$$R = \sum_{i=0}^{n} rRW_i + rIG_i$$

F2P the Ultimate Loss Leader

One of the first questions that used to be asked by prospective online gaming developers was whether to build Pay-to-Play (P2P) or Free-to-Play (F2P) games. There are advantages and disadvantages to both. That said the market (especially in the mobile/tablet arena) has wholeheartedly veered towards the F2P option. The short paper seeks to explain how a basic/simple commercial model for F2P games could work.

Contents

The Starting Point

So you've either decided to develop a video game or your interested in the commercial aspects of F2P games. For those prospective developers, perhaps this will be a Massive Multiuser Online Game? Perhaps a downloadable off-line game? Perhaps a Facebook linked game? Indeed, the possibilities are endless. That said, the main driver in developing anything for any commercial organization remains ever constant 'sales revenues and profitability'. So the fundamental basis for this short report and its starting point is simple:

" 1) How does the commercial model for F2P games work?

2) How does it deliver? "

Revenues $\longrightarrow$ **Maximize**

Profits $\longrightarrow$ **Maximize**

Costs $\longrightarrow$ **Minimize**

Revenue Expectations Analysis - I

The first step in any commercial or economic model is to derive the sources of income or revenue. In general for F2P games those are*****:

In-Game Purchases

Cosmetic Items

Character Modifications

Expansion Domains

Down Loadable Content

Additional Non-Player Characters (NPCs)

Virtual Goods

Periodic Promotions

Real World Purchases

Premium Subscriptions

Referrals

Advertisements

Merchandising

Channel "Offer Walls"

Demographics Data

"White Label" Royalties

Revenue Sources

*It is assumed that the "type" of game i.e. First Person Shooter(FPS), Board Game, Arcade Game, Strategy, etc. This phase of input is the next layer of detail to be done in conjunction with the game design team.

Revenue Expectations Analysis – II "Real World Purchases"

Premium Subscriptions	Offer a fixed discounted rate as an aggregation to a specific "bundle" of either "in-app" purchases or "new locked subscription only" domains or regions across a suite of your games to increase stickiness for "hard core" gamers with an already high ARPU/ABPU.

"White Label" Royalties	The revenue associated with selling your specific platform. While you most likely lease or subscribe to a major "engine" provider you can carve a revenue stream allowing "white labelling" of your specific code.

Advertisements	Providing "in-game" advertising for external companies, other gaming companies, and channel partner companies. Requires a focus on eCPM, eCTR, & eCPC.

Merchandising	Having a very successful or "viral" game opens up the possibility to design and market real world promotional merchandise i.e. apparel, mugs, posters, toys, etc.

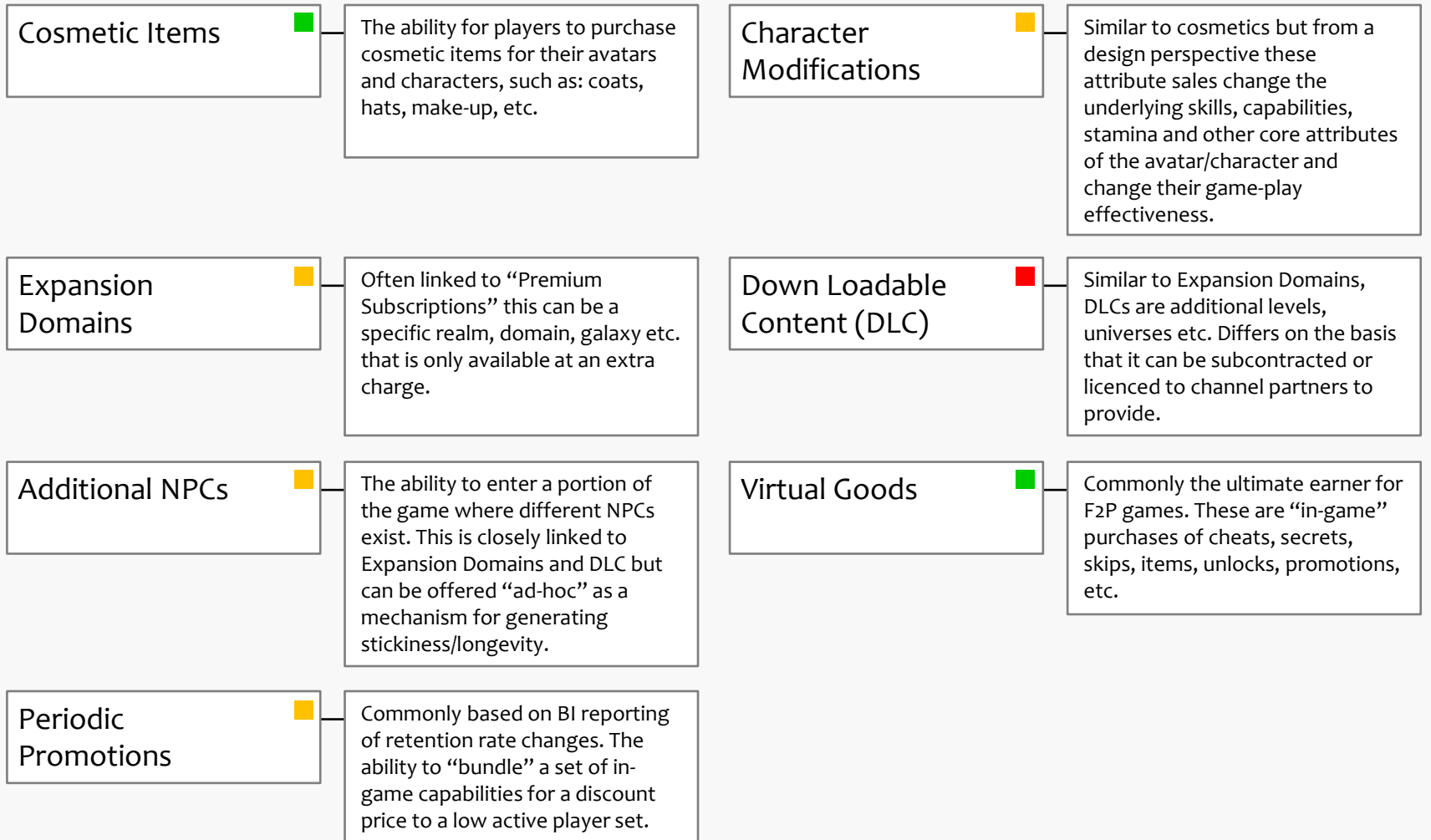| **Channel "Offer Walls"**	Providing an "in-game" aggregation table or 'bulletin board' style menu of external purchases. Similar to Advertising with the same focus on CPA, eCPM, etc.

Demographics Data	Build a revenue stream of customer centric purchasing and usage trend data for sale to marketing and research agencies. This is closely linked to your ability to track LCV, eCPM, CPA, etc.

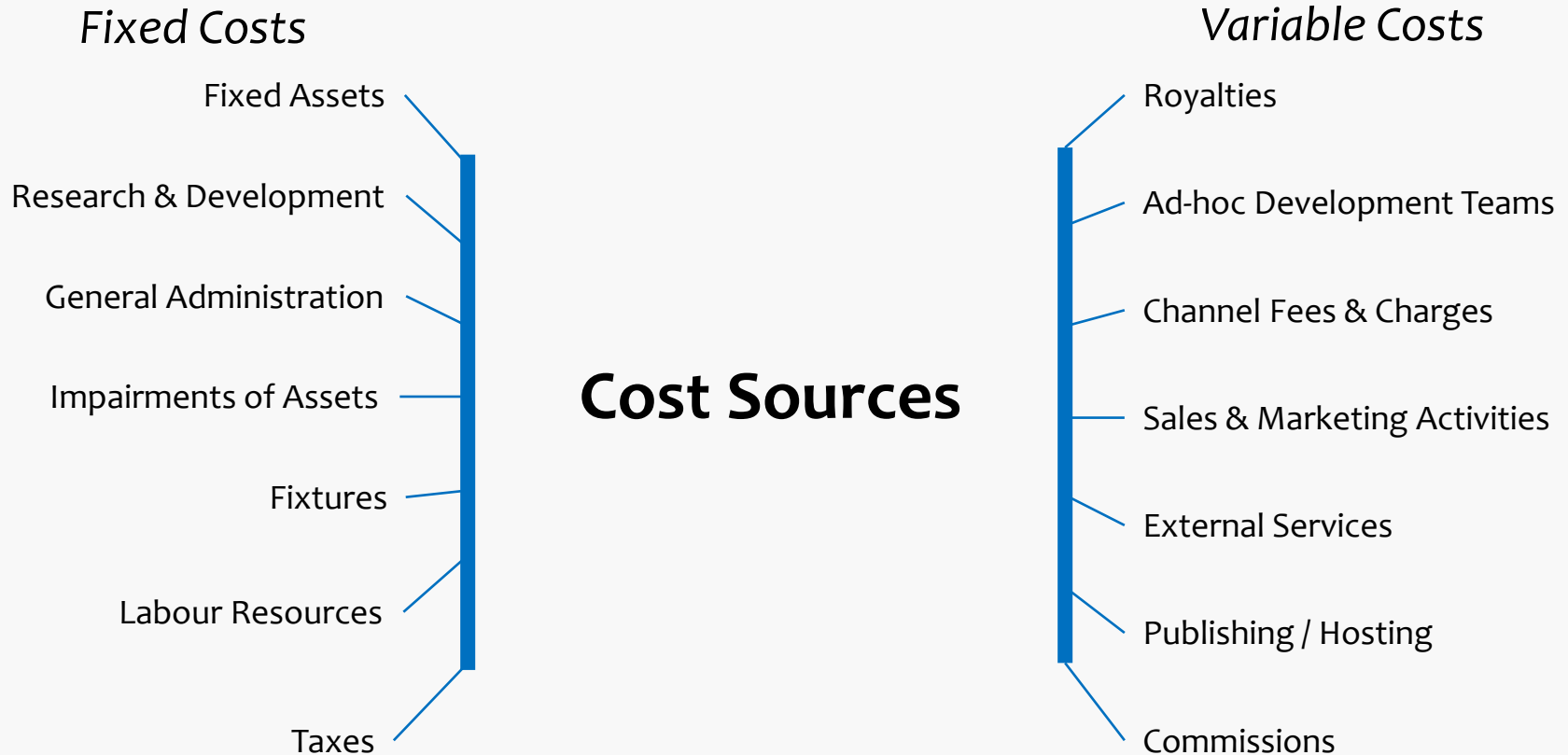| **Referrals**	An incremental revenue stream to advertising. Launch specific 'short-run' referral campaigns either "in-game" or through Blogs, Newsletters, etc.

Revenue Expectations Analysis – III "In-Game Purchases"

Cosmetic Items ▪ (green)

The ability for players to purchase cosmetic items for their avatars and characters, such as: coats, hats, make-up, etc.

Character Modifications ▪ (yellow)

Similar to cosmetics but from a design perspective these attribute sales change the underlying skills, capabilities, stamina and other core attributes of the avatar/character and change their game-play effectiveness.

Expansion Domains ▪ (yellow)

Often linked to "Premium Subscriptions" this can be a specific realm, domain, galaxy etc. that is only available at an extra charge.

Down Loadable Content (DLC) ▪ (red)

Similar to Expansion Domains, DLCs are additional levels, universes etc. Differs on the basis that it can be subcontracted or licenced to channel partners to provide.

Additional NPCs ▪ (yellow)

The ability to enter a portion of the game where different NPCs exist. This is closely linked to Expansion Domains and DLC but can be offered "ad-hoc" as a mechanism for generating stickiness/longevity.

Virtual Goods ▪ (green)

Commonly the ultimate earner for F2P games. These are "in-game" purchases of cheats, secrets, skips, items, unlocks, promotions, etc.

Periodic Promotions ▪ (yellow)

Commonly based on BI reporting of retention rate changes. The ability to "bundle" a set of in-game capabilities for a discount price to a low active player set.

In general: ▪ High Price Item (red)　▪ Medium Price Item (yellow)　▪ Low Price Item (green)

Cost Expectations Analysis

The next step is an in-depth analysis of where the costs for development, marketing, sales (yes there are stills sales costs) and publishing will come from***:**
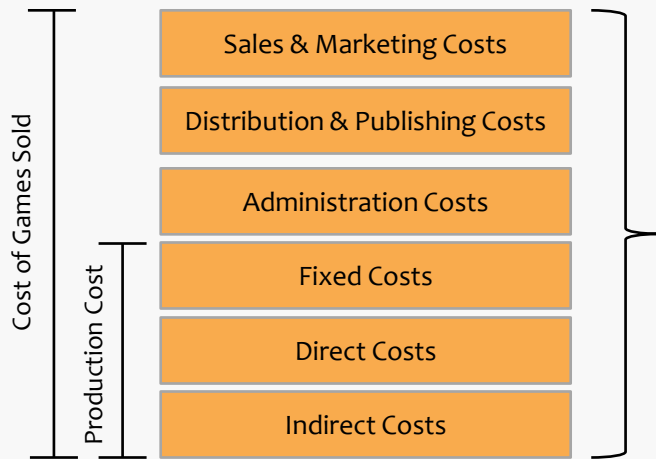
Fixed Costs

- Fixed Assets
- Research & Development
- General Administration
- Impairments of Assets
- Fixtures
- Labour Resources
- Taxes

Cost Sources

Variable Costs

- Royalties
- Ad-hoc Development Teams
- Channel Fees & Charges
- Sales & Marketing Activities
- External Services
- Publishing / Hosting
- Commissions

***It is assumed that the "engine" will be a hosted development platform paid for on a "Revenue Share Basis".

The Traditional Software Pricing Model

This is not an accounting brief but in general the traditional basis for any gaming (or other) software business was:
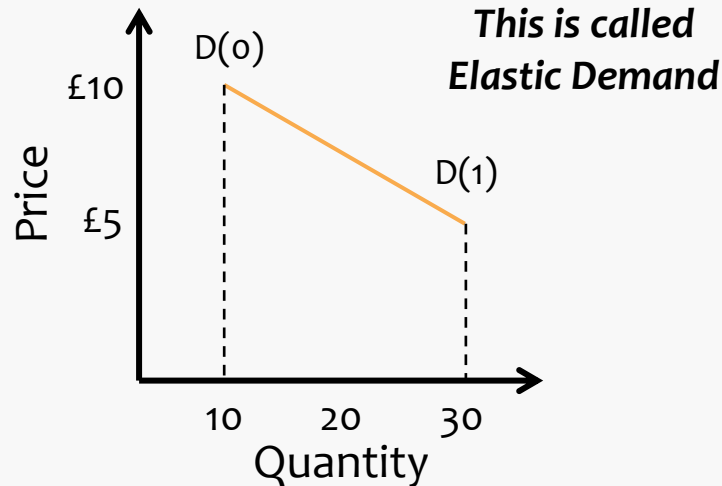
Traditional "P2P" Cost Model

Cost of Games Sold

Production Cost

- Sales & Marketing Costs
- Distribution & Publishing Costs
- Administration Costs
- Fixed Costs
- Direct Costs
- Indirect Costs

Traditional "P2P" Price Model

Recommended Retail Price

The Profit Margin in Gaming (and other) Software Markets is decided on the basis of Price Elasticity of Demand rather than a Cost Plus Model– it is not uncommon for this to be up to (and even beyond) 80%.

All Costs

A very quick Economics 101 refresher for Elasticity & Profit Maximization:

This is called Elastic Demand

The price of anything is determined in the market by many factors. That said it is also quite clear to all of us that the price we're willing to pay for anything is a large part of the determination. This was first documented in the 1960s by Gabor-Granger.

In the example above Customers will buy a:

- Quantity of 10 when the price is £10 so Revenue is £100

However if we lower the Price they will buy a:

- Quantity of 30 when the Price is £5 so the Revenue is £150

So if as in the diagram the demand for our product is Elastic – what is the effect on our Profits?

|	D(0)	D(1)
Revenue	£100	£150
Cost	£50	£65
Gross Margin	50%	57%

Therefore from a Commercial point of view (subject to a Marginal Cost curve) – it is better from both a Revenue and Profit perspective to sell more of this particular product.

Note: This is a very simplistic example – but hopefully it describes the point.

# The Price Elasticity of Demand for Gaming Software - II

The demand for Gaming (or other) Software is in general Elastic with a "Long Tail".

Traditional Gaming Software
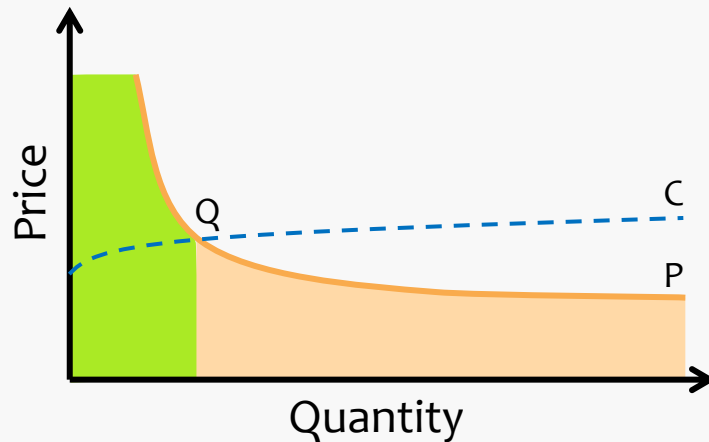
In this example, up to point (Q) the Traditional Gaming Software vendor would make Profit (or Break-even). This though at the expense of not being able to service the clear demand in the "Long Tail" which would buy but at a Price (P) below the Cost (C) incurred by the vendor.

Traditional Gaming Software (with Internet Distribution)
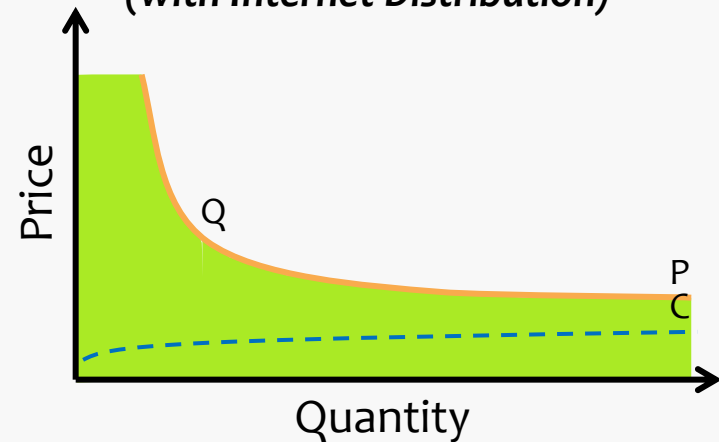
Now with electronic (near zero-cost) distribution Gaming (and other) Software vendors can reduce their costs significantly and farm the additional "Long Tail" revenues. This model remains Traditional though as its P2P.

**Note:** The graphic is purposefully exaggerated to emphasize the point.

The Trouble with Demand Curves for F2P

As we have seen Demand models for Traditional or P2P can be worked out and its fairly clear that

Price x Quantity = Revenue, and that

Revenue – (Cost x Quantity) = Profit

The trouble though is that in F2P games Price = £0, so Revenue = £0 … and worse still Profit is a huge **negative** number because costs are real and incurred irrespective of Internet delivery savings. If we presented a Revenue curve for the CFO it would looks … well awful …

But this is only "Base" Product Revenue

Revenue

C

Number of Users
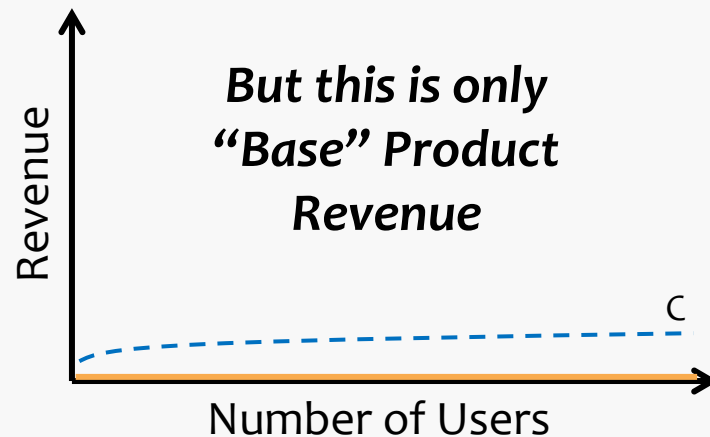
# So Why is F2P so Popular? Well "Free" is not really "Free"

Simply stated – "not everything is free". The commercial model is predicated on the basis that F2P for a basic capability yields "millions" of players very quickly. The approach then is to farm those "millions" in a two-fold way:

1)   For revenues derived from Real World Purchases

2)   For revenues derived from In-Game Purchases

On this basis while an "odd-looking curve" the Revenue curve begins to look far less anemic.

Now with "Incremental" Product Revenues
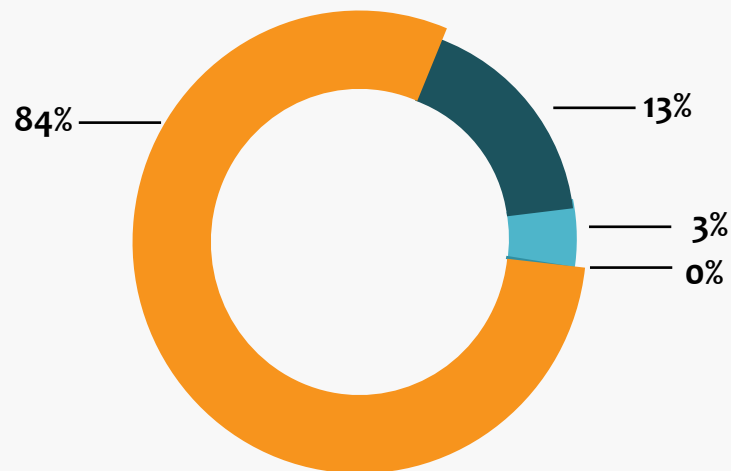
Revenue

Number of Users
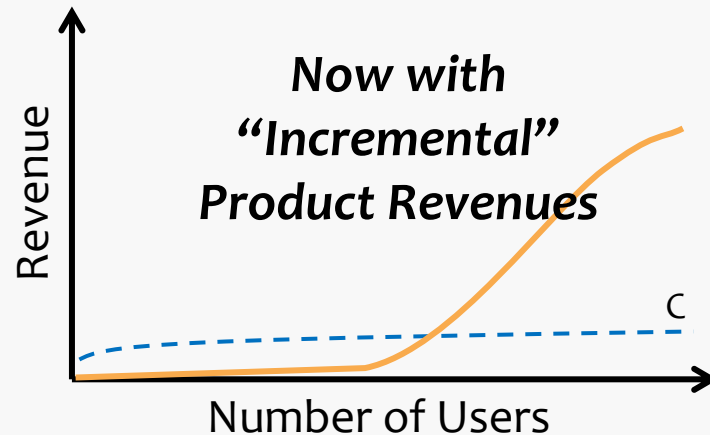
Evidence Suggests that while they are a low number Committed Players account for the lions share of the Revenues with Regulars coming a distant second
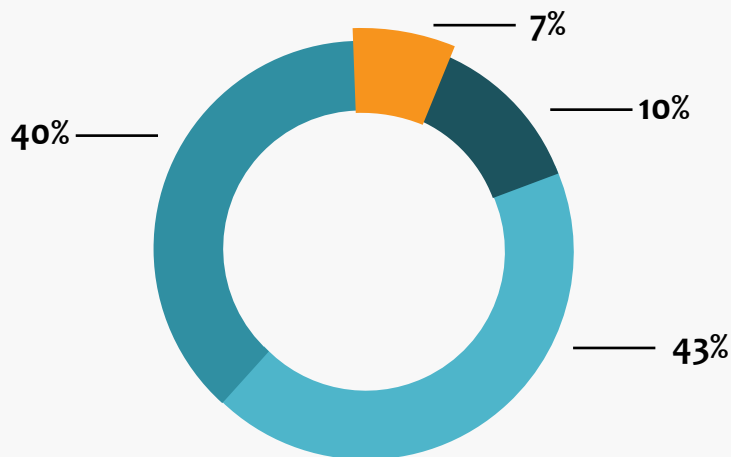
Percentage of Players (By Type)

7%
10%
43%
40%

- Committed
- Regulars
- Repeats
- Non-Repeats

Percentage of Revenues (By Type)

84%
13%
3%
0%

- Committed
- Regulars
- Repeats
- Non-Repeats

http://developers.kongregate.com/blog/maximizing-monetization-gdc-online-2012-talk
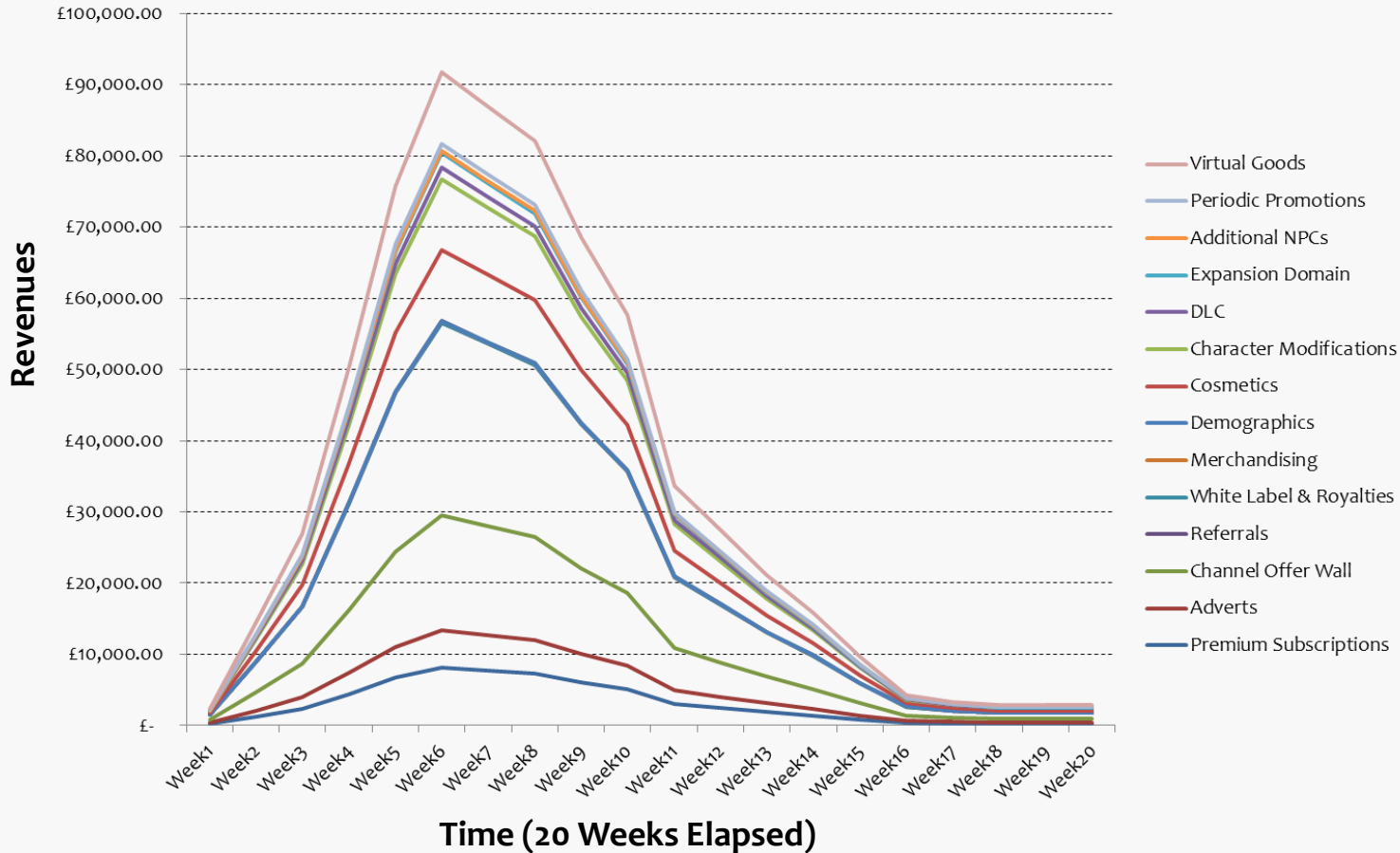
The Commercial Model used for the purposes of the Scenario's below is entirely flexible in terms of set-up. The Key Baselines & Model Logic for this presentation were set as follows …

For the following Scenario's it is assumed that:

- Player Usage is assumed as 7% Committed, 10% Regulars, 40% Repeats & 43% Non-Repeats
- Active Players are "Committed + Regulars + 10% of Regulars"
- Advertisement (Per 1000 Impressions) Revenues are stepped against Active Usage:
  - £1 for Active Usage below 500k Players
  - £35 for Active Usage above 5M
  - Impressions per minute play of 0.2
- Average Active Usage per day of 19 minutes
- Virtual Goods Average Purchase is £4.99p
- Premium Subscriptions £9.99p
- DLC £24.99
- For the purposes of simplicity the Average Development & Publishing Costs are assumed as being £9 Million

Stylised Scenario Analysis – "Flash in the Pan"

Total Downloads	950k	Total Costs	£9M	ARPU	£9.18p
Total Revenues	£680k	Gross Margin	-1,222%	ARPD	£0.72p

Legend:
- Virtual Goods
- Periodic Promotions
- Additional NPCs
- Expansion Domain
- DLC
- Character Modifications
- Cosmetics
- Demographics
- Merchandising
- White Label & Royalties
- Referrals
- Channel Offer Wall
- Adverts
- Premium Subscriptions

Y-axis: Revenues (£- to £100,000.00)

X-axis: Time (20 Weeks Elapsed) — Week1 to Week20

Stylised Scenario Analysis – "Steady Earner"

Total Downloads	10M	Total Costs	£9M	ARPU	£28.2p
Total Revenues	£24.1M	Gross Margin	62.7%	ARPD	£2.35p

Revenues vs **Time (20 Weeks Elapsed)**

Legend:
- Virtual Goods
- Periodic Promotions
- Additional NPCs
- Expansion Domain
- DLC
- Character Modifications
- Cosmetics
- Demographics
- Merchandising
- White Label & Royalties
- Referrals
- Channel Offer Wall
- Adverts
- Premium Subscriptions
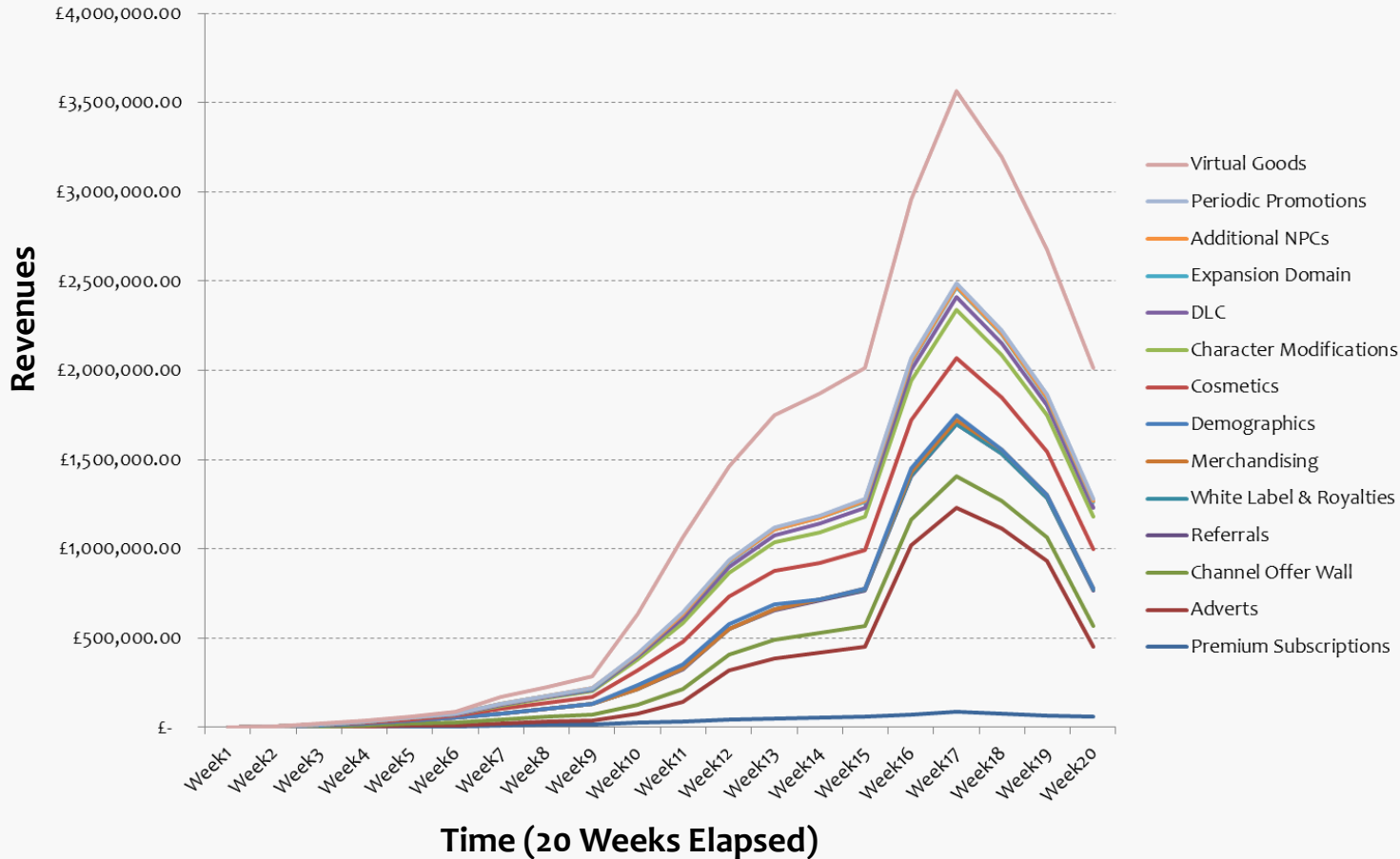
Stylised Scenario Analysis – "Goes Viral"

Total Downloads	38M	Total Costs	£9M	ARPU	£41.6p
Total Revenues	£121M	Gross Margin	92.6%	ARPD	£3.21p

Legend:
- Virtual Goods
- Periodic Promotions
- Additional NPCs
- Expansion Domain
- DLC
- Character Modifications
- Cosmetics
- Demographics
- Merchandising
- White Label & Royalties
- Referrals
- Channel Offer Wall
- Adverts
- Premium Subscriptions

Revenues (y-axis)

Time (20 Weeks Elapsed) (x-axis)
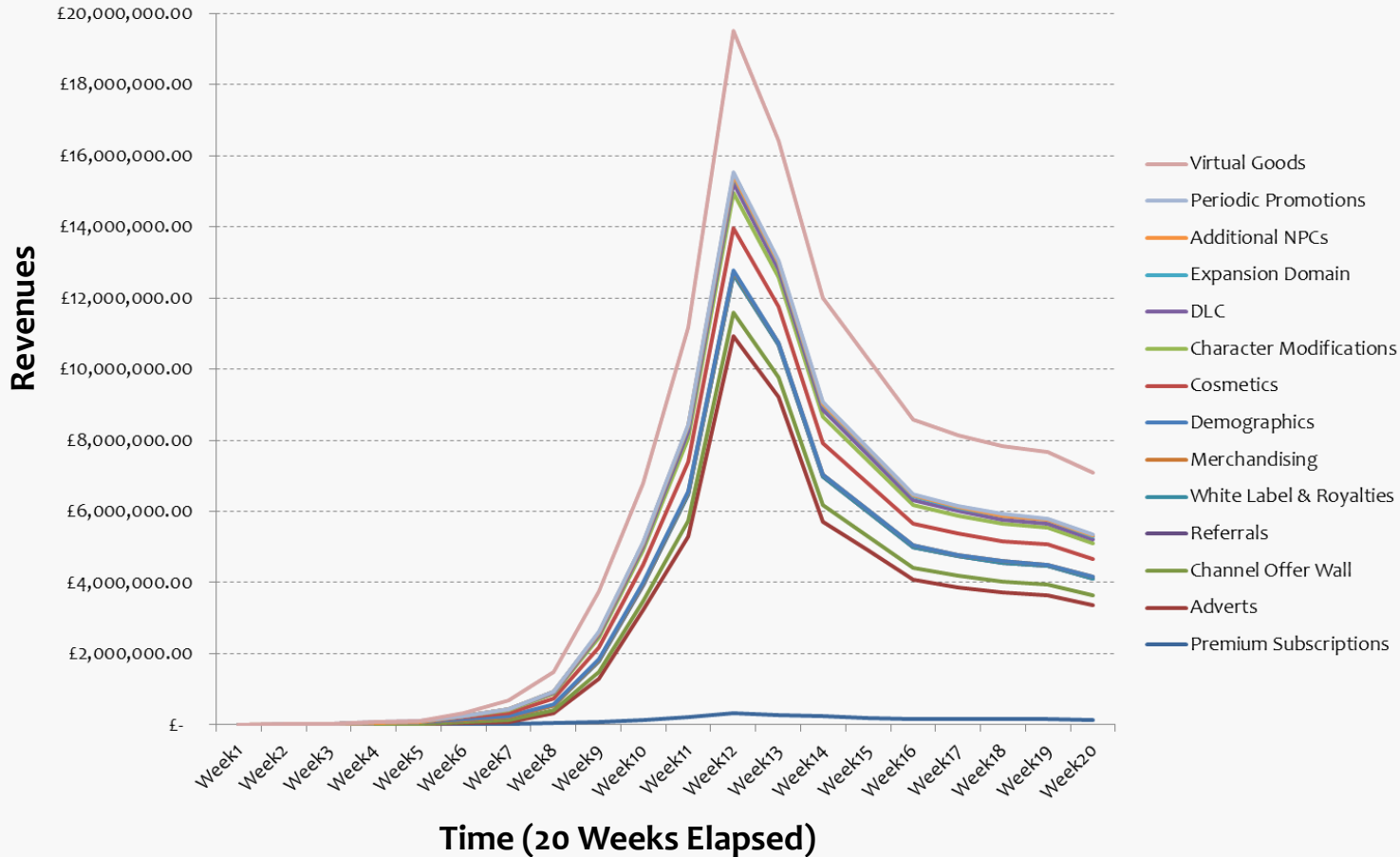
Revenue Scenarios can also be Modelled on a Daily Basis to provide more Realism

Total Downloads	3.5M		Total Costs	£9M		ARPU	£77.5p
Total Revenues	£12.6M		Gross Margin	28.5%		ARPD	£3.85p

Revenues

First 120 Days Elapsed

Legend:
- Virtual Goods
- Periodic Promotions
- Additional NPCs
- Expansion Domain
- DLC
- Character Modifications
- Cosmetics
- Demographics
- Merchandising
- White Label & Royalties
- Referrals
- Channel Offer Wall
- Adverts
- Premium Subscriptions
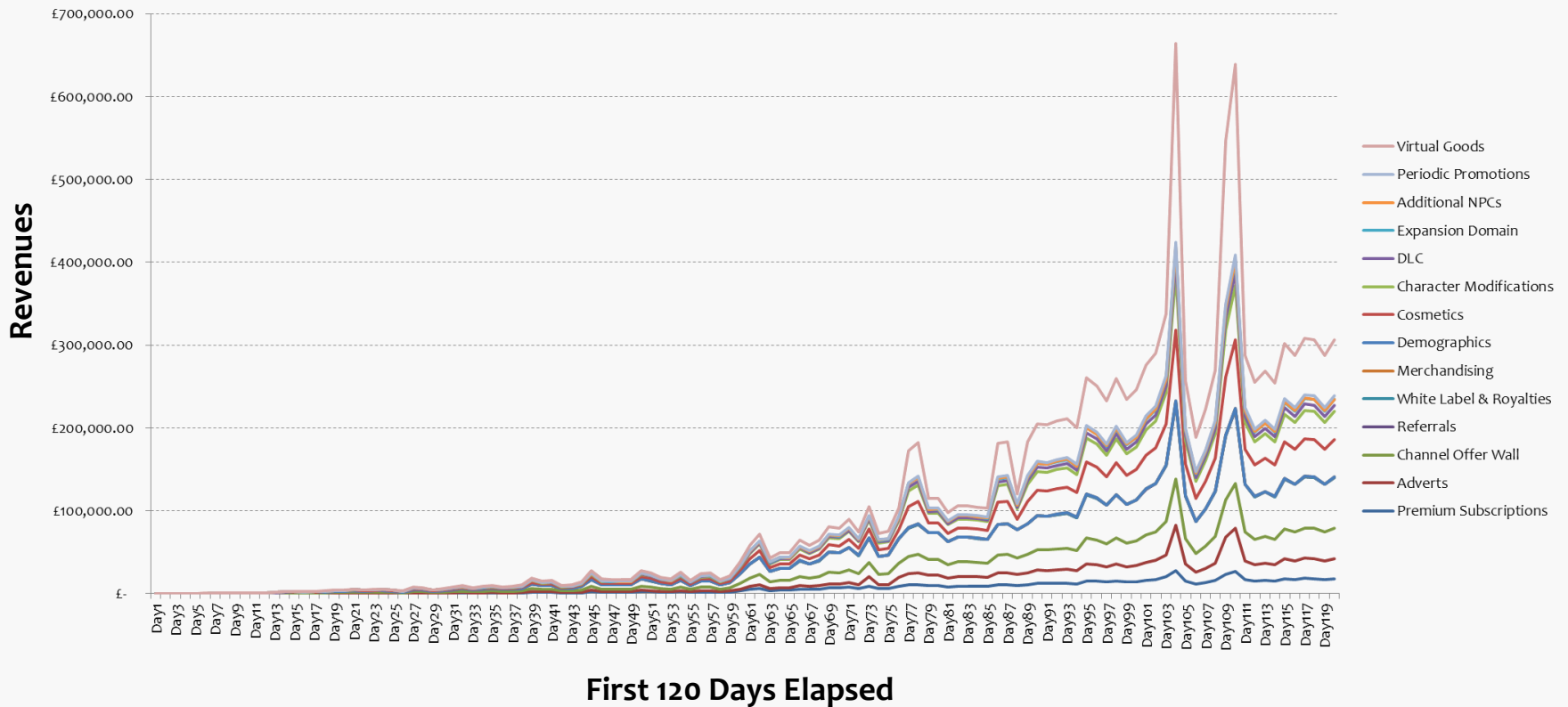
Jargon Buster – Glossary

ARPU – Average Revenue per User

ABPU – Average Billing per User

ARPD – Average Revenue per Download

eCPM – Effective Cost per Mile

eCTR – Effective Click Through Rate

eCPC – Effective Cost Per Click

CPA – Cost Per Action

LCV – Lifetime Customer Value

DLC – Downloadable Content

F2P – Free to Play

P2P – Pay to Play

MMOG = Massively Multiplayer Online Game

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No doubt there are many more links ...

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