Analysis of customer satisfaction and perceived quality for improvement of project management methodology in a video game project

SUBODH DEO

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Supervisor: Mrs. Lorca Kelly

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Declaration

I declare that this dissertation that I have submitted to Dublin Business School for the award of MBA Project management is the result of my own investigations, except where otherwise stated, where it is clearly acknowledged by references. Furthermore, this work has not been submitted for any other degree.

Signed: SUBODH DEO

Student Number: 10385541

Date: 9th January 2022

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Abstract

The Division 2 is a large scale video game project which has received mixed and mediocre reviews from the fans.

In this study researcher has analysed customer feedback data in form of customer satisfaction (CSAT and NPS score) and perceived quality (Graphics and audio) so that that existing project management processes and methods can be improved. Quantitative data was collected with help of survey questionnaire designed and distributed to sample of division 2 players. Total of 95 responses were received.

CSAT of overall game and storytelling was found to be low while NPS was negative. Majority of participants also reported bugs and wanted to see new features in the next expansion update and in sequel of the game. Perceived quality of audio was found to be low/mediocre.

Based on results and data analysis in SPSS, researcher has given recommendation for future and current projects of division 2.

1. Introduction

1.1 Background and rationale of the research

Over the last decade video game industry has transformed into a huge entertainment business which is growing at a rapid pace every year. Some key findings can be taken away from the research conducted by Gamingscan in 2021, which is a popular video game portal and by a video game studio called Starloop studios:

- Video games have a strong global reach which is expected to grow in the near future. Revenue of video game industry in North America, Central Europe, Japan, China and Canada was reported to surpass US$4000 million in the year 2018 (Gamingscan, 2021).
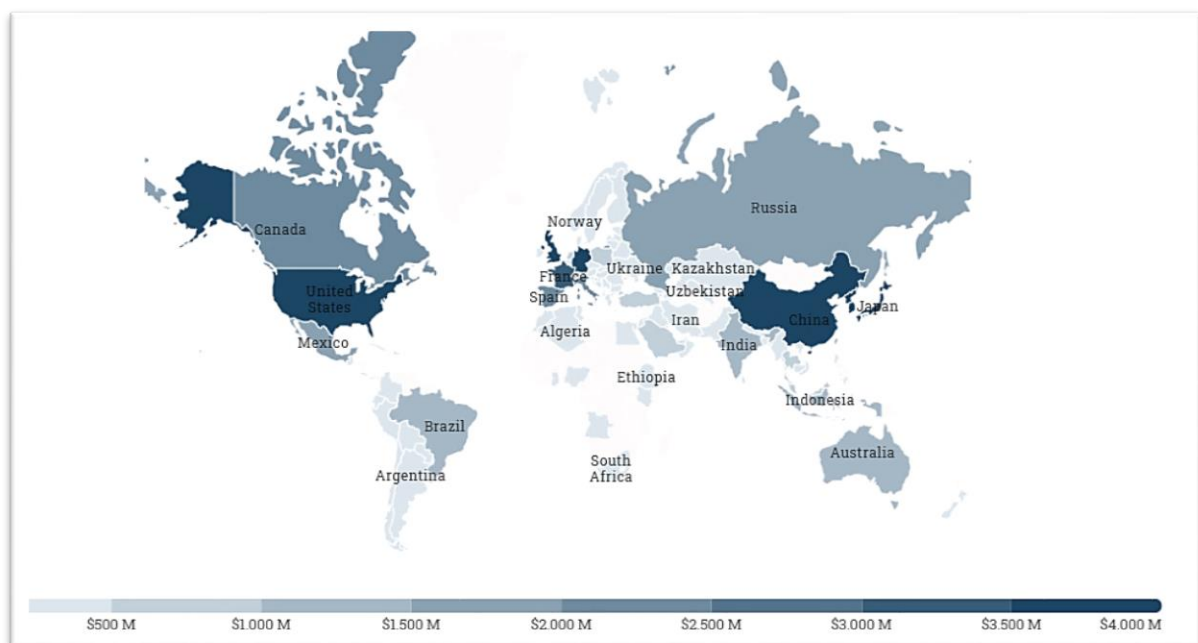
Figure 1: Game revenue by country (Gamingscan, 2021)

- Revenue from video games is expected to grow to as high as gigantic US $200 Billion dollars worldwide in 2022 compared to only less than 80 Billion dollars which was reported in in 2008 (Gamingscan, 2021)

Global Game Market Revenue (1970-2022*)
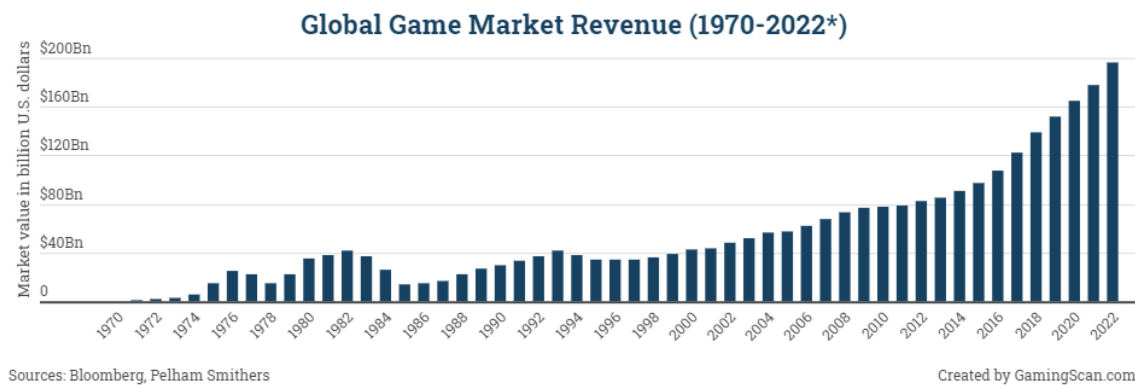
Figure 2: Global video game revenue (Gamingscan, 2021)

- 2.4 Billion Individuals all over the globe were engaged in playing video games for entertainment and non-entertainment purposes (Starloopstudios, 2020).

- There are big corporations and studios involved in video game development, production and their publication. Some of big players in the video game market are Tencent games, Sony (PlayStation), Microsoft (Xbox) and Activision Blizzard (Gamingscan, 2021).
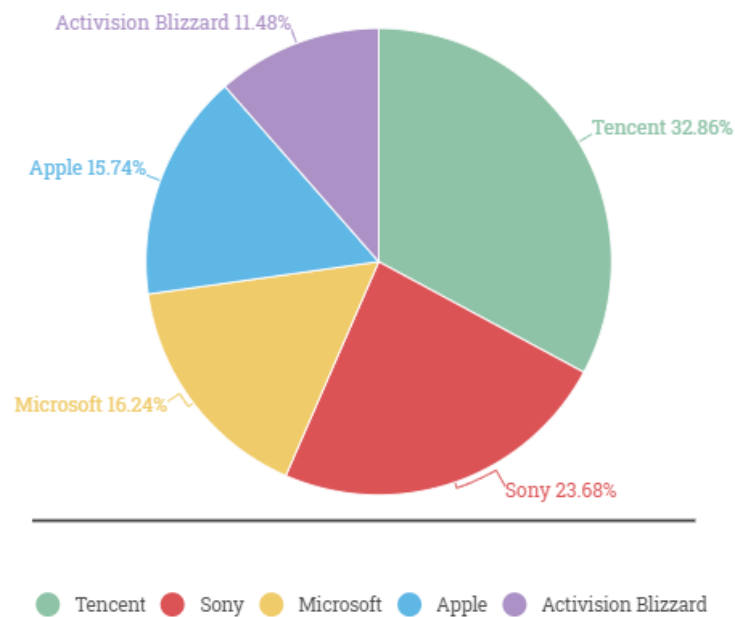
Figure 3: Game companies by game revenue (Gamingscan, 2021)

- Video games are not limited to entertainment, their application is also important in virtual training environments like flight simulators, medical simulators and simulators for soldiers and engineers (Arain, Basir and Nizamani, 2020).

Agile project management is a popular framework which is mostly used for software projects. This is primarily because software projects require constant change throughout its lifecycle which linear project management framework like waterfall model can't support (Fontana and Marczak, 2020, p.5).

Agile projects are iterative in nature and there is a stakeholder (including customer) involvement at every stage of the project (Wrike, 2021).
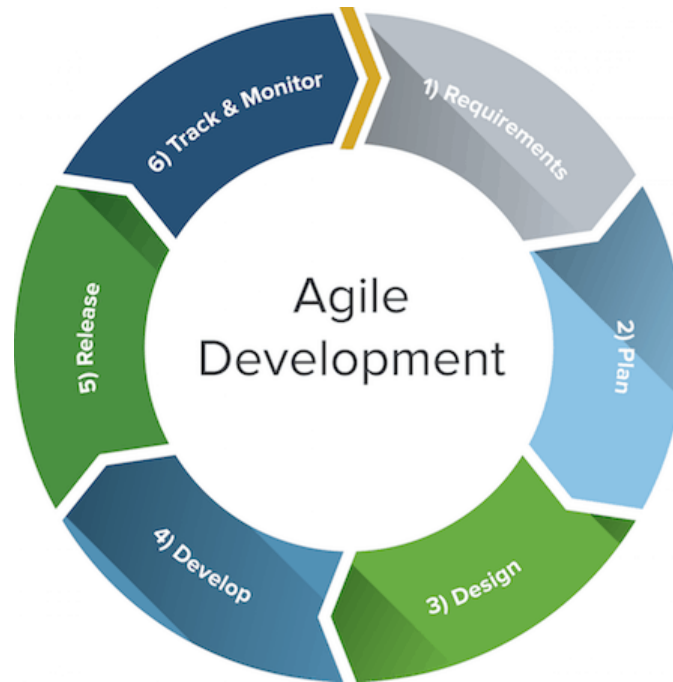
Figure 4: Agile project management (Smartsheet, 2021)

Agile Method	Percentage of respondents (%)
Scrum	73.1
Kanban	58.1
Hybrid customized	18.6
Iterative development	18.6
Scrum/XP hybrid	15.6
XP	15.0
Lean Development	10.8
Scrumban	10.2
Lean Startup	5.4
Others	12.6

Figure 5: Popular Agile methods in software projects (Fontana and Marczak, 2020, p.5)

Some of the popular agile methodology used in software projects can be seen in figure 5. Scrum is the most widely used methodology, followed by Kanban and others.

1.2 Project management methodology benefits and concerns

Agile project management methods have both benefits and challenges when used in projects. They also have the ability to effect the whole game production which is a complex development process in itself. Video game production involves AI programming, working in distributed teams, automatic workflows and tight schedules (Starloopstudios, 2020).

Agile project management methods like Scrum in game development help to solve challenges that arise due to the complexity of a project. This is because of iterative nature of Agile. Game development projects can be broken down into sub projects consisting of sprint and backlogs. (Starloopstudios, 2020).
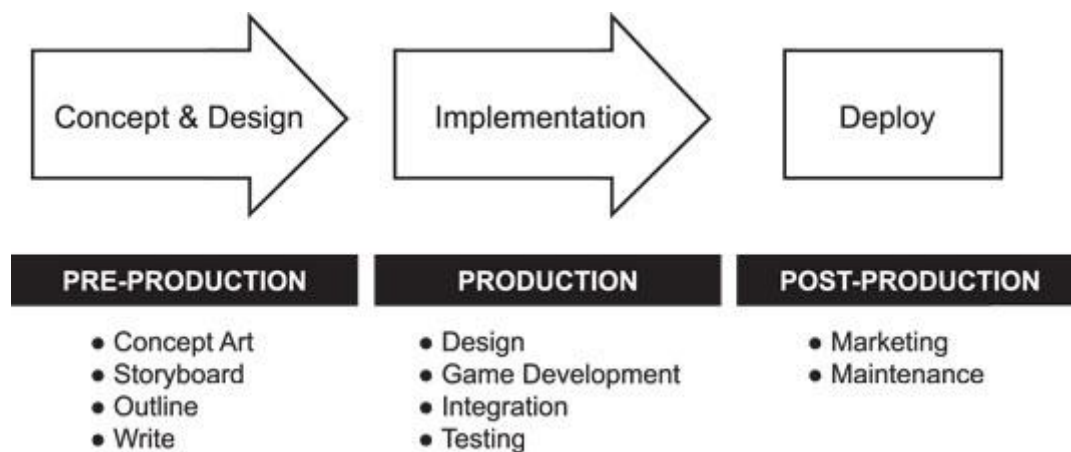
Figure 6: Video game development process (Layton, no date)

Even though agile project management is beneficial, that does not prevent it from having its own drawbacks, these drawbacks can degrade the quality of video games which can cause reduced customer satisfaction and low quality perceived by the customer.

Some of the drawbacks of agile project management methodology are:

1. Difficulty in prediction of the end product due to constant change in the agile process (Lonergan, 2016).

2. Can lead to rise of leadership challenges as there is minimum participation from top level management or no participation at all (Lonergan, 2016).

3. Project communication issues can take place due to over communication between teams which can lead to stress and feasibility issues (Lonergan, 2016).

4. Some agile frameworks like Scrum can be challenging to implement due to its complex nature. This is especially true when scale of the project it large (Lonergan, 2016).

Over the years there was been some failed, badly received and uncompleted video game development projects developed using agile methodology which was led to loss of millions of dollars and disappointed fans (Khandelwal, 2020).

1.3 Seven stages of video game development project
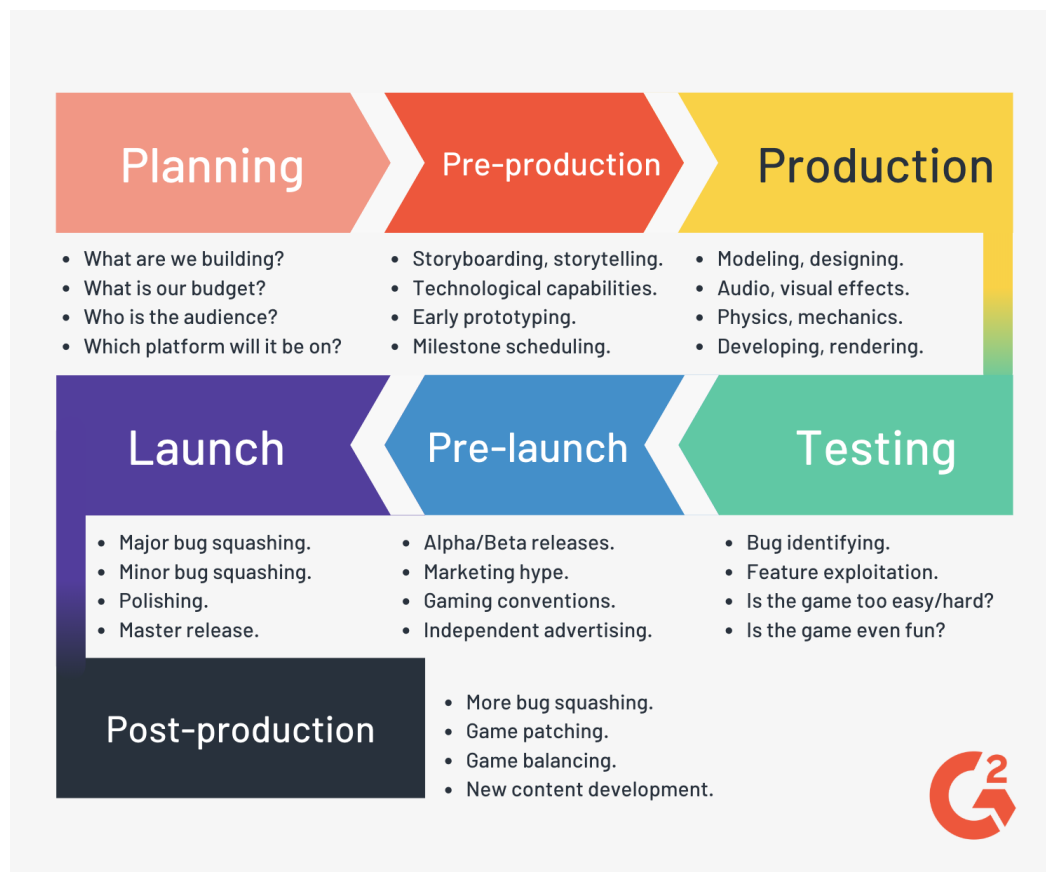
Figure 7: Seven stages of video game development (Pickell, 2019)

To understand a video game project, it is important to understand different phases of it. Pickell (2019) in an article for G2 described video game development in seven stages. Game development process is complex and comprises for many challenges that developers can face like production bottlenecks, pressure from publishers and busy work schedules.

1. **Planning**

   In this stage, game developers brainstorms ideas and fundamentals of the video game project. This is before writers have written a story. Some of the points that are included in this stage are:

   o Genre of video game

   o Target customers

   o Characters

   o When and where does game narrative take place

   Project planning is one of the most challenging stage because this will create the 'backbone' for the whole video game project (Pickell, 2019).

2. **Pre-production**

   This stage is important for project management, because at this stage project team collaborates with other departments like designers, writers, artists and engineers and puts life in the game (Pickell, 2019). Some of the elements of this stage are:

   o Project leaders collaborate with writers to build storytelling from the ground up.

   o Technical challenges are discussed by engineers with writers e.g. if a scene can't have too many characters because the game crashes due to lack memory.

   o Artists work with designers to discuss visuals and colours.

   o Game physics and mechanics are discussed by engineers with programmers.

3. **Production**

   In this stage most of the project budget and time is spent and the game is technically designed. This stage includes:

   o Modelling of characters, which is followed by rendering.

   o Audio and sound effects are designed e.g. footsteps on various textures like sand, gravel, wood etc.

   o Voice acting scripts are read by voice actors.

o Environment design and coding by programmers.

4. **Testing**

As the name suggests in this stage game is tested for project quality control. Testing is done by different testers like stress testers and fun factor testers. These tests takes place before Alpha release of the game and includes:

   o Finding bugs in different levels.
   o If walking outside restricted game access environment is possible?
   o Ways game can be exploited.
   o Are game dialogues repetitive or boring?
   o If the character gets stuck in some section of the environment.

5. **Pre-launch**

During this phase studio faces pressure due to expectation of customers as game is showcased for the first time in important conferences like E3 and PAX for marketing and hype creation. Cinematic videos for the game are also released to gain attention of fans (Pickell, 2019).

6. **Launch**

During this stage developers polish the game and categorize the bugs as game crashing bugs and minor bugs. At launch, game is finally distributed to the purchasing customer through various retail and online marketplace (Pickell, 2019).

7. **Post-launch**

Game development is an ongoing process even after launch. Depending on the user and community feedback, developers update the game and try to remove the bugs found on launch with patch fix. Game is also balanced if some aspect of the game is found to be unappealing and frustrating for fans. Future game content is also part of this phase (Pickell, 2019).

Customer satisfaction and quality are an important data that can be tapped to improve the overall game design after launch, which is a part of overall project management.

1.4 Tom Clancy's The Division 2: A 'massive' project by Massive Entertainment studio

For this research, researcher has chosen Tom Clancy's: The Division 2 as the video game project whose customer satisfaction and perceived quality will be analysed to make future recommendations for betterment of applied project management agile methodology.

Massive entertainment is a game studio based in Sweden who have developed The Division 2 game with help from eight other studios under publisher Ubisoft (Oldbring, 2020). Division series of game is an open world third person shooter set in a post pandemic world. In this open world the player plays as a customizable character with other online players in quest of levelling up their characters in search of better loot (weapons and gears) which are can be found in the open world and are random drops after completion of each mission or activity. For this study, researcher have also played the game in order to get first-hand experience with overall outlook of the game and issues in it.

The Division 2 is a part of Tom Clancy series of games. Tom Clancy is an American author who is known for his collection of books based on warfare and suspense (Tom Clancy, 2021). Tom Clancy's series of video games brand is owned by publisher Ubisoft. Some of the popular games who have received praise from fans and critiques belonging to Tom Clancy's series are (Rector, 2021):

1. Rainbow six (1998)
2. Ghost Recon: Advanced Warfighter 2 (2007)
3. Splinter cell (2002)

Challenges in project management process

The Division 2 was developed by Massive entertainment studios by collaborating and communicating with eight different studios located in different parts of the world (Oldbring, 2020). Effective changes to the project management methodology utilizing customer feedback will lead to improvement of the current and future game development projects.

Research questions and objectives will clarify motive of this study in detail.

1.5 Research question(s)

This research will have two research questions:

1. How satisfied are the customers of Tom Clancy's: The Division 2 video game with its quality and in-game experience?
2. How can project management quality and customer feedback metrics like customer satisfaction, Net Promoter Score and perceived quality be used to improve current project management methodology for the next seasonal expansion update and future projects like sequel of the game?

1.6 Research hypotheses

H1: Overall, customers of The Division 2 video game were moderately to low satisfied with the in-game experience and quality. Satisfaction score for visual (graphics) aspect of game was high, but of that of quality (presence of bugs, audio etc.) was low/mediocre.

H0: Overall, customers of The Division 2 video game were extremely satisfied or extremely dissatisfied with in-game experience and quality. Satisfaction score for visual dimension (graphics) of game was low, but of that of quality (presence of bugs, audio etc.) was high.

1.7 Aims and Objectives

1.   To analyse and find customer feedback metrics (CSAT and NPS) for Tom Clancy's The Division 2 using the data gathered from participants of the survey.

2.   To analyse and find out perceived quality (of graphics and audio design) in the game and to find technical problems that deteriorate the overall game experience.

3.   To utilise gathered customer feedback data to resolve challenges and suggest recommendations for improvement of project management process and methodology, thereby making them more effective in current and future projects at the studio.

2. Literature review

2.1 Project quality management: Importance of customer satisfaction and quality for improvement of project management methodology

Customer satisfaction is defined as overall happiness of customer who is interacting and using a product or a service (ASQ, 2021).
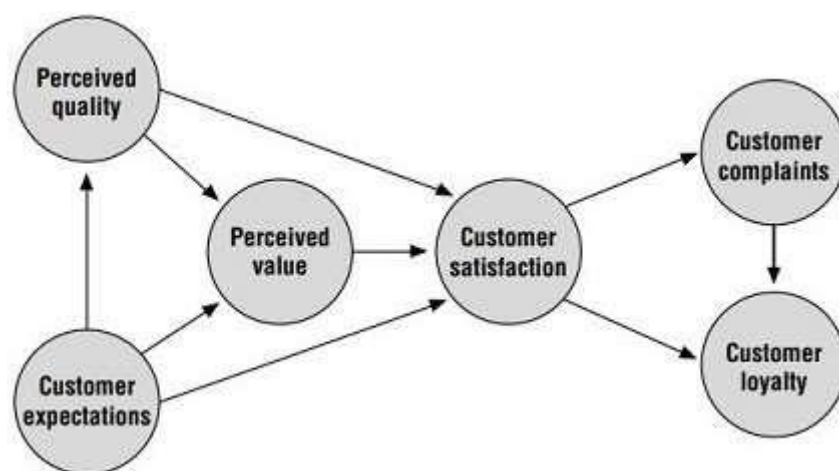
Figure 8: Customer satisfaction model (ASQ, 2021)

It can be seen in figure above that customer satisfaction is directly related with perceived quality, perceived value and customer's expectations.

Agile is built around core concept of customer feedback as customer is involved at every stage of the agile process. According to Neelu and Kavitha (2020) agile process allows the end user to be involved at every stage of software development project, leaving scope for minor and major changes during the project lifecycle (Neelu and Kavitha, 2020, p.992).

Quality is directly related to business performance of a video game. Perceived quality is something that a customer or user experiences through their senses. Perceived quality is important for brand's image as it is customer's view of the overall quality of the product (MBA skool, 2019).

There are many reasons why perceived quality is important. Perceived quality differs from objective quality of the product and is more of a psychological concept, it is opinion based on experience of a product. Customer feedback on perceived quality is a valuable information that a manufacturer can have and use it for improving product's competitive advantage (MBA skool, 2019):

- Perceived quality helps product to stand out from the competition.
- It justifies demand of premium by the company for a product.
- Keeps track of improvement of a product continuously.

Customer satisfaction score (CSAT)

Consumer has more power than ever due to presence of social media, viral customer reviews, and user generated content. CX stands for customer experience which is critical for any business today, it can be improved with help of customer feedback generating brand loyalty and boosting performance (Nicastro, 2021).

Customer experience or CX is one of the key driver for a business. In 2020 Walker, which is an experienced management firm reported in their report that CX was an important overall brand differentiator at the end of annual year 2020. Customer satisfaction score (CSAT) has a direct positive correlation with customer experience and brand loyalty hence making it important for an organisation (Nicastro, 2021).

To explain the customer satisfaction score it is critical to understand that how it is measured. CSAT is a strong indicator of satisfactory score of customer experience with the company's products and services. In this research, we will be focussing on one particular video game i.e. The Division 2.

- CSAT can be measured at any point of customer journey by giving out surveys to customers (Nicastro, 2021).
- CSAT can be measured on a quantitative scale of 1 to 10, with scale containing points such as very unsatisfied, unsatisfied, neutral, satisfied and very satisfied (Nicastro, 2021).

- Special symbols like smileys and stars can also be used to denote customer satisfaction rating (Nicastro, 2021).
- Customer surveys also help to identify which are the happy and unhappy customers, this can help to reduce customer churn (Nicastro, 2021).

Quality of video games and its importance to drive business

One of the article by NBC News mentions how some of the smaller projects like Independent games that are shorter in gameplay length are getting more and more popular because of their quality and user experience they offer (LeBoeuf, 2018). 'Quality is more important than quantity' when it comes to game design and content. It is proven from time to time by some of the following Indie games:

1. Gone Home by Fullbright studios was released in 2013 (LeBoeuf, 2018).
2. What Remains of Edith Finch by Giant Sparrows published by Annapurna Interactive released in 2017 (LeBoeuf, 2018).
3. Her Story by a single developer Sam Barlow (LeBoeuf, 2018).
4. Among us published by InnerSloth LLC was released in 2018, but gained tremendous outreach and downloads during 2020's COVID-19 pandemic making it the most popular game in the world (Ottesen, 2021).

All of these video game projects have set an example of why quality and ease of play is so important for customers. A lot also depends on age group of gamers playing the game. Kids and students have more time that they can invest in video games that are longer in gameplay length like Fallout 4 and The Legend of Zelda: Breath of the wild. Adult players on the other hand can devote less time to entertainment such as video games due to busy schedules, work and family. All of the Indie games mentioned above deliver strong meaningful experiences in a short game session which adults can find worthwhile (LeBoeuf, 2018).

In one of the studies by Bassett et al. (2021) it was found that as designed quality of games increased their respective subjective rating also increased i.e. they were desired more by participants of the study and were rated to be more likeable and fun. This was a psychological study which aimed to find addictive effects of video games.

Designed quality of the video game in this study was defined the researchers and participants by various factors such as: (Bassett et al., 2021)

- Graphics
- Display resolution
- Capabilities of the console or system so it can run all the features of the game
- Market value
- Sound and User interface

Designed quality in this study can also be considered as perceived quality as it was a direct feedback from sample of video game players. Hence, for this dissertation some of these factors that determine quality of a video game will be incorporated in survey design.

In this dissertation, researcher will be using Likert scale to measure participant's perception of quality in dimension of graphics and audio design. According to Surveymonkey (2021), Likert scales are popular and reliable way to measure perceptions and behaviours of participants. For American psychological association, McLeod (2019) writes that Likert scale can be used to measure quality ranging from excellent to very poor (Mcleod, 2019). Researcher will be using similar measuring style for perceived quality and customer satisfaction by giving participants option to rate quality for graphics and audio on a scale of 1 to 5 stars in the division 2 video game.

2.2 How various project management methodologies are applied and misapplied in video game projects

One of the recent studies published in 2021 IEEE/ACM Joint 15th International Conference on Software and System Processes (ICSSP) and 16th ACM/IEEE International Conference on Global Engineering (ICGSE) gives a critical outlook and data on how agile practices are applied and misapplied in video game development projects (McKenzie et al., 2021)

In this study researchers analysed various VGD (Video game development projects) to find out effectiveness of agile practices utilised for project management. They did this by use of empirical technique to know how agile frameworks were applied in various video game

projects. It was concluded that Scrum and Kanban frameworks were often had to adapt to the requirements of different pipelines in non-similar VGDs. As part of their research design, researchers used semi-structured interviews to collect data from studios based in New Zealand (McKenzie et al., 2021).

Researchers analysed different agile methodologies and tried to find out what were the issues faced during its implementation. They also gathered crucial data like what was the team size and information on who was acting as the scrum master. Please refer to figure below:

Studio	Way of Working	Team size	Retrospectives?	Action Items?	Scrum Master?	Team Dynamics Issues
1	Agile→ScrumBut	20 with up to 30 extra outsourced	No	No	Producer	Communication, Knowledge Siloing
2	Agile	7→15	No	No	Dev lead	Communication, Accountability, Shared Game Vision, Agile Experience
3	Agile/Kanban	8	No	No	PO/Dev lead	Crunch (in the past)
4	Agile	9	Yes	No	Producer	Communication, Accountability, Process Commitment
5	Scrumban	9	Yes	No	No	Communication (solved by collocation and chat systems)
6	Scrum	5 to 8	Yes	Yes	Yes	Process Commitment, Shared Understanding, Knowledge Siloing
7	ScrumBut	45 broken into teams of 3 to 10	Yes	Yes	Producer	Team diversity, Shared Game Vision
8	Scrum→Scrumban	28 broken into teams of 5 to 9	Yes	Yes	Yes	Shared Understanding, Knowledge Siloing, Process Commitment

Figure 9: Agile project management issues faced in video game projects (McKenzie et al., 2021, p.101)

It can be seen in figure 9, what team dynamic issues were found for different agile methodologies that were applied in game projects in studios. Different agile practices that were applied were Scrum, Scrumban and ScrumBut. Size of the teams varied between 7 - 45 members. In some projects, bigger teams were broken down into smaller teams to manage the project (McKenzie et al., 2021, p.101).

Key issues that were found in dynamic teams in this study are summarised below:

- Communication: Team communication was a major issue that was found in multiple projects and teams. It was also found that in some teams, communication problems were solved with help of technology like chat systems (McKenzie et al., 2021)

- Knowledge Silos: Some team members had knowledge that other members didn't have access to (McKenzie et al., 2021).

- Shared game vision and understanding was lacking in some projects (McKenzie et al., 2021).

- Team diversity was a problem in some teams (McKenzie et al., 2021).

Mckenzie et al. (2021) also states that in the iterative development process of video games playtesting and user experience feedback can improve quality of the video game. This can also reduce risks like overruns in schedule and hence benefitting overall project management process (McKenzie et al., 2021, p.95). Project management leadership issues was also found in those video game projects where PO's (Product owner) role was split among different people which goes against scrum agile principles (McKenzie et al., 2021, p.102).

In another study, Arain, Basir and Nizamani (2020) propose extension of scrum framework for video game projects (Figure 10) and state that product backlog should allow changes based on feedback from customers (Arain, Basir and Nizamani, 2020, p.136).
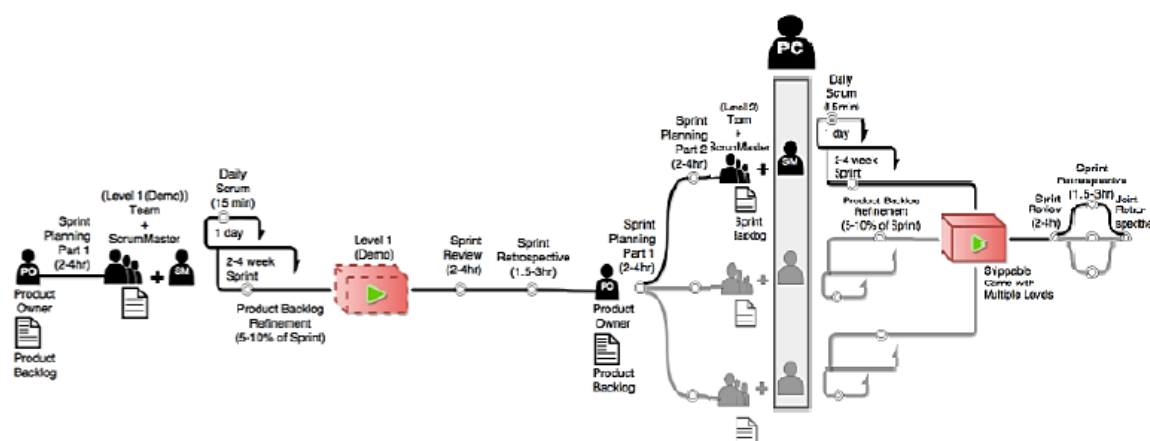
Figure 10: Proposed scrum framework for game projects (Arain, Basir and Nizamani, 2020)

Atlassian who are developers of popular project management platform Jira, mention on their website that in some projects, project managers find it feasible to rank product backlogs based on customer feedback metrics like customer satisfaction, NPS and quality. In Scrum

agile methodology a backlog is a list of tasks for the developers which is prioritized by various factors (Atlassian, 2021).

There is a gap in knowledge in area of how customer feedback (customer satisfaction, Net promoter score and perceived quality) can be used to improve agile processes like Scrum and tackle challenges that arise in a particular and focussed video game development project. For this dissertation author plans to do the same and has chosen to analyse customer feedback of Tom Clancy's: The division 2 video game.

2.3 Improvement of project management methodology through perceived quality and customer feedback

According to PMBOK guide 7th edition:

"Projects need clear direction from customers and end users regarding project requirements, outcomes, and expectations. In adaptive and hybrid project environments, the need for ongoing feedback is greater because the project teams are exploring and developing product elements within specific increments. In some project environments, the customer or end user engages with the project team for periodic review and feedback." (Project Management Institute, 2021, p.35).

In a project using agile framework, product owner works along with customer to refine project requirements, also providing input for the development team at the same time. At end of every sprint or iteration customer provides feedback which is included in the development process.

Journal published in Journal of entrepreneurship, innovation and management in Poland explains how customer is involved in the game development process. This study also mentions how customer involvement have an impact on overall project design. One of the objective of this research was to find how demands of customer impacts the project team (Starostka and Prystupa, 2015).

Following were the key points of this study:

- Game development has similarity to the project development process (Starostka and Prystupa, 2015).

- Agile is the most common methodology used in game projects (Starostka and Prystupa, 2015).

- Game development involves four phases; Concept development, pre-production, production and testing (Alpha and Beta) (Starostka and Prystupa, 2015).

- Some of the customer feedback data that was acquired in different phases of development was subjective quality, customer expectations and technical quality. (Starostka and Prystupa, 2015).

Area of customer involvement	Methods used by Cubicon	Methods used by DAX
Feedback gathering	Internet forum	Internet forum, special website, brainwave analysis
Ways of overcoming the drawbacks of applied approach	Filtration of information by experts	Precise questions
Primary user involvement	Demo version of the game	First graphics
First graphics	Demo version	2nd stage of beta tests

Figure 11: User feedback comparison (Starostka and Prystupa, 2015)

This study found that when users were involved in game development projects for feedback and testing it was beneficial in areas of error (bugs) reporting and to meet customer's expectations. In domain of artistic creativity however, customer feedback was taken into consideration to a smaller extent due to customer's lack of specialist knowledge (Starostka and Prystupa, 2015).

Agile methodology and customer feedback go hand in hand

Customer is at heart of agile project management process and is involved at every stage of project management cycle. Layton (2017) says that this methodology makes a lot of sense as

the project is for the customer. Agile methodology is common for IT and video game projects as discussed before, with its principles focused primarily for the customer:

1. Top level priority is to satisfy the customer though software delivery (Layton, 2021)

2. Because of the changing requirements of the customer, change is always a part of the methodology (Layton, 2017).

3. Business stakeholders should work with developers for the best outcome (Layton, 2017)

4. In Agile framework, product owner is responsible for needs of customer from a product (Layton, 2017).

In software projects including video games, project cycle consists of alpha and beta testing prior to full release of software. Which can be explained below:

Figure 12: Alpha and Beta testing (Hamilton, 2021)

Alpha and Beta software testing

Alpha testing is like beta testing in the sense that both are done to remove bugs and other software related issues before software is launched in the market.

Both Alpha and Beta testing is done for the purpose of increased customer satisfaction at launch, so the customer faces no or less bugs during its use and is happy with the purchase. Alpha tests are usually done internally by employees in the organisation developing the software (Hamilton, 2021).

Beta testing is done at later stages of project near launch in real environment by chosen group of testers who can also be customers. It also helps to improve product quality with help of validation of customer, and helps to test reliability, security and robustness of the software

(Hamilton, 2021). There are various types of Beta testing but for this research, researcher will be focussing on public Beta testing of Tom Clancy's: The Division 2.

Customer satisfaction and perceived quality data from testing can be extremely beneficial for the project performance in the long run by improving the project framework, by learning from old mistakes and by knowing what customer wants (Miller, 2019). According to Miller (2019) "…level of customer satisfaction measures a project's longevity and its future scalability." Project can be considered a failure if it does not satisfy the customer (Miller, 2019).
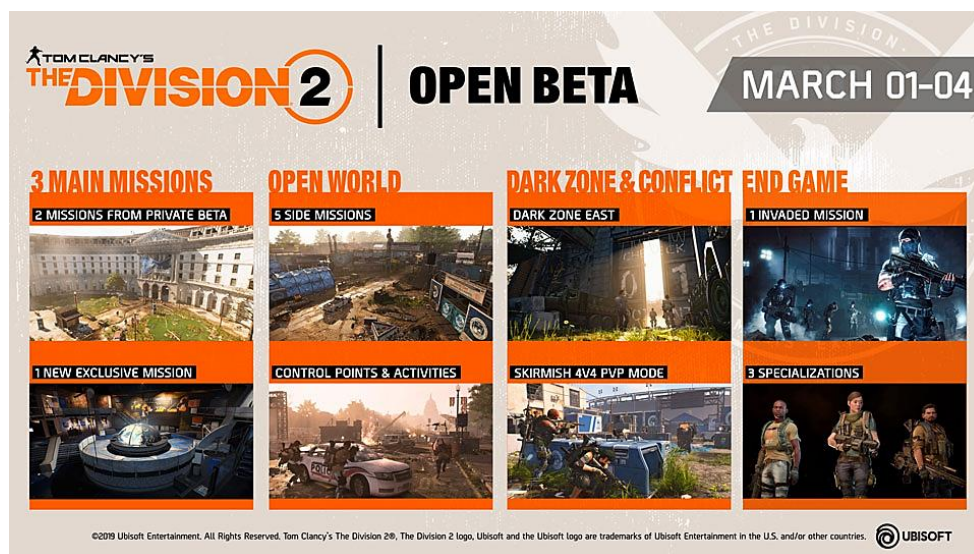
Figure 13: The division 2 open beta (Ubisoft, 2019)

Tom Clancy's: The Division 2 open beta was released approximately two weeks before launch of the full game in which lot of players participated (Ubisoft, 2019). Researcher speculates that launching beta tests just few weeks before launch is not optimal as it may not give developers enough time to collect beta feedback to fix and improve the final release version of the game.

2.4 Importance of video games other than entertainment

Though video games are meant primarily for entertainment their importance extends beyond just entertainment. One short study published in Turkey by Cubukcu, Canbazoglu and Ozerdem (2020) aimed at developing a mobile game to aid learning and education for children with Down syndrome.

Arain, Basir and Nizamani (2020) mention that in 2015 game industry had CAGR (Compound annual growth rate) of $71.3 Billion which increased to $90.1 Billion in 2020. Game industry stretches far beyond just entertainment as it is also involved in learning domain e.g. simulators for purpose of training pilots, medical students, engineers and soldiers (Arain, Basir and Nizamani, 2020).

Washington post posted an article in the early phases of pandemic about video games one can play while being stuck at home. Some of the games that were picked in this article were Minecraft, Witcher 3: Wild hunt, Overwatch and Animal Crossing (Hume et al., 2020).

During the pandemic sales of video games sky rocketed as they became a social lifeline for people stuck at home due to lockdown. One survey conducted in the US suggested that four out of five consumers played video games in six months during lockdown period (Lufkin, 2020).

BBC reports in their article "The explosive growth of gaming during the pandemic has shown that many have found a new outlet for much-need connection in isolation". Video gaming provided major relief for many while providing some degree of social interaction through voice chat and multiplayer games which connected friends far away from each other (Lufkin, 2020).

Some even organised social gathering virtually in game, like birthday parties in Animal crossing, some went on dates. Games became so important that some couples who cancelled their wedding due to COVID-19, got married in video games (Luflkin, 2020).

2.5 Risk associated with video game projects: Poor customer satisfaction and quality

Video game projects can be volatile and unstable in nature. Though there has been a boom in revenue generated by video games in last few years due to their popularity and demand, there are problems that persist.

According to study by Schmalz, Finn and Taylor (2014), In May of 2012, 38 studios faced financial troubles and were unable to pay government loans. This was due to multiple failed video game projects. Some of these projects became "vaporware" i.e. never actually

transforming into a playable launch title. Problems with traditional schedule, budget and performance were to be blamed for these failed projects (Schmalz, Finn and Taylor, 2014).

One example of failed video game project is of one game that was supposed to be the biggest video game projects of 2020. Cyberpunk 2077 is developed by CD Projekt Red, a Polish game development studio, publisher and distributor.

Image 1: Cyberpunk 2077 (Heaton, 2021)

Cyberpunk's 2020 launch is considered as one of the biggest disaster in video game community and industry. This caused the studio to lose whooping $50 million dollars in just offering refunds (Heaton, 2021). Release of the game was already delayed by the studio multiple times causing agitation among the fans. At launch, next generation version of the game (i.e. meant for PlayStation 5 and Xbox series X) was full of glitches/bugs and had serious performance issues. This issue was even worse on older generation of consoles like PS4 and Xbox one on which Cyberpunk was barely able to run and render graphics (Isaac and Browning, 2020).

To the understand the gravity of this failed launch, many physical retailers like GameStop and online retailers like PlayStation Store started giving out refunds if the game was purchased within 30 days of launch. Sony's PlayStation store even decided to remove the entire digital copy of the game until it was patched and was considered in a working condition. Microsoft did the same for their online store, by providing refunds for digital copies, though players

were still able to buy it. A warning message was displayed notifying players that the game has performance issues (Peters, 2020). This was significantly damaging for studio's reputation and business. This is an ideal example of how development and project management issues can lead to catastrophic blow to a business.

More examples of unsuccessful video game projects

Over the years, many other video game projects have failed due to lack of testing which is a part of quality assurance in project quality management (Tyler, 2021). Some of these cases were so bad that these games never made it to market due to cancellation of the whole project. This led to huge financial losses and waste of human effort (Khandelwal, 2020).

Anthem

Image 2: Anthem by BioWare (Kain, 2019)

Anthem was an ambitious video game project which did make to the market as it was backed by a big publisher and studio. Anthem is a shooter developed by studio BioWare and published by Electronic Arts. Currently, Anthem is rated only a user score of 3.5 out 10 on Metacritic (Metacritic, 2021). Forbes mentions in an article what led to its failure:

1. Use of EA's game engine called Frosbite, which has also been used for multiple games from various genres. This approach might have led to lot of bugs as the game was

lacking in optimization at launch. This had to be fixed slowly with different updates (Kain, 2019) (Khandelwal, 2020).

2. Anthem had a clunky UI and confusing combat system (Kain, 2019).

3. Loot system was meant for rewarding players but replay ability was poorly designed (Kain, 2019).

4. User interface was hard to navigate and poorly designed (Kain, 2019).

5. Lack of communication for the community from BioWare which led to frustration among the fans (Kain, 2019).

All of these reasons led to failure of Anthem in market. Lack of efficient project management methodology and quality assurance testing can be blamed for the same.

2.6 Successful video game projects: Positive customer satisfaction and perceived quality

There are video game projects that have received praise and appreciation of the video gaming community and have transformed how games are developed today. In these games developers listened to the fans and learned from past projects which resulted in high customer satisfaction and quality. Also, valuable project lessons can be learned from these games by using the customer satisfaction feedback they have received.

Customer satisfaction and quality of video game are important attributes that lead to a game's success in turn also improving its business performance. Also, if customers are satisfied with the game it will help in creating a community that may thrive on online platforms for years. It will help to build the trust and loyalty of the customer with the studio and the brand.

Metacritic is a popular website in the entertainment industry that aggregates all reviews /scores of different users and critiques in one place. They have termed their combined score as 'Metascore'. Metascore makes it simpler for the user to get the review of the game in one place rather than browsing for it on different websites (Metacritic, no date).
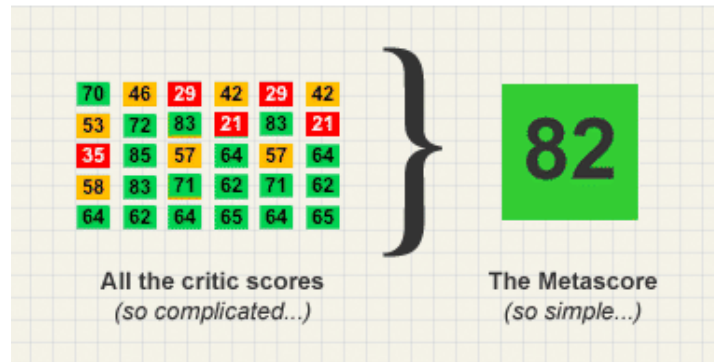
Image 3: Metascore from Metacritic

(Metacritic, no date)

. Some of the top rated video games on Metacritic are:

1. **Minecraft**

Image 4: Minecraft by Mojang AB (Henningson, 2021)

Minecraft has sold more than 238 million copies till date. Developed by Mojang AB, Minecraft first opened its doors for players in 2011. It is considered by some as of the most critically acclaimed video game of all times. Metacritic has rated Minecraft with 'Metacritic must play' accolade with 93 out of 100 Metascore for the PC version of the game (Metacritic, 2021).

Minecraft is a block based first person mining game with its original version created in JAVA programming language. It also has fantasy and storytelling elements which makes it appealing to younger player audience. Minecraft is often used in education for children as it even has an educational version of the game available (Minecraft, 2021).

Image 5: Minecraft education edition logo (Minecraft, 2021)

First playable Alpha version of Minecraft was released on June 30, 2010 followed by numerous updates over time after which beta phase was launched in December of 2010. All of updates and improvement over time lead to the polished product which Minecraft is today (Henningson, 2021).

2. **Grand theft Auto V**

Image 6: Grand Theft Auto V by Rockstar games (Langston, 2021)

Rockstar are well known for their Graft theft Auto series in the gaming community. GTA is a modern world action/adventure open world title. GTA III, GTA Vice City, and GTA IV are all blockbuster titles with one of the best sale numbers of all time. According to recent numbers in August of 2021, GTA V have sold more than 150 million copies worldwide since its launch in 2013 (Langston, 2021).

According to Sportskeeda, GTA V had a budget of 137 million dollars, with whole project taking three years for complete development (Bhusan, 2020). PS4 version of this game also boasts Metascore of 97 out of 100 on Metacritic's website (Metacritic, 2021).

3. **Uncharted 2: Among thieves**

Image 7: Uncharted 2: Among thieves by Naughty dog (Amazon, 2021)

Developed by Naughty Dog studios, Uncharted 2 was the second instalment to Uncharted series that hit the market shelves and online stores in October of 2009. Uncharted is a PlayStation exclusive franchise, as Naughty Dog is owned by SIE (Sony interactive entertainment) formerly known as SCE (Sony computer entertainment).

It is a critically acclaimed third person shooter, action/adventure linear game often praised for its wonderful story telling and characters such as Nathan Drake. With 96/100 Metascore on Metacritic and 9.5 out of 10 rating from critics such as IGN and GameSpot, Uncharted 2 is often considered to be one of the best game that was ever launched on a PlayStation 3 console (Metacritic, 2021)

Game Informer a popular game critique website, mentioned in their review "Uncharted 2 is a ringing testament to the power of both games and storytelling. It pulls you in, keeps you engaged, and concludes with a thunderous bang." (Metacritic, 2021).

Uncharted has become such a mainstream and enjoyable video game franchise for the fans that it is being converted into a full-fledged Hollywood movie which is set to be released in February of 2022 starring Tom Holland and Mark Wahlberg, who are well known Hollywood stars (IMDb, 2021).

2.7 Tom Clancy's: The Division 2: Project management methodology

Image 8: Tom Clancy's: The Division 2 artwork

(Oldbring, 2020)

Tom Clancy's: The Division 2 is a third person shooter developed primarily by Massive entertainment studio based in Sweden and published by Ubisoft. It is set in a post pandemic world of Washington D.C., USA after events of The Division which was the first game of the series set in New York (Ubisoft, 2021).

Image 9: The Division universe: Games and additional content (Ubisoft news, 2021)

This section is particularly important as here researcher will be discussing what and how project management processes and methodology were applied for the development of Tom Clancy's: The Division 2, which is the chosen game for this research. Article that was used for this part was found on Massive.se which is an official website for studio that developed The Division 2. Researcher has also taken appropriate steps to check authenticity of this article and of the author. Author was confirmed to have worked on multiple game projects including The Division 2 at Massive entertainment studios (Moby games, 2021). This article was taken from speech of the author at PMI (Project management institute) Sweden chapter congress in March 2020.

Image 10: Johan Oldbring at PMI Sweden (Oldbring, 2020)

Johan Oldbring works as an Art producer, who has spent three years in the art production department at Massive entertainment studio responsible for development of The Division 2. He has also held other positions in the company as a game tester, project management team member and programmer.
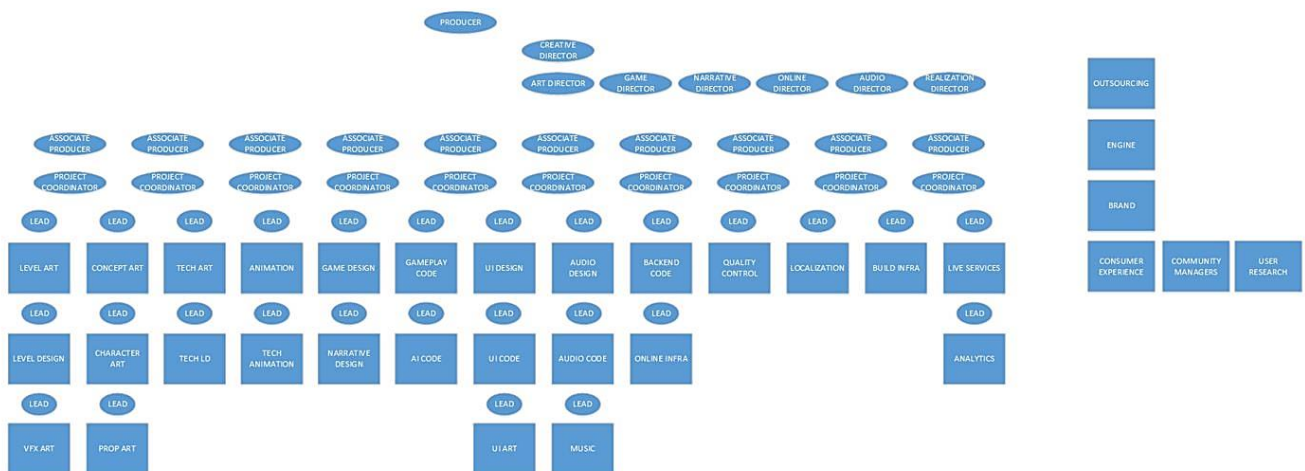
Figure 14: The Division 2 project roles (Oldbring, 2020)

Oldbring (2020) says that sheer size of project like The Division 2 can be compared with to that of Hollywood's Marvel movie.

"For The Division 2, we also worked together with eight other Ubisoft studios in six different countries. As you might imagine, our credit list is as long as a Marvel movie." (Oldbring, 2020).

Project structure

Managing large scale project like division 2 is a challenge, hence it is important that the project has a structure for efficient reallocation of resources and people. Structure of the project can be seen in the figure above. It can be seen in figure 14 that this project had many project teams that worked together in various roles like Game design, UI, Tech art, concept art, quality control etc.

Oldbring also goes on to talk about project methodology of The Division 2 in details. He gives an example of the launch trailer where the playable character can be broken down into

different parts like hair and shoes. He says that different teams worked on these different elements in a straight forward timeline one by one rather than in parallel (Oldbring, 2020).

Image 8: Character customization in division 2 game (Hawkins, 2019)

Gameplay features however were developed in a more iterative way by teams together. All the elements like sound, art etc. were developed in parallel unlike character design (Oldbring, 2020).

Most challenging part of project like this is collaborating with people all over the world from different studios to develop game like The Division 2. Effective communication and coordination in pursue of the same goal is the key. To make sure that all team work together there is middle management like project coordinator and associate producers who help to facilitate bridge between different teams (Oldbring, 2020).

The creative process

Oldbring (2020) also say that creativity is one of the biggest factor in the video game that keeps a customer engaged and entertained. This makes the creative process in projects more

challenging as the market in gaming industry is competitive and technology for development is constantly evolving.

The creative team which is responsible for making the gameplay fun consists of directors and managers. Directors are responsible at the core of creativity to come up with ideas that makes the game entertaining for the gamers. Managers on the other hand are responsible for balance between schedule, improvement and happiness of customers (Oldbring, 2020).

To find out what makes the game entertaining, Massive studios has a Game Lab where they test the game and invite people from outside the organisation to play their games. Massive uses combination of analytics to achieve these project goals (Oldbring, 2020).

Project planning process

For big projects like The Division 2, Massive entertainment studios has a plan in place:

- Massive have a process which is called FSO or Feature sign off. In this process directors are involved who write short creative user stories, these are called FSO where all details and dependencies of the project and are mentioned. One representative from every team get together and sign a feature before it gets a go ahead for the production (Oldbring, 2020).
- Collection of these FSOs from different teams together is termed as "Gaming design bible" which helps producers to plan the project scope (Oldbring, 2020).

Project lifecycle is split into four phases (Oldbring, 2020):

1. Conception phase: During this phase decisions are made broadly on genre of the game, storytelling and design of the game world.
2. Pre-production phase: All technical framework for the game is built in this phase. First playable demo is created and tested in the game engine.
3. Production phase: This phase sees the true potential of team work as project team is complete in this phase. Game is finished and alpha and beta testing is done.
4. Operation Phase: This phase occurs after the game has been released. Additional content (Downloadable content) and customer support is part of this phase.

Team works on 'Production builds' consisting for few week long sprints (part of Scrum agile framework) during all the phases mentioned above. These production builds help the team to define the scope which helps them in iterations and reviews (Oldbring, 2020).

Challenges in project management process

- **Leadership**

  Due to dynamic work environment and commitment to quality, failure can occur in various form during the project lifecycle. To keep the team's motivation high and the right mind-set, good leadership is important to face these unforeseen situations (Oldbring, 2020).

- **Change management**

  Change management is necessary for a project like The Division 2 because many changes can occur during the life of the project like change during development, budget and delays. There is also pressure to deliver project within time and budget (Oldbring, 2020).

Even after applying such complex and sophisticated PM methodologies and techniques at launch division 2 was plagued by various problems and errors that still persist to this day. Some of the issues faced at launch were list of errors like Mike-01, Alpha 02, Bravo and Delta -03 which is due to problems like failure to access your profile, online connectivity and Server side issues (Tapsell, 2019).

Importance of character builds in The Division 2

One study that was published in 2020 IEEE Conference on Games (CoG) was authored by developers at Massive entertainment studios, talks about how character builds and player choices in The Division 2 can lead to improvement of the design process in the future and ongoing video game projects. Character builds are a way for the player to choose different set of available weapons, armour and health (Renaudie et al., 2020)

They were identified by researchers as important as they were linked with player's behaviour model and playtime (time spent on a game) (Renaudie et al., 2020).

2.8 Use of project management tools for video game development projects

There are wide variety of project management tools available for game developers to effectively apply various elements of game project design and to create a working video game. These tools aid and support game development methodologies such as Scrum and also help in improving quality of the game by use of features such as bug tracking and reporting (Hall, 2018).

Some of these tools are discussed in detail below:

1. **Asana**
   - Asana is available as a website and also as an IOS and Android application platform.
   - Pricing: Free for project team of up to 15 team members. Premium plan costs 9.99 Australian dollars per member each month (Hall, 2018).
   - There are number of features that makes Asana attractive for game developers who are part of small or medium project teams:
     1. Completely cloud based, works well with teams located in different geographical area (Hall, 2018).
     2. Great for teams who want to utilize visual scrums as part of agile methodology (Hall, 2018).
     3. Light and flexible ad-hoc workflows support for development (Hall, 2018).
     4. In addition to all of the above, Asana has features like Calendar view, project section, statistics and attachment area for people working on same processes (Hall, 2018).

2. Jira

- Jira is well suited for development teams using agile method for project management. Jira enables teams to use Scrum boards and helps them to communicate and collaborate better (COFES, 2021).

- Jira like Asana is also available for all available platforms such as web, IOS and Android to facilitate multitasking and group team work (Halls, 2018).

- Suitable for large teams working on different games or elements within a single game. Particularly works great for big multiplayer games where bug tracking and customer feedback is an ongoing process throughout project lifecycle (Halls, 2018).

- Developers can index, mark and track bugs as they occur, making it easier to fix them (Asana, 2021)

- Various agile methodologies like Kanban are available with visual aspects for backlog, cycle times etc. (Hall, 2018).

2.9 Conceptual theoretical framework
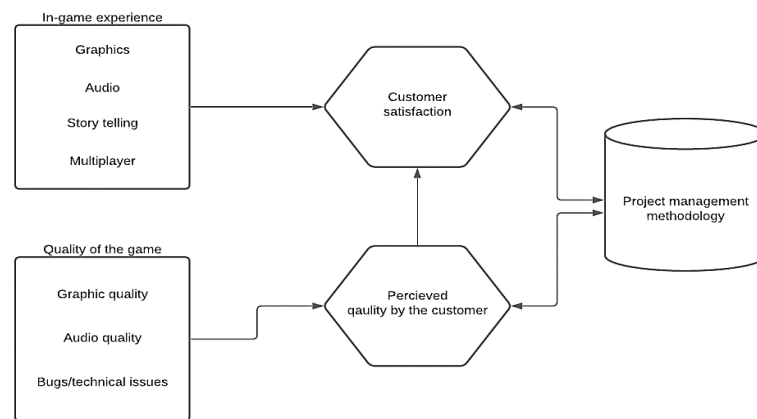
Figure 15: Conceptual theoretical framework

Figure 15 shows conceptual theoretical framework for this research which is inspired by literature review. Survey design and methodology will be based upon this framework which is focussed on customer feedback like satisfaction, Net promoter score and perceived quality for improvement of project management methodology.

Customer satisfaction and perceived quality are two measurable variables defined by video game player's in-game experience and perception of quality of the division 2 video game.

In-game experience of the player is defined by graphic fidelity of the video game, audio, story of the game and multiplayer through which online players can play simultaneously together. For data collection researcher will be focussing on storytelling and multiplayer satisfaction of participants.

For measuring perceived quality, researcher it will focus on combination of graphic quality (which is combination of screen resolution, VFX, character and environment modelling etc.),

audio quality (like directional audio and sound effects) and bugs & technical issues encountered by players in the game.

Second variable i.e. perceived quality also has a relationship with first variable which is customer satisfaction. Both of these variables can be used as an input for improvement of project management methodology used for game development. Effective project management methodology will also help to improve customer satisfaction and perceived quality which explains the two directional arrows in the figure.

2.10 Hypotheses

After the reading the literature and learning about PM practices and reviews for the division 2, researcher predicts that overall customer satisfaction level of the game is mediocre and can be increased. After years of release, this game is still plagued by different bugs which needs to be fixed as they degrade quality perceived by the customer. With collection of data, researcher will be more certain what bugs and elements degrade the quality and satisfaction of the game. This should be included in agile sprint planning and backlog of current and future projects at the studio for improvement of PM methodology.

3. Methodology

3.1 Research question(s)

This research has two research questions:

1.   How satisfied are customers of Tom Clancy's: The Division 2 video game in terms of its quality and in-game experience?

2.   How can project management quality metrics like customer satisfaction, NPS and perceived quality be used to improve project management methodology for the future updates and sequel of the game?

3.2 Aims and Objectives

Following aims and objectives have been outlined for this research:

1. To analyse and find customer feedback metrics (CSAT and NPS) for Tom Clancy's The Division 2 using the data gathered from participants of the survey.

2. To analyse and find out perceived quality (of graphics and audio design) in the game and to find technical problems that deteriorate the overall game experience.

3. To utilise gathered customer feedback data to resolve challenges and suggest recommendations for improvement of project management process and methodology, thereby making them more effective in current and future projects at the studio.

Explanation of literature for methodology

Customer satisfaction and perceived quality are a part of project quality management and hence are an essential element of overall project management. The Division 2 has been released for more than three years (Metacritic 2021), but still has many players who are actively playing the game on all platforms (Playercounter, 2021) (Activeplayers, 2021).

Massive entertainment studios and publisher Ubisoft who are behind the game have confirmed their plans to launch next big update in February 2022 which will see lot of players returning to the game (Ubisoft, 2021). This update will feature lot of exciting features like endgame modifications and brand new game mode which has never been introduced in The Division series (Wales, 2021).

Hence, it can be said That Division 2 is an ongoing project with many sub-projects which are being implemented. Publisher Ubisoft has said that "Since then, we made various iterations on the plans and actively challenged ourselves not to compromise on quality and ambitions for this new content." (Wales, 2021).

There was been no confirmation but it is highly likely that there will be a sequel of the game coming in near future called Tom Clancy's: The Division 3 (Reddit, 2021).

Customer satisfaction and perceived quality data collected from the quantitative survey will be analysed to make meaningful interferences which can be used for future and ongoing projects like the next update and sequel of the game. Researcher has got significant knowledge about the project management process and methodology of The Division 2 game through Johan Oldbring's talk at PMI Sweden (Oldbring, 2020). This will be used with the primary data in conclusion and recommendation section of this research.

According to Miller (2019) "The significance of customer satisfaction within project management is the driving force behind its progression."

Through his own knowledge and with help of data acquired from the survey, researcher will be suggesting changes that can be made to the project management techniques and the design process which will help improve the future updates and the possible sequel. Also this project customer satisfaction data can be used for betterment of games which are similar to The Division 2 genre.

For the same reason, customer feedback elements are inbuilt into project management tools like Asana. Asana is a popular project management tool in video game industry and offers variety of features like integration, tracking and management of customer feedback (Asana, 2021).

CSAT metric is a measure of how satisfied and happy a customer is after using a product or service. In this research product is a video game software meant for entertainment. CSAT which is a score out of 100 can be calculated by finding total number of satisfied customer. Satisfied customer will be defined as participant who have chosen rating of 4 or 5 (on a scale of 5) or rating of 8, 9 or 10 (on a scale of 10) in the survey questionnaire.

CSAT percentage = Total number of satisfied customers/Total responses *100 (Delighted, 2021).

3.3 Research design methodology

Researcher has chosen to adopt quantitative technique for data collection through survey questionnaire for the sample of population. The survey questionnaire will be designed on Google forms and sent to people who have played the division 2 game. Researcher is looking for response from 80 to 100 sample of people.

Questionnaire/survey can be found in Appendix 1.

Participants:

Participants of the designed survey will be video game players of The Division 2 from all over the world which is the population from which sample will be selected. This sample of participants will be equal or more than 18 years of age. This is due to privacy and consent.

Researcher is looking for response from approximately 80-100 individuals through various sources like online forums and chat communication platforms to make sure they represent the population.

Sampling framework and procedure

For this research, researcher has chosen to adopt Snowball sampling and self-selection sampling technique in order to collect quantitative data from the sample of gamers representing the population.

Population of this study can be defined as all the adult video game players and beta testers who have played Tom Clancy's: The Division 2 on various gaming platforms. Though The Division 2 has sold 10 million copies of the game (both physical and digital), number of players who actively play the game keeps fluctuating.
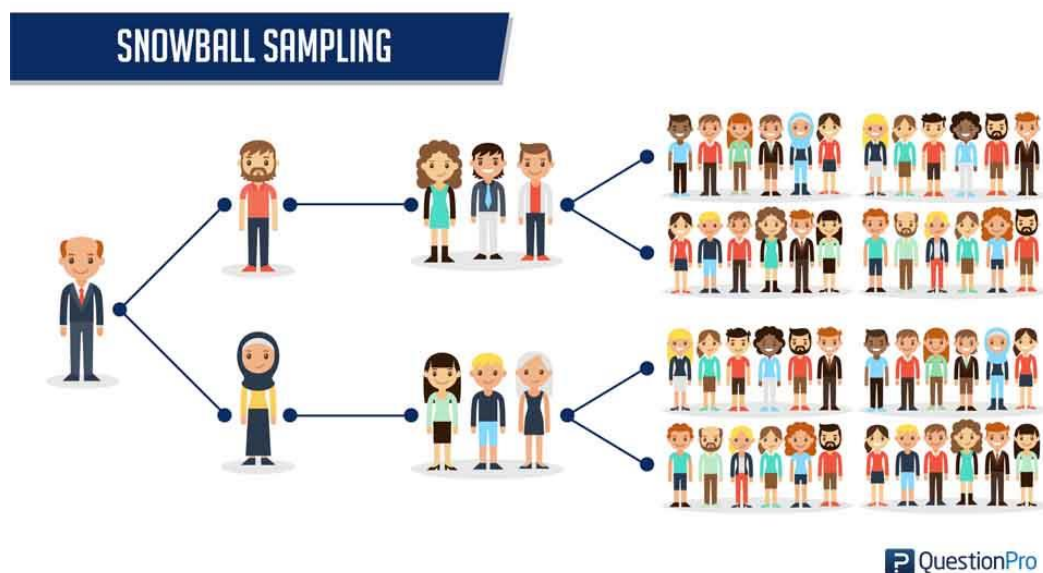
Figure 16: Snowball sampling (Questionpro, no date)

Snowball sampling

Snowball sampling is a type of non-probability sampling technique and hence it is not random. It uses a referral chain method in which initial participants help to distribute and nominate other primary data sources i.e. more participants. It is particularly useful for a businesses where finding subjects for data collection can be hard to access (Dudovskiy, no date).

Researcher has chosen Snowball sampling method because they have contact with few gamers who have played Tom Clancy's: The Division 2 but don't have access to hundreds of player who have played the game. So researcher will be recruiting few initial samples to refer

the quantitative survey to other players. These recruited players will also be asked to distribute the survey in same manner.

Exponential non-discriminative snowball sampling will be optimal for data collection as it will help the researcher to get required number of valid responses/data in a short amount of time. This is particularly useful when there is a limitation of time like in this research.
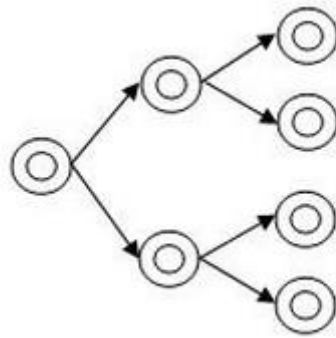
Figure 17: Exponential non-discriminative snowball sampling technique (Dudovskiy, no date)

Some of the advantages of Snowball sampling techniques are as follows:

1. Snowball sampling can help to identify hidden sample of the population which can be beneficial for the results (Dudovskiy, no date).
2. It is a cost effective way to collect primary quantitative data in a short amount of time, which is essential for this research (Dudovskiy, no date).
3. Minimal planning is required before starting data collection (Dudovskiy, no date).

There are also disadvantages of using Snowball sampling technique just like any other sampling technique, but researcher has chosen Snowball sampling because benefits of its use overweigh the downsides.

Self-selection random sampling

For this study, researcher will also use random self-selection sampling in order to get survey responses from The Division 2 players and testers. Community websites like Reddit, Official community forums for The Division 2 and multiplayer communication platforms like Discord will be used to distribute the survey through online link.

Self-selection sampling is also a type of non-probability sampling in which participants from a sample are given a choice to participate in the study. One of the example of this instance is when a researcher distributes survey on an appropriate website where he/she believes that sampling frame of participants may reside (Laerd, no date).

3.4 Procedure and survey design

Reddit is one of the biggest website for video game players where most of the gaming discussions take place. These discussions revolve around topics like issues in the game, request to join online game sessions or just players sharing screenshots of good times they had while playing a particular game like The Division 2. The Division 2 community on Reddit has 354,000 followers (The division 2 Reddit, 2021). Every game have their own official or unofficial Reddit page managed by moderators. It is also an important place for developers as here they can find issues that can be addressed in the next patch or to just interact with the community to get valuable customer feedback. For the same reason researcher has chosen to post their survey questionnaire on The Division 2 Reddit page.

Official community website of The Division 2 is also a great place for rich gaming discussions to take place in the threads. There are total of 273,000 users on this website till date with over 44,000 topics created in 214,000 posts (Ubisoft, 2021). Researcher will also be posting the questionnaire there.

Discord is a popular voice and video communication platform for gamers with over 150 million active users worldwide (Discord, 2021). It also has features like group channels for different games like The Division 2 which helps the community thrive similar to forum websites. Researcher will also be utilising the potential of Discord to collect primary data for this research (Discord, 2021).

Survey design

Survey is designed on Google forms and consists of total of 21 questions for the participants who are players and testers of Tom Clancy's: The Division 2.

Some of the key questions asked by the researcher in the survey are:

1. What is your age group?

   This question will helps the researcher segment the participants based on age which can help in analysing customer satisfaction and quality data based on participant's age. This will help in grouping participants into various age groups.

2. Have you played games from Ubisoft's Tom Clancy's series before? (Like The Division, Rainbow six siege etc.)?

   Researcher has asked this question from the participants to divide participants into loyal and new video game fans of the Tom Clancy's franchise.

3. Which Platform did you play Tom Clancy's: The Division 2 on?

   Response to this question will help the researcher to know what type of experience participants had on different devices they played The Division 2 on like PC, PS4, PS5 and Xbox etc. Each device has different hardware and software specifications to run the game and the development process may differ slightly on each device. This will help the researcher to group the players based on device they played the game on.

4. How satisfied were you with the storytelling aspect of The Division 2?

   This is a Likert scale question which is important from point of the research question variable which is customer satisfaction. This question focusses on the customer satisfaction of the storytelling of the game. Though The Division 2 is a multiplayer only game but it has component of story and main missions that focus on the narrative. This question will help to determine dependent variable which is CSAT score of the story in the game.

5. What did you find most immersive about the story?

    This question gives multiple choices to participants who can choose more than one answer. It is a follow up question to the previous question to know what kept participants engaged with the story. This question will help to determine the independent variable (How immersive is the story).

6. How satisfied were you with the multiplayer and COOP (cooperative) of the game?

    The Division 2 is primarily a multiplayer game which requires internet connectivity at all times. Most of the project management techniques that were used to design the game focussed on multiplayer aspects (Oldbring, 2020). Hence, this question will help to determine CSAT score the multiplayer and cooperative features in the game. This question will help in determining the dependent variable which is the multiplayer CSAT score of the game.

7. What did you find most immersive about multiplayer?

    This is a follow up question to the last question to make inferences that why participants rated the satisfaction score they did for the multiplayer. Researcher also played the game themselves at the stage of designing the survey in order to get first-hand experience with the multiplayer.

8. Did you encounter any bugs in The Division 2? / If you encountered bugs in the game, please describe nature of the bugs.

    Both of these questions are related to each other to find what kinds of bugs or glitches players (or participants) came across in the game. This data is critical as it will help in identifying problems that can be fixed in the next update with appropriate project management methodology. The question asking about type of bugs will help in determining the independent variable i.e. type of bugs, which will help in explaining the perceived quality of the game.

9. Did you participate in open beta testing of the division 2? / Did you find any significant improvement in experience in full version of the game compared to beta version?

These questions will help to identify players who participated in The Division 2 beta testing phase and improvement they noticed in the final release of the game. As discussed before in literature review, beta testing is important part of project quality management in video game industry. From responses of these question researcher can determine what improvement was made in the final version of the game with help of feedback provided by beta testers.

Researcher has also made sure to make these questions non-compulsory as not all respondents would have participated in the Beta testing of the game.

10. How many stars out of 5 will you rate the graphic quality of the game on your platform? / How many stars out of 5 will you rate the sound design quality of the game?

These questions focus on the second variable of the research which is perceived quality. In a video game, graphics, audio and immersion are the main quality metrics a customer perceives, which has also led to addiction behaviour in some video games (Bassett et al., 2021). This question will help in determining the dependent variables which are the graphics and audio quality perceived by the player/participant.

11. Overall, how satisfied were you with The Division 2 (All features combined)

This question is important for this research as it is included to find the overall customer satisfaction score of The Division 2 video game. Researcher have also asked customer satisfaction score separately for story and multiplayer. Overall CSAT can be compared with CSAT scores of multiplayer and storytelling to derive meaningful results. This will help in determining the dependent variable for this research which is the overall CSAT value of the game.

12. What type of new features will you like to see in the next content update of The Division 2 scheduled for next year? / What type of new features will you like to see in the possible sequel of The Division 2?

These two questions focus on the third research objective which is to give suggestions of improvement of project management techniques to improve the game. Customer feedback is key to successful project management and depending on what participants want, project management methodology like scrum can be tailored to deliver those elements. Communication and leadership can be focussed more on those areas of the game in order to successfully complete the project.

It should also be noted that project for the next possible sequel of the game will be much bigger and complex in size than the update which is a confirmed ongoing project. For the same reason two separate question were chosen by the researcher in the survey for both of these projects.

3.5 Ethical consideration for data collection

For this study, researcher has taken appropriate steps to make sure that data collection and methodological procedures in use are in compliance with ethical practices to protect privacy and data of participants. Some of the steps taken are as follows:

- **Protection of privacy/anonymity of participants:**

While designing the survey, researcher has made sure that all questions do not compromise the privacy and confidentiality of participants. Only answer that will hint personal information of participant is their age group. Researcher has chosen to enquire about age group instead of exact age so the information can't be tracked back to the participants and keep them anonymous.

- **Integrity of the research:**

  Researcher has also made sure to be as transparent as possible with the participants with help of information sheet provided on the first page of the questionnaire. This information sheet contains various sections like:

  1. Aim and title of the study: In this section, researcher clearly explains title, about themselves and purpose of the study. How collected data will be used to answer research question and objectives is also mentioned in this section.

  2. What will happen? : In this section researcher describes how data will be collected by use of survey. Types of question is also defined here.

  3. Time commitment: In this part researcher tells the participants that how long it will approximately take to complete the survey.

  4. Participant's rights:

     Here all of the rights participants are entitled of are mentioned, like their right to access of their own data. They are also informed that they can ask for their data to be deleted at any time and can with withdraw from the research at any point, if they choose to do so.

  5. Privacy of participants:

     Here participants are informed that none of their personal data will be collected in the survey except their age group.

  6. Contact:

     Researchers have provided their and supervisor's contact details in this section, so they can be contacted at any time by participants if needed.

- **Physical and mental safety of participants**

  No participants of the survey for this research will be prone to any mental or physical harm. This research has the theme of video game entertainment which is non-stressful and non-anxiety inducing theme.

3.6 Critical evaluation of methodology

Quantitative survey methodology technique used by the researcher has both benefits and drawbacks when it comes to how profound a research can be on its completion.

Some of the benefits of using quantitative survey research are:

1. Testing and validity of research: Quantitative research can be replicated by someone else to test results which can be validated. Makes gathered data more reliable and authentic (Devault, 2020).

2. Data analysis is a rapid and straightforward process: Data gathered from quantitative methodology is numerical in nature and is represented by graphs and tables. Data analysis includes range of statistical tests and carrying out these tests is simple in available tools like IBM's SPSS (Devault, 2020).

3. Value of the research: Research involving complex statistical data analysis techniques is considered to be reputed as it is backed by hard factual numerical data (Devault, 2020).

4. Scientific objectivity of the research: Quantitative study is based on scientific and mathematical calculations and hence can be trusted and is rational (McLeod, 2019)

Some of the drawbacks of using quantitative methodology like surveys are as follows:

1. Context of the research: Quantitative methods like survey does not take place in natural environment, and hence there is no direct communication between the participant and the researcher leading to lack of understanding of the question asked (Carr, 1994).

2. Expertise of the researcher impacts the results: Any mistake and insufficient knowledge of statistical techniques can lead to wrong results and negatively impact the interpretation of results (Black, 1999).

3. Over focus on numerical data: Researcher may focus on numerical data too much which can lead them to miss the broad picture and relationships between variables (Devault, 2020).

4. Time for data collection: Data collection can be a lengthy process and can be slower during the end of phase. Researcher has faced the same problem in this study.

3.7 Limitations of the research

Researcher is aware that this study is an academic study and has its limitations. These limitations particularly doesn't make this research less valuable but gives opportunity to other researchers in the future to pursue the same theme in variety of different ways.

Tome horizon for this research is cross-sectional i.e. it is a short study that was completed in approximately 3 months of time.
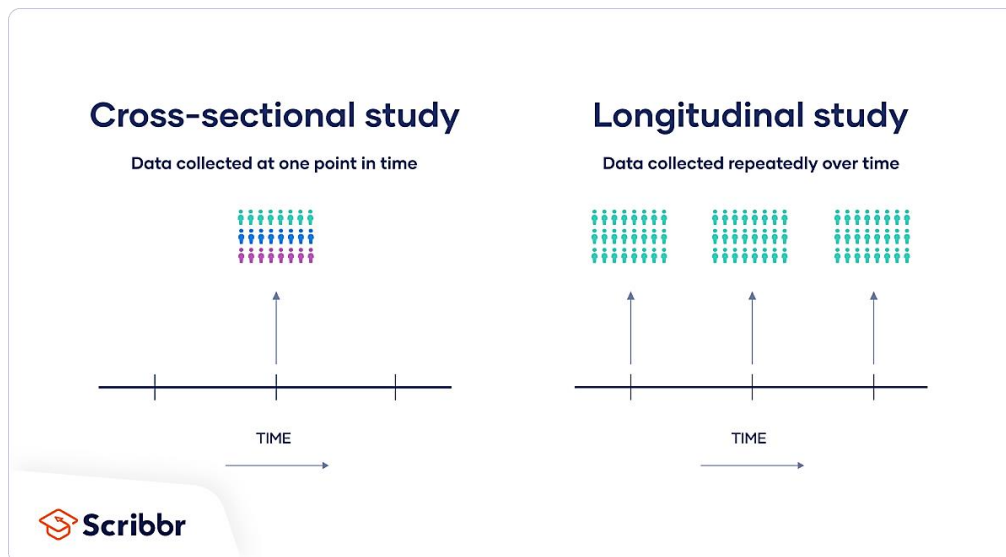
Figure 18: Cross sectional vs longitudinal study (Thomas, 2020)

Cross sectional study is beneficial for a research when there is restriction of time and funds like in this study. In a cross-sectional study data is collected at one point of time rather than multiple times like in longitudinal research which spans for a longer time frame. Some of the benefits of using cross sectional study is ability to capture data from a large pool of samples at given moment in time to provide results and overview of that period (Thomas, 2020). Researcher is trying to capture customer feedback data for the current time as The division 2 project is ongoing and next expansion update of the game is scheduled for February 2022 release.

4. Results and data analysis

In this section data gathered from the survey will be visualised and then analysed using various statistical techniques in IBM's SPSS tool. These visualisations and statistical analysis will help to give a deep insight about the characteristics of data to derive meaningful conclusions which will be helpful for the researcher to address the research objective and answer research questions of this study.

4.1 Results of the survey

In total, researcher got 100 responses from the participant after which they decided to stop accepting responses and proceed to data analysis stage.

Five initial responses were deleted from the data analysis stage because they were found to be redundant so actual number of response is 95.

Following is the overview of responses received for questionnaire designed on Google forms (Appendix 1):

1.

What is your age group?
95 responses

Legend:
- 18-25 years
- 25-39 years
- 39-45 years
- >45 years

52.6%

38.9%
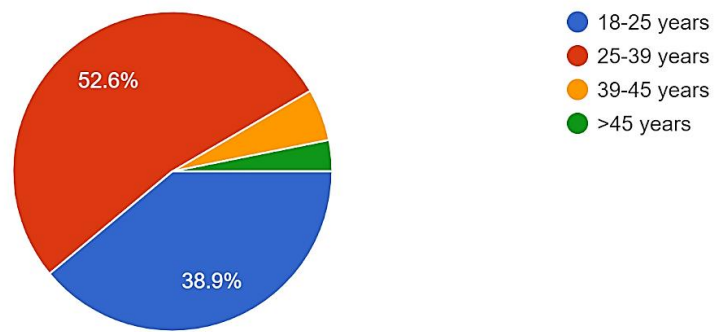
Figure 19: Survey question 1

More than half (52.6%) of participants in the sample belonged to age group of 25-39 year olds, while 38.9% of participants were 18-25 years of age. It can be said that majority of participants of the survey were young adult video game players. Out of 95 responses only 8 participants said they were of older age group ranging from 39 to more than 45 years of age.

2.

Have you played games from Ubisoft's Tom Clancy's series before? (Like The Division, Rainbow six siege etc.)

95 responses
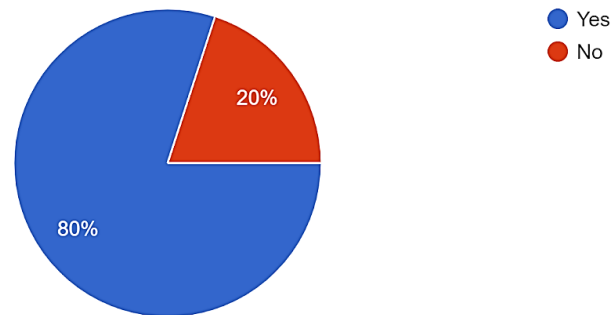
Figure 20: Survey question 2

Second question was focussed on finding out which participants had more experience with Tom Clancy's series of game by Ubisoft. This will also help grouping the sample into old and new fans of the game which can be an important data point for improvement of project management process for current and future video game projects.

Researcher was not surprised by the response that 80% if participants said that they have played video games from the same series of game before. This is because Tom Clancy's series of game is well known in video game industry. 20% of participants said that they were new to this series of game.

3.

Which Platform did you play Tom Clancy's: The Division 2 on?
95 responses
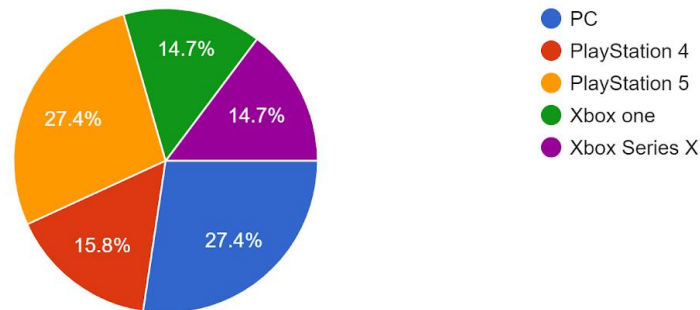
Figure 21: Survey question 3

This question is focussed on enquiring what platform or hardware devices did the participant play The Division 2 on. Hardware devices is an important data to collect because each device that was provided in choices; PC, PS4, PS5 and Xbox all have different capabilities to run the different elements of the game like graphics and audio. PS5 and PC got the highest number of responses i.e. 27.4% each, which was relatively close to other devices in results like PS4 and Xbox.

4.

Approximately how many hours have you played The Division 2?

95 responses
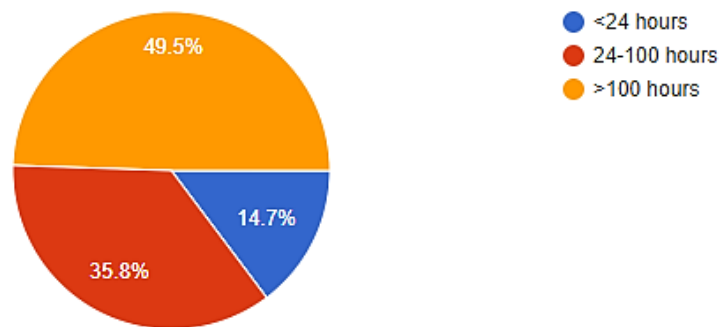
Figure 22: Survey question 4

Almost half of the participants (49.5%) said that they have played the division 2 more than 100 hours in gameplay time. This is a substantial amount of time for the participant to experience mostly all elements of video game design and explore the virtual worlds developers have created. This also means feedback from these participants is more valuable and concrete for improving upon the existing project management processes of the game.

5.

How satisfied were you with the storytelling aspect of The Division 2?

95 responses
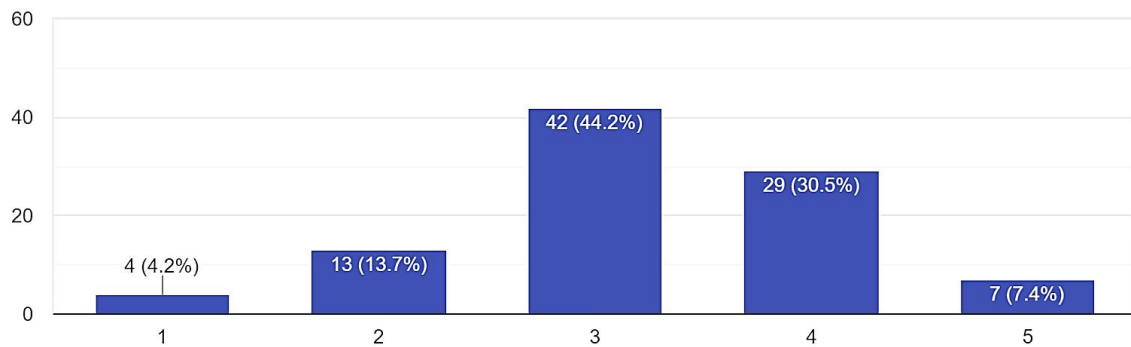
Figure 23: Survey question 5

This was a Likert scale based question to measure customer satisfaction score of the story in the game. Size of the scale was chosen to be five with one being worst score and five being the best. Result indicates that 44.2% of participants gave satisfaction score for the storytelling a rating of 3 out of 5. Moreover, total of 36 participants gave division 2 high scores of 4 and 5. These results show that there is a room for improvement in the story of the game by use of feedback from fans. Massive entertainment can strengthen their project management techniques for improving the storytelling aspects in the future updates and sequel.

6.

What did you find most immersive about the story?

95 responses
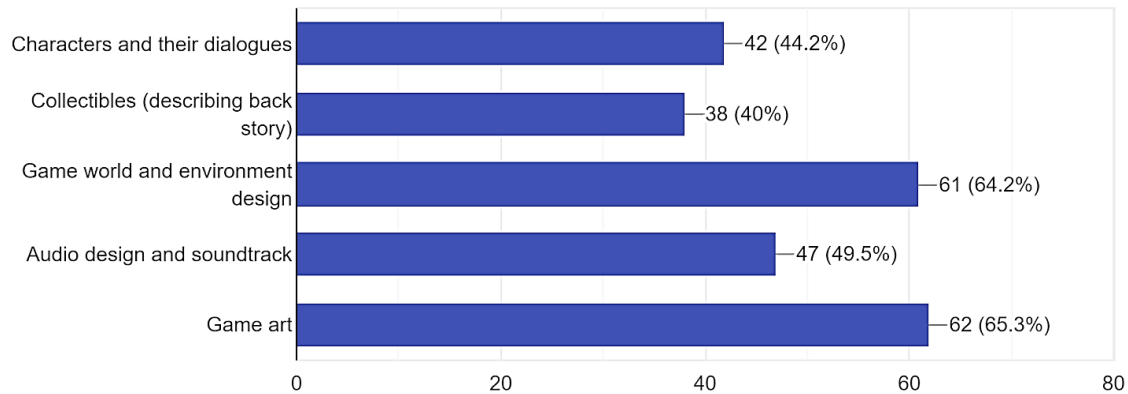
Figure 24: Survey question 6

This question was asked by the researcher to know what aspects of story of the game did the participant like. The division 2 is a multiplayer focussed game meant to be played with other online players with less emphasis on story.

Apart from setting the narrative of the post pandemic world and describing the back story of the events that took place before the player takes control of the character, developers has not put much work on the storytelling in the game. Game world /environment design and game art were chosen the most with 64.2% and 65.3% of participant selecting both options. Collectibles are present in the game in form of video and audio files which describe the story which got the least responses.

7.

How satisfied were you with the multiplayer and COOP (cooperative) of the game?
95 responses
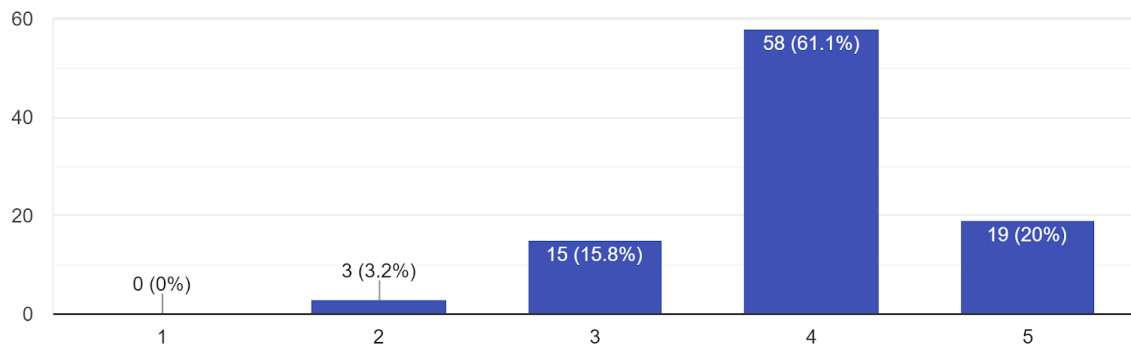
Figure 25: Survey question 7

The Division 2 has been praised for its multiplayer and it is a multiplayer focussed video game requiring internet connectivity at all times during gameplay. 61.1% of participants gave multiplayer and cooperative a score of 4 out of 5, which is quite high compared to storytelling.

Few players also gave multiplayer a low satisfaction score i.e. 2 or 3 out of 5 which means using appropriate customer feedback, project management processes can be improved to make multiplayer more appealing in the future update.

8.

What did you find most immersive about multiplayer?
95 responses
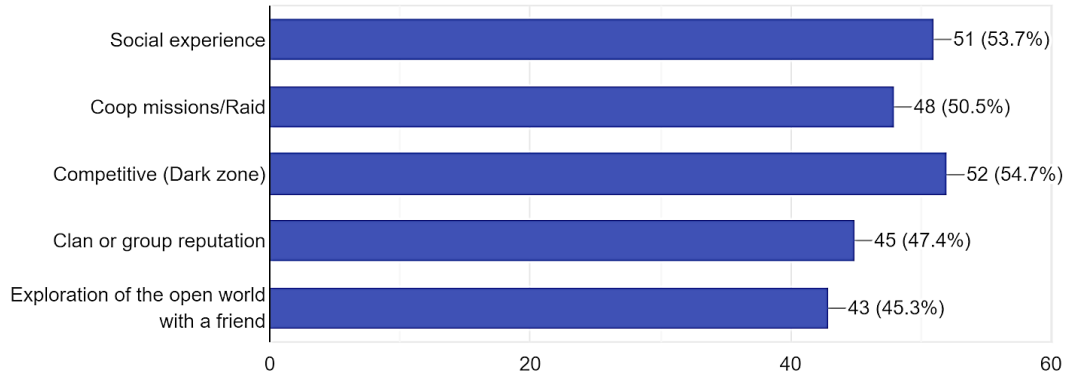
Figure 26: Survey question 8

These responses refer to all the elements of the multiplayer participants liked in the game, it is also obvious that these responses explain customer satisfaction rating they gave in the previous question to multiplayer.

9.

Did you encounter any bugs in The Division 2?
95 responses
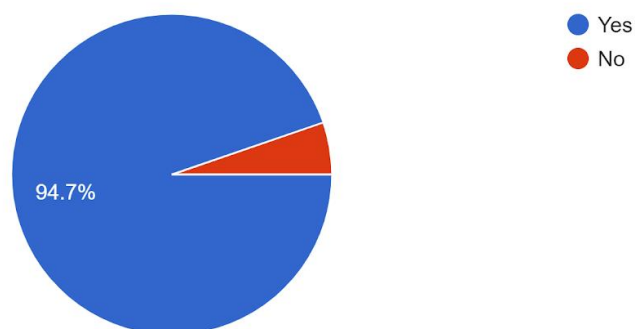
Figure 27: Survey question 9

This question and its responses by the participant is particularly important in terms of dependent variable which is perceived quality. 94.7% of participants, found some or other type of bugs in the division 2 video game. Researcher designed the next question to find what type of bugs they encountered while playing the game.

10.

If you encountered bugs in the game, please describe nature of the bugs
92 responses
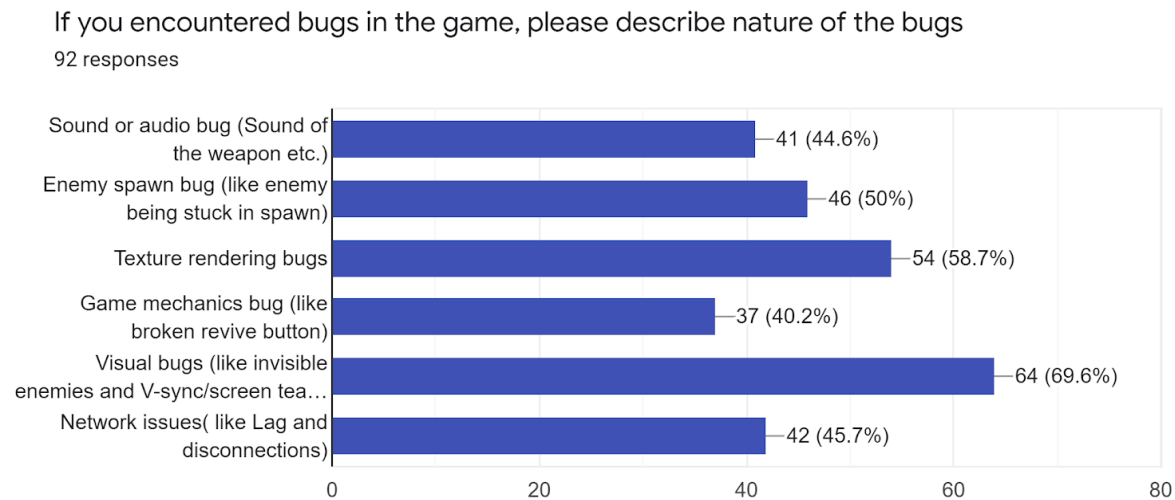
Figure 28: Survey question 10

There are variety of bugs that participants faced during their gameplay sessions. This question was a multiple choice and hence it can also be seen that participants has chosen more than one type of bugs.

Researcher played the division 2 video game themselves during this study and also encountered similar bugs in the game e.g. Visual bugs like screen tearing which is a sync issue of the frame rate. This bug also received the highest percentage of selection by participants (69.6%). Other popular bugs were related to texture rendering, audio and enemy AI.

11.

Did you participate in open beta testing of the division 2?

95 responses
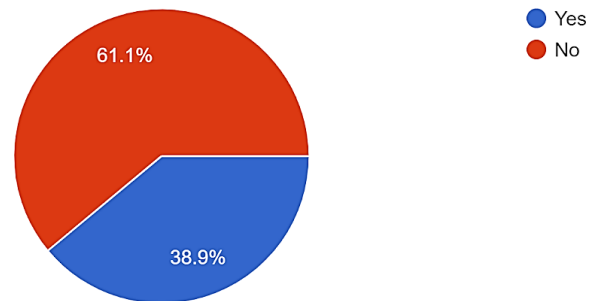
- Yes
- No

61.1%

38.9%

Did you find any significant improvement in experience in full version of the game compared to beta version?

48 responses

- Yes
- No
- Maybe

12.5%

12.5%

75%

What type of improvement did you notice?
47 responses
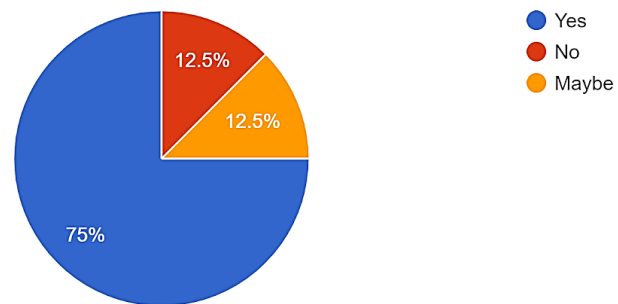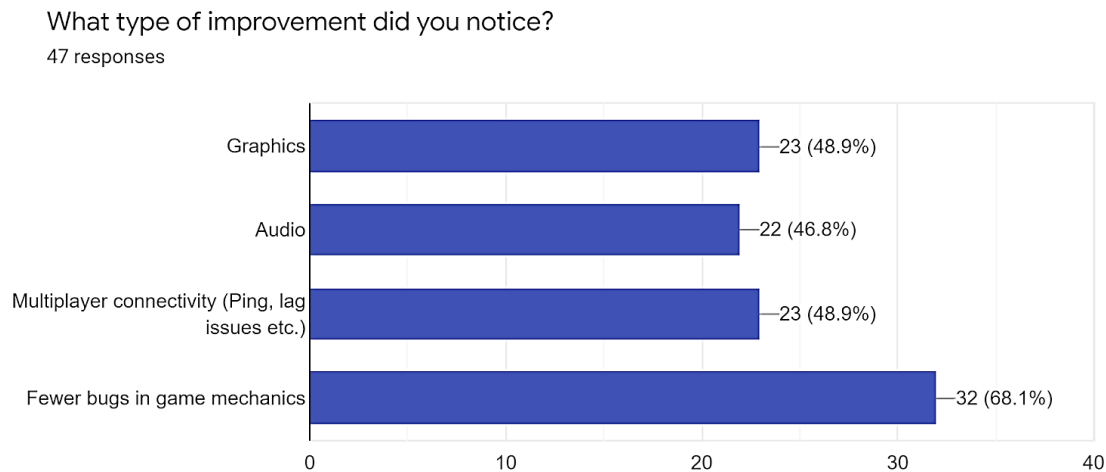
Figure 29: Survey question 11, 12 and 13

These questions were non-compulsory and were only meant for players who participated in open beta testing of The Division 2 and were a part of project feedback process before launch of division 2. This feedback was crucial for the development of the full product as it helped to remove earlier bugs and issues present from the launch version of the game.

75% of participants said that they saw different types of improvement in the full version of the game compared to beta version in graphics, audio, multiplayer connectivity and number of bugs in game mechanics. Participants who felt that they faced fewer bugs in game mechanics in full game compared to beta version was the highest i.e. 68.1%.

12.

How many stars out of 5 will you rate the graphic quality of the game on your platform?
95 responses
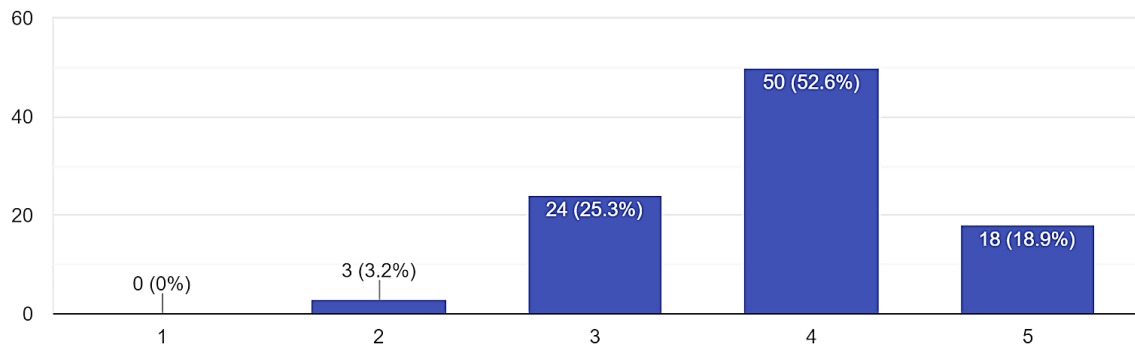
How many stars out of 5 will you rate the sound design quality of the game?
95 responses
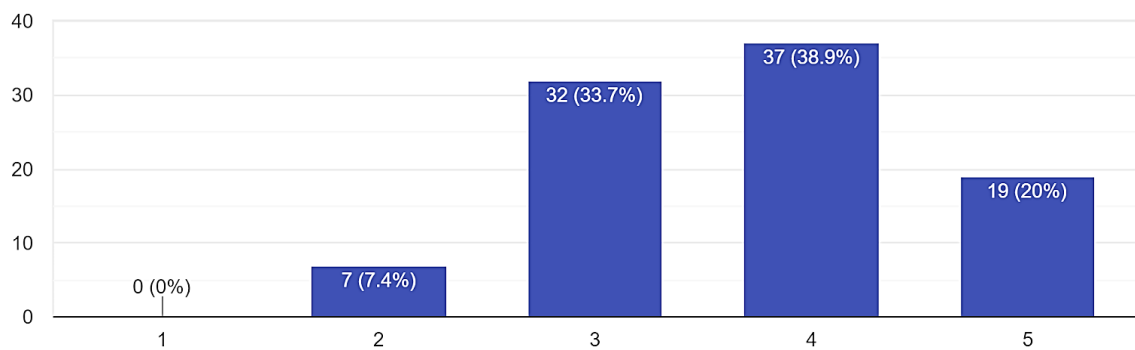
Figure 30: Survey question 14 and 15

Both of the questions in figure 30 were focussed to find the perceived quality of the game based on graphics and audio experience. According to the results, participants thought that graphic quality of the game was better than sound quality with 52.6% of them voting for graphic quality four stars compared to only 38.9% who voted for sound quality same.

It should be also noted that 33.7% of respondents also voted sound quality only 3 stars.

13.

Did you face any performance issues like frame rate drops on the platform ?
95 responses

- Yes
- No
- Neglectable

38.9%

8.4%

52.6%
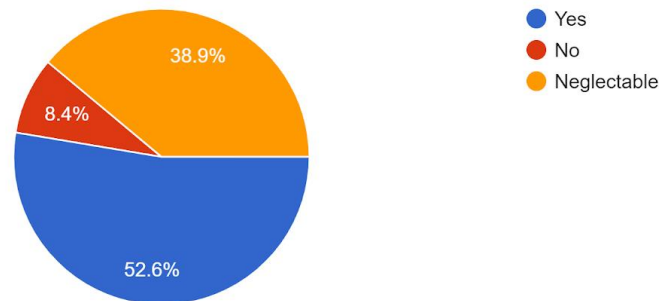
Figure 31: Survey question 16

This question was also focussed to find what participants felt about the quality of the game. Moreover, it was also aimed to find out performance hardware capabilities and optimisation of the Division 2 on various devices on which participant played the game. This will be discussed further using data visualisation in MS Power BI.

14.

What type of improvement will you like to see in future updates of the game?
95 responses

Weapon balancing	39 (41.1%)
Matchmaking fix (Quicker matchmaking)	43 (45.3%)
Audio glitches fix	41 (43.2%)
Game mechanics fix	54 (56.8%)
More customization	48 (50.5%)
Newer missions/raids for multiplayer	52 (54.7%)
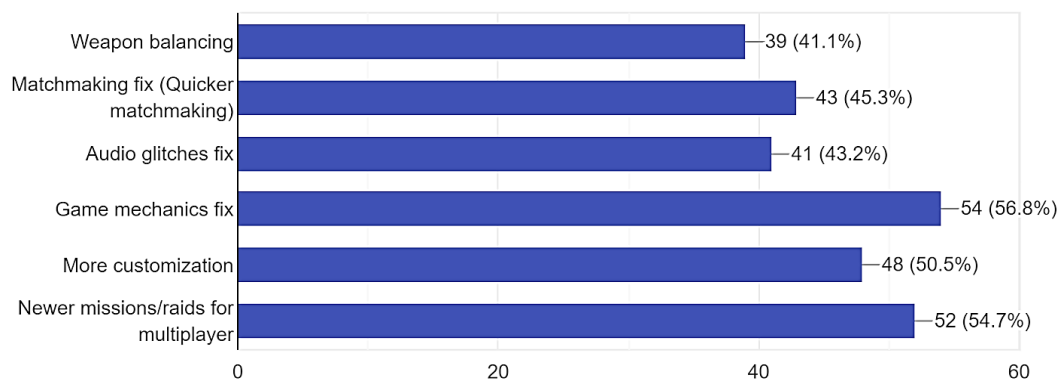
How likely will you recommend The division 2 to your gaming friends? (1-Lowest and 5- Highest)
95 responses
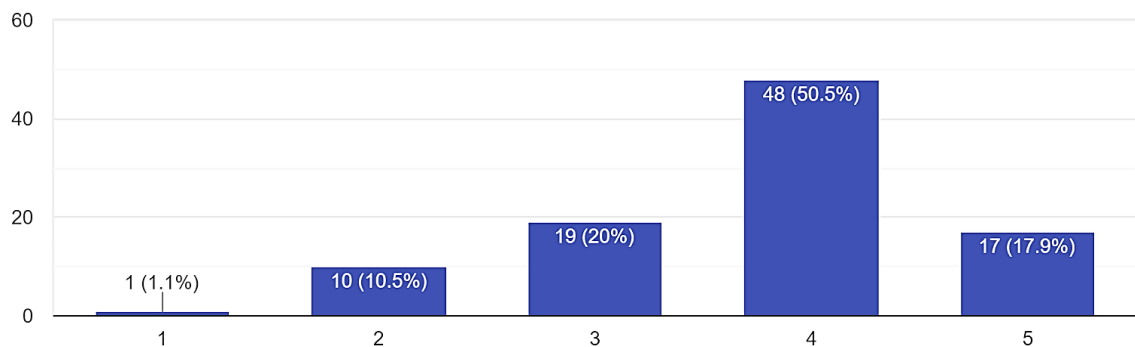
Figure 32: Survey question 17 and 18

First question in figure 32 was designed to know improvements that participants will like to see in the future expansion update of The Division 2, this feedback will be important for project planning stage and ranking of sprint backlog of project management methodology (Atlassian, 2021). This feedback will be beneficial for Massive entertainment to improve their already existing agile project management methodology.

Second question in figure 32 will be used to calculate net promoter score (NPS) metric, which is likelihood of participants recommending the division 2 to their friends.

15.

Overall, how satisfied were you with The Division 2 (All features combined)

95 responses
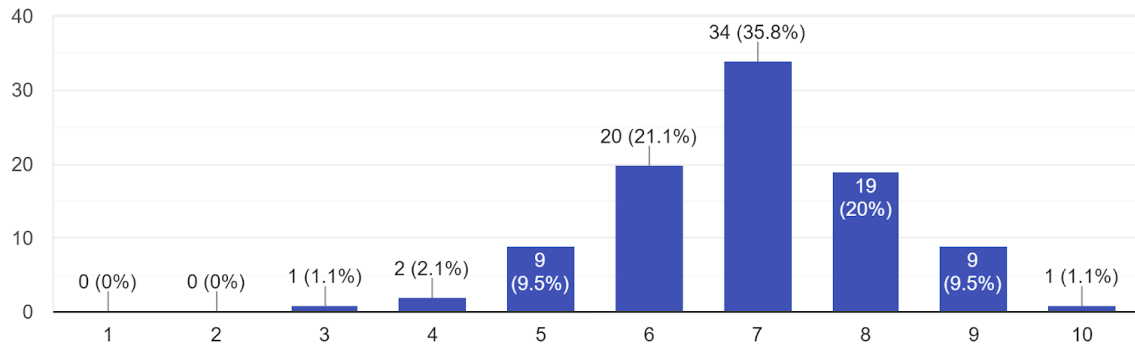
Figure 33: Survey question 19

In this question researcher aimed to enquire the overall satisfaction rating of the game. Figure 33 indicates that the division 2 got mediocre score from the participants, this is in line with the actual user rating of the game which was is also mediocre to low (Metacritic, 2021). It is clear that there is still lot of improvement that can be implemented in the future and current projects in the division 2.

16.

What type of new features will you like to see in the next content update of The Division 2 scheduled for next year?
95 responses
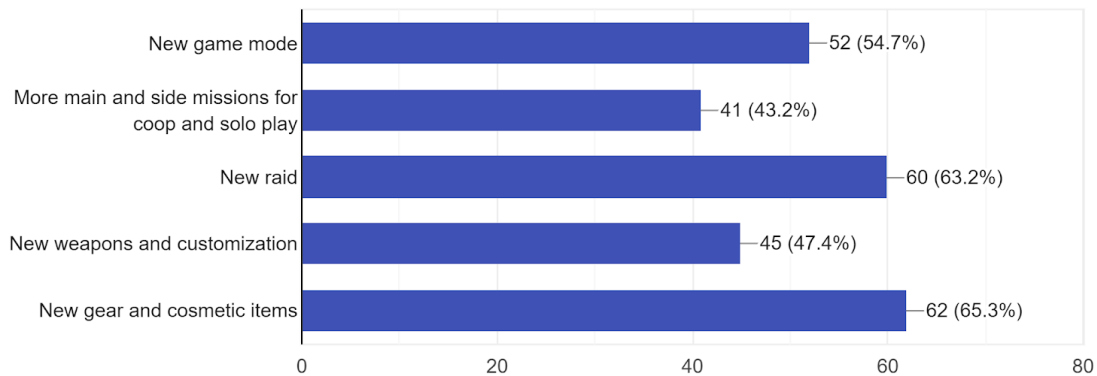
New game mode — 52 (54.7%)
More main and side missions for coop and solo play — 41 (43.2%)
New raid — 60 (63.2%)
New weapons and customization — 45 (47.4%)
New gear and cosmetic items — 62 (65.3%)

(Axis: 0, 20, 40, 60, 80)

What type of new features will you like to see in the possible sequel of The Division 2?
95 responses

Better progression system for multiplayer — 53 (55.8%)
New world environment (New country or city) — 63 (66.3%)
Presence of playable vehicles in the game — 48 (50.5%)
Cross platform play — 65 (68.4%)
Non Linear story line — 42 (44.2%)

(Axis: 0, 20, 40, 60, 80)
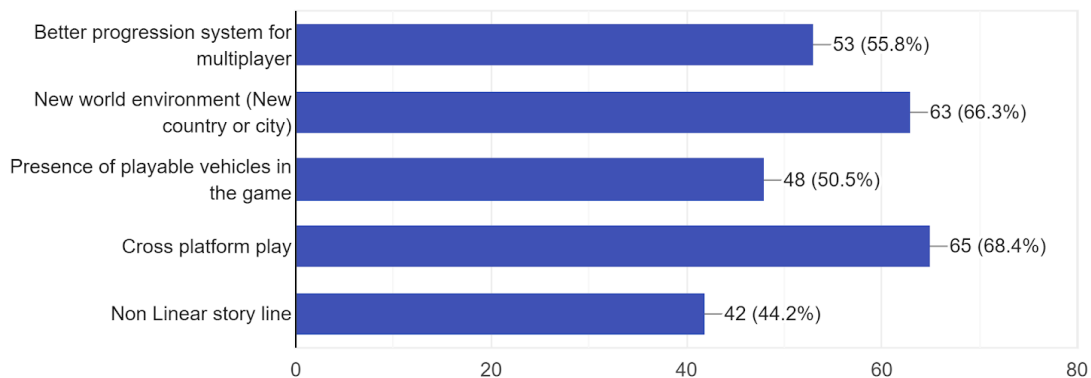
Figure 34: Survey question 20 and 21

These were the last two questions of the survey were focussed on gathering of customer feedback (in terms of new features and content) for next content update and possible sequel of the division 2. All of the highest rated features should be included in the sprint planning and backlog of scrum project management methodology which will impact the overall customer satisfaction score and business performance.

Microsoft Power BI data visualisation
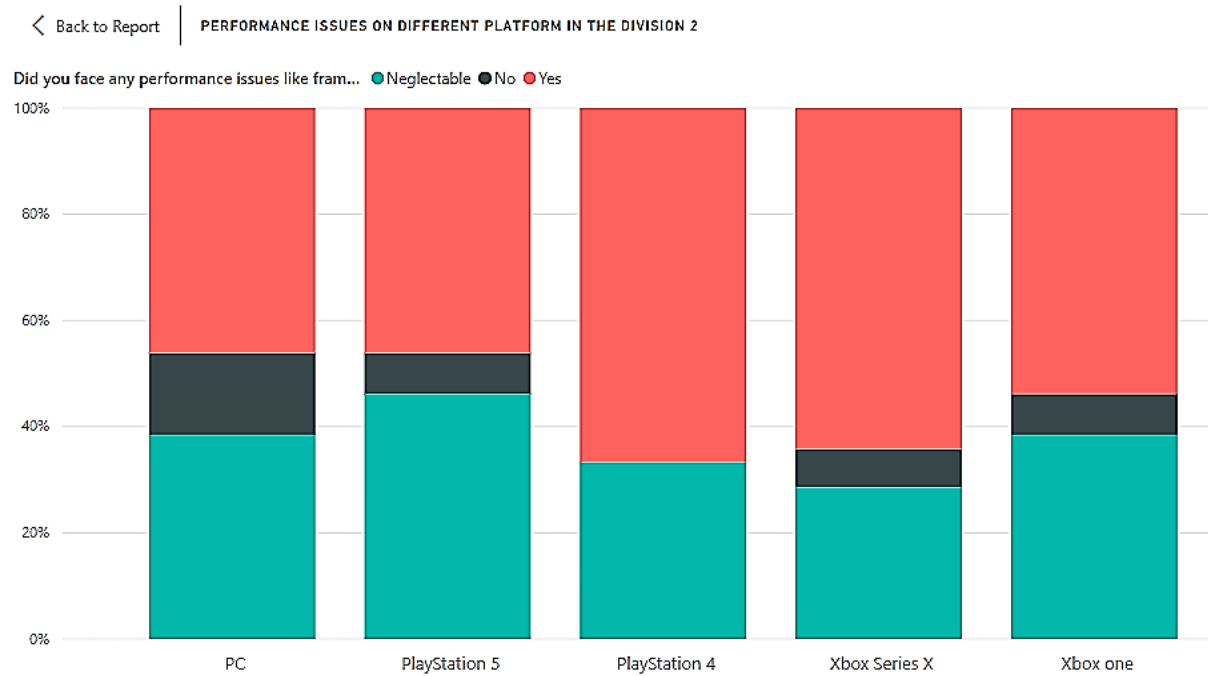
Figure 35: Performance issues faced on different platforms
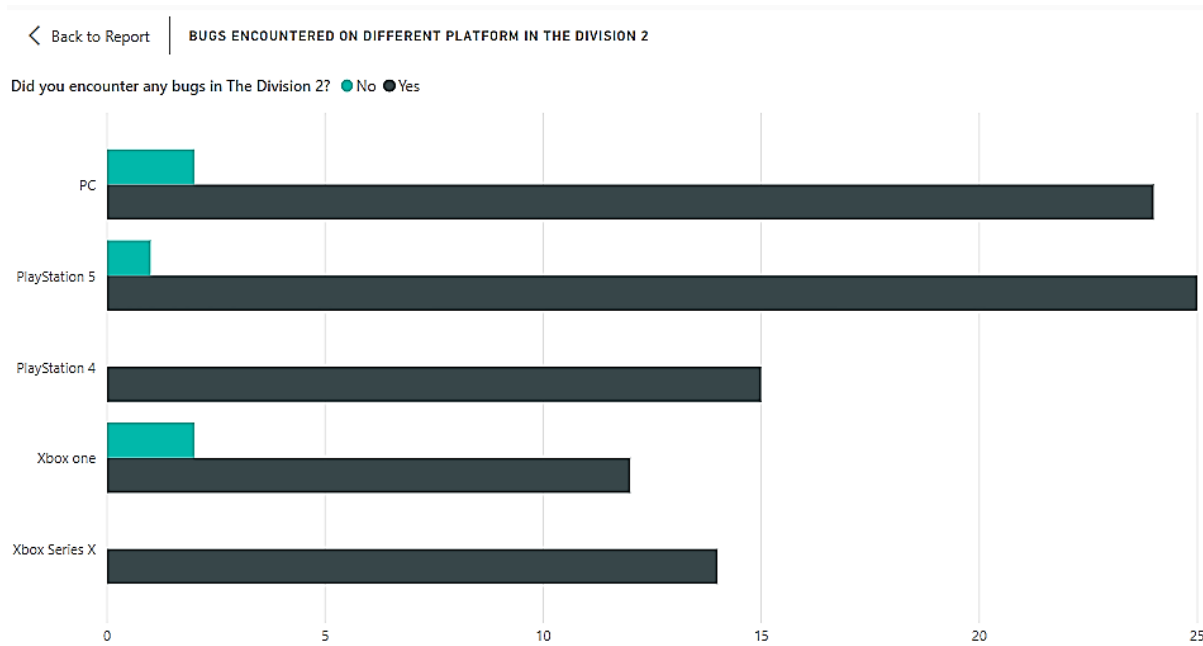
Figure 36: Bugs encountered by different platform

Customer satisfaction by age group

What is your age group?	Average of How satisfied were you with the storytelling aspect of The Division 2?	Average of How satisfied were you with the multiplayer and COOP (cooperative) of the game?
>45 years	4.67	5.00
18-25 years	3.19	4.03
25-39 years	3.12	3.86
39-45 years	3.80	4.20
Total	**3.23**	**3.98**

Figure 37: Customer satisfaction mean of story and multiplayer by age group

Data visualisations in figure 35, 36 and 37 was created in Microsoft Power BI by the researcher to create meaningful observations from the survey data which was found to be lacking in visualizations on Google forms. Figure 35 shows how did performance issues like frame rate drops varied on different platform on which game was experienced by the participant. It can be seen that participants who played game on PlayStation 4 experienced more performance issues than other players.

Next visualisation shows relationship between bugs encountered by participants and platform they played the game on. It was found that highest number of participants who found bugs in the game were on PS5 console followed by PC. Both of these platforms also had few number of the participants who said that they didn't come across any bugs in the game. Xbox one had lowest participants who faced bugs in the game and also had few participants who responded that they didn't find any issues at all.

Table visualisation in figure 37 shows customer mean satisfaction score of storytelling and multiplayer by participant's age group. No comment will be made by researcher on it because no significant difference was found in the mean score by age group. Participant who were older than 45 years of age had rated a higher score compared to other age groups, but researcher found there were not enough participant with age older than 45 years no make meaningful statement on their score.
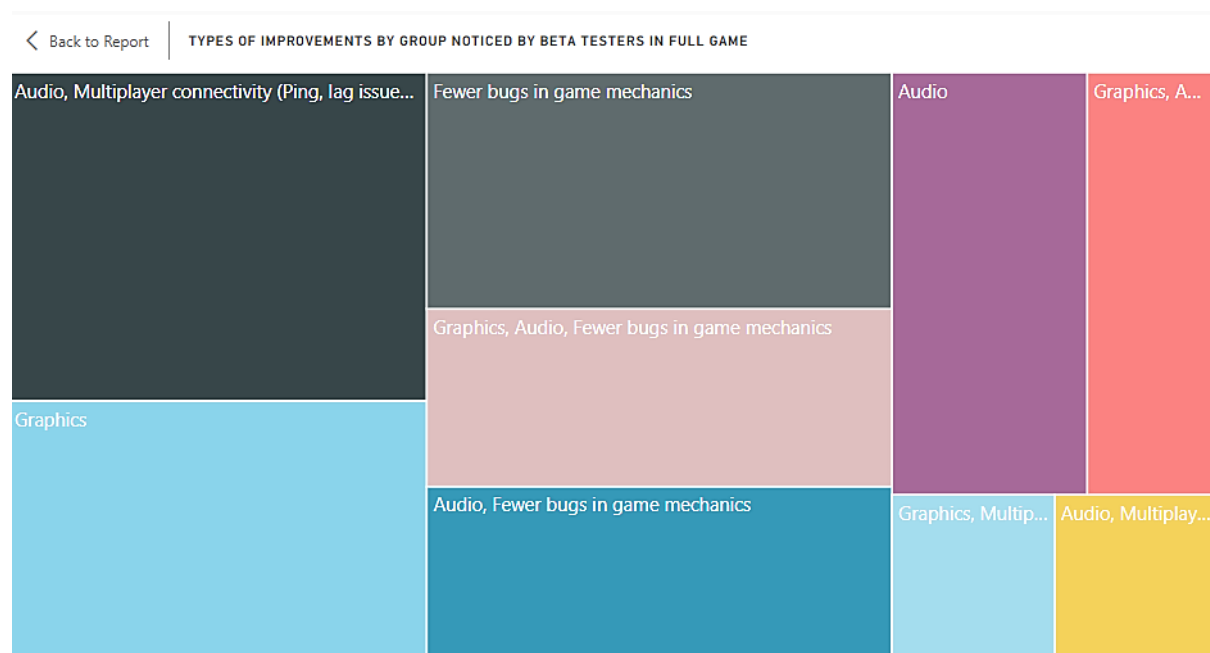
Figure 38: Improvement in game noticed by beta testers in group

In the above Tree map visualisation (figure 38) researcher tried to find what improvements as group did beta game testers saw in the full version of the game. Participants were given multiple choices for this questions, for the same reason it's more sensible to view these

responses as a group. As shown by area of the rectangles highest number of the participants said that they noticed improvement in audio, multiplayer connectivity and game mechanics. This shows that Massive entertainment studios did listen to beta tester customer feedback to improve the full version of the game project which was noticed by these participants.
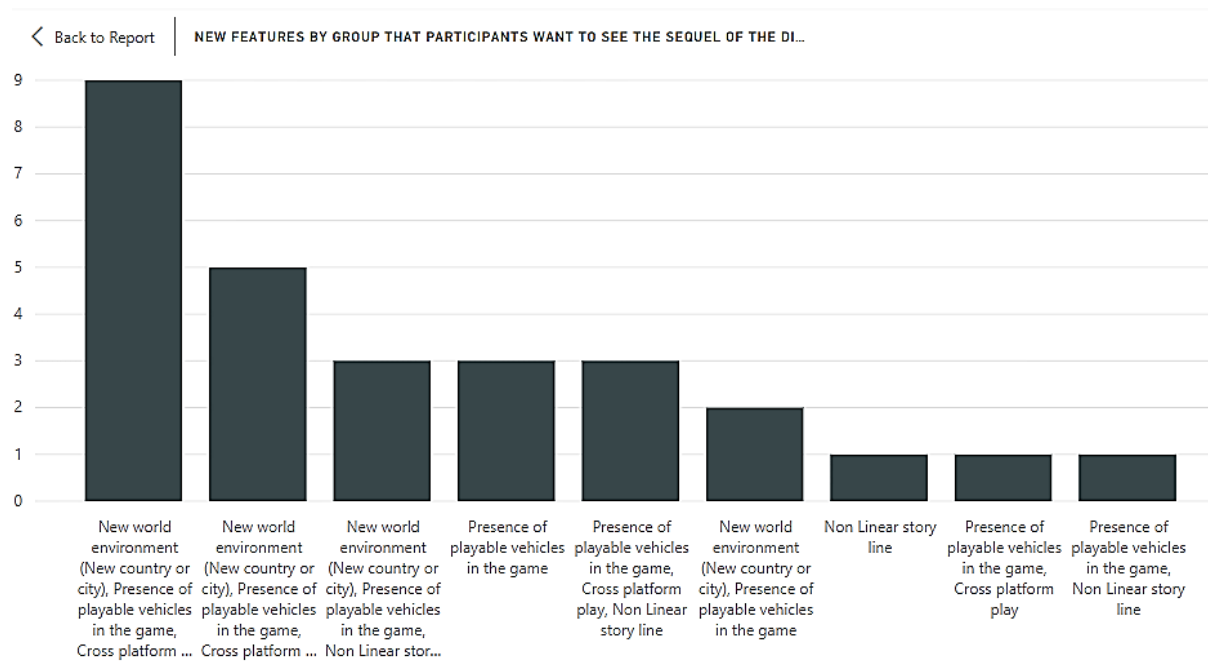
Figure 39: New features grouped which participants want to see in the sequel

Bar chart above shows new features that participants want to see in the sequel of the division 2 as a group. This question in the survey also allowed participants to choose multiple features which they thought will be great for the next division game project. It was found that most respondents wanted to see new environment i.e. new map in a new country, presence of playable vehicles as currently division 2 does not contain any controllable vehicles in the game and cross platform play (ability to play online multiplayer between different platforms like PC with PlayStation or vice versa).

4.2 Descriptive statistics and CSAT score

Descriptive statistics helps to describe the data from the sample with help of various coefficients like Mean, Median, Mode, variance and standard deviation (Hayes, 2021). Data analysis was conducted with help of IBM's statistic tool called SPSS.

Descriptive statistics is important because they give different characteristics of the dataset, which helps to understand the data in detail.

- Mean: is the average of all the observed quantitative numerical data (Hayes, 2021).
- Standard deviation: SD helps in determining how dispersed data is using variance (Hayes, 2021).
- Mode: Mode of the data set is the observation that occurs most frequently (Hayes, 2021).
- Median: Is the observation that is present in middle of a dataset (Hayes, 2021)

Before starting data analysis in SPSS it should be noted that researcher has considered Likert scale data to be continuous and interval in nature. As Likert data can be considered as ordinal or interval, researcher has assumed that Likert data is continuous/interval. Because of the same arithmetic calculations and inferential parametric tests can be performed on this data.

According to Scribbr (2021) it is common to assume Likert scale as interval i.e. it has equal distance between each score on the scale. To explain this even further researcher will use example of perceived quality Likert scale used in the survey where researcher has asked participants to rate quality by number of stars. It is sensible to assume that each increment of number of stars has equal spacing between them and hence scale is interval and continuous in nature.

Customer satisfaction

Table 1: Table for Mean and standard deviation of customer satisfaction score of story, multiplayer and overall game (N=95)

Variable	Mean	Standard deviation
Customer satisfaction (Story)	3.23	.93
Customer satisfaction (multiplayer)	3.98	.70
Overall customer satisfaction	6.92	1.28

Table 2: Table of Median and Mode of customer satisfaction score of storytelling, multiplayer and overall video game (N=95, valid =95, missing=0)

Statistics	CS of storytelling	CS of multiplayer	Overall CS of game
Median	3.00	4.00	7.00
Mode	3	4	7

CS refers to Customer satisfaction

Table 3: Frequency table of participant's age group (N=95)

Age group	Frequency	Percentage (%)	Cumulative percentage
>45 years	3	3.2	3.2
18-25 years	37	38.9	42.1
25-39 years	50	52.6	94.7
39-45 years	5	5.3	100

Table 4: Frequency table of customer satisfaction score of storytelling (N=95)

Score	Frequency	Percentage (%)	Cumulative percentage
1 (Very unsatisfied)	4	4.2	4.2
2 (Unsatisfied)	13	13.7	17.9
3 (Moderately satisfied)	42	44.2	62.1
4 (Satisfied)	29	30.5	92.6
5 (Very satisfied)	7	7.4	100.0

CSAT percentage of storytelling = 29+7 (Participants who gave storytelling a CS score of 4 or 5) /95 (total number of participants) *100 = **37.89%**

Table 5: Frequency table of customer satisfaction score of multiplayer in the division 2 (N=95)

Score	Frequency	Percentage (%)	Cumulative percentage
1 (Very unsatisfied)	0	0	0
2 (Unsatisfied)	3	3.2	3.2
3 (Moderately satisfied)	15	15.8	18.9
4 (Satisfied)	58	61.1	80.0
5 (Very unsatisfied)	19	20.0	100.0

CSAT percentage of multiplayer = 58+19 (Participants who gave multiplayer a CS score of 4 or 5)/95 (total number of participants) *100

=81.05%

Table 6: Frequency table of overall customer satisfaction score of the division 2 game (N=95)

Score	Frequency	Percentage (%)	Cumulative percentage
1	0	0	0
2	0	0	0
3	1	1.1	1.1
4	2	2.1	3.2
5	9	9.5	12.6
6	20	21.1	33.7
7	34	35.8	69.5
8	19	20.0	89.5
9	9	9.5	98.9
10	1	1.1	100.0

CSAT percentage of overall game= 19+9+1 (Participants who gave overall game CS score of 8, 9 or 10)/95 (total number of participants) *100

=30.53%

Perceived quality

Table 7: Table for Mean and standard deviation of perceived quality score of graphics and audio in the division 2 (N=95)

Variable	Mean	Standard deviation
Quality of graphics (number of stars)	3.87	.75
Quality of sound design (number of stars)	3.72	.87

Table 8: Table for Median and Mode of perceived quality score of graphics and audio in the division 2 (N=95)

Variable	Median	Mode
Perceived quality of graphics	4.00	4
Perceived quality of sound design	4.00	4

Percentage of participants who gave high perceived quality score for graphics = (People who rated graphic quality 4 or 5 stars / Total number of participants)*100 = (50+18)/95*100 =**71.58%**

Percentage of participants who gave high perceived quality score for sound design = (People who rated sound design quality 4 or 5 stars / Total number of participants)*100 = (37+19)/95*100 = **58.95%**

Net promoter score

Net promoter score helps to determine experience for the customer and also predicts business growth (Netpromoter, 2021).

Figure 40: Net promoter score calculation on 11 point scale (Netpromoters, 2021)

As the researcher has chosen five point scale for this study for measuring recommendation of the participants. Participants who will be labelled as detractors, passives and promoters will lie on a different quantifiable magnitude on the scale.

- Detractors – Score of 1, 2 or 3, these can be considered as customer who are unsatisfied and unhappy. They may damage game's reputation by providing negative feedback to others.
- Passives – Score of 4 , these are neutral and not enthusiastic customers who can churn to competition
- Promoters –Score of 5, these are the loyal customers who can refer product to others with a good word of mouth which can help in growth of business.

Table 9: Frequency table for likelihood of recommendation for calculating NPS of the game (N=95)

Score	Frequency	Percentage (%)	Cumulative percentage
1 (Very unlikely)	1	1.1	1.1
2 (Unlikely)	10	10.5	11.6
3 (Maybe)	19	20.0	31.6
4 (Likely)	48	50.5	82.1
5 (Very likely)	17	17.9	100.0

NPS= % Number of participant who gave score 5 – % Number of participants who gave score of 1, 2 or 3.

NPS= (17/95*100)-((1+10+19)/95*100) = 17.89% - 31.58% = **-13.69%**

NPS is negative, which indicates that participants/customers may negatively impact the game's reputation while talking about it to others. This also means that developers and project management team at Massive for the division 2 have to work for improvement of the game utilising customer feedback.

Reliability statistics and Cronbach's alpha

Cronbach's alpha is the measure of internal consistency of data and it also indicates how closely related set of items are in a dataset as a group. It can also be referred to as coefficient of reliability (UCLA, 2021).

Researcher conducted Cronbach's alpha test of reliability on various combination of Likert scale variables of the survey. Four of these Likert variables were found to be consistent together in a group, these variables were:

1) How satisfied were you with multiplayer and cooperative of the game?
2) How many stars out of 5 will you rate the graphic quality of the game on your platform?
3) Overall, how satisfied were you with The Division 2 (All features combined)?
4) How likely are to recommend the division 2 to your gaming friends?

Result in SPSS:

Cronbach's alpha	N of items
.662	4

This rating of alpha is acceptable and hence these variables were found to be consistent and closely related to each other. How these closely grouped variables can be used to address hypotheses and research questions will be discussed in chapter of conclusion and recommendations.

Cronbach's Alpha Score	Level of Reliability
0.0 − 0.20	Less Reliable
>0.20 − 0.40	Rather Reliable
>0.40 − 0.60	Quite Reliable
>0.60 − 0.80	Reliable
>0.80 − 1.00	Very Reliable

Figure 41: Cronbach's alpha scores (Ahdika, 2017)

4.3 Inferential statistics

One Sample T-test

To test the hypotheses researcher will be using one sample T-test in SPSS. This will be done by rejecting the null hypotheses using a test value.

Research hypotheses for this study can be broken down into two major components which will be tested:

1) Overall customer satisfaction of the division 2 video game was mediocre.
2) Perceived quality of graphics was high, but that of audio was mediocre to low.

To test the first part of research hypotheses researcher tested null hypotheses by inputting test value of 9 (high) and 4 (low) in the one sample t-test for overall customer satisfaction variable, following were the results:

Table 10: One sample t test for overall satisfaction variable (test value=9)

Variable	t	df	P value (Sig. 2- tailed)	Mean difference	Lower (95%)	Upper (95%)
Overall customer satisfaction	-15.91	94	.000	-2.08	-2.34	-1.82

As p<.05 researcher will reject this null hypotheses. Mean of the sample is 6.92 which means that hypotheses that mean of the population is lower than 9 is true with 95% confidence interval.

Table 11: One sample t test for overall satisfaction variable (test value=4)

Variable	t	df	P value (Sig. 2- tailed)	Mean difference	Lower (95%)	Upper (95%)
Overall customer satisfaction	22.25	94	.000	2.92	2.66	3.18

As p<.05 researcher will reject this null hypotheses as well. As mean of sample is 6.92 it can be said that hypotheses of mean of the population being higher than 4 is true with 95% confidence interval.

Hence we can now accept the alternative research hypotheses i.e. overall customer satisfaction of the division 2 is mediocre (not high or low).

Table 12: One sample t test for graphic perceived quality variable (test value=3)

Variable	t	df	P value	Mean difference	Lower (95%)	Upper (95%)
Graphic perceived quality	11.40	94	.000	.87	.72	1.03

As p<.05 we can reject this null hypotheses. We can say that perceived graphic quality for population is higher than 3 as per hypotheses as mean value of sample is 3.87 which is higher than test value of 3.

Table 13: One sample t test for sound design perceived quality variable (test value=4)

Variable	t	df	P value	Mean difference	Lower (95%)	Upper (95%)
Sound design perceived quality	-3.18	94	.002	-.28	-.46	-.11

As p<.05 we can reject the null hypotheses and test value of 4, as mean of sample is 3.72 it can be said that hypotheses that perceived quality of sound design is less than 4 is true at 95% confidence interval. Hence making the hypotheses true that audio perceived quality of the game is mediocre/low for the population.

5. Conclusions and discussions for improvement of project management methodology

5.1 Conclusion from the results

It can be seen from the results of the survey in the previous chapter that though fans and customers of the division 2 liked some aspects of game design and mechanics there are still lot of issues and bugs that persist that degrade the overall customer experience. These issues need to be addressed urgently in the future updates of the game. Data gathered from the survey also consists of expectations of the fans, which should be included in the planning stage of the future and current project lifecycle.

Researcher has got data in form of charts from Google forms and has conducted in depth statistical analysis of data in SPSS. Microsoft Power BI was also used so that important visualisations can be derived from the survey data. All the tools and techniques used for this study has helped the researcher in concluding the results and also in giving meaningful recommendations for the project management team at Massive entertainment studios.

Following conclusions were derived from the results in line with aims and objectives of the study:

1. The overall satisfaction score of the division 2 was found to be mediocre/low as per the research hypotheses. CSAT percentage of overall game was calculated to be 30.53% which was quite low and mean of the sample's overall satisfaction rating was 6.92. Researcher has also calculated CSAT percentages of storytelling and multiplayer separately which was found to be 37.89% and 81.05% respectively. This shows that though fans and customers liked the multiplayer side of the game, something is definitely lacking in the storytelling elements.

2. Researcher has also enquired from participants about the issues and bugs in the game they faced. Majority i.e. 94.7% of participants said they found some or other types of bugs in game. Many of the issues were related to visual graphics like texture rendering

and visual sync, while others were audio and game mechanic bugs like AI of the enemy was not working as expected. Half of the participants also reported performance issues on their platform while running the game. These issues could be related to game optimization for a particular platform like PC, PlayStation 5 or Xbox. PlayStation 4 saw the highest number of performance issues reported.

3. Perceived quality of the game was also analysed by the researcher in dimension of graphics and sound design. It was found that though participants thought quality of graphics was good, quality of sound they experienced was mediocre to low. Good quality percentage for the graphics was 71.58% and that of sound design was approximately 56%.
Multiplayer games like the division 2 tend to have important use of directional sounds, according to gaming audio accessory company EPOS "Good Audio Can Be Better than Body Armor" (EPOS, 2021) as it gives players a competitive edge over others. AOC who are also leading producers of gaming products like monitors and headphones mention that great audio is important for immersion and can be a decider in win and lose situation in e-sports multiplayer gaming tournaments (AOC, 2021).

4. Net promoter score (NPS) of the game was also calculated by the researcher using the survey data of how likely are participants willing to refer the game to their friends. NPS was found to be negative (-13.69%) which means that there were more detractors than promoters. This score is expected to get better with launch of new expansion next year if the project team at Massive entertainment studios includes customer feedback effectively in the agile project methodology (sprint planning and backlog).

5.2 Improvement of project management methodology with help of customer feedback

For the recommendations, researcher will be connecting the project management methodology which Massive entertainment used for the division 2 (discussed in detail in the chapter of literature review) and customer feedback received from the participants.

These recommendations, which is also the final research objective of this study will focus on improvement of project management methodology and its processes which will help the studio to make their ongoing and future projects better.

Addressing the key existing project management challenges in the division 2 development cycle with help of customer feedback

Johan Oldbring has mentioned key project management challenges they face in video game development projects (like the division 2) at their studios during talk at PMI Sweden (Oldbring, 2020).

1. Change management and leadership

Projects at Massive entertainment studios like the division 2 are dynamic and complex in nature and therefore comes with challenges of leadership and change management. Strong leadership skills are required to incorporate the change in the project in an event of failure or unforeseen circumstances (Oldbring, 2020). This can be provided by experienced project manager or by higher management like the CEO.

According to PMBOK Guide it is important to identify type of stakeholders that are important to internal and external environment of the organisation. Having effective leadership skills is important to engage with stakeholders of a project, while engaging stakeholder should have strong listening skills, interpersonal skills, leadership skills and critical thinking (Project, Management Institute, 2021, p.80-82).

Oldbring (2020) also says that change management is also one the biggest problem for managing projects in the studio. Projects like the division 2 change all the time and it is not easy to omit features due to expectations and reactions of people who have worked hard on that feature. Hence, changes in leadership and improvement in the change management strategy can definitely benefit Massive in delivering a better product within budget in the near future. This will also help in improvement of customer satisfaction metrics and project management techniques of the game.

2. Improvement of phases of game development project using customer feedback

The Division 2 development project follows Ubisoft's project phases which are also deployed for other video game projects as well under the same publisher (Oldbring, 2020).

In all four phases of the game project which are called Conception, Pre-production, Production and Operation phase, project team works in a few week long sprints which are a part of production build process. These production builds consist of planning phase at the start and review phase in the end. This helps project team with the project scope and allows time for review and iterations (Oldbring, 2020).

Looking at the results of the survey it is important to note that production phase (comprising of both alpha and beta testing) and operation phase (consisting of expansion content and customer support) needs to be strengthened. This is because majority (94.7%) of participants found different types bugs in the game. Precisely more focus has to be given to beta testing in ongoing projects like the expansion update as at Massive beta testing is focussed on removal of bugs in the game. Alpha testing focusses on areas so that all the elements of the game are playable from start to end. Alpha testing which happens internally in Game labs will be important for future projects like the sequel (Oldbring, 2020).

Massive should make customer feedback their priority in addition to data provided by the survey in this study. Other communication channels can be used like social media platforms, email and community forums to gather customer needs and reviews of the game. All of collected data should be included at the core of project management cycle and production builds.

3. Focus on platform performance optimization

According to the results of survey nearly half of the participants said that they faced performance issues in the division 2 on various devices. Performance issues in video games are usually linked to graphical performance like low frame rate and slow texture rendering (Unity3d, 2021).

Unity which is a popular game engine has been used in multiple large game projects like Cuphead, Escape from Tarkov and Pokemon Go at studios all over the globe (Unity, 2021). Unity is a free to use open source game engine with its documentation available for public use on their website. Researcher have referred to this documentation to understand performance issues in games in detail. For The division 2 developers have used Snowdrop engine but fundamentals of optimisation remains almost same for all engines (Drakeus, 2021). Though use of game engine is a part of development process, its implementation and monitoring is part of project management plan.

Unity mentions in their documentation that one of the key to success to a game is how well it performs. One of the ways performance issues can be addressed is by team locating the parts of the game where graphic demand is high. Also, game optimization should be broken down as GPU (Graphical processing unit) and CPU (Computing processing unit) centric. This is because there is a significant difference in optimisation of GPU and CPU (Unity3d, 2021)

This can be done by development and project team by optimizing geometry of models, compression of texture, optimizing lighting and minimizing use of complex mathematical calculations (Unity3d, 2021). Different devices like PC, PlayStation and Xbox have varied GPU and CPU performance, so different approach should be taken to optimize performance on each platform. PlayStation 4 was found to have more performance issues compared to other platforms, hence more steps should be taken to optimise PS4 version of the game.

Not launching sequel of the division 2 on previous generation of devices like PS4 and Xbox one can help the development team being not too limited by GPU and CPU bandwidth, hence improving game performance. Launching sequel on only next generation devices like PC, PS5

and Xbox series X will also project and development team more freedom to be creative and not be constrained with limited hardware.

Fixing performance issues will also help to increase perceived quality in dimension of audio and graphics for the game.

During the data analysis stage researcher found that there was a close relationship between variables of perceived graphic quality, overall customer satisfaction, likelihood of recommendation and satisfaction score of multiplayer. This shows that graphic quality does have a strong impact on overall satisfaction score and other metrics like multiplayer experience.

All of the recommendations above should be deployed in pre-production phase of the project management methodology in upcoming projects for the division 2 as all the technical development in the game engine take place at this project stage at Massive studios (Oldbring, 2020).

4. Improving storytelling with engagement and the PM creative process

As per the results of the survey, CSAT score of the storytelling in the division 2 was considerably low compared to multiplayer. Johan Oldbring also mentions that one of the biggest challenges that a game project face at Massive studios is creativity i.e. to develop a game to be entertaining and engaging for fans (Oldbring, 2020). Some examples of games that are praised for their storytelling are Life is Strange, Undertale and The Walking dead. All of these games are some of the highest rated game on Steam game store with more than 95% positive reviews (Starloopstudios, 2021).

Starloop studio states on their website that stories are an essential part of human life and a good and captivating story always helps people to connect with entertainment like movies, music and video game. This gives entertainment media like video games opportunity of providing a story driven immersive experience by letting players help understand relationships between characters and virtual environment they are part of (Starloopstudios, 2021).

Researcher also recommends that shifting some level of focus to storytelling will help the fans to be more engaged with game and will allow them to have a better overall experience.

New ideas should be brainstormed by the project team responsible for story in the game like Directors who manage the creative process of the division 2 project (Oldbring, 2020). Storytelling in future projects of division 2 can be improved by incorporating following features:

1. Transmedia along with storytelling can be used to engage the division 2 game audience prior to the launch of next update and sequel. Transmedia is a new concept in entertainment which means that variety of game content like story of game, information on character's profile and game environment concept art is distributed through various media outlets to make the narrative of story part of everyday life of a fan or a potential customer (Starloopstudios, 2021).
Though storytelling and transmedia are separate concepts, researcher believes both can go hand in hand with one another if used correctly by the development and project team for division 2 next seasonal expansion project and sequel. Transmedia is more of a concept of communication which is external to the game itself, while storytelling is an integral part of video game.

2. Creative storytelling techniques can also be incorporated in the project plan for next sequel like non-linear branching story line (44.2% of participants of the survey opted for it), character dialogue choices, animations and ability to perform certain story actions. At the centre of a great story in video games is player's emotion. More emotionally invested players are likely to have a better story experience. Some of the elements that can build up player's emotion in game are suspense, aesthetics and soundtrack (Starloopstudios, 2021).

3. The division 2 is a RPG (role playing game) shooter, which gives developers a great chance to elevate the storytelling in its sequel (Ubisoft, 2021). They can do this by adding MMORPG (Massive multiplayer online and role playing game) features to it by increasing the number of online players that can play simultaneously together in one session in a server. Currently, till date there are only limited number of players that can play together. PVE (Players vs AI) confrontation usually takes place

in majority of the map in the game, while PVP (Player vs Player) battles take place in a limited area of map called Darkzone (Ubisoft, 2021).

4. Finding more creative ways to edit the character build customization i.e. combination of weapon, armour and equipment player can carry will help players to be more engaged with the game (Renaudie et al., 2020). 47.4% of participants of the survey said that they wanted new weapons and customization in the next expansion update.

All of these creative ideas should be added to FSO (Feature sign off) by different departments of the project, which will later become 'bible' for the project management plan (Oldbring, 2020).

5. Robust project communications plan and work life balance at the studio

Massive entertainment is a big studio and the division 2 is a large scale project with a seasonal ongoing project aimed for its expansion. There are multiple teams and department that have worked or are currently working on the current expansion project.

Johan Oldbring says that list of people who worked on division 2 was as big as that of a Marvel movie. He also goes on to say that Massive entertainment worked along with eight other studios all around the globe for division 2, which was a challenge (Oldbring, 2020).

According to Project management Institute's PMBOK guide 7th edition usually project communications consists of informal and formal communication in form of verbal communications like meetings and sprints, written communication like emails, information ad-hoc requests, reports and presentation. It is also important to store useful information in digital safe repositories so they can be used for future projects (Project management institute, 2021, p.130).

Also, for an effective communication plan it is important that project team at Massive use an appropriate communication model with help of project coordinators and producers (Oldbring, 2020). Communication models consists of concepts such as how sender and receiver frame of reference impacts the communication, how effective is the medium of

communication and how end user information differs from the reality. Trying new and improved communication models can help multicultural project teams to communicate more efficiently leading to a better product after project completion (Project management institute, 2021, p.194). One of the recent study (also mentioned in literature review) by McKenzie, T. et al. (2021) found that communication problems like poor team communication and knowledge silos were the major issues that occurred in various agile project management methodologies in video game projects.

It is important that different teams at Massive entertainment studios use customer feedback e.g. results of research survey, social media posts and community forums and covey this valuable information with help of effective communication model between departments like programming, art, sound design and story direction with help of appropriate project management tools in place.

Oldbring (2020) also mentions that it is important that projects are planned smartly so that incredible talent at the studio such as Massive is not drained. Overtime working hours and stressful work environment should be avoided near launch by efficient project planning and meeting project schedule deadlines.

6. Improving audio design and addition of new features in the project

According to the results of the survey perceived quality of audio design was rated as mediocre to low by the participants. Perceived quality percentage was 58.95% and mean of sample was calculated to be approximately 3 out of 5.

It is important that project team at the studio use feedback on the audio design and aim at improving it in the next seasonal update. Audio design team also need get rid of audio bugs (44.6% of participants said they faced audio issues in game) and come up with technical solutions to improve audio design. Longer and more sprint sessions on audio can be applied to the scrum agile project management methodology for fixing sound related issues.

Researcher will not go into too much technical aspects of improving audio as it is a part of development process rather than PM, but some of the ways audio can be improved by incorporating it in the project plan and agile backlog are:

1. Teamwork in the project: Audio design team need to work closely with other project teams like animation and environment design in order for the gameplay audio to be synced with game mechanics (Tyler, 2021). This can also be aided with better communication models and project tools as discussed before.

2. Audio designers need to work closely and effectively with music composers who might be external to the game project team (Tyler, 2021).

3. Testing is also a vital part of audio design in video games which should be done at later states of game project. Also, right audio design tools and software should be used as needed (Tyler, 2021). Beta testing should be ramped as it an effective way to remove audio and other bugs. There should be enough time gap in schedule between beta testing and full game release to allow developers to utilise feedback and fix bugs reported by customers in beta phase. 46.8% of beta tester participants of the survey found improvement in audio in full version of the game compared to beta version in the division 2. This means that beta testing has worked in previous projects but it needs to be improved further in upcoming projects.

It is also important that project management planning stage for the next expansion and sequel should be built around deliverables that have been suggested by the participants of the survey:

• 54.7% of participants said that they would like see a new game mode in the next update. New game mode can be added to provide a new and fresh game experience to players. One example of this could be a survival mode in which player (as a group or solo) are put with other players in a player vs player (PVP) environment. All players are given similar objective with quest to collect gear and food items and need to fight in order to survive.

This concept of survival game mode has worked well for some games like Rust, The forest and Arma 3 survival with all of them receiving positive reviews (Steam, 2021).

- 63.2% of respondents said that they would like see brand new raid in the new expansion update. Raid in the division 2 is the hardest large scale mission challenge players can engage in. It can be played in a group of 8 online players, with 2 teams of 4 working together for an objective. Raids require preparation, communication and ability of players to work in teams in order to defeat enemy bosses to complete the encounter (Fandom, 2021).

  At the end of raid players are rewarded with random rewards like high level powerful gear and weapons. Addition of a new raid in the next update should definitely be a part of project plan as it is loved by fans and community and will bring them back.

- 68.4% of participants said they wanted ability to play between different platforms in the sequel of the division 2. This is also known as cross platform play, with launch of next generation platforms like PS5 and Xbox series X, more and more players are moving to new platforms. Ability to play on different platforms together with help of central server connectivity will to prevent the division 2 community from breaking apart and allow gaming friends to play together even if one decides to move to a new platform.

- At the moment there are no payable vehicles in the game i.e. player has to traverse the map on foot with other online players. There are reasons why playable vehicles were not part of the project plan in Division 1 and 2. Playable vehicles will make the weapon and ground combat pointless and less fun. Developers also wanted to focus gameplay on the loot system in the game. According to Executive producer of Division one Fredrik Rundqvist, presence of playable vehicles will make the players miss important loot and rewards lying around in the virtual world like med kits, crafting items etc. thus making the exploration less enjoyable (Haulica, 2014).

  Game development technology is far more advanced now than it was back in 2016 when division one was released. With launch of new generation of hardware, developers have more freedom with tools and can create bigger and open world maps for players to explore. This gives rise to possibility of map exploration in driveable vehicles which can be captivating and fun for the fans.

All of these new features should be included at the heart of project management planning stage and at the core of the improved PM methodology for the next expansion and sequel. This will help the open world shooter that is division 2 to grow which will result in more satisfied and happy customers.

These results, conclusions and recommendations will help in making the current project management methodology in use at Massive studios more effective. Also, this constant positive customer feedback loop should be maintained, which will help in initiating, planning, communication, monitoring quality and testing of the ongoing and future projects for the division 2.

This will also help to reinforce and improve already existing project management principles and guidelines (project management methodology) like changes to project phases and improvement of existing agile scrum framework with help of valuable customer feedback and polished sprint backlogs.

Future opportunities

As discussed before this research is limited due to constraint of time and resources. In the future, other researchers can undertake endeavours for betterment of this research by use of different methodologies and variables.

Data collected from this study can be used as secondary data along with the primary data to answer more meaningful research questions for variety of ongoing video game projects.

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Appendix 1:

Survey questionnaire:

Can also be found on Google forms link: https://forms.gle/9CiEybh8SY8X8WfQA

(Please copy and paste link in browser if it doesn't work)

Title:

Analysis of customer satisfaction and perceived quality for improvement of project management methodology in a video game development project

Information sheet:

Information for participants

-> Aim and Title of study:

Title: Analysis of customer satisfaction and perceived quality for improvement of project management methodology in a video game development project

Hi everyone and fellow gamers!

I'm Subodh and a student in Dublin, Ireland. I'm pursuing master thesis for MBA project management course from Dublin Business School. For this research I will be analysing customer satisfaction and perceived quality in a video game project. I have chosen Tom Clancy's: The Division 2 for this study because of my love for the franchise and mixed reviews it has received.

Massive entertainment, studio behind The Division 2 has already announced their plan for next big update scheduled in early 2022. There are also rumours of the sequel floating around. Your participation in this survey can help perfect future updates and sequel of the game by improvement of project management techniques/methodology utilizing data you provide in this survey.

-> What will happen?

In this study, you will be asked to answer series of multiple choice and scale based question. This is for the purpose of analysing your experience as a customer with the video game i.e. Tom Clancy's: The Division 2.

I'm seeking for your consent to allow me to collect your customer satisfaction data from this questionnaire.

After the completion of this research, all collected data will be deleted and destroyed.

-> Time commitment:

This survey typically takes approximately 10-15 minutes to finish.

-> Participants rights:

You may decide to stop being a part of the research study at any time without explanation required from you. You have the right to ask that any data you have supplied to that point be withdrawn / destroyed. You have the right to omit or refuse to answer or respond to any question that is asked of you. You have the right to have your questions about the procedures answered (unless answering these questions would interfere with the study's outcome). If

you have any questions as a result of reading this information sheet, you should ask the researcher before the study begins.

-> Confidentiality/Privacy of participants

The data I collect does not contain any personal information about you except your age group.

-> Contact:

I will be glad to answer your questions about this study at any time. You may contact me at 10385541@mydbs.ie or my research supervisor, Ms. Lorca Kelly at lorca.kelly@dbs.ie.

By filling the form below, you are agreeing that: (1) you have read and understood the Participant Information Sheet, (2) questions about your participation in this study have been answered satisfactorily, (3) you are aware of the potential risks (if any), and (4) you are taking part in this research study voluntarily (without coercion).

Thank you!

Subodh

Questions and choices:

1. What is your age group? *

- 18-25 years
- 25-39 years
- 39-45 years
- >45 years

2. Have you played games from Ubisoft's Tom Clancy's series before? (Like The Division, Rainbow six siege etc.) *

- Yes

- No

3. Which Platform did you play Tom Clancy's: The Division 2 on? *

- PC

- PlayStation 4

- PlayStation 5

- Xbox one

- Xbox Series X

4. Approximately how many hours have you played The Division 2? *

- <24 hours

- 24-100 hours

- >100 hours

5. How satisfied were you with the storytelling aspect of The Division 2? (1-Lowest and 5- Highest) *

    Very unsatisfied

- 1

- 2

- 3

- 4

- 5

    Very satisfied

6. What did you find most immersive about the story? *

- Characters and their dialogues

- Collectibles (describing back story)

- Game world and environment design

- Audio design and soundtrack

- Game art

7. How satisfied were you with the multiplayer and COOP (cooperative) of the game? (1-Lowest and 5- Highest) *

   Very unsatisfied

- 1

- 2

- 3

- 4

- 5

   Very satisfied

8. What did you find most immersive about multiplayer? *

- Social experience

- Coop missions/Raid

- Competitive (Dark zone)

- Clan or group reputation

- Exploration of the open world with a friend

9. Did you encounter any bugs in The Division 2? *

- Yes

- No

10. If you encountered bugs in the game, please describe nature of the bugs

- Sound or audio bug (Sound of the weapon etc.)

- Enemy spawn bug (like enemy being stuck in spawn)

- Texture rendering bugs

- Game mechanics bug (like broken revive button)

- Visual bugs (like invisible enemies and V-sync/screen tearing issues)

- Network issues (like Lag and disconnections)

11. Did you participate in open beta testing of the division 2? *

- Yes

- No

12. Did you find any significant improvement in experience in full version of the game compared to beta version?

- Yes

- No

- Maybe

13. What type of improvement did you notice?

- Graphics

- Audio

- Multiplayer connectivity (Ping, lag issues etc.)

- Fewer bugs in game mechanics

14. How many stars out of 5 will you rate the graphic quality of the game on your platform?(1-Lowest and 5- Highest) *

- 1

- 2

- 3

- 4

- 5

15. How many stars out of 5 will you rate the sound design quality of the game? (1-Lowest and 5- Highest) *

- 1

- 2

- 3

- 4
- 5

16. Did you face any performance issues like frame rate drops on the platform? *

- Yes
- No
- Neglectable

17. What type of improvement will you like to see in future updates of the game? *

- Weapon balancing
- Matchmaking fix (Quicker matchmaking)
- Audio glitches fix
- Game mechanics fix
- More customization
- Newer missions/raids for multiplayer

18. How likely will you recommend The division 2 to your gaming friends? (1-Lowest and 5- Highest) *

    Highly unlikely

- 1
- 2
- 3
- 4
- 5

    Very likely

19. Overall, how satisfied were you with The Division 2 (All features combined) (1-Lowest and 10- Highest) *

    Poor

- 1
- 2

- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

  Masterpiece

20. What type of new features will you like to see in the next content update of The Division 2 scheduled for next year? *

- New game mode
- More main and side missions for coop and solo play
- New raid
- New weapons and customization
- New gear and cosmetic items

21. What type of new features will you like to see in the possible sequel of The Division 2? *

- Better progression system for multiplayer
- New world environment (New country or city)
- Presence of playable vehicles in the game
- Cross platform play
- Non Linear story line

*   - Compulsory questions