Video Game Industry as Business

Industry and Developers
Business Models
2014E Global Games Market
Per Market Segment & Screen*

TOTAL $81.5Bn

1,747M GAMERS
+8% YoY

CASUAL WEBGAMES
9% 1,289M GAMERS
$7.6Bn  +4% YoY

MMO GAMES
22% 885M GAMERS
$17.8Bn  +16% YoY

(MID)-CORE PC/MAC GAMES
9% 1,045M GAMERS
$7.4Bn  +3% YoY

MOBILE PHONE GAMES
19% 1,268M GAMERS
$15.2Bn  +19% YoY

TV/CONSOLE GAMES
29% 727M GAMERS
$23.4Bn  -1% YoY

HANDHELD GAMES
4% 280M GAMERS
$3.5Bn  -20% YoY

TABLET GAMES
8% 527M GAMERS
$6.5Bn  +37% YoY

ENTERTAINMENT SCREEN
12% 40% 215M GAMERS

PERSONAL SCREEN
19%

*Excluding tax, hardware, consumer-to-consumer trade but including retail margin.
Fast growth of Game business
Global Games Market 2012-2017

Total & Mobile Game Revenues

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Market</th>
<th>Mobile Market</th>
<th>2013-2017 CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>$75.5Bn</td>
<td>$17.6Bn</td>
<td>+8.1%</td>
</tr>
<tr>
<td>2017</td>
<td>$102.9Bn</td>
<td>$35.4Bn</td>
<td></td>
</tr>
</tbody>
</table>

Key Take-Aways.

This year mobile gaming passes a quarter share of the games market. In 2017 34% of global game revenues will be generated through (smart)phones and tablets, at $35.4bn.

Double compared to 2013 and more than consoles….
Global game revenues per screen

2013 by Screen

- Consoles & Other TV “Entertainment Screen” 40%
- Tablets & Handhelds “Floating Screen” 12%
- Smartphones “Personal Screen” 17%
- MMO, PC & Webgames “Computer Screen” 31%

Total $75.5bn

2017 by Screen & Segment

- Mobile Phone $22.4bn
- MMO $23.5bn
- PC Games $8.2bn
- (Mid)-Core
- Webgames $9.3bn
- TV / Console $24.3bn
- Handheld Console $2.3bn
- Tablet $12.9bn

Total $102.9bn

Source: Newzoo 2014 Global Games Market Report & Service
Tablet games revenue will grow 400% by 2016

- **2012**: $2.1BN ($7.0BN)
- **2013e**: $3.7BN ($8.5BN)
- **2016e**: $10.0BN ($13.9BN)

**TOTAL 2012-2016**: $23.9BN

- **Tablets**: $12.2BN (47.6%)
- **Smartphones**: $10.0BN (18.8%)

* includes feature phones
PC vs Console
2013 Global Games Market
Per Region

- **LATIN AMERICA**
  - $2.9Bn
  - 170M Gamers
  - 4%

- **NORTH AMERICA**
  - $21.9Bn
  - 190M Gamers
  - 29%

- **EUROPE & MIDDLE EAST AFRICA**
  - $18.7Bn
  - 520M Gamers
  - 25%

- **ASIA - PACIFIC**
  - $31.9Bn
  - 740M Gamers
  - 42%

**TOTAL**
- $75.5Bn
- 1.6Bn Gamers

© 2014 Newzoo

*Excluding tax, hardware, consumer-to-consumer trades but including real money.
Digital distribution

WORLDWIDE STEAM SALES BY REGION 2013

- North America: 41%
- Western Europe: 40%
- Russian Territories: 5%
- Oceania: 5%
- Asia: 3%
- South America: 2%
- Eastern Europe: 2%
- Other: 1%
- South East Asia: 1%
Mobile Game Markets 2013

- **NORTH AMERICA**
  - Revenue 2013e: $3.0BN
  - YoY Growth: 38%
  - 146M players
  - $3.87 average spend

- **LATIN AMERICA**
  - Revenue 2013e: $400M
  - YoY Growth: 33%
  - 84M players
  - $1.15 average spend

- **MIDDLE EAST & AFRICA**
  - Revenue 2013e: $260M
  - YoY Growth: 29%
  - 105M players
  - $0.67 average spend

- **ASIA PACIFIC**
  - Revenue 2013e: $5.9BN
  - YoY Growth: 25%
  - 412M players
  - $2.86 average spend

- **WESTERN EUROPE**
  - Revenue 2013e: $2.3BN
  - YoY Growth: 63%
  - 128M players
  - $4.40 average spend

- **EASTERN EUROPE**
  - Revenue 2013e: $420M
  - YoY Growth: 39%
  - 88M players
  - $1.27 average spend

*per month per paying mobile gamer*
Markets are changing

Global Population vs Gamers
Per region for the top 110 countries: Population, Online Population, Gamers, Money (2013E)

- "MATURE" MARKETS REPRESENT:
  - 14.9% of people
  - 31.5% of online people
  - 37.1% of gamers
  - 37.8% of paying gamers
  - 73.6% of money spent on games

- **Total Population (6.4bn)**
- **Online Population (2.4bn)**
- **Active Gamers (1.2bn)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Population</th>
<th>Online Population</th>
<th>Gamers</th>
<th>Share of Money</th>
</tr>
</thead>
<tbody>
<tr>
<td>KOR/JP/Oceania</td>
<td>200M</td>
<td>165M</td>
<td>85M</td>
<td>17.9%</td>
</tr>
<tr>
<td>NAM</td>
<td>350M</td>
<td>275M</td>
<td>190M</td>
<td>32.4%</td>
</tr>
<tr>
<td>West Europe</td>
<td>400M</td>
<td>310M</td>
<td>180M</td>
<td>23.2%</td>
</tr>
<tr>
<td>East Europe</td>
<td>410M</td>
<td>205M</td>
<td>120M</td>
<td>2.8%</td>
</tr>
<tr>
<td>LATAM</td>
<td>570M</td>
<td>250M</td>
<td>115M</td>
<td>4.3%</td>
</tr>
<tr>
<td>MEA</td>
<td>880M</td>
<td>245M</td>
<td>145M</td>
<td>1.8%</td>
</tr>
<tr>
<td>APAC (Others)</td>
<td>1.0B</td>
<td>255M</td>
<td>140M</td>
<td>1.8%</td>
</tr>
<tr>
<td>India</td>
<td>1.2B</td>
<td>140M</td>
<td>75M</td>
<td>0.7%</td>
</tr>
<tr>
<td>China</td>
<td>540M</td>
<td>180M</td>
<td>180M</td>
<td>15.2%</td>
</tr>
</tbody>
</table>
Mobile opportunities

**Mobile Games Market Size**
- Based on estimated mobile games revenue in 2014

**Growth Potential**
- Based on mobile games revenue CAGR 2013-2017

**Monetization Potential**
- Based on share of payers and average spend per payer

**CPI Levels Per Loyal Gamer**
- CPIs are averaged across country groups/continents

**Global Appeal Score for Mobile Game Publishers**
Global Games Market 2013-2017

Key Moments Towards 2017 | Revenues Per Year and Market Segment

- **2013 Global Revenues Exceeded Expectations Driven by Continued Growth in China and Mobile Gaming on a Global Scale.**
- **Between 2013 and 2017, the Global Games Market Grows at 8.1% (CAGR) per Year to $100bn in 2017.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>$75.5Bn</td>
<td>31%</td>
</tr>
<tr>
<td>2014</td>
<td>$81.5Bn</td>
<td>9%</td>
</tr>
<tr>
<td>2015</td>
<td>$88.0Bn</td>
<td>27%</td>
</tr>
<tr>
<td>2016</td>
<td>$95.2Bn</td>
<td>22%</td>
</tr>
<tr>
<td>2017</td>
<td>$102.9Bn</td>
<td>23%</td>
</tr>
</tbody>
</table>

- **Apple, King, Gungho Generate More Annual Game Revenues Than Nintendo.**
- **The Asia-Pacific Region Contributes 82% of $6Bn Global Games Market Growth.**

- **Smartphones and Tablets Match Global Console Revenues.**
- **Tencent Takes 10% of World Games Market.**
- **Physical Sales Evaporate, Dropping Below 20% in the US.**

- **Mobile Games Market Share Rises to 35% with $35Bn Revenue.**
- **Global MMO Revenues Equal Those of TV / Consoles at $24Bn.**
- **The Asia-Pacific Region Takes 49% of Global Market.**

- **China Overtakes US as Worlds’ Biggest Games Market with over $25Bn Revenue.**
- **The Global Number of Gamers Surpasses 2.0Bn, Up From 1.6Bn in 2013.**

In 2013, Tencent became worlds' biggest game company. Its Q1 results showed YoY growth of **+40%**

At this pace, Tencent will take **10%** of the global games market in 2015.

<table>
<thead>
<tr>
<th>Year</th>
<th>Million €</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>1800</td>
</tr>
<tr>
<td>2013</td>
<td>900</td>
</tr>
<tr>
<td>2012</td>
<td>250</td>
</tr>
<tr>
<td>2011</td>
<td>165</td>
</tr>
<tr>
<td>2010</td>
<td>105</td>
</tr>
<tr>
<td>2009</td>
<td>87</td>
</tr>
<tr>
<td>2008</td>
<td>87</td>
</tr>
</tbody>
</table>
Number of employees in the Finnish game industry 2008–2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2500</td>
</tr>
<tr>
<td>2013</td>
<td>2200</td>
</tr>
<tr>
<td>2012</td>
<td>1800</td>
</tr>
<tr>
<td>2011</td>
<td>1264</td>
</tr>
<tr>
<td>2010</td>
<td>1079</td>
</tr>
<tr>
<td>2009</td>
<td>1120</td>
</tr>
<tr>
<td>2008</td>
<td>1147</td>
</tr>
</tbody>
</table>

20% women
Competition is increasing

Number of available apps in the iTunes App Store from 2008 to 2014 (cumulative)
Competition is increasing
What is happening out there?

- Mobile game markets are lucrative, possibility to get rich: low barriers to entry because of digital distribution, low development costs (50 – 100 K €) and relative low operational costs
- Thousands of new games every year
- Harsh competition about players attention and money
- Fast growing player acquisition costs/install: +233 % from 1/2012 (2,23 USD, 12 /2012) to 4,36 USD by end of 2013 (Superdataresearch.com)
- Average revenue / player (ARPU) increased 38 % in the same time frame (0,78 –> 1,08 USD)
Average Revenue per Download vs. Average Cost per Install
Apple App Store, Games Category, Q4 2013

- **Canada**: $2.73 ($2.42)
- **United Kingdom**: $2.33 ($1.86)
- **Germany**: $2.45 ($2.07)
- **South Korea**: $3.82 ($1.98)
- **United States**: $2.52 ($2.17)
- **Italy**: $1.61 ($1.47)
- **China**: $1.13 ($0.90)
- **Australia**: $4.50 ($2.59)
- **Japan**: $6.34 ($1.86)

**DISTIMO**

**Chartboost**
THE STATE OF THE GAME DEVELOPERS NATION

In a multi-platform world, it takes experience and scale to succeed consistently.

- **33%** of developers make games
- **40%** of downloads are games
- **57%** of games make < $500 per month
- **70%** of developers shipped < 4 games
- **80%** of store revenues are from games

### Game Developers Are Most Likely to Adopt New Platforms

Game developer attitudes, by platform used:
- **Number of mobile platforms targeted**
- **Percentage of developers for each platform making games**

### Unity Beats All Other Game Development Tools

<table>
<thead>
<tr>
<th>% of game developers</th>
<th>Using</th>
<th>Primary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unity</td>
<td>47%</td>
<td>29%</td>
</tr>
<tr>
<td>Native Code Only</td>
<td>42%</td>
<td>29%</td>
</tr>
<tr>
<td>Custom Solution</td>
<td>21%</td>
<td>9%</td>
</tr>
<tr>
<td>Cocos2d</td>
<td>19%</td>
<td>8%</td>
</tr>
<tr>
<td>Adobe Air</td>
<td>15%</td>
<td>6%</td>
</tr>
<tr>
<td>Unreal Engine</td>
<td>13%</td>
<td>3%</td>
</tr>
</tbody>
</table>

### Experience Breeds Financial Success

<table>
<thead>
<tr>
<th>Number of titles shipped</th>
<th>&lt;$100</th>
<th>$100-500</th>
<th>$500-5,000</th>
<th>$5-25K</th>
<th>$25K+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>44%</td>
<td>20%</td>
<td>21%</td>
<td>12%</td>
<td>3%</td>
</tr>
<tr>
<td>4-9</td>
<td>31%</td>
<td>18%</td>
<td>24%</td>
<td>20%</td>
<td>7%</td>
</tr>
<tr>
<td>10-20</td>
<td>24%</td>
<td>22%</td>
<td>28%</td>
<td>20%</td>
<td>6%</td>
</tr>
<tr>
<td>21-50</td>
<td>19%</td>
<td>15%</td>
<td>24%</td>
<td>26%</td>
<td>16%</td>
</tr>
<tr>
<td>50+</td>
<td>14%</td>
<td>7%</td>
<td>27%</td>
<td>25%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Source: Developer Economics: State of Nation Q3 2014 | www.DeveloperEconomics.com/go | Licensed under CC BY ND | Copyright VisionMobile
870 000 Game Developers?

- 2,9 million app developers -> 33 % make games
- 80 000 in China
- 200 – 300 new video games every day
- 2 % makes over 95 % of revenue
- 57% of game developers make less than $500 per app per month
- 243 developers made over 1 million USD net revenue in Appstore 2012
Dominance of Freemium (F2P)

• Growth of Business in mobile and MMO:s
• F2P is dominant revenue model in both
• Growing fast 50 % (2012) -> 73 % Q3 2013, NA
• 90 % revenue share Appstore Games, Android higher F2P (Distimo,2013)
Figure 1: Conceptual Framework for analyzing video game business models
## Business Model Canvas

### Key Partners
- Apple
- Google
- Advertisers
- Dev Platform Suppliers

### Key Activities
- Creating Mobile Games
- Monetizing Existing Games
- User Support

### Value Propositions
- Cheap, attractive, high-retention games
- Free, high retention games with ads
- Free, high retention games with IAPs

### Customer Relationships
- App Stores
- Website
- Email Support
- Social Networks
- Newsletters

### Customer Segments
- Casual Non-Paying Gamer: 150,000,000
- Mobile Non-Paying Gamer: 350,000,000
- Casual Paying Gamers: 50,000,000
- Mobile Paying Gamers: 150,000,000
- Advertisers: 10,000

### Key Resources
- User Base
- Development Team
- Intellectual Property
- Brand

### Channels
- Apple App Store
- Google Play Store
- Internet

### Cost Structure
- Advertising: $29,200,000
- Game Development: $14,250,000
- Servers: $500,000
- App Store Commissions: $120,960,000

### Revenue Streams
- Selling Games: $28,800,000
- Selling Virtual Goods: $374,400,000
- Selling Ad Space: $36,500,000

**Costs:** $164,910,000  
**Revenues:** $439,700,000  
**Profit:** $274,790,000

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BMCalc The Business Model Calculator *beta*
Created by Diderik van Wingerden (contact@diderikvw.nl)
Edited by the X70 Instructional Team, Kelley School of Business, Indiana University
Based on Alexander Osterwalder's Business Model Canvas
www.businessmodelgeneration.com
Different revenue models

• **Packed Game software sales** (AAA-games)
  – Oldest model and decreasing
  – digital distribution 2014 (Steam, Origin etc)
  – Gamer pay in advance and may pay also from DLC (paymium-model)
  – (Battlefield series: 60 € / original game and 10 € x 5 DLC in retail)
  – Brand business -> 5 million USD in marketing to get top 10 in US -> world 100 million
  – Publisher takes care in cases distribution and marketing -> even 85 % of revenue and biggest risk
  – Game developer ”sub contracting”
Publishers

- A **video game publisher** is a company that **publishes video games** that they have either developed internally or have had developed by a **video game developer**. Video game publishers are responsible for their product's **manufacturing**, distribution and **marketing**, including **market research** and all aspects of **advertising** and PR.
Publishers

- They often finance the development, sometimes by paying a video game developer (the publisher calls this external development) and sometimes by paying an internal staff of developers called a studio. The large video game publishers also distribute the games they publish, while some smaller publishers instead hire distribution companies (or larger video game publishers) to distribute the games they publish. Other functions usually performed by the publisher include deciding on and paying for any license that the game may utilize; paying for localization; layout, printing, and possibly the writing of the user manual; and the creation of graphic design elements such as the box design.

- Publishers own fanbase and networks important in marketing

- Successful Game companies become often publishers: Paradox, Rovio, Fingersoft
Publishers

• Because the publisher often finances development, it usually tries to manage development risk with a staff of producers or project managers to monitor the progress of the developer, critique ongoing development, and assist as necessary. Most video games created by an external video game developer are paid for with periodic advances on royalties. These advances are paid when the developer reaches certain stages of development, called milestones.
US Computer and Video Game (Packaged software) UNIT Sales

in million dollars

2001: 208.6
2002: 224.3
2003: 239.5
2004: 248.4
2005: 227.4
2006: 240.1
2007: 268.2
2008: 298.2
2009: 278.7
2010: 257.3
2011: 245.6
Digital marketplaces

• At the moment every major operating system/platform has its own digital marketplace (Google Play (android), AppStore (Apple IOS), Windows store, Steam (PC). Although all of these work with their own rules and regulations they also have a lot in common.

• Typical revenue split between the marketplace and developer is 30 % for the market place and 70% for the developer.

• the provider of the market place keeps tight control over the titles that are released to keep the quality high and to avoid any kind of scandals or problems with authorities -> 1 – 5 weeks waiting times
Free or Paid? The Big Question

• When you submit your game for approval for example to the App Store you’ll have the choice of releasing your app as either paid or free. (Apple users more ready to pay as Android users)

• Each model has advantages and disadvantages and there are various methods of making money with both.
Paid Games/premium

• This model probably has the most appeal because you have the highest chance of making immediate income from your game/app since people pay to download it.
• Minecraft only top 50 game in 2014
• Apps in the App/Android Store are sold starting at $.99 and increase by one-dollar increments ($1.99, $2.99, $3.99, etc.).
• Out of each sale Apple/Google takes 30%
• Paid apps generally have a higher surge of downloads than free apps after the first 24 hours of their initial release, but then slow down much faster afterwards.
Paid (mobile) games

• This is due mainly to the fact that Apple tends to favor new paid apps over new free apps because of the 30% cut they receive. If you take a look at the App Store you’ll notice the featured paid apps are listed above the free apps and are clearly more visible to customers.
Paid games

Paid apps toggled by default

Paid apps displayed ABOVE free apps
Paid Apps

- In order to do well and continue experiencing the “surge” you enjoyed your first day, your paid app must make it to one of the Top 100 or 20.
- One month on “hot new apps” section -> make sequels, DLCs -> keep your name on list.
- If you are not on one of these lists you’ll be buried with all the other average Joe apps out there in the dead zone and you’ll be at the mercy of search results.
- The best thing you can do for yourself in this case is ensure your keywords and tags are optimized in your app’s metadata.
- Social marketing helps -> create fan base (Case Fingersoft)
Different revenue models

- **Subscription model (MMO:s)**
- SaaS model: Game is service: new content all the time, high costs to develop and maintain: need critical mass to succeed
- Paid monthly, usually by credit card or automatic debit payment. It’s sometimes coupled with a retail purchase to get the install files / manual. Commonly players set up the credit card payments and don’t stop them, as they want to keep the game ‘available’ or keep their characters alive that they’ve worked so hard to create. (It’s pretty great to get a subscription from people that don’t even play, so expect more people to design games were they will clearly KILL your characters if you stop paying. Not good for players, but it’s on the list as it’s a monetization method.)
  - WoW most succesful, many have failed (Star wars: old republic 200 M USD costs -> f2p)
  - Elder scrolls new title (Game order 54,99 € / 30 days, 12,99 € / 30 days)
Different revenue models

• Subscription model / premium
• Episodic Entertainment: you either buy the episodes in a serial fashion as they become available, you can pay for all episodes unlocked for a period of time, or they are sold as expansion packs.
• Strong story driven games
• Telltale games: Walking dead, The Wolf among us
Different revenue models

• **Free to Play (F2P):** gives players access to a significant portion of their content without paying (easy to try, get more players, reach critical mass)

• users are granted access to a fully functional game, but must pay **microtransactions** (IAP = in application purchases) to access additional content also **advertisement** may be used as monetisation tool

• Clash of clans, Farmville, World of Tanks, Team Fortres 2, Hill Climb Raser etc
Different revenue models

- There are several kinds of **Free-to-play games**: 
- “Try Before you Buy” / Trialware / Shareware / Demoware / Timedware refers to a trial of variable functionality intended to convince users to buy a full license of the **pay-to-play** game. Also known as **game demos**, shareware often gives free users severely limited functionality compared to the full game. This is a real balancing act as too much in the demo can kill any hope of future sales. Xbox Live has been experimenting with this concept, they seem to have hit the sweet spot by giving one playable level and then giving a big reveal (like there’s a giant boss monster around the corner) then they say “Buy the full version to continue!”
- **Freemium**: (free + premium) games offer the "full version" of a product free of charge, while users are charged **micropayments** to access premium features (faster development, more tank slots) and **virtual goods** (better equipment, nice hats) and services, often in a piecemeal fashion. (In game currency: silver and real money: gold, diamonds)
- **Freeware games** do not support charging the user at all, but are usually proprietary.
- **Open source games** cost the user nothing in their entirety, and make their **source code** freely available.
Different revenue models

• **Free to Play**: free download (no risk) -> more players -> potential of making money, lots of competition (low barriers to entry in mobile) -> difficult to get players attention -> higher player acquisition costs (2- 5 USD/player), stars count: 4 minimum

• Average revenue per download (ARPD) is a very important figure when it comes to assessing the cash generated by any mobile app. Not only does the ARPD data give a sense of how effective the application is at generating income, it also can give you a sense of which features the money comes from, and what kind of spending behavior users are demonstrating.

• High retentio rate needed 1,7,30 days, varies by genres
  — -> 40 %, 20 %, 10 % excellent, should be at least 30-15-8
USER ACQUISITION
# Installs / day

RETENTION
D+7 retention
Push notification opt-in ratio

ENGAGEMENT
Daily Sessions / DAU’s Average Time / Session

MONETIZATION
Customer Lifetime Value
Average Revenue per Daily Active User
% of Paying Users

VIRALITY
AppStore Reviews
Social Media Sharing
Strategy, Trivia & Adventure Games Have The Highest % of Devices Making In-App Purchases

Source: Apsalar Analytics, February 2013

If Apps Can't Generate Engagement, They Can't Generate In-App Purchases

Source: Apsalar Analytics, February 2013
Mobile Game Loyalty Matrix

- Frequency of use per week
- 90-day retention

- Strategy
- Slots
- Mgmt/Sim
- Social Turn-Based
- Card-Battle
- Action
- Casino / Poker
- Endless
- Solitaire
Revenue models: free to Play

- Segmentation by spend is critical to understanding the mobile gaming market. The majority of mobile gaming revenue is generated by a small percentage of mobile gamers. The top 5% of spenders (defined as Heavy Payers, whales) generate half (49.2%) of the mobile gaming revenue, while over half of mobile gamers (54%) do not pay to play mobile games. This growth in Non-Payers (up from 37% in 2012) is driven by the rise of popular casual F2P games.
### Percent of Apps By Users and Retention

<table>
<thead>
<tr>
<th>Monthly Users</th>
<th>0-21%</th>
<th>22-36%</th>
<th>37%+</th>
</tr>
</thead>
<tbody>
<tr>
<td>32,000+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6%</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>8,000-31,999</td>
<td>10%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>0-7999</td>
<td>17%</td>
<td>10%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: Flurry Analytics

© FLURRY
<table>
<thead>
<tr>
<th>Freemium Monetization</th>
<th>Value Proposition</th>
<th>App Examples*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usage</td>
<td>Free app offers limited usage, bandwidth, hours or storage space. Pay to raise or remove those limits.</td>
<td>NYTimes, Dropbox</td>
</tr>
<tr>
<td>Time</td>
<td>Free trial of full functionality for a limited amount of time. Pay to continue using after time period is up.</td>
<td>WhatsApp Messenger, SwiftKey Keyboard</td>
</tr>
<tr>
<td>Functionality</td>
<td>Pay for virtual items, speed-ups, content, add-ons, upgrades, services or capabilities.</td>
<td>Clash of Clans, LINE, Skype</td>
</tr>
<tr>
<td>User Experience</td>
<td>Free app is ad-supported. Remove ads by paying in-app or through a separate paid download.</td>
<td>Say the Same Thing, SoundHound</td>
</tr>
<tr>
<td>Combination</td>
<td>The app uses a combination of the above.</td>
<td>Evernote (Functionality and Usage)</td>
</tr>
</tbody>
</table>

* Additional information on these apps available on [App Annie Store Stats](#)
Revenue models

• **IPR capitalization**: utilize your brand to sell other items: Rovio, Angry birds over 30 000 different products worldwide from t-shirts to theme parks
Different revenue models

• **Player to Player trading of Virtual Items, Auction** (letting them trade land, property, characters, items, also by auctions). You keep a cut of all the money exchanged. You also keep the transactions safe for the player (they don’t have to go to the gold farmers or risk the black market for characters.) Some games let the players cash this money out of the game, so it can become a full time job, but is also a major fraud generator

• **Team Fortres**
Different revenue models

• **Pay-per-tap advertising** generates profit in a similar fashion to the way Google AdSense works for websites. People download your app for free and every time they tap on one of the advertisements scrolling across the screen, you get paid.

• Apps best suited for this method are those that have a high use factor: Games, News app, weather app etc

• Daily use / more visibility for your ads

• You need lots of downloads and nice retention rate to make money
Tap for Tap Advertising

- Dozens of Ad networks:
  - iAd
  - AdMob
  - RevMob
  - BrightRoll
  - Greystripe
  - AdWhirl*

*AdWhirl, like AdMob is owned by Google. The great thing about AdWhirl though is it allows you to mediate and manage all your ad networks in one place. So you can track your traffic for iAd, BrightRoll, and AdMob from one console!

http://www.adnetworkdirectory.com/
Revenue Models

• **In-Game Advertising** (either obvious billboards or branded items in the game world, or subtle product placement (certain clothing, sunglasses or vehicles), or built into story elements (like the hero’s girlfriend works for a Coca Cola). Companies like IGA, Massive, Game Jacket, Mochi Media, Google, VideoEgg etc.
Revenue Models

• **Around-Game Advertising** (basically making money from banner & skyscraper adverts that circle the gameplay window), this is common on flash game aggregator sites, they use services like Google, Commission Junction, personal affiliate deals etc. The revenue comes from CPM (cost per thousand views), CPC (cost per click), CPA (cost per acquisition of a player), CPP (cost for a “real” player who really plays for a certain time, or to a certain level.)
Revenue levels depend on amount of downloads, engagement and retention.

- Breakout apps can make over $100K per month
- Developers in the 75th to 90th percentile can make up to $10K per month
- This illustrates the uniqueness of Flappy Bird reportedly making over $50K per day in in-app advertising
In 2014, how often will you use these in-app ad formats?

- Interstitial Video Ads (n = 393)
- Interstitial Non-Video (n = 497)
- Native Ads (n = 451)
- Incentivized Ads (n = 361)
- Pre/Mid/Post-Roll Video (n = 304)
- Banner Ads (n = 713)

- Less Than in 2013
- About the Same as in 2013
- More Than in 2013

Source: App Annie Survey, February 2014 (n = 807)
Increasing mobile devices and app-related revenue per device create a huge opportunity in mobile by 2017

Combined iOS and Android Smartphone and Tablet Device Installed Base in Key Countries*

Device Installed Base

Source: IDC

Indexed Revenue per Device in Key Countries*

Indexed Revenue per Device

Source: IDC

* Brazil, Canada, France, Germany, India, Japan, Russia, South Korea, United Kingdom, & United States
* In-app advertising across all app stores; app store revenue across iOS App Store and Google Play
Selecting the mobile app business model that fits the target region is of paramount importance.

Mobile App* Revenue Composition in 2013

*In-app advertising across all app stores; app store revenue across iOS App Store and Google Play

Source: App Annie & IDC
Most key countries expected to move even more toward in-app advertising by 2017

Proportion of App-Related Revenue Contributed by In-App Advertising

*In-app advertising across all app stores; app store revenue across iOS App Store and Google Play

Source: IDC
How to choose a good mobile ad network

• **Angle #1 – Fill Rate**
  A quick look at your mobile analytics provider will show the countries or regions the majority of your users are coming from.

• **Geography**: If most of your users are coming from North America, for example, you should actively search for mobile ad networks that have a high fill rate in this region otherwise you will not be making money at your full potential.

• **Consistency**: This is slightly tricky to evaluate beforehand, but aim for a monetization partner that in the last 3 months had consistently high fill rates in the regions you are most interested.

• Many in-app advertising solutions have developed mediation technologies and partnerships with ad exchanges to combat these issues and while touting near 100% global fill rate, make sure you evaluate on hard numbers and not just marketing talk.
How to choose a good mobile ad network

• Angle #2 – eCPM
  • Choosing a mobile ad network based only on its average eCPM has a caveat because eCPM measures performance on a relative basis. Only when combined with the fill rate and your estimated monthly ad requests you can get a good sense of your expected earnings in absolute terms.
  • Have in mind that there are many factors that will cause significant fluctuations on eCPM, including the seasonality of advertising campaigns and the quality of traffic you send from your apps. You should anticipate fluctuations, especially if you are working with a single mobile ad network, and use the network’s average eCPM to get an “order-of-magnitude” feeling on what to expect.
How to choose a good mobile ad network

• **Angle #3 – User Experience**
  
  People who download a free game are well-aware that it has to be funded somehow and they expect that the app might include a form of advertising.

  Game developers, however, have a choice whether they want to deliver a spammy user experience or interrupt the normal user flow to display ads and by choosing to do so they consciously take the risk that user retention can fall dramatically.

  When quality **user experience is important** to your game, some mobile ad networks are more flexible than others and have started embracing **native advertising** technologies to offer developers more control on what kind of ads, how and where ads get displayed.
How to choose a good mobile ad network

• **Angle #4 – Technology**
  • You can also evaluate a mobile ad network based on its technology.
  • **SDK**: A lightweight SDK that has been battle-tested enough will ensure your app’s performance will not be impaired at any time.
  • **Dashboard**: A fully-featured dashboard can enable thorough monitoring and effortless fine tuning which helps in both maximizing your revenues and increasing transparency.
  • **Ad Server**: This component is the most difficult to evaluate but among others, low-latency infrastructure and yield optimization algorithms are the backbone for a good eCPM, so you can use that as a proxy.
How to choose a good mobile ad network

• **Angle #5 – Payment Options**
• We’ve covered previously the different payment options offered by major mobile ad networks and is important to be familiar with them well in advance in order to avoid unpleasant surprises.

• **Payment methods:** Mobile ad networks often support a limited number of payment methods and you have to make sure your individual circumstances can be covered before you start integration.

• **Payment schedule:** This is usually not a deal breaker, but some networks offer a faster payment schedule than others.
Tips to Advertisers

- **Start Early** – Determine how to monetize up front, not after building your app
- **Value Proposition** – Make sure your app provides value to users
- **App Discovery** – Ensure people can find your app
- **User Acquisition** – Need a large user base to bring in enough revenue
- **App Usage** – Keep users engaged to drive monetization
- **Ad Sales Channel** – Be sure to find the right ad network for your app
- **Ad Content** – Show ads that are relevant to your users
- **User Experience** – Do not let monetization strategy degrade user experience
- **Track, Analyze, Research, & Optimize** – Measure, iterate and improve your monetization strategy, constantly keep an eye on market trends
Revenue Models

• **Advertgames** (the whole experience is an advert), common on movie websites, can also be big like America’s Army or the Burger King games on Xbox 360. I did one of the first of these called “Cool Spot” for 7-UP. The advertiser helps fund the game and depending on the deal, that determines who earns cash out of the revenue. Your reputation will impact this equation.

• B2B-model, also other propaganda
Revenue Models

• Sponsored Games / Donationware (serious games, games for good, charity games), these are the games that are somehow helping society, so could be paid for by a philanthropist, or by a charity or non-profit, or by player donations. www.Onebiggame.org is an example.
Revenue Models

• Peripheral Enticement (the game cannot function without a piece of equipment), so it’s really a way to make you money on the hardware. (Gym equipment is a good example, like the virtual bike or rowing games, you tease them with the software into a very expensive purchase.)

• Military simulators

• Build your own ecosystem: Playstation, Xbox
Where is money coming from?

• In the U.S. market at least, in-application purchases (IAP) account for the vast majority, approaching 75% in fact. This is important to consider, only 1/4 of the revenue drawn from applications comes from the initial purchase price.

• Depends on Game and Genre

• Ads can dominate in some genres
### App publishers use a variety of business models to generate revenue

<table>
<thead>
<tr>
<th>Business Model</th>
<th>How does it work?</th>
<th>Top 3 Apps by iOS and Google Play Revenue in 2013*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freemium</td>
<td>Free download with in-app purchases</td>
<td><img src="image" alt="Puzzle &amp; Dragons" />, Candy Crush Saga, Clash of Clans</td>
</tr>
<tr>
<td>Paid</td>
<td>Paid download with no in-app purchases</td>
<td><img src="image" alt="Minecraft – Pocket Edition" />, Pages, <img src="image" alt="WhatsApp Messenger" />**</td>
</tr>
<tr>
<td>Paidmimum</td>
<td>Paid download with in-app purchases</td>
<td><img src="image" alt="FIFA 13" />, Grindr Xtra, Bloons TD 5</td>
</tr>
<tr>
<td>In-App Advertising</td>
<td>Contains ads (banner ads, video ads, etc.)</td>
<td>N/A</td>
</tr>
<tr>
<td>Dynamic</td>
<td>Business model shifts depending on certain factors (app shifts to an ad-supported model if the user does not make in-app purchases, etc.)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Based on [App Annie Intelligence](http://www.appannie.com) estimates

**WhatsApp Messenger ranked as the #3 paid app based on its iOS revenue up until early August 2013, when it went from paid to freemium on iOS
# Advertising Most Popular Revenue Model but Subscription Pays Better

<table>
<thead>
<tr>
<th>Popularity</th>
<th>Most Frequently Used on</th>
<th>Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developer Economics Jan 2013</td>
<td>Developer Economics June 2012</td>
<td></td>
</tr>
<tr>
<td>Advertising</td>
<td>38%</td>
<td>53%</td>
</tr>
<tr>
<td>Pay per download</td>
<td>32%</td>
<td>53%</td>
</tr>
<tr>
<td>In-app purchases</td>
<td>26%</td>
<td>37%</td>
</tr>
<tr>
<td>Freemium</td>
<td>19%</td>
<td>31%</td>
</tr>
<tr>
<td>Subscriptions</td>
<td>12%</td>
<td>22%</td>
</tr>
</tbody>
</table>

% of developers using each revenue model, among mobile developers (n=2,167, weighted) | % of developers using revenue model, by main platform (n=3,260, weighted) | Revenue per app per month, excluding respondents not interested in revenue (n=2,096, weighted) | $1,014 | $1,283 | $1,835 | $1,365 | $2,649 |

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## Average Revenue Per User for Major Free-to-Play MMO Titles—Worldwide

<table>
<thead>
<tr>
<th>Rank</th>
<th>Title</th>
<th>Publisher</th>
<th>Average revenue per user</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>World of Tanks</td>
<td>Wargaming.net</td>
<td>$4.51</td>
</tr>
<tr>
<td>2</td>
<td>Team Fortress 2</td>
<td>Valve Corporation</td>
<td>$4.36</td>
</tr>
<tr>
<td>3</td>
<td>Guild Wars 2</td>
<td>ArenaNet</td>
<td>$3.88</td>
</tr>
<tr>
<td>4</td>
<td>War Thunder</td>
<td>Gaijin Entertainment</td>
<td>$3.26</td>
</tr>
<tr>
<td>5</td>
<td>Planetside 2</td>
<td>Sony Online Entertainment</td>
<td>$2.86</td>
</tr>
<tr>
<td>6</td>
<td>Combat Arms</td>
<td>Nexon</td>
<td>$2.81</td>
</tr>
<tr>
<td>7</td>
<td>Crossfire</td>
<td>SmileGate</td>
<td>$1.58</td>
</tr>
<tr>
<td>8</td>
<td>DOTA 2</td>
<td>Valve Corporation</td>
<td>$1.54</td>
</tr>
<tr>
<td>9</td>
<td>Heroes of Newerth</td>
<td>S2 Games</td>
<td>$1.48</td>
</tr>
<tr>
<td>10</td>
<td>League of Legends</td>
<td>Riot Games</td>
<td>$1.32</td>
</tr>
</tbody>
</table>

*Shown: Average dollar amount spent by a player in the last twelve months on top free-to-play online games, ending in March, 2014. Numbers calculated based on monthly transactions collected from publishers, payment service providers and other industry sources, and dividing the estimated total dollar earnings by the monthly active user base. Please note that this list does not represent a worldwide top ten of free-to-play titles. Copyright © 2014 SuperData Research. All numbers subject to change. For more information on our methodology, please visit www.superdataresearch.com*
Where is money coming from?

• Along similar lines, as should be expected; the applications with highest ARPD were using the model of paid application with in-application purchases available. Paid-only applications came second in ARPD, while free applications with in-application purchases came last. It is important to remember however that the paid-only model is skewed heavily by applications costing more than $5, of which there are quite a few.
Where is money coming from?

• Gamers are gradually moving towards favoring the “freemium” model, in a general sense. However, if your application can obtain traction, a paid application with in-application purchases will likely generate the most income.

• Get to know your figures App Annie

• Offer a trial period with the freemium model before migrating towards the paid-app model after a few weeks.
An app that ranked number 10 in the top overall free charts in the Apple App Store for iPhone in the U.S. generated 72K downloads per day on average during May 2013. An app in the paid charts that ranked number 10 generated 4K downloads on average.

An app that ranked number 50 in the top grossing charts in the Apple App Store for iPhone in the U.S. generated $12K on average per day during May 2013, while on iPad this number was $10.2K. The revenue was significantly lower in Google Play at $6.6K.

The number of downloads required to ensure a top position can vary on a daily basis. Compared to the downloads that were required for rank 10 in the top overall free on an average Monday in May 2013, only 94% of these downloads were required on Thursdays for this position in the Apple App Store for iPhone in the U.S. In order to obtain this position on a Sunday, an app needed 11% more downloads than on the average Monday.

The differences in the size of app markets across the world makes a difference in terms of the number of downloads an app has to generate to reach top chart positions. In order to obtain rank 25 free in The Apple App Store for iPhone, most downloads are required in the United States. In Japan, an average app that ranked 25 in the free charts generated 38% of the downloads of an average app with that position in the U.S. in May 2013. One of the fastest growing app markets, Russia, now requires more downloads to reach rank 25 in the free charts than in Germany.

The Amazon Appstore requires approximately nine times fewer downloads than the Apple App Store for iPhone in the U.S. in order to reach rank 50 free. The number of downloads needed in the Amazon Appstore for paid apps to reach a top 50 position was 2.8 times lower than in the Apple App Store for iPhone in May 2013.
The preference toward paid or free content, not only varies in different markets, but also per category. While the freemium model is in general more successful (looking at revenue for the complete market), some categories show a larger revenue share for paid content. The graph below is based on data aggregated over all countries for the month of November 2013 in the Apple App Store, showing the top 10 categories in the order of largest revenue from top to bottom.
Revenue Distribution by Country and Platform - November 2013

Canada
United States
United Kingdom
Germany
France
Russia
China
South Korea
Japan
Australia

iPad  iPhone  Google Play