Tatu Teittinen

Mobile Game Soft Launch and Production Planning

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Tämän opinnäytetyön toimeksiantajana toimii työnantajani, Critical Force Oy, joka on kajaanilainen mobiilipelien kehittäjä. Yritys keskittyy toimintapeleihin mobiilialustoilla ja kehittää tällä hetkellä Critical Opsia, ensimmäisen personnan ammuntapeliä iOS:lle, Androidille sekä Facebook Arcadelle.

Valitsin mobiilipelin soft launchin sekä tuotannon ohjaamisen soft launchia kohti, koska näin tarpeen soft launchien tutkimustiedolle, avustavien metriikoiden etsimiselle sekä tiedolle siitä, miten luodaan malli pelituotannolle kohti soft launchia.

Opinnäytetyö jakautuu mobiilipelien metriikoiden käsittelemiseen, soft launchien tutkimiseen, pelituotannon perusteisiin sekä tuotantosuunnitelman tekemiseen. Opinnäytetyön tavoitteena on määritellä tärkeimmät metriikat soft launchia varten, tutkia mobiilipelien soft launchien kehitystä viime vuosien aikana, sekä tuottaa yritykselle alustavaa tuotantosuunnitelmaa joka helpottaa mobiilipelin viemistä konseptista soft launchiin onnistuneesti.

ABSTRACT

This thesis was commissioned by my employer, Critical Force Oy, which is a mobile game development studio based in Kajaani, Finland. The studio focuses on mobile action games and is currently developing Critical Ops, a multiplayer first-person shooter for iOS, Android and Facebook Arcade.

I chose the subject of soft launches and production planning towards a soft launch because I saw a need for knowledge, analysis, quantifiable numbers and set rules for production planning within our company and within my own skillset.

The goal of this thesis was to define the most important metrics for a mobile game soft launch, research the trends and data from mobile game soft launches from the past few years, and produce a preliminary framework and soft launch production plan that can help the product development team successfully bring a product from concept to soft launch.

Content

SYMBOL LIST

KPI   Key performance indicator is a metric chosen to represent crucial business performance and is used to evaluate success.

Soft launch   Soft launch is a period before the game's global launch where the game is available in a limited amount of countries to evaluate its metrics and chance of success in the global mobile market.

Product Development Team

        The team working on a mobile game product, includes designers, producers, product managers, artists, developers and more.

Retention Rate   The percentage of users return to the game on an exact set day after playing the game for the first time.

Conversion Rate The rate at which players convert into paying users.

CPI   Cost per install, which is the average cost to get a user to install the game on a device.

Feature   A part of the game product that the users that is meant to add value to the player experience.

DAU   Daily active users, the amount of users who have opened the app during a single day.

1 INTRODUCTION

The rise of current mobile game market began with the introduction of Apple iPhone and soon after the launch of App Store in 2008. The newly found mobile touch controls and easy to access digital distribution platforms gave developers tools to access millions of potential customers fast and easily.

This helped the platform into explosive growth and in less than 10 years it has enabled the mobile game market to become a juggernaut with a yearly revenue of over 30 billion USD. It is still growing fast, and especially in the Asia-Pacific market there is substantial growth projected over the next few years. This means the market is still extremely desirable for developers and investors. (Newzoo 2016.)

The budgets and financial risk has grown substantially and developers like Kabam are creating mobile games with budgets exceeding 10 million US dollars. For this reason developers have tried to reduce risk with analytics and data-driven decision making, agile product development models and soft launching their games to validate the chance of success. (Chou 2016.)

For Critical Force this still means a lucrative market and the company has established a vision to dominate the shooter/action genre as well as push for "mobile e-sports", a sub-genre that focuses on competitive play, public tournaments and a different way to market games. This sub-genre has proven to be untapped and the company's first title "*Critical Ops*" has seen incredible growth. However, the competitive mobile game market means that the product development team needs to be supported by a strong and agile development product development model and product validation models for any future projects. Because of this need, this thesis delves into the process of soft launching a mobile game and aims to establish a framework for production to tackle the needs of successful soft launch.

2 MOBILE GAME METRICS

This chapter delves into the key performance indicators (metrics that are used evaluate business performance, referred to as KPIs) that are commonly tracked during a soft launch. All of these metrics will be used with the soft launch production plan document. The purpose is also to establish clear definitions of all the KPIs which the product development team members can refer to and use in their decision making.

2.1 Retention

The most important metric for a mobile game is retention rate, which tells the percentage of users who return to the game on an exact set day after playing the game for the first time (also referred to as cohort or classic retention as opposed to rolling retention). This is usually broken down into day 1, day 7, day 14, day 28 (or day 30), day 90 and day 365 retention rates. This KPI tracks on average how the long users stay playing the game and a low retention rate can imply that the player does not enjoy playing the game and has quit playing the game. (Chartboost 2015.)

According to the writer of "*Freemium Economics: Leveraging Analytics and User Segmentation to Drive Revenue*", Eric Seufert, "the purpose of retention metrics is to track the frequency and longevity of product use". These retention metrics can be graphed to visualize a funnel that gives the product development team invaluable information on how the users behave and how long they play. He also mentions that "as a general rule, the retention profile decays in a pattern such that day 7 retention is 50 percent of day 1 retention, and day 30 retention is 50 percent of day 7 retention." This behaviour can be used before the actual product launch to create an estimation of a long-term retention profile that can then be used to create business case estimations as well as drive the design decisions in features that are designed to support long term retention. (Seufert 2014.)
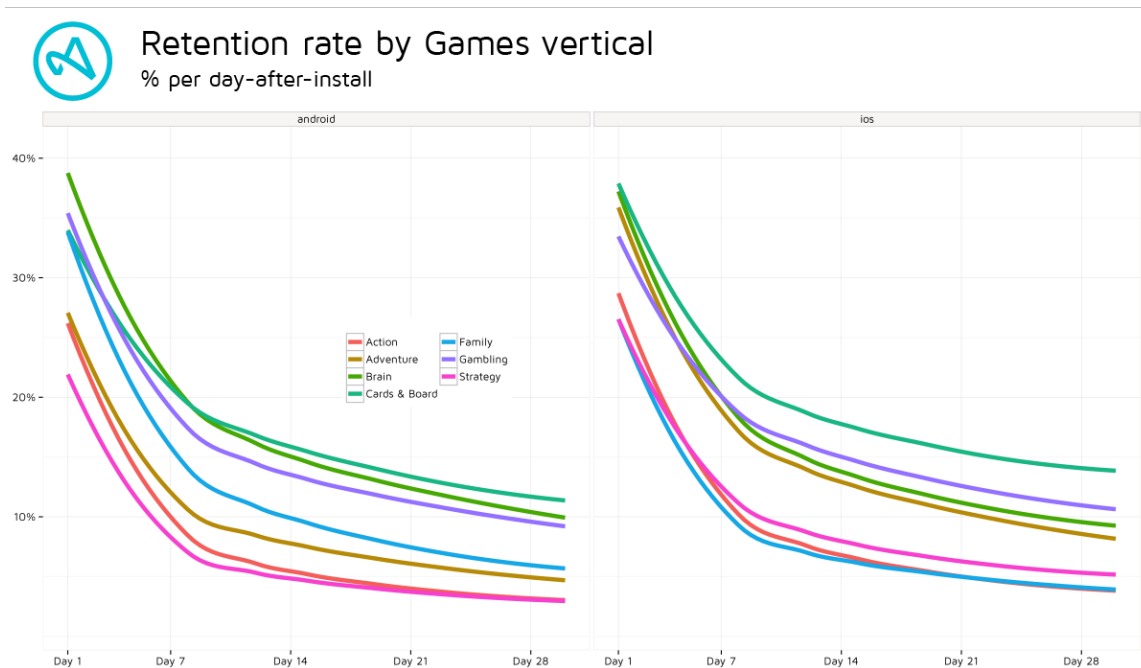
Figure 1. Illustrating retention rate per different game genres. (Terwitte 2015)

The retention profile by games vertical from Adjust above (Figure 1) shows that in Q3 2015 the retention profile in the action games, the genre in which Critical Force Ltd. Specializes in, is lower than most of the genres. The figure also illustrates that the Android platform sees generally lower retention rates than the iOS platform. (Terwitte 2015.)

DeltaDNA also posted an analysis of average retention rates across different genres and found that in 2015 the action genre average day 1 retention rate was 29% and day 7 retention rate was 8%. This could serve as a benchmark for soft launch production plan targets. (DeltaDNA 2015.)

2.2 Conversion rate

Conversion rate tells the product development team what percentage of the user base have made an in-app purchase or in other words, how likely is it that a single user will make or has a made a purchase within the game. On mobile the conversion rate is usually very low, often below 5%. These users can referred to as converted users or paying users. (Seufert 2014.)

With the addition of incentivized video ads, the product development team can segment the conversion by users who have bought an in-app purchase, watched video ads or both. This can be used to set different benchmarks by segments so that the paying users and users that only contribute revenue through incentivized video ads have different KPI targets.

Conversion for the action genre is at around 1.4% per the 2015 DeltaDNA report, which also establishes that the use of timed blockers in the strategy genre result in shorter first session, but higher conversion rate within that session. (DeltaDNA 2015.)

2.3 ARPPU

ARPPU, or average revenue per paying user, "is an average measure of revenue contribution on a per-user basis". It is segmented to paying users only, and thus, users who have not purchased an in-app product will not be taken into account. It can be calculated on a daily basis or though the user's lifetime, and thus, the product development team tracking should have a definition of how they calculate ARPPU. For daily ARPPU the formula can be:

Daily ARPPU = Daily Revenue of IAP / Amount of Daily Paying Users

Changes in daily ARPPU can give the product development team insight into how chances in the product affect the paying users' behaviour. Thus, it can be one of the KPI to be implemented in the production plan phase to be tracked on a daily basis and to track changes during the soft launch period. (Seufert 2014, 94-95.)

2.4 DAU

Daily Active Users, or DAU, is the amount of unique players that have accessed the game within that day. This tells the developer about the active user base and serves to be a crucial factor in many of the formulas used to calculate a business

case. A segmented formula that can also be used to calculate the percentage for each source for DAU can be as follows:

DAU = Daily Returning Users + Paid New Users + Organic New Users

This means DAU consists of players who have returned to the game (which is tracked by retention), paid new users that have been acquired by user acquisition (which factors in CPI and marketing spend) and organic users who have been invited to the game or have found the game organically.
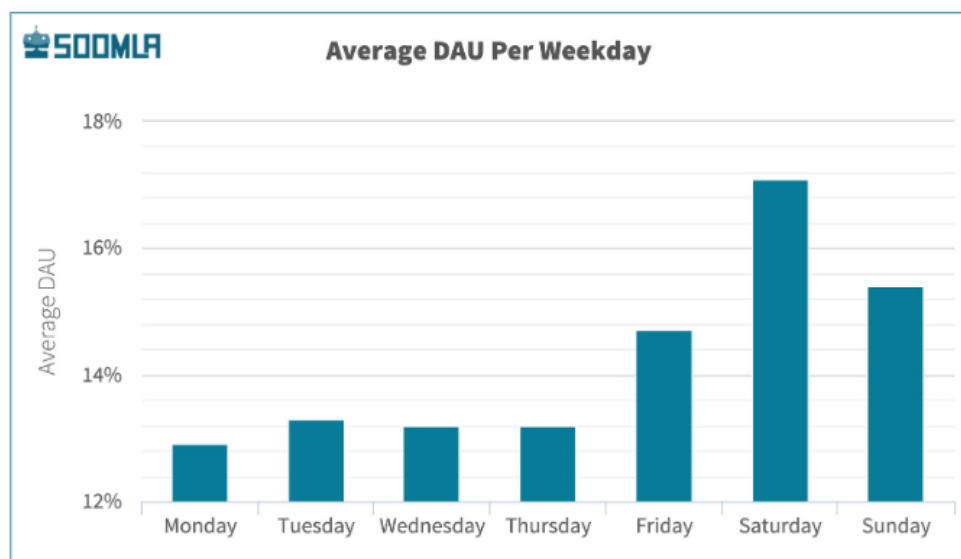

Figure 2. Average DAU Per Weekday. (Soomla 2016)

As The SOOMLA Mobile Gaming Insights Report - Q1 2016 indicates, on average the DAU varies by weekday and player base is more likely to be active within the weekends and Saturday is the most active day within a week as per the Figure 2 above (Soomla 2016).

2.5 ARPDAU

ARPDAU (Average revenue per daily active user) tracks how much an average user generates revenue per day. The formula for ARPDAU is:

ARPDAU = Daily Revenue / DAU

The SOOMLA Mobile Gaming Insights Report - Q1 2016 (Soomla 2016) reveals that the average ARPDAU varies substantially between different game genres.
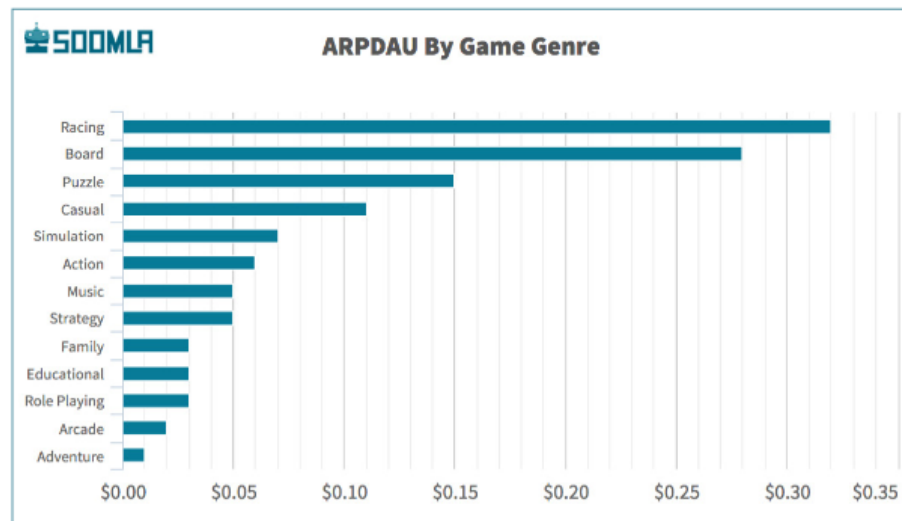

Figure 3. ARPDAU by Game Genre. (Soomla 2016)

The Figure 3 reveals that the average ARPDAU for the Action Genre, which Critical Force Ltd. focuses on, is around $0.06. This can serve as a benchmark for the soft launch production plan target and used to calculate the business case for a potential action genre mobile game. (Soomla 2016.)

2.6 LTV

LTV, or lifetime value ”...is the total amount of money a user is expected to spend on a product, adjusted as if that money were received as a lump sum today.” LTV in mobile games is hard to model to a definitive formula as it is influenced by factors such as the users' total time spent on the time, the amount of purchases made, the different price points for the purchases and any and all future behaviour. However, as conceptual model it is an extremely important basis for making successful decisions in mobile game marketing and revenue growth. (Seufert 2014, 115-119.)

LTV as a KPI will be important when the focus is on paid user acquisition by different marketing channels, but like many metrics and behaviours, it differs much from regional demographics to age demographics and more. Thus, the product development team may need to segment it by different user groups to track which types of users have a high LTV and which channels they have entered the game from.

2.7 eCPI and marketability

eCPI, or effective cost per install, shows the developer how much on average it costs to acquire a user to the game. It consists of paid users through CPI (cost per install), which tracks how much a single installation cost on average when acquired through a paid marketing campaign, and the users who have not been attributed to CPI campaigns (the so-called organic users). (Seufert 2014.)

CPI = Marketing Campaign Cost / Attributable User Installs

eCPI = Marketing Campaign Cost / (Attributable User Installs + Organic User Installs)

For the production planning, it would be important to define a strategy for a low eCPI and high virality so that the product and the company can succeed in a highly competitive market. This could materialize in features designed to drive virality, and visual and product marketing that lowers the CPI.

To run effective marketing, the estimated CPI should be lower than the projected LTV. If this condition is met and in retrospect proves to be a correct assumption, the marketing will have been profitable and the game and its revenue can grow by further acquiring users with paid user acquisition (UA).

Profitable UA = CPI < LTV

3 MOBILE GAME SOFT LAUNCH

3.1 Soft launch definition

Soft launch refers to the process of launching a game to a small section of the mobile game market. This small section is usually limited to a small number of different geographical regions. (Mobile Dev Memo.)

The most common purpose of a soft launch is to evaluate a game's performance and marketability based on actual user behaviour and metrics and evaluate if the game can hit its business targets. This allows the publisher to either kill the project and avoid significant costs without a return or continue towards a full global launch based on actual data and projections of subsequent business performance. (Mobile Dev Memo.)

A soft launch also enables the development team to iterate on the game as a product based on data. The metrics gathered through soft launch user behaviour can be used to point out deficiencies in the product and key areas that need improvement for the game to maximize the chance of business success within the mobile game market. Using the data gathered throughout the soft launch the development team can measure and evaluate the product KPIs. (Mobile Dev Memo.)

3.2 Tools of soft launch

3.2.1 Analytics tools

To track and visualize the KPIs and other data, the product development team needs a tool to gather, store and present the data. Commonly referred as analytics tools, these need to contain an integration within the game client that sends the data at set intervals and attributes, a database that stores the sent data correctly,

and a front-end through which the product development team can access the data and view it easily.

An example of an analytics tools is Unity Analytics. It is integrated to the Unity Engine, a common tool used in game development, and handles all three major aspects of analytics. The example screenshot below (Figure 4) shows the main dashboard view of the tool and how the metrics are presented to the product development team. (Unity3D 2016.)
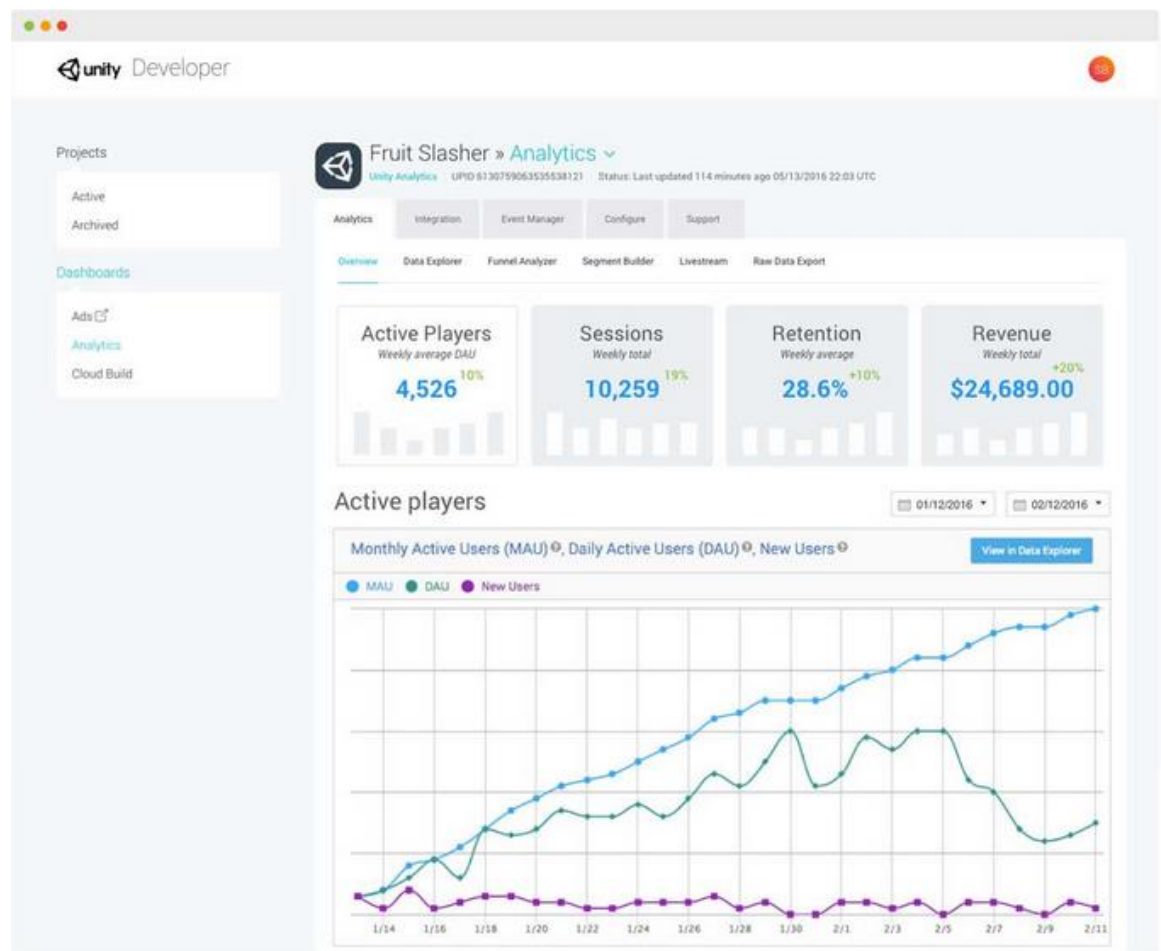

Figure 4. Example screenshot of the Unity Analytics Dashboard. (Unity3D 2016)

The product development team can also create their own tools, including the game integration, backend and front end for the development team. This can have its own risks and rewards so it should be included within the soft launch production plan, even though it can also be a company-wide decision where all the product development teams have access and support for the same tools.

3.2.2 Testing tools

Both major mobile platform holders, Apple and Google, have introduced tools to help test applications and releasing test versions of applications to a select pool of users. This allows easy over-the-air deployment of test versions before the actual soft launch or global launch. For game development these tools can be used to test the game with a selected pool of users and use can range from gathering written feedback or having influencer marketing through videos made by the community before the launch.

3.3 Technical soft launch

The purpose of a technical soft launch is evaluating the technical performance and stability of the game application. This means it is not meant for tracking the aforementioned KPIs to evaluate the business performance, but rather to see if the game has technical issues that need to be solved before being able to evaluate the business performance and KPIs.

For this reason, the technical soft-launch is limited to so-called B-countries. The reasoning being that it allows the developer to use an audience that would not necessarily reflect the target audience in general KPIs and to spend less marketing budget due to eCPI being much lower for these countries. The Figure 5 below shows examples of the countries used in these 2 stages of soft launch. (Telfer 2016.)

Figure 5. Soft launch stages and countries. (Telfer 2016)

While there will already be support for tracking the KPIs, virality and download growth, these metrics will not be the focus of the soft launch as the data will not match the markets that most mobile game companies focus on.

This period can be around 1 or 2 months and the requirements would need to include the core loop of the game and the necessary tools to track errors happening within the game application.

3.4 Soft launch

Once the product has completed the technical soft launch and the product development team feels confident that the game has the necessary content and technical quality to verify earlier assumptions, the product can finally enter the proper soft launch phase.

The product is launched in select countries and platforms to start gathering data for evaluating the final market potential and marketability. This is done by tracking the agreed upon KPIs, which usually consist of the ones mentioned earlier in this thesis. Soft launching also includes purchasing users with paid user acquisition to

determine the CPI and eCPI, and how it differs per regional demographics and as the amount of user acquisition scales up.

The product development team may already have a set of expectations for the KPIs and can now start to compare the reality to their assumptions. As the soft launch continues and the first cohort of users (the users who installed the game on the same day) have been in the game for around 30 days, the product development team can start to evaluate LTV. As the KPI can be based on some users playing the game past 3 years and more, it will not be a completely accurate estimation, but can serve as a basis for the CPI<LTV calculation. The product development team needs to decide on how long they track each cohort, as the longer the game is in soft launch, the higher the costs. (Telfer 2016.)

At this point the product development team can still continue to develop the product further and it usually includes adding content to the game. One advantage of the soft launch for the product development team is, that it allows the team to make changes based on data and then evaluate the changes. This can include a feature designed to boost the retention rate of users past day 14. Once the feature is developed and released to the users, it can be A/B-tested by having 50% of the user base have the feature and 50% of the user base on a previous version without the feature. Then the product development team can compare all the KPIs between the 2 versions and see how the feature affects retention rate and if it, for example, negatively affects any other KPIs. This allows the product development team to course correct the product if the KPIs of the first cohort do not match the expectations and the CPI becomes higher than the LTV.

4 SOFT LAUNCH TRENDS

4.1 Costs

The Fiksu Index reveals that the mobile CPI or "Cost per Loyal User" user has risen substantially. Just from April 2014 to April 2016, the "Cost per Loyal User" rose from $1.52 to $2.51, a 65% increase in 2 years' time (Figure 6).

App Store Competitive Index	5.34M		CPI Index	$1.24	$1.31
Cost per Loyal User Index	$1.52		Cost Per Launch Index	$0.21	$0.13

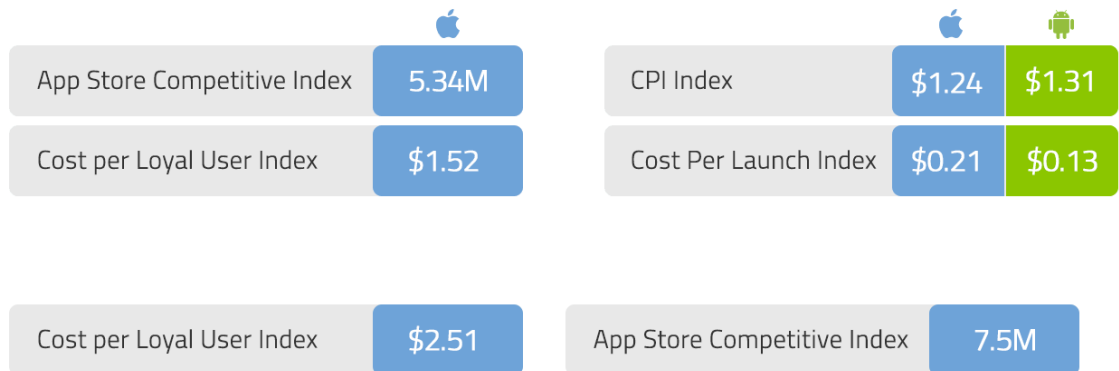| Cost per Loyal User Index	$2.51		App Store Competitive Index	7.5M

Figure 6. Screenshot of Fiksu Index comparison from April 2014 to April 2016. 2014 above and 2016 below. (Fiksu 2016)

This means much higher costs during soft launch and global launch making the CPI<LTV much harder to reach than it was before (Fiksu 2016).

For the user acquisition costs, Wooga's Adam Telfer reveals in his GDC presentation, titled "What to Expect When You're Expecting a Soft Launch" (Telfer 2016), that the costs were $283,000 for *Max Ammo* and $250,000 for *Futurama*, both running for about 5 months. In the presentation he also includes a graph showing the increase in costs from *Diamond Dash* in 2011 to *Max Ammo* in 2015 (Figure 7).
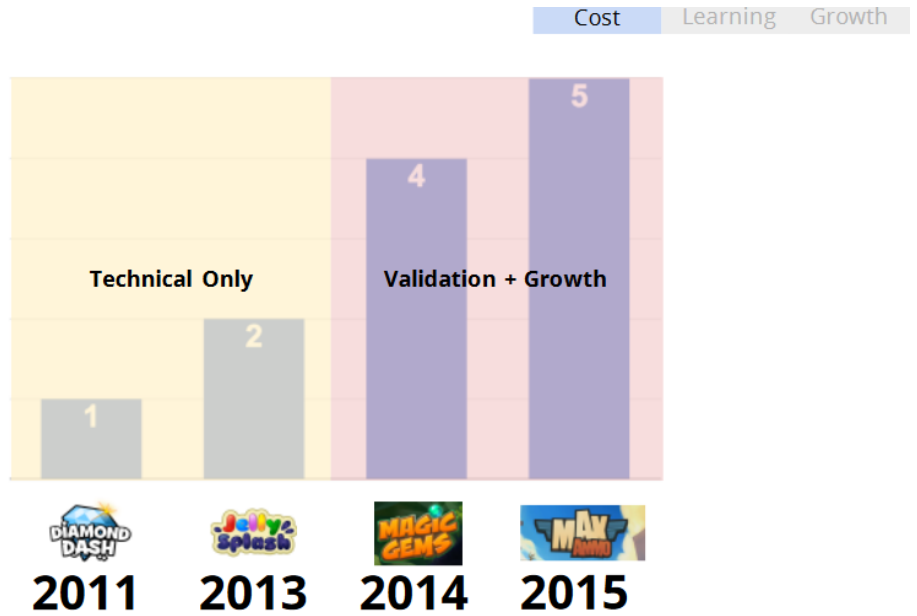
Figure 7. Soft launch costs for 4 different Wooga titles spanning 4 years. (Telfer 2016)

However, he points out that the earlier soft launches of *Diamond Dash* and *Jelly Splash* only needed to focus on the technical aspect and that the organic growth of user base was substantially higher so the soft launches before 2014 were even cheaper as there was no need to buy a lot of users. (Telfer 2016.)

Figure 8. CPI differences across game genres and countries on iOS. (Chartboost 2016)

The screenshot of Chartboost iOS CPIs for different countries and genres above (Figure 8) shows the variance between countries and genres. This means the soft launch cost will also be dependent on the genre of the game. (Chartboost 2016.)

4.2 Countries

A survey run by PocketGamer.biz reveals that Canada (as per the Figure 9 below) is the most popular country for soft launching a mobile game with it being used in 72% of the games studied. Australia comes in second, but interestingly the third most popular country is Philippines, only one of 2 non-western countries in the top 6 most popular soft launch countries Philippines and Singapore being in the top results could be explained by their large share of English-speaking population.

Figure 9. Most popular countries for soft launch. (Jordan 2016)
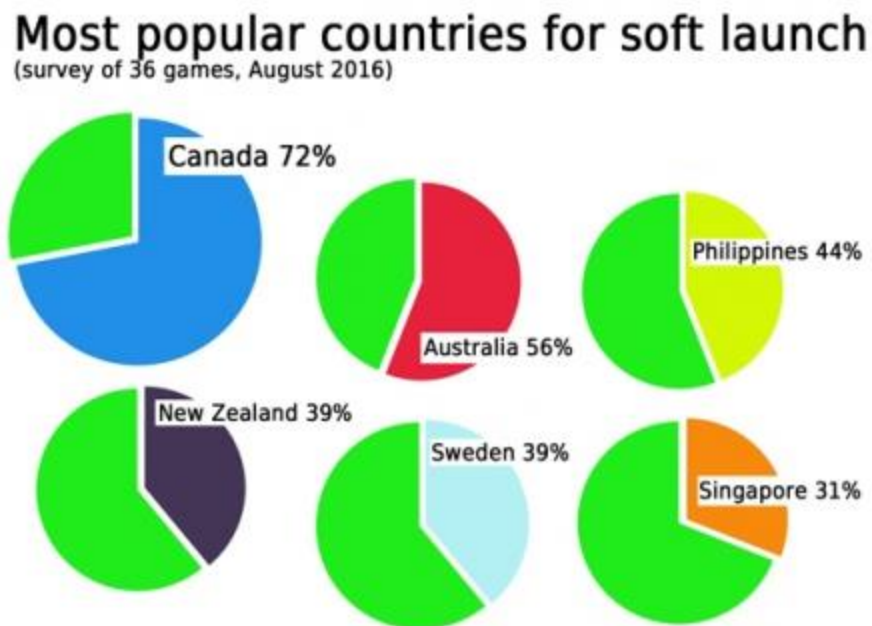
The survey highlights that the popularity of soft launch countries has not changed much in the past few years, but that Philippines and Singapore have risen due to the growth of the mobile game market in Asia.

However, according to the same survey, there has been considerable change in the amount of simultaneous soft launch countries. The recent average is about 7

simultaneous soft launch countries, though the survey acknowledges that the number is pushed upwards by some games having soft launched in over 20 countries. (Jordan 2016.)

4.3 Length

Soft launches have gone from a few months up to a few years. *Dawn of Titans* developed by Natural Motion published by their owner Zynga was first soft launched in March 2015 and at the time of writing has still yet to be fully launched. Z2Live's *Rise of Tyrants*, published by King, had also been in soft launch for almost 2 years before the game was announced to be shut down. (Jordan 2016)

Some of the later successful titles have also had relatively short soft launches. *Clash Royale*, for example, started its soft launch in January 4th 2015 on iOS in Canada, Hong Kong, Australia, Sweden, Norway, Denmark, Iceland, Finland and New Zealand. In February 16th they added Android and Google Play to the soft launch platforms. The full global launch happened in March 2nd 2016, only 3 months after the initial soft launch, and the game subsequently jumped to the top of the top grossing charts in all of the major western countries.

4.4 Impact on KPIs

In his GDC 2016 talk "*What to Expect When You're Expecting a Soft Launch*" Wooga's Adam Telfer also reveals that due to the quality of traffic of different sources, tracking the impact of soft launch can be very hard. There can be a lot of variance in the data coming from the users, as some sources have users who are less likely to stay in the game, whilst some sources provide high quality users. The daily difference in day 1 retention can be substantial as the Figure 10 points out.

1d Retention by day
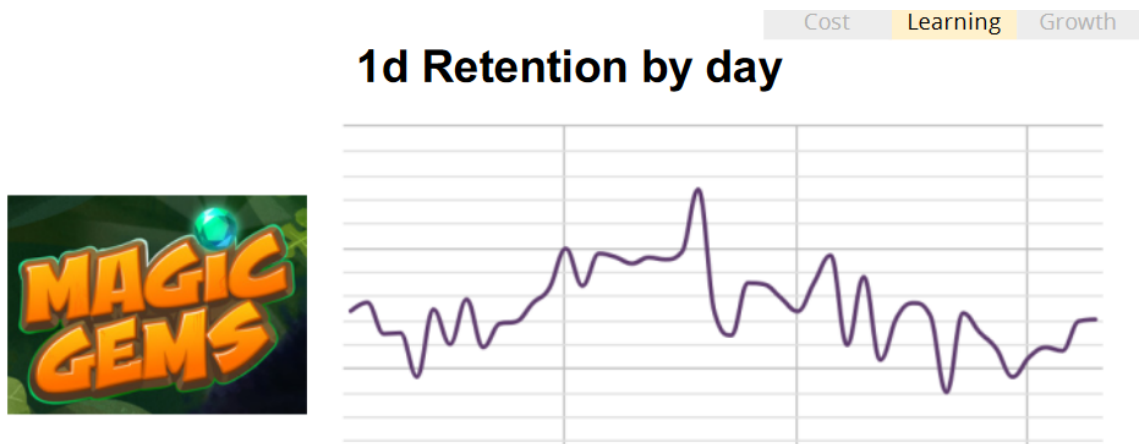
Cost   Learning   Growth

Figure 10. Showing the variance in daily retention. (Telfer 2016)

This means that the product development team should strive to have a large user base and should cover a large variety of different user acquisition sources. This helps the validation with more reliable data. (Telfer 2016.)

He also reveals that impact on KPIs Wooga has seen during their soft launches when improving the product by adding features or modifying the values of existing features. For retention, as per Figure 11 below, they have generally seen a 0.5 to 1.5 percentage point increase per one development and testing month (Figure 11), and this average number had not changed much during the past few years. This can give the product development team an estimation of soft launch time and costs needed to hit the set expectations in case the product falls under them while in the soft launch. They also saw multiple features that had no impact on the retention rate of the product during the soft launch. Among the categories of features they saw have an effect on the retention were funnel optimization, tutorial and difficulty. (Telfer 2016.)

Figure 11. Percentage point increase in retention per month in development and soft launch. (Telfer 2016)

However, monetization is more likely to grow during in soft launch and even after launch. *Pearl's Peril* saw a 50% improvement in monetization during one year of soft launch and post launch development (Figure 12). The major uplift was provided by so-called "live operations", which included events, sales and seasonal content. (Telfer 2016.)
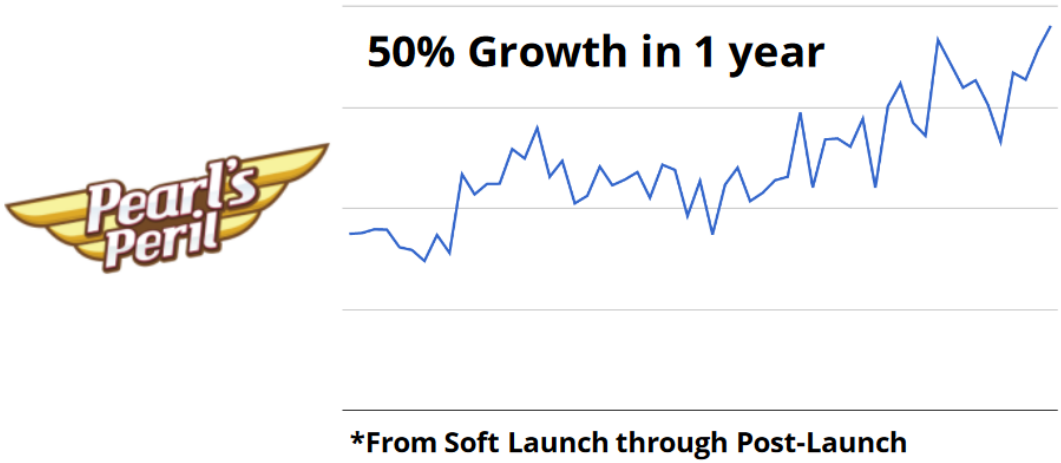

Figure 12. The monetization growth in Pearl's Peril during one year. (Telfer 2016)

Another Game Developer's Conference talk, titled "*Overcoming Analysis Paralysis: Experimenting with Bears vs. Art*", hosted by Luke Muscat from Halfbrick Studios delves into the soft launch of their game *Bears vs. Art* and how drastic changes to the core gameplay during soft launch can improve the KPIs of a game. Halfbrick also uses a metric called "Lapsed Players" that is "simply the players who have not returned to the game for 14 days". This is used because even users that have seemingly quit the game can eventually come back, for example, due to an update to the game.

Figure 13. Halfbrick Studios' plan for improving the game "Bears vs. Art" during soft launch. (Muscat 2015.)

The game was soft launched with retention KPIs that underperformed severely and their D7 retention was only half of what it was supposed to be. The soft launch plan for tackling the issue was to "Make big, 'table flipping' changes." 2 times a week and try them out and A/B-test them for new users. The graph above (Figure 13) also shows their goals by the end of soft launch. Because the game was underperforming and the team knew that the "safe bet" features would not be enough, only riskier and more drastic features could save the game from being cancelled.

Figure 14. Results of the plan and soft launch after 6 weeks. Yellow bars indicating staring point and green bars the metrics after 6 weeks. (Muscat 2015)

This plan was successful in the end and resulted in the game surpassing the retention KPI targets within just 6 weeks of development time. The D1 retention went from below 40% to 50% and the crucial D7 retention went from 7% to 20% (Figure 14), a substantial 185% increase, which also defies the learnings Wooga had had in soft launch. This could be implemented as "plan b" in the soft launch production plan if the game fails to hit the KPI targets. (Muscat 2015.)

5 MOBILE GAME PRODUCTION

5.1 Agile software development process

Game development usually follows the development models commonly seen in other form of software development, but the most common of these models for game development is the so-called "*Agile Software Development*" model. It is based on the following manifesto:

Manifesto for Agile Software Development

We are uncovering better ways of developing

software by doing it and helping others do it.

Through this work we have come to value:

Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiation

Responding to change over following a plan

That is, while there is value in the items on

the right, we value the items on the left more. (Agile Manifesto 2011)

These principles result in a more customer-facing development and allow focus on the end product through rapid iteration and increments of the product. As Oskari Aalto from Wooga says "Games are interactive products that should be fun to play and the fun cannot be verified from a design document" (Aalto 2015, 8). This model

is also employed at Wooga, a leading mobile game publisher and developer, and the reasoning for adopting the model is that it allows the company to have the highest chance of making successful products for the very competitive mobile game market. (Aalto 2015.)

5.2 Production phases

Game production is usually split into different phases with different requirements for the end deliverables as well as that the needs of the product development team are usually different between these phases. According to the "*Game Producer's Handbook – Second Edition*" by Heather Maxwell Chandler these are generally regarded to be:

- Pre-production

- Production

- Testing

- Post-production (Chandler, 2009, 3-15.)

To better suit the needs of the company and the needs of the mobile game market, these have been decided to be the changed to the following for the soft launch production plan:

- Concepting

- Prototyping

- Pre-production

- Production

- Soft-Launch

5.2.1 Concepting

This first phase is designed to result in a deliverable that gives the team a vision of the game and allows the team to start effective prototyping. The concept phase should define areas like the visual style, the target platform(s), input methods, game genre and unique selling points. The phase should be collaborative, but it does not necessarily need to include development, so the team size should be kept to a minimum. The small team can also consult members of the other product development teams and brainstorm together if needed. (Maxwell Chandler 2009.)

The game concept phase can be initiated by finding opportunities in the mobile game market, whether it's a specific genre that does not have much competition, a segment of the mobile game audience that does not have a game that serves its needs or some else prospect emerging. A competitor analysis or market research can be a crucial part of this phase of game development, as it is important to validate the business viability of the concept early on. This phase should be purely iterative and "allow the development team to create as many ideas as possible" and reject any ideas to find the best possible concept for development. (Aalto 2015.)

5.2.2 Prototyping

According to Chandler (Maxwell Chandler 2009, 233) "in game development, a prototype is an early and playable version of a proposed game mechanic or idea". A single game project can have multiple prototypes; one for each new mechanic to be validated, for example. The goal of prototyping is to validate new gameplay features, ideas or other areas that the product development team otherwise cannot evaluate with enough accuracy. This phase can already include multiple product development team members and necessitates some sort of software development to create the prototypes, but the team size should still be fairly small for maximum effectiveness and reduce the cost if the prototype phase fails to deliver a prototype that shows the viability and fun of the idea. Prototyping itself can still occur at any other phase of game production, but as a phase the product development team

should be able to validate the core of the game in a separate phase dedicated to prototyping and create prototypes that can be scrapped completely before heading into pre-production. (Maxwell Chandler 2009.)

5.2.3 Pre-production

According to Clinton Keith (Keith 2010, 16.) pre-production is the most crucial part of the game production and going into production too early can have drastic consequences. If the pre-production fails to deliver its goals, the product development team can be forced to rework core aspects of the game, and thus, fall behind in schedule and quality. A poorly lead pre-production can also make it hard for the team to scale up effectively in staffing, leading to more unexpected problems and delays. (Keith 2010.)

In pre-production the team should still explore "what is fun" as the game project increases its scope from just the prototyped features into a full product, but crucially it also needs to define how the full development is approached when the product development team staffs up and enters production: which features end up in the game, how they will be built, how the asset production pipeline works and how the art is produced, and also incrementally improve the game as product as the product development team will still be learning about the game and is production. (Keith 2010.)

According to Keith (Keith 2010, 292) "Developers and publishers need to clearly establish the goals a game must meet before it enters production. Metrics need to be established in pre-production that demonstrate the production plan is still viable." These metrics can be the budget and schedule of the production, for which the product development team must be able to show that it can staff the needed positions and the fully staffed team can produce the necessary assets and features the product needs, in the time and budget allocated. (Keith 2010.)

In the mobile game development, these metrics should include the target KPIs of the product so the product development team can also calculate the costs and revenue the game will yield once it is live and continues to run after soft launch

and up to years on the market. For this the soft launch production plan should include designing the live operations phase already in pre-production.

5.2.4 Production

According to Heather Maxwell Chandler (Maxwell Chandler 2009, 293) "If things are properly planned during pre-production, the production phase should present no unexpected surprises. The goal of production is to implement the game plan created during pre-production and get the game shipped to stores." However, this can be optimistic as games can take multiple years to create and the market changes rapidly. Thus, it is imperative that the product development team tracks the production, manages risks and adjusts the production to accommodate the most important goals of the project. (Maxwell Chandler 2009.)

Agile methods in the production phase can be more about improving the way the production works rather than making major changes to the product itself, which can end up being very costly both in terms of time and money spent. This makes it critical to lock down details and values that would be expensive to change in production and leave the room for iteration in areas that are inexpensive to iterate upon and can be proven to add value to the product without compromising the schedule. (Keith 2010.)

5.2.5 Soft Launch

In the modern console game market this phase could be titled "Post-Production" as Clinton Keith explains: "With the content brought to shippable quality, the team focuses on polishing the whole eight- to twelve-hour game experience. This stage improves the game incrementally. Following this, the game is submitted to hardware testing. Although much of this testing is spread throughout the entire project, some of it cannot be. For example, Microsoft and Sony hardware testing is expensive and only occurs in the months prior to shipping the game." (Keith 2010.)

For the mobile market, this phase includes preparing and testing the game for a technical and A-country soft launch, finalizing the KPI goals and then following up by launching the game in the planned soft launch countries. During this phase the product development team monitors the KPIs of the game to validate any assumptions and to learn about the player behaviour. The team can uncover exact areas that show there is room for improvement and then create features to address these planned KPI increases, release them and A/B-test them. During the A-country soft launch team product development team and the publisher can evaluate if it makes sense to move forward with a full global launch and assign a marketing budget for the first month. The product development team can also create a roadmap of development after the game has launched, which can include new features to further push the KPIs, events to drive engagement and content to keep the game alive for years to come.

6 CASE: SOFT LAUNCH PRODUCTION PLAN

6.1 Introduction

The Soft Launch Production Plan creation was decided to help facilitate mobile game production and design, and to guide the product development team. Its purpose is to serve as a high-level framework that would hopefully lead the product development team towards a successful soft launch of a new product. Thus, it will delve into the how, why and when of mobile game production and product development.

The how focuses on production practises and needs, and it should guide the team on how to work effectively, when to make decisions on the product development process, when does the team need to staff and scale up, which tools and pipelines the team should use.

The why focuses on the product the product development team is working on. It should guide the team on designing a product that can succeed on the challenging and global mobile game market and set assumptions and estimations for the product development team. This means having a focus on the KPIs defined in earlier chapter and addressing them with the right priorities in every phase of the production.

6.2 Plan requirements

The Soft Launch Production Plan was decided to be created on the Confluence, a wiki-like collaboration platform by Atlassian, due to its cloud-based advantages and its features as a documentation platform. It could be used an easy-to-use template for any future game project that has not yet reached soft launch. Each production phase will have its own "hub" page that includes the most important information and status of the deliverables of the phase and project. The hubs are meant to serve as frameworks that allow the product development team to ask relevant questions and ensure that team keeps moving into the right direction and

towards a product that will show strong a business case and KPIs. It should still allow the team to be agile and choose their development methods.

The plan also assumes that the would-be product fits in the vision of Critical Force, so it is not planned to support genres like casual Match-3 or idle games, but is ambiguous that it in itself does not define any of the design aspects or the product development team structure.

To address the business case easily with a small product development team, the plan also makes use of Eric Seufert's "*F2P Excel Model*" (Mobile Dev Memo) spreadsheet. With every production phase, the product development team can input the expected and adjusted KPIs into the sheet to calculate business outcomes if the game hits the targets during launch (Figure 14). This allows the team to easily see if they are still on track for a reasonable product and if the expected values do not result in a valid business case for the company, the team can choose to kill the project based on concrete numbers.

Figure 14. Example screenshot of the reveunue tab in F2P Excel Model. (Mobile Dev Memo)

6.3 Plan sections

6.3.1 Concept Phase

Because the company focuses on action and mobile, both genre and platform will not be necessary to include in the deliverables. Deliverables for this page include:

- Game Vision

- Target Audience

- Unique Selling Points

- Input Methods and Player Actions

- Visual Style References

- Business Opportunity

These were picked to be concise enough so that deliverables and structure does not get in the way of organic concepting and brainstorming, and so that the framework does not restrict the team in how to approach concepting, but gives the team deliverables that serve in giving the best possible base to start prototyping. The game vision and target audience should narrow the focus to something actionable and allow the product development team to think of unique selling points; the aspects of the game that make it stand out in the crowded mobile game market. Visual references help build an image of how the game might look like and define how it stands out visually from the rest of the market.

The business opportunity was chosen to ensure that the product development team researches the market so that the product would fit in the competition and by design suits the F2P business model. Already in this phase it's possible to set some KPI targets which can be readjusted as the market and the product changes during the course of its development. Also, the team can define how to calculate each KPI that can have their own interpretation as to avoid any confusion if they want to deviate from the definitions used in previous projects.

6.3.2 Prototyping

The framework also does not define how the product development team should approach prototype development, but tries to ask the team relevant questions that drive the team towards prototyping the most crucial things to ensure the game does not need to change considerably later on to be on track to hit necessary KPIs for a successful business case. These include questions like "does this prototype show potential for driving long-term activity" or "does this prove the fun in our concept" or "does this prototype show that the game concept might be harder to produce than expected?" The phase also does not define any aspects of the workflow yet, and instead focuses on allowing the individual team members to develop the prototypes as fast as possible with the least amount of process overhead.

The main goal of the phase is decide whether to continue with the project and move it to pre-production or to go back to the concepting phase. During the prototyping phase the team is also expected to adjust any of the previous deliverables based on what they have learned during the creation of the prototypes. Areas like the visual style, game loops and technical art are expected to change during this phase.

Deliverables:

- Feature prototypes

- Technical art prototypes

- Adjusted documents from Concept Phase

- Prototype reviews

6.3.3 Pre-production

The pre-production phase and its hub page is focused on deliverables that help the team to ensure a smooth production, to address the remaining questions about

the project as a product and to staff the team so that the product development team can follow a realistic schedule and hit soft launch with a set budget. The deliverables and requirements were gathered from different team members in the Critical Ops product development team as to ensure the pre-production addresses aspects learned during the production of Critical Ops and helps every single team member when the project enters production. The deliverable list during this phase is further split into different areas, each with their own dedicate sub-page, and includes:

- Art Definition

- Technical Art and Art Pipelines

- Game Design and Values

- Production, Team Structure and Documentation

- Analytics and Monetization

- Client Tech

- Backend Tech

- Technical Production

- Production Milestones

- Publishing, Soft Launch, and Budgeting

Each of these sections serve as a hub and the sub-pages within these sections will have their own deliverables and requirements. However, being the largest and most important phase for the production, the product development team should also adjust this structure and the deliverables as they see fit and ensure that the deliverables should enable a smooth production. The pre-production priorities are driven by ensuring the most important workflows, technical aspects and production pipelines are defined and locked down as early as possible so that the team does not change the most expensive areas during the latter part of the phase or during production. The team will also decide upon the milestones for production and write

them down for the production phase and into the "Production Phase" page under the Soft Launch Production Plan.

During this phase, the team will also need to ensure they will have full staffing for the production and can already start to staff the team up to avoid delays during the production due to not having the expected amount of team members.

6.3.4 Production

The production phase is focused on executing on the goals set during pre-production, so the framework will be mostly provided during the pre-production and simply written down to the "Soft Launch Production Plan". However, during this phase the team can start to prepare for the soft launch, by finalizing the KPI targets, settling on a UA budget and soft launch countries, and addressing risks caused by the game failing to meet these targets by, for example, having a list of features that can be created and added to the game during the soft launch.

The deliverables for this phase would be:

- Game version ready for soft launch

- Soft launch length and KPI targets

- Soft launch marketing plan and budget

- Soft launch risk management plan

6.3.5 Soft launch

As the plan was aimed at helping the game production go towards a soft launch, and not further, this final section only covers helping wrap up the production and analyse the soft launch and production. It asks the product development team if the soft launch was successful, what development changes were needed to be done during the soft launch to increase certain KPIs, and whether the company

wants to commit to a global launch. The company can also commit to a marketing budget for paid user acquisition based on the LTV and eCPI projections from the data of soft launched A-countries. With a large enough budget the product can gain added visibility within the App Store and Google Play Store by gaining a high spot in the top grossing and downloads charts.

During this phase the development team should also look retrospectively at the soft launch and what the team learned during the production from concept to soft launch. These topics can help bring more knowledge from the product development team to the whole company and ensure the future projects will have learned from the journey to soft launch, whether it was successful or not, or whether team changes for the next project. The soft launch production plan itself can only be properly evaluated during this phase and if necessary can be changed radically or dismissed altogether. The product development team can then move from the soft launch towards a global launch and further toward live operations to keep the game running and the user base engaged for years, or start a new project to find new ways to tackle the competitive mobile game market.

7 CONCLUSION

Researching mobile game soft launches and trying to find a way to create a game production framework that would drive a game project towards a successful soft launch proved to be an interesting challenge.

Defining the most important KPIs made me realize that there are multiple ways to calculate some of these KPIs and that the product development team should be crystal clear about how to work with them. The soft launch research showed quite clearly that mobile game soft launches have had major changes during the last few years; from substantial rise in the cost of soft launching a game to first proving the technology and then the KPIs against competition. It also showed that there are multiple ways to approach improving the game during the soft launch period and that only drastic changes to the core game can bring drastic changes to retention, while monetization has KPIs that are more realistic to tackle continuously with substantial increases. This combined with the increased competition on the market makes it even more important to focus on the important aspects of the game quicker and validate these aspects as early as possible.

During the creation of the Soft Launch Production Plan I was faced with the issue of creating a framework that would not be too rigid as to be against the agile principles and general best practices when approaching the creation of a product that is ultimately a mix of software development, art, player experience, creation something but still familiar to the players, and data-driven product development. This meant the framework itself does not contain a lot of information or rigid structure and needs to be proven in action. However, finding the right key areas for each production phase should help the product development team find the minimum viable product as early as possible and define the KPIs and features that tackle those KPIs.

Having a focus on the right KPIs with a framework that drives game production will hopefully ensure the projects that adopt this framework will be able to address the biggest risks early on, validate these numbers quickly and challenge the competition on the market and become another hit alongside Critical Ops.

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