fri 07/06/19	Mon 10/06/19	12
29		QA Testing	3 days	Tue 11/06/19	Thu 13/06/19	28
30		Bug Fixing	1 day	Fri 14/06/19	Fri 14/06/19	29
31		Milestone 5	0 days	Mon 03/06/19	Mon 03/06/19	
32		**Stage 5: Finalizing**	**4 days**	**Mon 17/06/19**	**Thu 20/06/19**	
33		QA Testing	3 days	Mon 17/06/19	Wed 19/06/19	23
34		Bug Fixing	1 day	Thu 20/06/19	Thu 20/06/19	33
35		**Post-Production**	**13 days**	**Wed 12/06/19**	**Fri 28/06/19**	
36		Marketing	12 days	Wed 12/06/19	Thu 27/06/19	
37		Publishing	1 day	Fri 28/06/19	Fri 28/06/19	36
38		Milestone 6	0 days	Fri 28/06/19	Fri 28/06/19	37

Chart 5: Phase One Timeline

3.2.3 Milestones

MILESTONE #1	Start of The Project
DUE DATE	**01-Feb-19**
COST	**$20,220**

MILESTONE #2	Design Process	
DUE DATE	**01-Mar-19**	
COST	**$28,756**	
TASK NAME	**DESCRIPTION**	**TEST CRITERIA**
ART:		
Player design	*Ongoing process*	*Ongoing process*
DESIGN:		
Background images	*Ongoing process*	*Ongoing process*

MILESTONE #3	First Draft Designs	
DUE DATE	**01-Apr-19**	
COST	**$32,663**	
TASK NAME	**DESCRIPTION**	**TEST CRITERIA**
ART:		
Player design	*The player is the main character of the game*	*Player has all body parts and his outfit matches the original*
Weapons Design	*Ongoing process*	*Ongoing process*
DESIGN:		
Background images	*Each level has a background image that represents a famous landmark of a country*	*The similarity of the image landmark to each country's landmark*
Mechanics	*Ongoing process*	*Ongoing process*
ANIMATION:		
Characters	*Ongoing process*	*Ongoing process*

MILESTONE #4	Mid Project Draft	
DUE DATE	01-May-19	
COST	$25,030	
TASK NAME	DESCRIPTION	TEST CRITERIA
ART:		
Weapons Design	Ongoing process	Ongoing process
DESIGN:		
Menu/ Mechanics	Ongoing process	Ongoing process
PROGRAMMING:		
Programming assets	Ongoing process	Ongoing process
ANIMATION:		
Player Animation	Main character to walk left right, climb up and down.	Test the player if he can walk / climb around and all animations to be visible.

MILESTONE #5	Combining	
DUE DATE	03-Jun-19	
COST	$19,074	
TASK NAME	DESCRIPTION	TEST CRITERIA
DESIGN:		
Menu	Main menu and menu around the main scene (scores, etc.)	All information must be presented in the menu (Stage name, score, etc.)
PROGRAMMING:		
Programming Assets	Ongoing Process	Ongoing Process
SOUND:		

Sound composition	*Background sounds as well as sound effects are plenty throughout the game*	*Check if all sounds are of great quality*
ANIMATION:		
Animals	*Ongoing Process*	*Ongoing Process*
Boosters	*Ongoing Process*	*Ongoing Process*
Weapons Animation	*Ongoing Process*	*Ongoing Process*

MILESTONE #6	Finalizing / Marketing / Release	
DUE DATE	**28-Jun-19**	
COST	**$30,124**	
TASK NAME	**DESCRIPTION**	**TEST CRITERIA**
PROGRAMMING:		
Characters	*-*	*Check if player moves smoothly on input and if the right keys are used*
Assets	*Player interactions with assets*	*Check if the player interacts with assets smoothly. If he can pick boosters, shoot etc.*
Weapons and Player	*-*	*Player to be able to move around and interact with weapons as well as use them*
ANIMATION:		
Animals	*5 different animals appear throughout the game to confuse the player*	*Animals to have good and smooth movements*
Boosters	*7 different boosters/ helpers appear throughout the game to help player*	*Boosters to have good and smooth movements*
Weapons Animation	*3 Different weapons*	*Check how weapons look like when they fire out. + Their Projectiles*

3.2.4 Total Cost

Phase One Costs	
Employees	$ 104,596
Office Costs (5 months)	
Rent (1000m^2)	$ 9,000.00
Electricity	$ 1,425.00
Heating (Gas)	$ 590.00
Water	$ 250.00
Software	$ 750.00
Insurance	$ 375.00
Council tax	$ 500.00
Catering Facilities	$ 1,500.00
Marketing	$ 20,000.00
Licensing	$ 25,000.00
Translations	
Korean	$ 1,500.00
Japanese	$ 1,500.00
Chinese	$ 2,000.00
Outsource Travel Costs	$ 500.00
Apple Store Annual Fee	$ 99.00
Google Play Store Fee	$ 25.00
Total	**$ 159,610**

Table 2: Total Phase One costs

3.3 Phase Two: Online Connectivity

3.3.1 Employee costs

Positions	Annual Salary	Monthly Salary	July Work	July Cost	August Work	August Cost	September Work	September Cost	Total Per Person Work	Total Per Person Cost
					NIC 13.8%		Pension 4%			
Project Manager	$ 40,000	$ 3,330	1	$ 3,923	1	$ 3,923	1	$ 3,923	3	$11,768
Lead Designer	$ 35,000	$ 2,920	1	$ 3,440	1	$ 3,440	1	$ 3,440	3	$10,319
Narrative (Temp)	$ 15,000	$ 1,250	0.75	$ 1,160					0.75	$ 1,160
UI Developer	$ 16,000	$ 1,330			1	$ 1,567	0.5	$ 902	1.5	$ 2,468
Level Designer	$ 20,000	$ 1,670	1	$ 1,967	1	$ 1,967	0.5	$ 1,132	2.5	$ 5,067
Lead Animator	$ 35,000	$ 2,920			0.5	$ 1,980	0.5	$ 1,980	1	$ 3,960
2D Animator	$ 20,000	$ 1,670			0.5	$ 1,132	0.5	$ 1,132	1	$ 2,265
Lead Artist	$ 35,000	$ 2,920	1	$ 3,440	1	$ 3,440			2	$ 6,880
2D Artist	$ 20,000	$ 1,670	1	$ 1,967	0.5	$ 1,132			1.5	$ 3,100
Lead Programmer	$ 35,000	$ 2,920	1	$ 3,440	1	$ 3,440	1	$ 3,440	3	$10,319
Front-end	$ 23,000	$ 1,920	0.25	$ 822	1	$ 2,262			1.25	$ 3,084
Back-end	$ 20,000	$ 1,670	1	$ 1,967	1	$ 1,967	0.25	$ 715	2.25	$ 4,649
Sound Engineer Ext	$ 22,000	$ 1,830			0.5	$ 1,241	0.5	$ 1,241	1	$ 2,481
QA Tester Ext	$ 20,000	$ 1,670					0.5	$ 1,132	0.5	$ 1,132
		Total		$22,126		$27,490		$19,036		$68,652

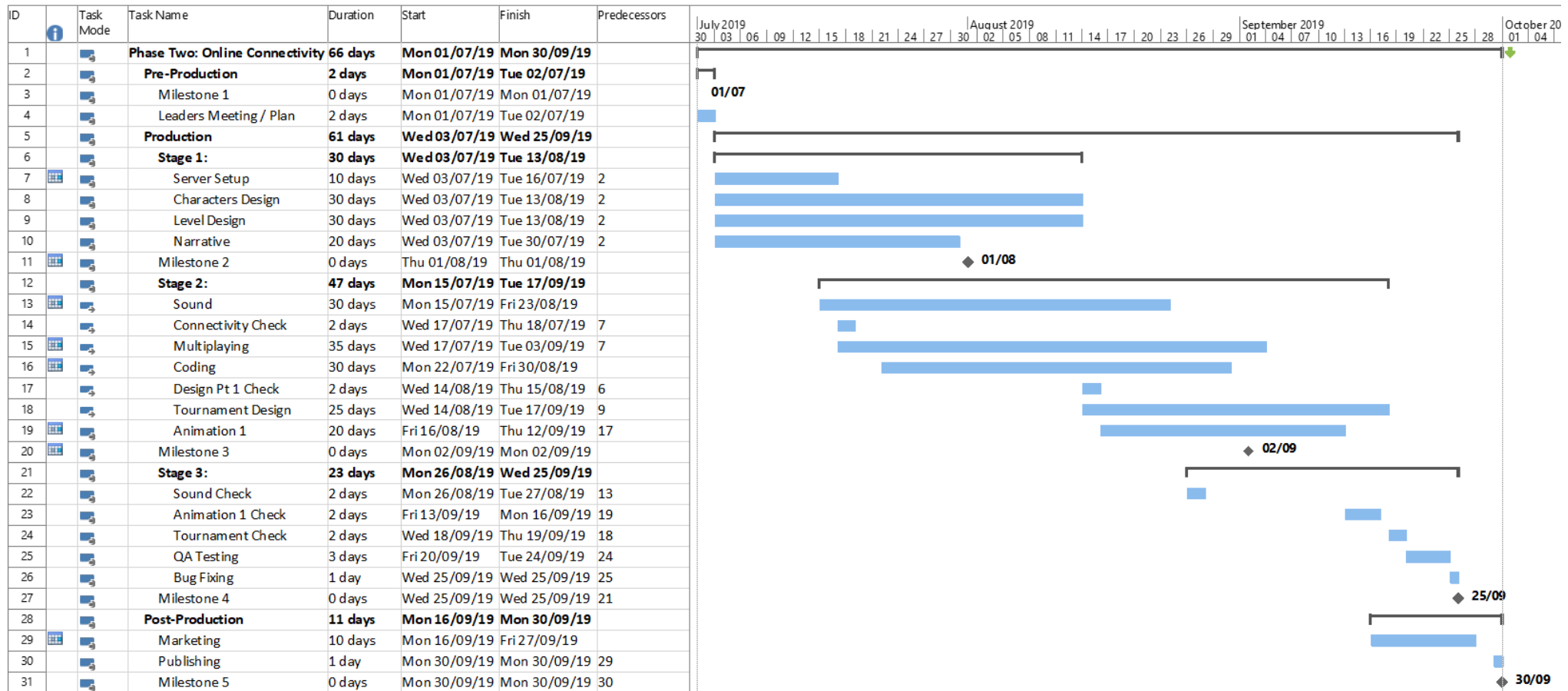*Table 3: Phase Two schedule and costs*

3.3.2 Timeline

ID		Task Mode	Task Name	Duration	Start	Finish	Predecessors
1			**Phase Two: Online Connectivity**	**66 days**	**Mon 01/07/19**	**Mon 30/09/19**	
2			**Pre-Production**	**2 days**	**Mon 01/07/19**	**Tue 02/07/19**	
3			Milestone 1	0 days	Mon 01/07/19	Mon 01/07/19	
4			Leaders Meeting / Plan	2 days	Mon 01/07/19	Tue 02/07/19	
5			**Production**	**61 days**	**Wed 03/07/19**	**Wed 25/09/19**	
6			**Stage 1:**	**30 days**	**Wed 03/07/19**	**Tue 13/08/19**	
7			Server Setup	10 days	Wed 03/07/19	Tue 16/07/19	2
8			Characters Design	30 days	Wed 03/07/19	Tue 13/08/19	2
9			Level Design	30 days	Wed 03/07/19	Tue 13/08/19	2
10			Narrative	20 days	Wed 03/07/19	Tue 30/07/19	2
11			Milestone 2	0 days	Thu 01/08/19	Thu 01/08/19	
12			**Stage 2:**	**47 days**	**Mon 15/07/19**	**Tue 17/09/19**	
13			Sound	30 days	Mon 15/07/19	Fri 23/08/19	
14			Connectivity Check	2 days	Wed 17/07/19	Thu 18/07/19	7
15			Multiplaying	35 days	Wed 17/07/19	Tue 03/09/19	7
16			Coding	30 days	Mon 22/07/19	Fri 30/08/19	
17			Design Pt 1 Check	2 days	Wed 14/08/19	Thu 15/08/19	6
18			Tournament Design	25 days	Wed 14/08/19	Tue 17/09/19	9
19			Animation 1	20 days	Fri 16/08/19	Thu 12/09/19	17
20			Milestone 3	0 days	Mon 02/09/19	Mon 02/09/19	
21			**Stage 3:**	**23 days**	**Mon 26/08/19**	**Wed 25/09/19**	
22			Sound Check	2 days	Mon 26/08/19	Tue 27/08/19	13
23			Animation 1 Check	2 days	Fri 13/09/19	Mon 16/09/19	19
24			Tournament Check	2 days	Wed 18/09/19	Thu 19/09/19	18
25			QA Testing	3 days	Fri 20/09/19	Tue 24/09/19	24
26			Bug Fixing	1 day	Wed 25/09/19	Wed 25/09/19	25
27			Milestone 4	0 days	Wed 25/09/19	Wed 25/09/19	21
28			**Post-Production**	**11 days**	**Mon 16/09/19**	**Mon 30/09/19**	
29			Marketing	10 days	Mon 16/09/19	Fri 27/09/19	
30			Publishing	1 day	Mon 30/09/19	Mon 30/09/19	29
31			Milestone 5	0 days	Mon 30/09/19	Mon 30/09/19	30

Chart 6: Phase Two Timeline

17

3.3.3 Milestones

MILESTONE #1	Start of The Project
DUE DATE	01-Jul-19
COST	$25,316

MILESTONE #2	Design Process	
DUE DATE	01-Aug-19	
COST	$34,630	
TASK NAME	**DESCRIPTION**	**TEST CRITERIA**
ART:		
Characters Design	*Ongoing process*	*Ongoing process*
BACK-END:		
Narrative	*Narrative for the tournament, "country wars", multiplayer*	*Check for spellings, coherent sentences, structure and if the main idea is understandable*
Server	*Server setup*	*Check the in and out data flow of the server and how many simultaneous processes it handles*
DESIGN:		
Narrative	*Ongoing process*	*Ongoing process*
Level Design	*Ongoing process*	*Ongoing process*

MILESTONE #3	First Draft Design	
DUE DATE	02-Sep-19	
COST	$26,436	
TASK NAME	**DESCRIPTION**	**TEST CRITERIA**
ART:		
Player design	*More players added, with customizations*	*Test the player to be fully customizable and recognizable among other players*
DESIGN:		

Level Design	Tournament creation, country to country war	Check every scene's environment, background images
PROGRAMMING:		
Characters	Character moving in tournament, multiplayer concept	Test player in multiplayer mode. Movement, dueling, etc.
Interactable objects	New multiplayer weapons, obstacles, etc.	Test player interaction with objects in multiplayer mode, while 4+ players exist at the same time
SOUND:		
Sound implementation	More effects used to show trophy win, etc.	Check if sounds are of great quality
BACK-END:		
Multiplayer	Ongoing process	Ongoing process
PROGRAMMING:		
Code	Ongoing process	Ongoing process

MILESTONE #4	**Finalizing / Marketing**	
DUE DATE	**25-Sep-19**	
COST	**$41,000**	
TASK NAME	**DESCRIPTION**	**TEST CRITERIA**
ART:		
Team & tournament	Assets for guilds, tournaments, etc. Like trophies, skins, countries map	Check whether images are of great quality and of high standards
DESIGN:		
Environment design	Level design & surroundings of tournaments, communities, etc.	Check whether images are of great quality and of high standards
ANIMATION:		
Designs	New interactable objects, weapons, trophies, etc.	Check if animations are smooth with particle effects
BACK-END:		
Multiplayer	How many people can log in, if interaction between 2+ is possible	How many people can log in, if interaction between 2+ is possible, and check if payments are going through

MILESTONE #5	**Release**
DUE DATE	**30-Sep-19**

3.3.4 Total Cost

Phase Two Costs	
Employees	$ 68,652.00
Office Costs (3 months)	
Rent (1000m^2)	$ 5,400.00
Electricity	$ 855.00
Heating (Gas)	$ 354.00
Water	$ 150.00
Software	$ 450.00
Insurance	$ 225.00
Council tax	$ 300.00
Catering Facilities	$ 900.00
Marketing	$ 20,000.00
Licensing	
Translations	
Korean	$ 1,500.00
Japanese	$ 1,500.00
Chinese	$ 2,000.00
Outsource Travel Costs	$ 500.00
Gaming Server	$ 1,000.00
Apple Store Annual Fee	
Google Play Store Fee	
Total	**$ 103,786**

Table 4: Total Phase Two costs

3.4 Risk analysis

ID	RISK DESCRIPTION	MITIGATIONS (actions to prevent risk)	CONTINGENCIES (actions to cure risk)	PARTY ACCOUNTABLE	PROBABILITY	LOSS	EXPOSURE
1	Background images take longer than expected due to big amount, delaying iterations.	Ask for more time to finish product. Pay for overtime. Hire more people to split the duties	Designers go to overtime to catch up. If problem continues, hire more people. If nothing changes, find more experienced	Designers	0.9	10	9
2	Money shortage if something goes wrong and PAID overtime will be on effect	Best duties allocation and time management	Hiring of more people, if needed.	Company	0.8	10	8
3	Credit risk. The client will change mind/ run out of money to keep endorsing the development	Legal agreement to ensure that everybody will be paid the hours worked.	Legal actions.	Clients	0.8	10	8
4	Translations are not good enough	Hire 2+ translators to double/ triple check	Find better translators to release a quick patch	Translators	0.7	10	7
5	Brexit / currency risk. Pound rates will drop after Brexit	Assume possible outcomes and act accordingly. Set aside money for damage control	Invest money and time for damage control for a steady progress	External	0.7	8	5.6
6	Liquidity risk of not meeting the projected sales, hence, client payment back takes more time	Good marketing.	Ensure the client that they will get their money back soon, by downloads due to marketing and tournament entries	Company / Market	0.6	8	4.8
7	Network failure, meaning gaming server can't sustain numerous entries	Choose the right server plan (bandwidth, etc.)	If the current server can't support the need, look for others that they can	External	0.6	8	4.8
8	Animation quality is not good enough, making player moving in an unorthodox way	Ensure about animator's experience. If limited, teach them or find other people	Overtime for better rigging. If needed, online fast lessons will be taken.	Animators	0.4	10	4
9	Sound (outsource) clips are not good quality	Research for the best outsource sound studio	Find another outsource studio to take on	Sound Engineers	0.5	8	4
10	Exchange rates from the revenues of tournaments and downloads	Currency forwarding. Binding contract with FOREX to lock the exchange rates for a future time	Set aside money for damage control, if any.	External	0.5	8	4
11	People are not interested in the multiplayer paid tournaments	Good marketing.	Ensure that the prizes that participants can win are visible and worthy.	Company / Target	0.4	8	3.2

12	UK minimum wage increased.	-	During production, cuts will be done if possible. During release, funds will be used from revenue till phase two release	External	0.3	7	2.1
13	Client wants the final product one month earlier	Explain the drawbacks of rushing the project.	Ask for more money to hire more people	Clients	0.3	5	1.5
14	UI inadequacy with fonts that are eye tiring and menu designs are confusing	Pre-production sketch / tests on where anything should go	Reorder / reorganization of the confusing/ tiring parts fast to be kept on track or during overtime	UI Developers	0.3	5	1.5
15	Accidental deletion of code, making it unrecoverable	Continuous back up on the cloud	Programmer will go on overtime to fix / rewrite and catch up	Programmers	0.1	5	0.5

❖ Tables, charts and diagrams inspired by blackboard material and Microsoft templates.
❖ All prices correct in May 2019.
❖ Currency used throughout the project is USD $.
❖ When the project was created the exchange rates were:

USD	1	0.77	POUNDS
USD	1	0.89	EURO
USD	1	6.78	CHINESE YUAN
USD	1	110.33	JAPANESE YEN
USD	1	1,173.17	KOREAN WON

4. <u>Reflection</u>

Our assigned project was to port an arcade game from 1986-1989 into mobile, acting as a Project Manager. We had to create, organize and manage the business and the people involved, as well as research and create some scenarios. So, I choose Pang and jumped into the research.

The main scope to focus on, was a game with totally refreshed graphics, animations and quality of the sound. We had to choose a bolt on scenario after the original port. I chose "Online Connectivity" as the stretch goal which was easy choice because everyone enjoys multiplayer hence the game popularity would be ensured. On the other hand, picturing that game and its needs was challenging. I had to think of features like building teams/ guilds, guild wars between countries, and most importantly the tournament. The tournament idea came to me from a game that I play that has occasionally some tournaments that you can win real money or vouchers.

This project taught me about managing a team of people and make vital decisions for a company. Prior to that, I thought the project manager just orders people around and joins meetings. I learnt the depth of a company's costs, and if it weren't for the charts in UKIE, Newzoo or similar game industry related sites, I would still believe that costs are only the salaries. In addition, I learned that many things could go wrong. The module sessions and the research I did, helped me figure out the risks that may occur in a business can be a lot.

In order to succeed in delivering the project on time, I had to do time management. Having searched for jobs before, helped me find salaries information fast enough to complete a section of deliverables regarding team structure. Another strength of mine was delivering the PBS and PFD fast. On the other hand, dealing with the project timeline, milestones and risk assessment was hard task to do. Every time something wasn't reasonable, changes were made that led to iterations / changes of all charts. The last lab session pointed my mistakes in critical parts, like the PBS which I thought was simply perfect, that gave me better understanding and led me into correcting a great amount of work at the end. Lastly, throughout the project, I had things from the blackboard as templates/ examples with a combination of online excel / word templates.

Finally, I wouldn't say that anything was missing from this module. It would be better though, as a future module development, to break it down into two modules. One as it is, the paperwork, and the other a real porting of the game into mobile. At the beginning, I thought I would never choose the direction of the Project Manager and as lectures proceeded my opinion didn't change. But, while diving into more details I caught myself intrigued about it which can only mean that the staff did a great job delivering this module.
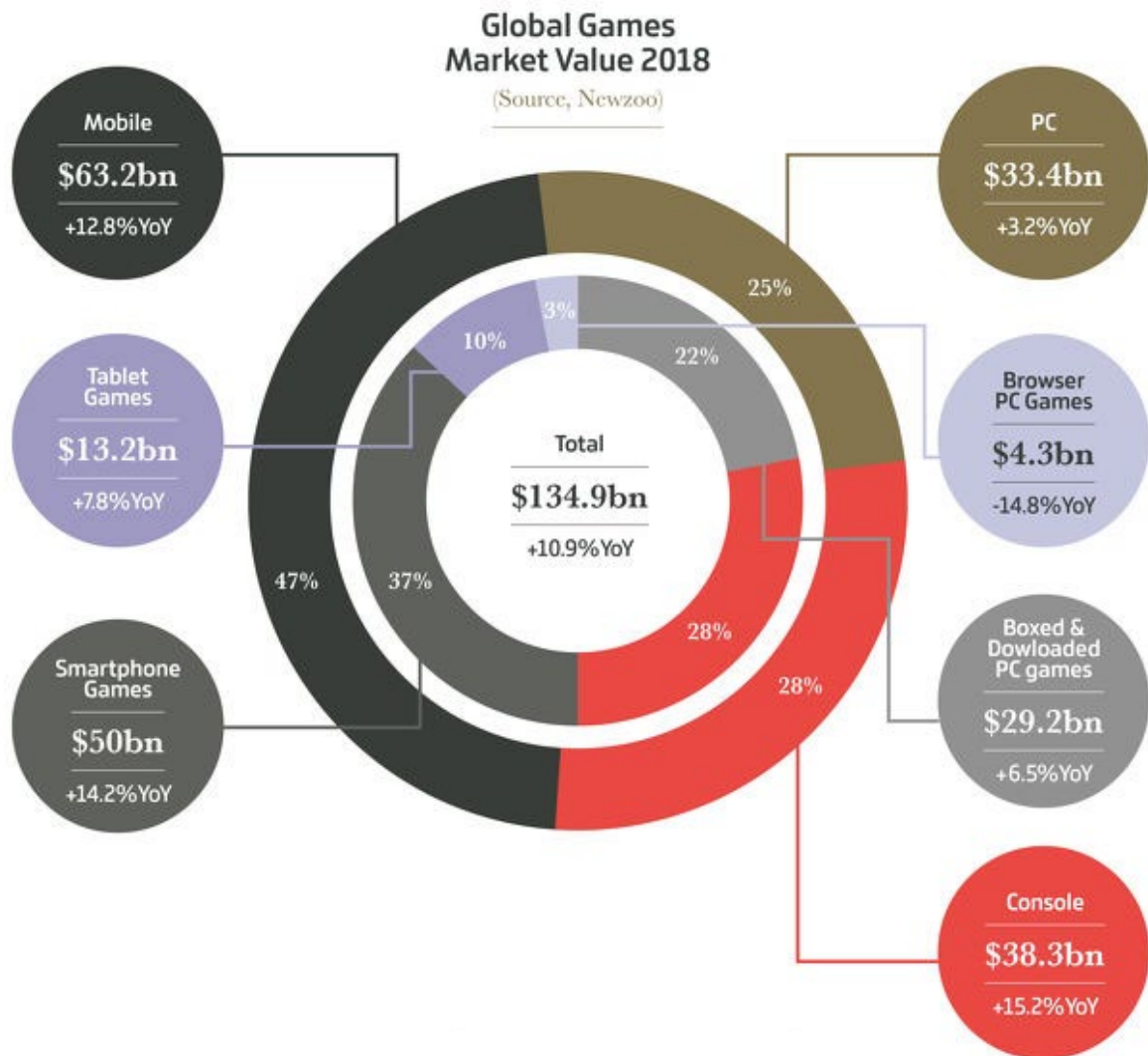
5. Appendices

Figure 1: General Mobile Market

Figure 2: Game Industry Value - General
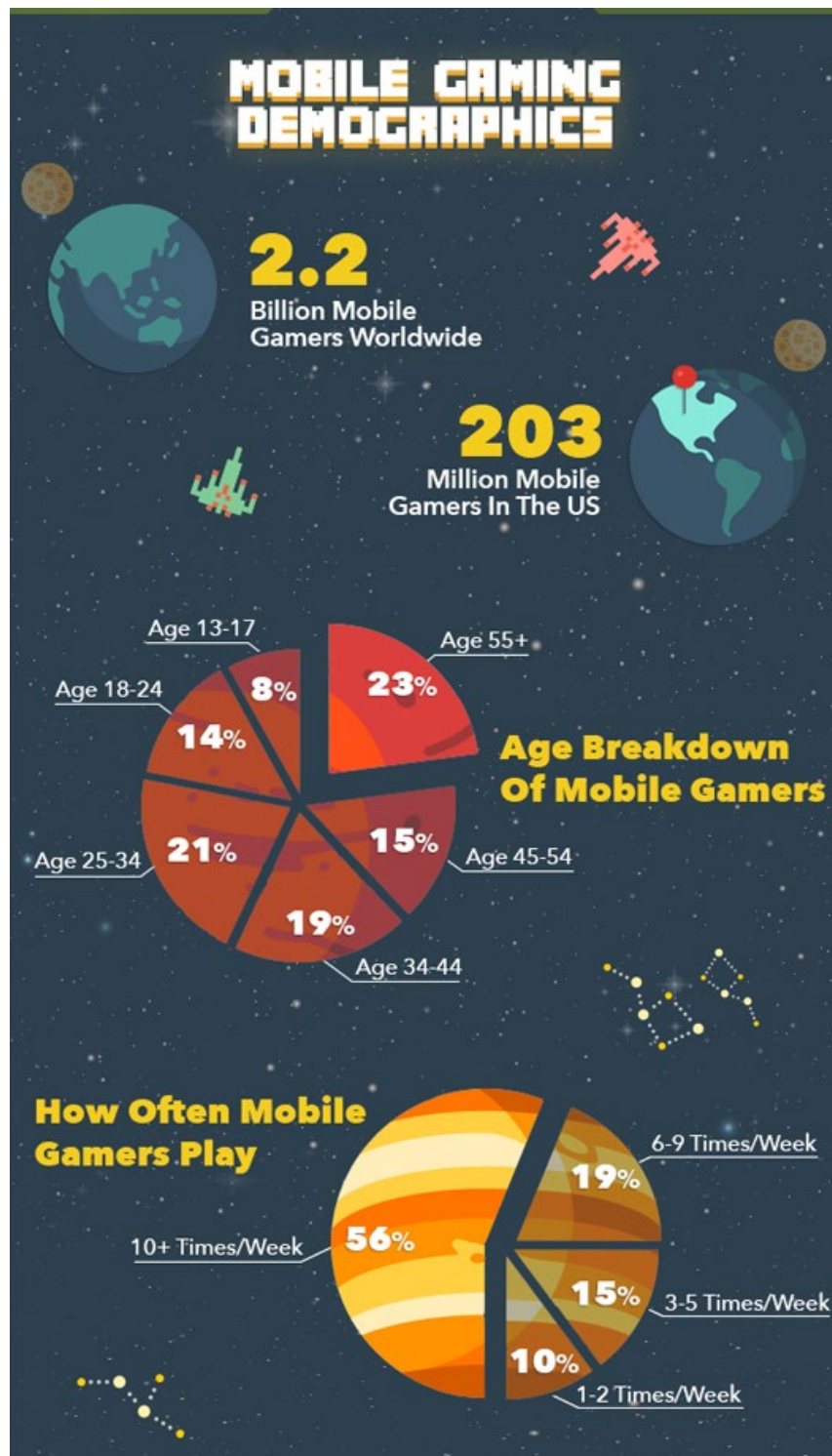
Figure 3: Game Genre by Penetration

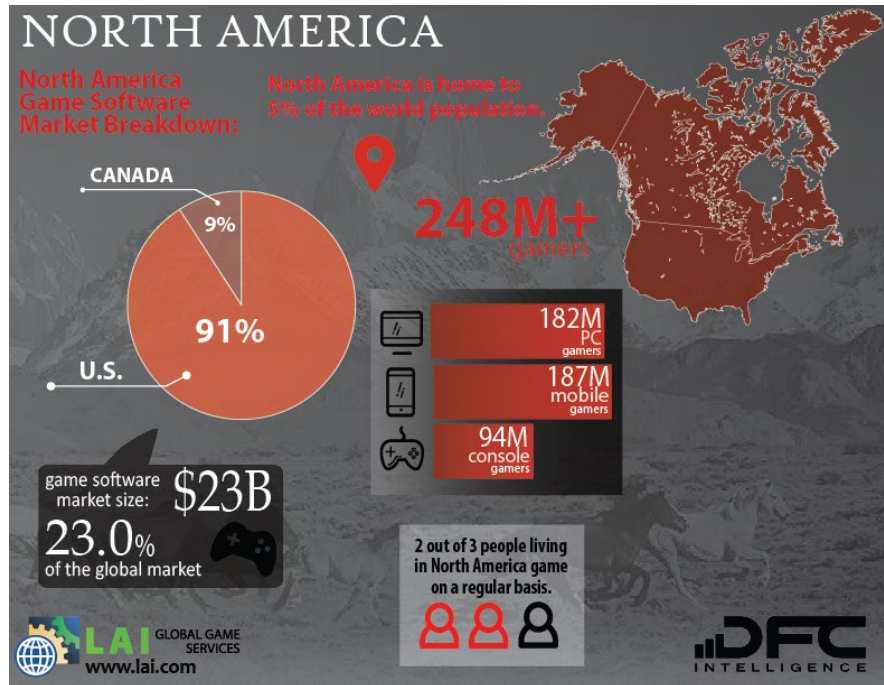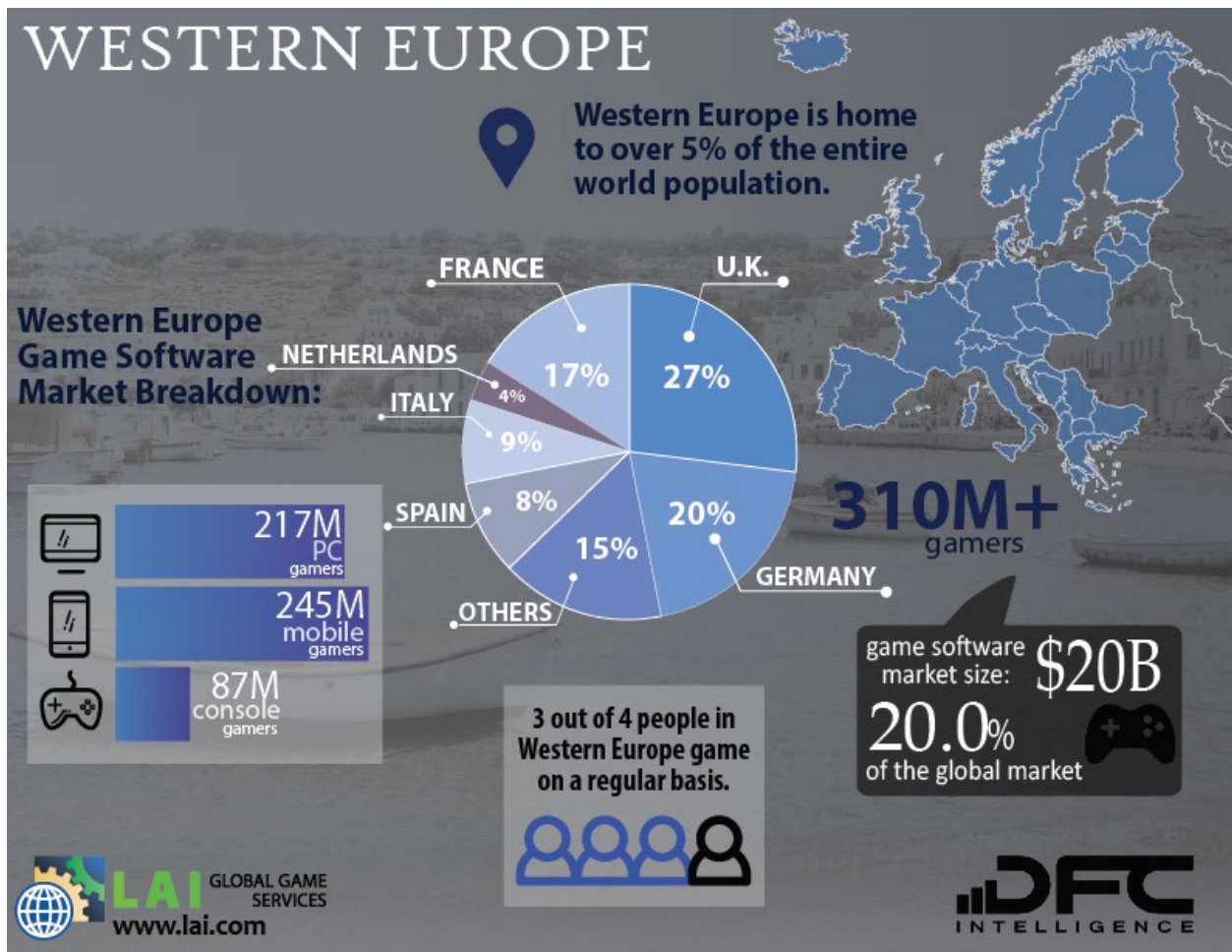*Figure 4: Mobile Gamer Demographics*
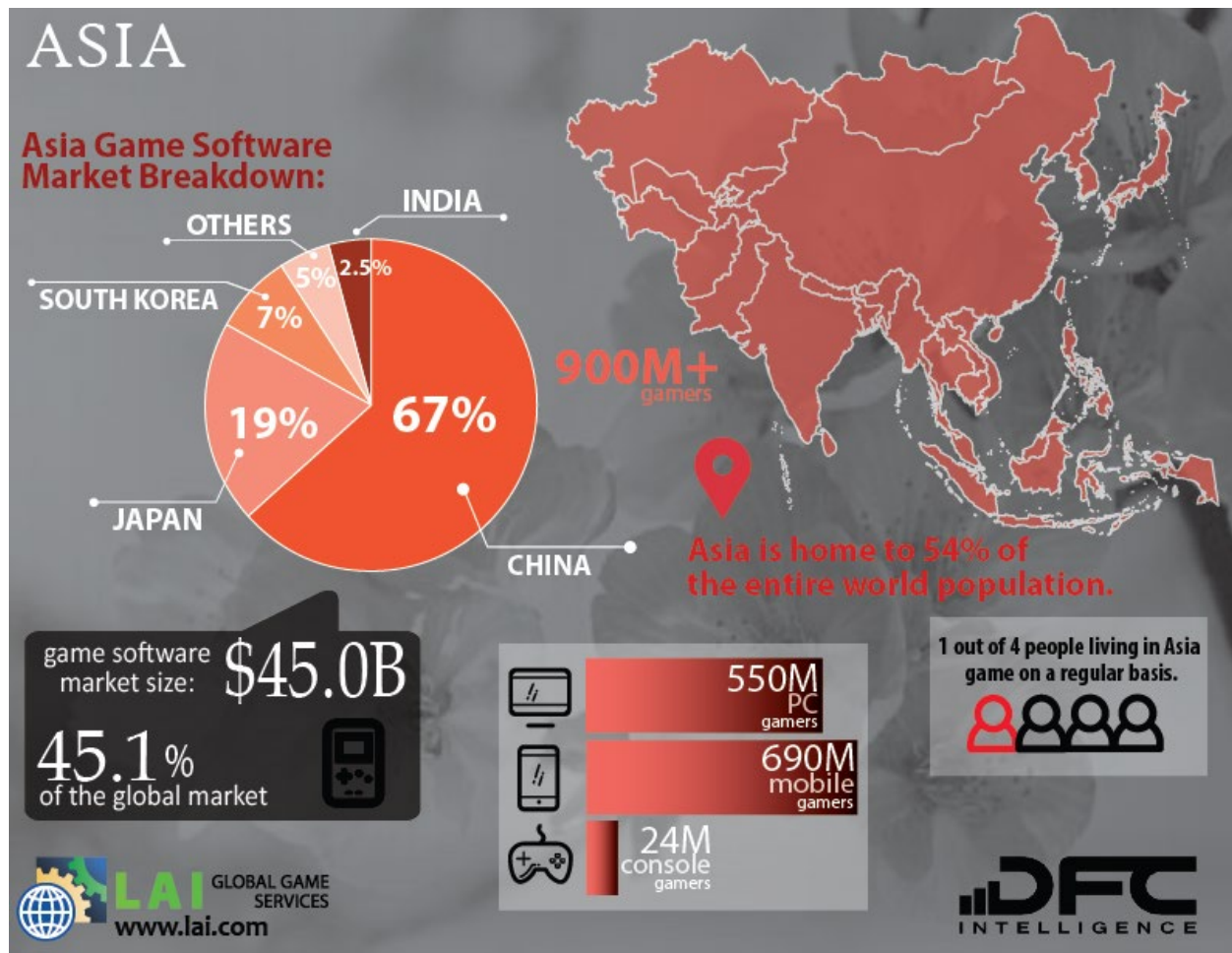
Figure 5: North America Infographic

Figure 6: Western Europe Infographic

Figure 7: Asia Infographic