Game Biz

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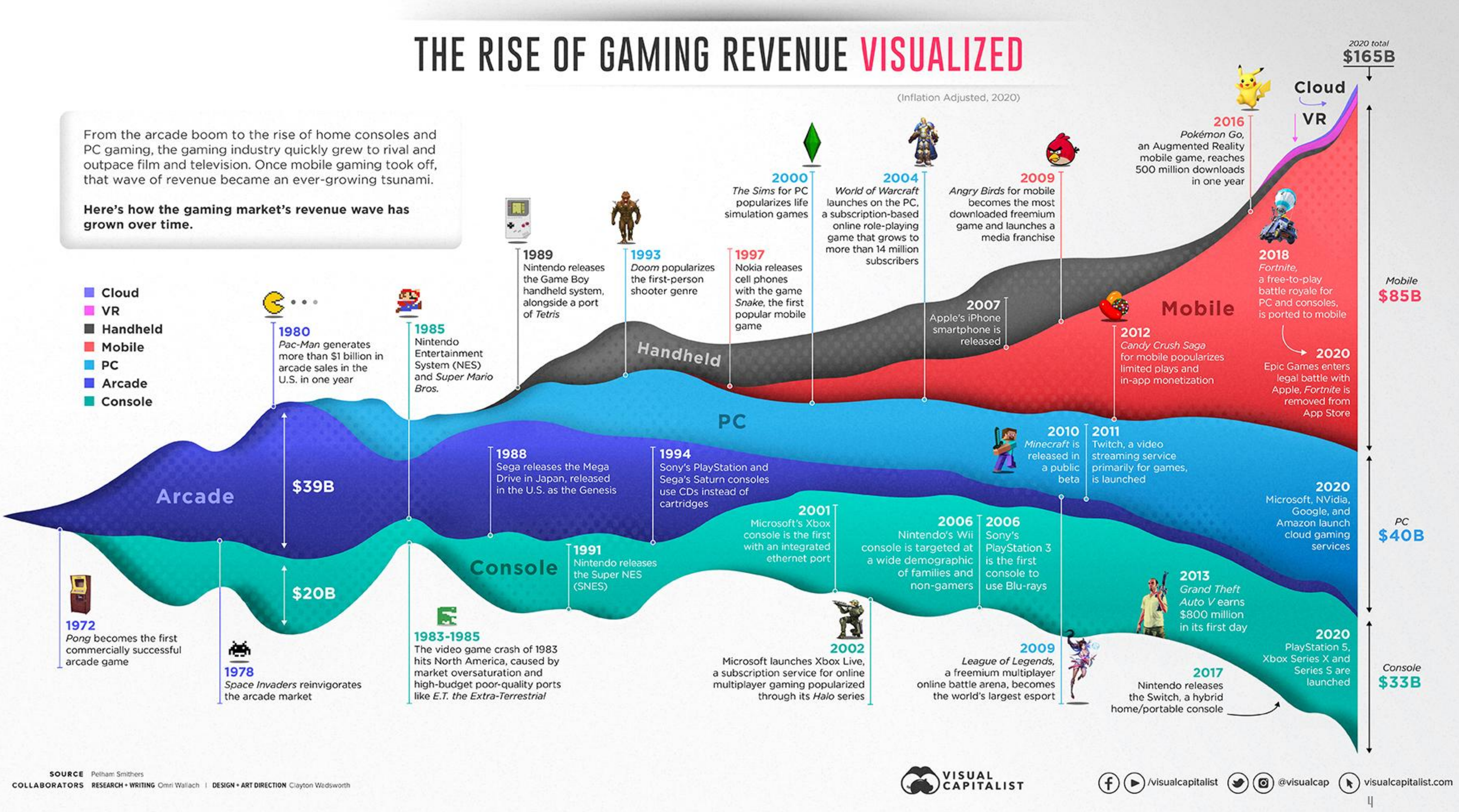
Profile

- 18 years of games industry.
- Former co-founder of a very small studio doing PC downloadable / casual games.
- Former Producer at Glu and other companies, doing console premium and mobile free-to-play.
- Former Economy Designer at Gameloft and other companies, worked on several mobile free-to-play titles.
- Currently Data Analyst at Bethesda, working on mobile free-to-play and console premium.
- Opinions are my own. Examples of game design or commentary are not representative of the games or practices of my current employer.

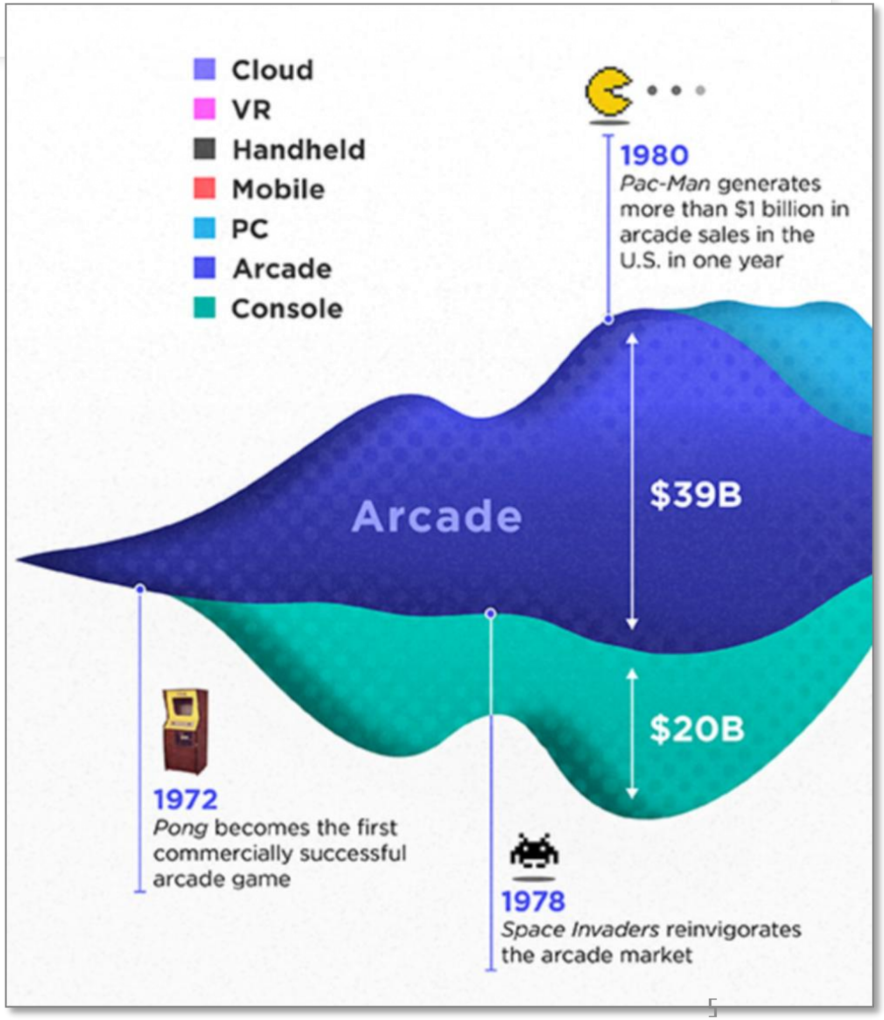
History of Game Markets

From 1972 to 2020


THE RISE OF GAMING REVENUE VISUALIZED
(Inflation Adjusted, 2020)
From the arcade boom to the rise of home consoles and PC gaming, the gaming industry quickly grew to rival and outpace film and television. Once mobile gaming took off, that wave of revenue became an ever-growing tsunami.
Here's how the gaming market's revenue wave has grown over time.
Cloud
VR
Handheld
Mobile
PC
Arcade
Console
Arcade
$39B
$20B
Console
Handheld
PC
Mobile
Cloud
VR
2020 total
$165B
Mobile
$85B
PC
$40B
Console
$33B
1972
Pong becomes the first commercially successful arcade game
1978
Space Invaders reinvigorates the arcade market
1980
Pac-Man generates more than $1 billion in arcade sales in the U.S. in one year
1983-1985
The video game crash of 1983 hits North America, caused by market oversaturation and high-budget poor-quality ports like E.T. the Extra-Terrestrial
1985
Nintendo Entertainment System (NES) and Super Mario Bros.
1988
Sega releases the Mega Drive in Japan, released in the U.S. as the Genesis
1989
Nintendo releases the Game Boy handheld system, alongside a port of Tetris
1991
Nintendo releases the Super NES (SNES)
1993
Doom popularizes the first-person shooter genre
1994
Sony's PlayStation and Sega's Saturn consoles use CDs instead of cartridges
1997
Nokia releases cell phones with the game Snake, the first popular mobile game
2000
The Sims for PC popularizes life simulation games
2001
Microsoft's Xbox console is the first with an integrated ethernet port
2002
Microsoft launches Xbox Live, a subscription service for online multiplayer gaming popularized through its Halo series
2004
World of Warcraft launches on the PC, a subscription-based online role-playing game that grows to more than 14 million subscribers
2006
Nintendo's Wii console is targeted at a wide demographic of families and non-gamers
2006
Sony's PlayStation 3 is the first console to use Blu-rays
2007
Apple's iPhone smartphone is released
2009
Angry Birds for mobile becomes the most downloaded freemium game and launches a media franchise
2009
League of Legends, a freemium multiplayer online battle arena, becomes the world's largest esport
2010
Minecraft is released in a public beta
2011
Twitch, a video streaming service primarily for games, is launched
2012
Candy Crush Saga for mobile popularizes limited plays and in-app monetization
2013
Grand Theft Auto V earns $800 million in its first day
2016
Pokémon Go, an Augmented Reality mobile game, reaches 500 million downloads in one year
2017
Nintendo releases the Switch, a hybrid home/portable console
2018
Fortnite, a free-to-play battle royale for PC and consoles, is ported to mobile
2020
Epic Games enters legal battle with Apple, Fortnite is removed from App Store
2020
Microsoft, NVidia, Google, and Amazon launch cloud gaming services
2020
PlayStation 5, Xbox Series X and Series S are launched
SOURCE Pelham Smithers
COLLABORATORS RESEARCH + WRITING Omri Wallach | DESIGN + ART DIRECTION Clayton Wadsworth
VISUAL CAPITALIST
/visualcapitalist @visualcap visualcapitalist.com

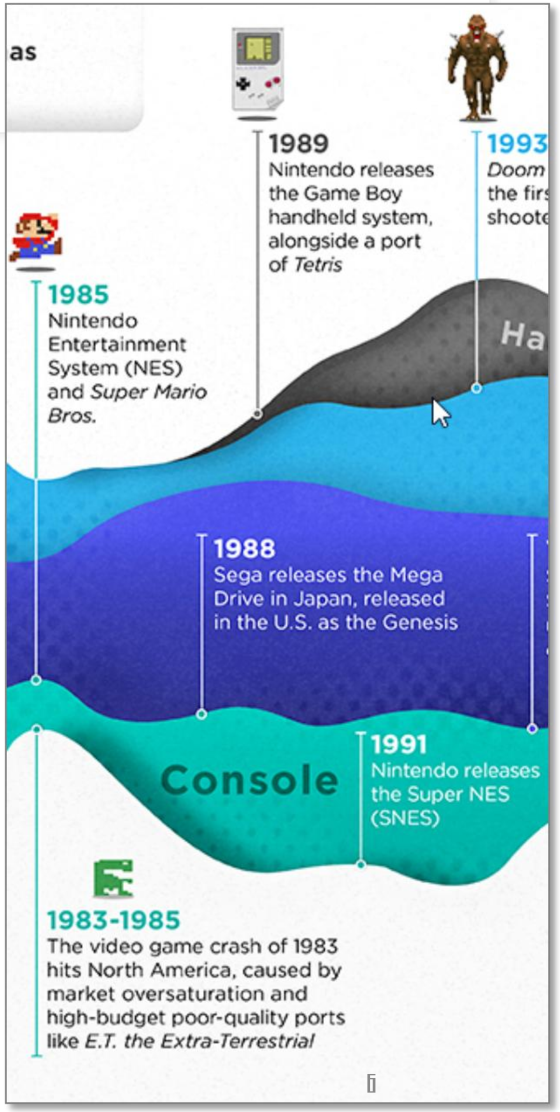
History of Game Revenue, 1972 - 1984

- Arcades coin-op:
  - Games designed to *eat coins* and keep average session times around 3 minutes, so other players can play next.
  - Start rewarding but difficulty levels rise *very* fast
- Atari was in practice an open platform.
  - Premium without licensing models.
  - Atari was arguably more focused on first-party titles.



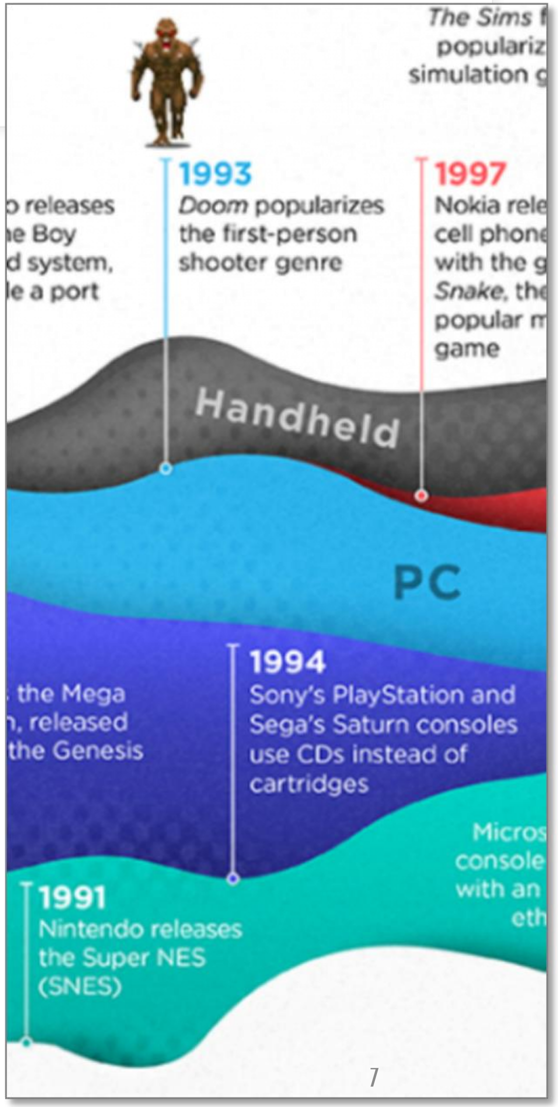
History of Game Revenue, 1985 - 1990

- Nintendo rise:
  - High licencing fees and restricted dev access.
  - Heavy platform lock-in, preventing devs from launching in other consoles. Lock-in practices were later challenged in court by Atari/Tengen.
  - Other consoles copy main licensing practices.
- Strong arcade performance.
  - Sega and SNK rise on arcade first.



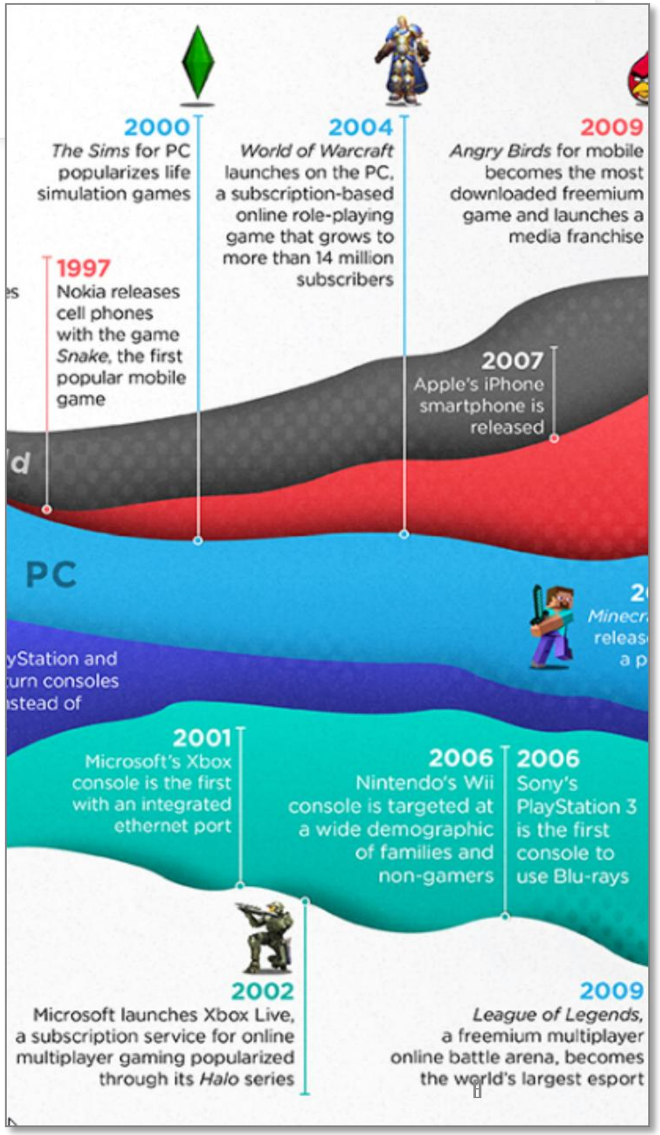
History of Game Revenue, 1991 - 1995

- PC rise:
  - Personal computing exploding, "Tech" as a section in newspapers.
  - IBM PC is the major open platform to this day, enabling any form of business model experimentations.
- Handhelds create mobile games
  - Cartridge based, same console licensing practices.
  - Cheap Tetris bootlegs sells as one-game devices, like Tiger games.
- CD-ROMs change the business of manufacturing and distributing
  - Much cheaper manufacturing costs >> more marginal profit.
  - Freeware and shareware collections on magazines.



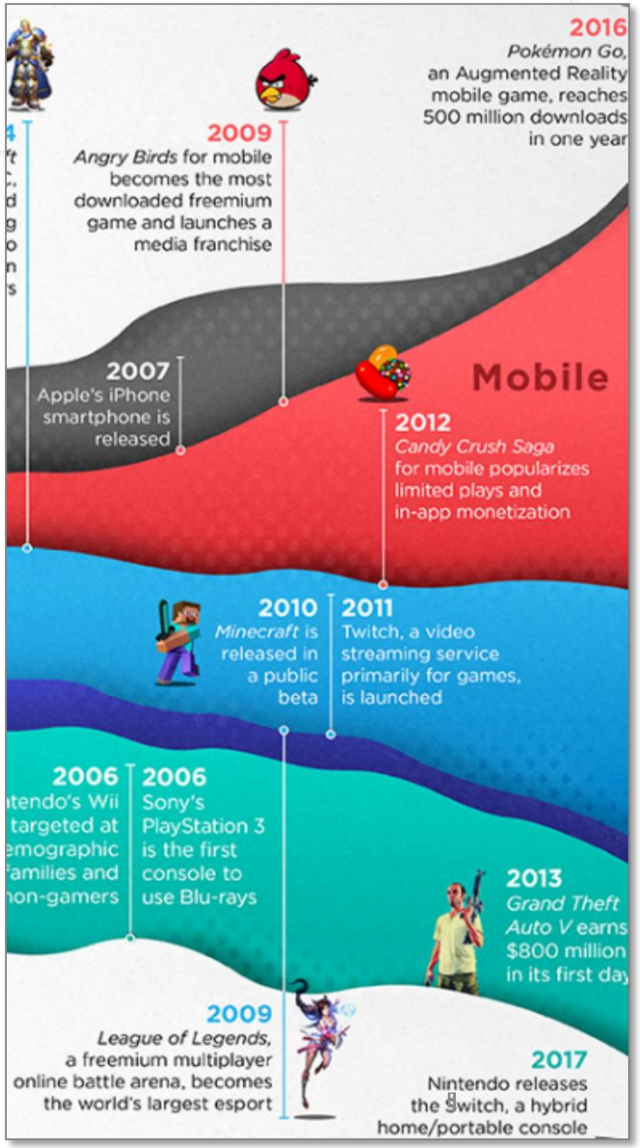
History of Game Revenue, 1996 - 2007

- Rise of online gaming, PC-centric.
  - Internet access explodes, network hardware go cheap. Wi-fi is created.
  - Steam transforms games distribution on PC.
  - MMORPGs, World of Warcraft leads the segment to this day.
- Never-seen-before audience democratization.
  - Wii phenomena, bought by families and seniors.
  - Female-focused casual downloadable portals like Big Fish Games
- Rise of free-to-play games on PC, over browser. Golden age of Flash.
- Mobile games on feature phones
  - Games sold by online stores of carriers. A specific publishing market rise to get deals with carriers.



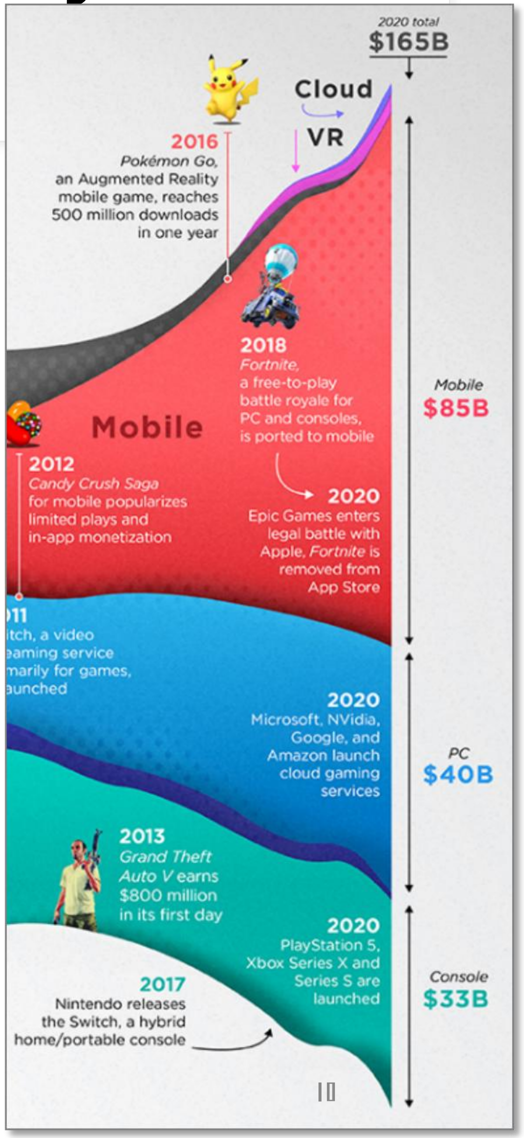
History of Game Revenue, 2008 - 2013

- Explosion of mobile gaming on smartphones.
  - Apple's and Google's centralized ecosystem replaces and deprecates local carriers' stores.
  - High democratization of dev access: very low entry fees, no recommendation-based systems, available worldwide. Not quite as open as PC, but the next-most-open thing.
- Explosion of free-to-play
  - Already popular in the East, F2P gains traction during the 2008-2010 recession in the US + the boom of Facebook gaming.
  - More ambitious F2P PC titles such as League of Legends, Path of Exile, World of Tanks and Hearthstone.
  - Turn publishing deals and practices on its head.
- In-game Advertising rise and matures.
- Consolidation of online distribution across all platforms.



History of Game Revenue, 2014 - today

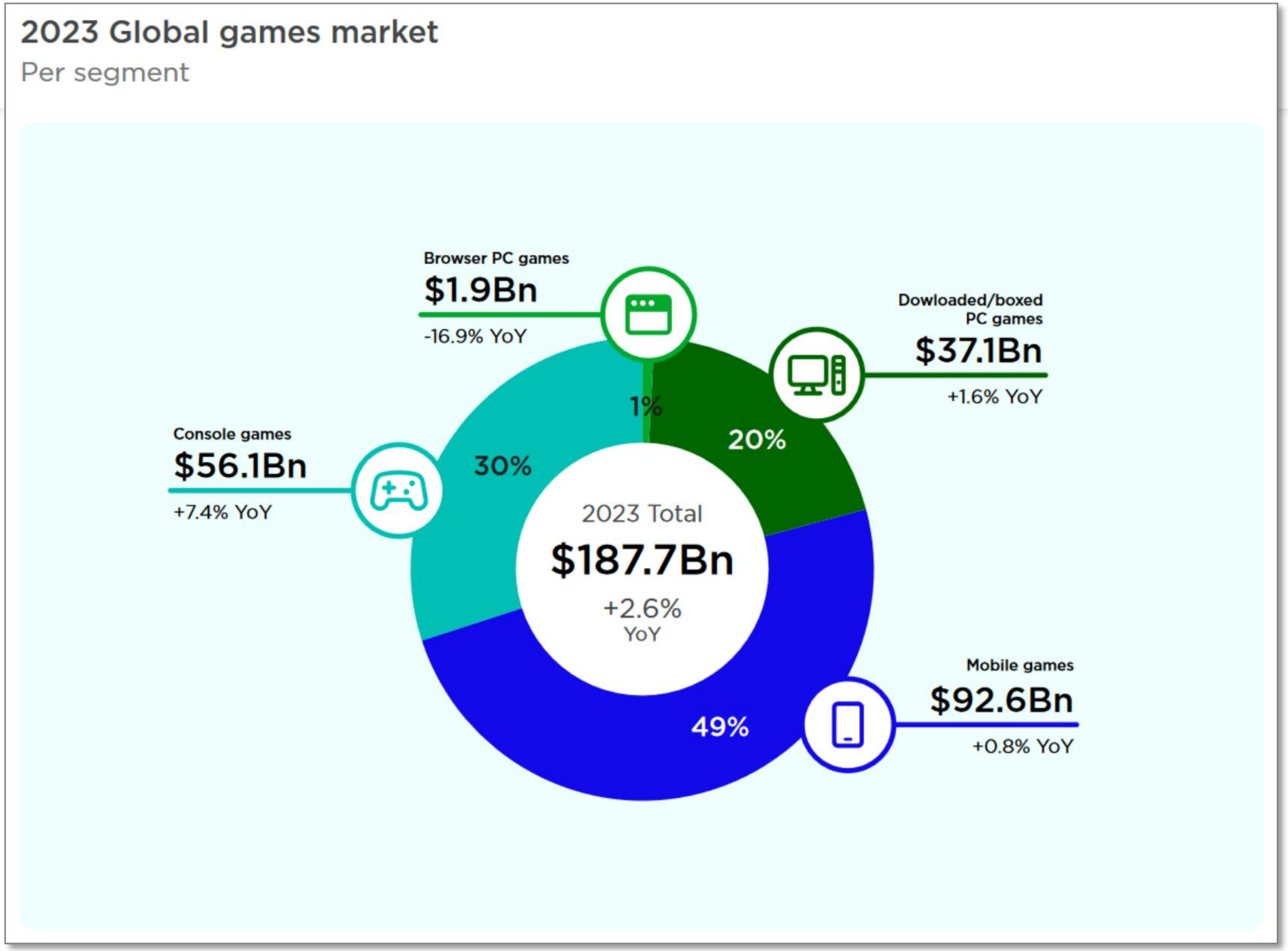
- Cross-platform + metaverse gaming phenomena: Minecraft, Fortnite, Roblox.
- Mobile grows everywhere, but faster in China and Eastern markets.
  - Powerful smartphones with advanced CPUs and GPUs become cheap to produce, enabling a new generation of mobile game tech.
- Rise of all-you-can-eat subscription models: Xbox Game Pass, PS Now, EA Play, etc.
- Live Ops / games-as-services
  - Created among new Silicon Valley players like Zynga, bringing ideas from internet start-ups.
  - Later and spreads on console as an answer to rapidly rising production costs.
- First major cloud gaming offers, technology advances fast.
- Social gaming during the pandemic: Among Us, Animal Crossing



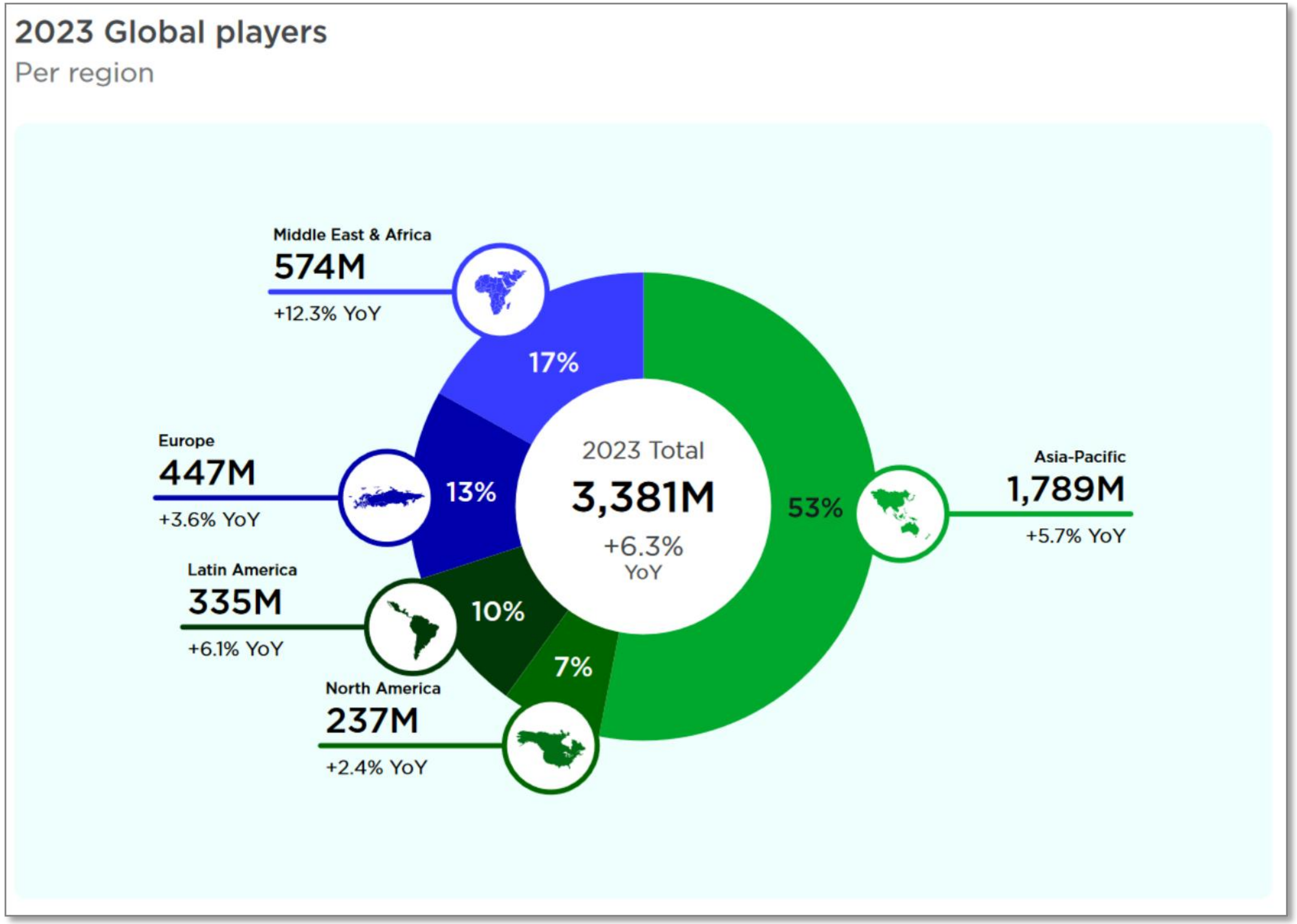
State of Markets

Overview of where the money is.

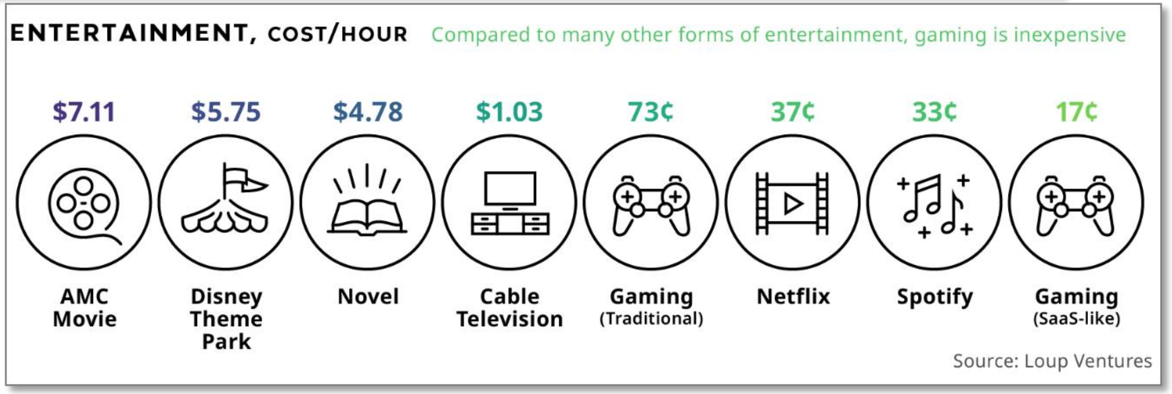
State of Markets



- Discrepancy between statistics companies on size of console market, since data is opaque.
- Check various sources for these estimates!
- Easier to estimate mobile as a lot of more App Store data is publicly visible and workable into estimates.



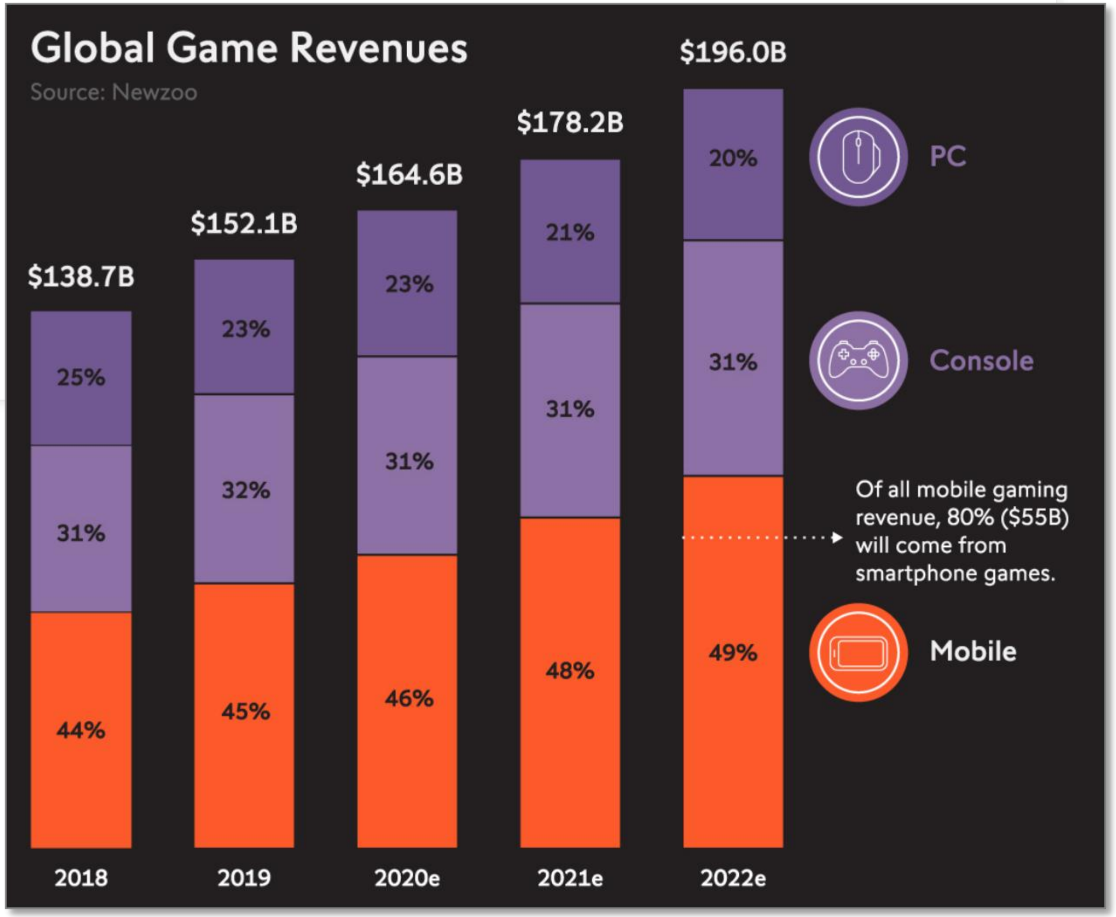
- China + US is half the market.
- China is bigger than US, but harder to launch and monetize.
  - Local partner, approval process.
  - Free-to-play + very cheap purchases on USD, gain on volume.
  - More aggressive UI, VIP clubs. Less pushback against "pay-to-win".
- India:
  - Very complex country
  - 85% of the market is mobile + fragmentation of Android devices.
- Russia and Brazil: play a lot but low revenue per user.
- Europe: GDPR and loot box legislations.

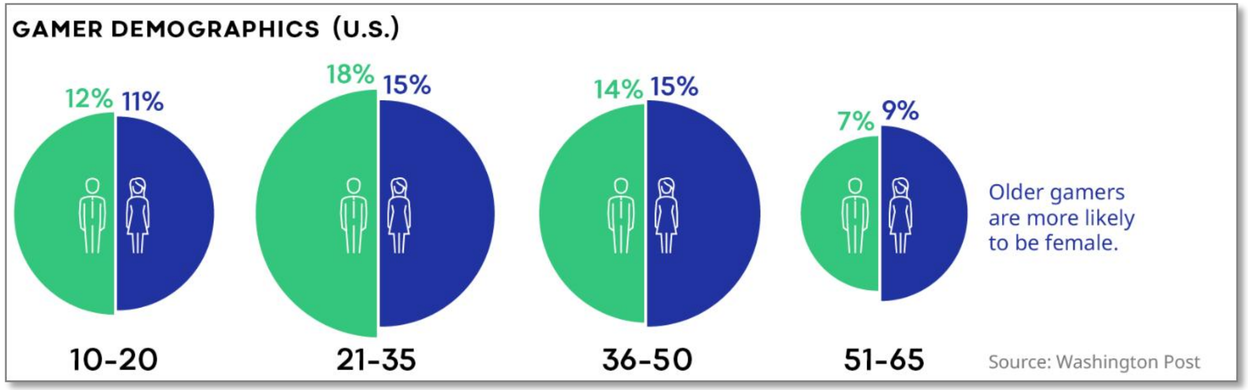


- SaaS = Software-as-a-Service. In gaming, sometimes "GaaS"
- "Gaming (SaaS-like)" basically means *free-to-play games, mostly mobile*. They almost always run live ops keeping the game fresh.

State of Markets, 2021

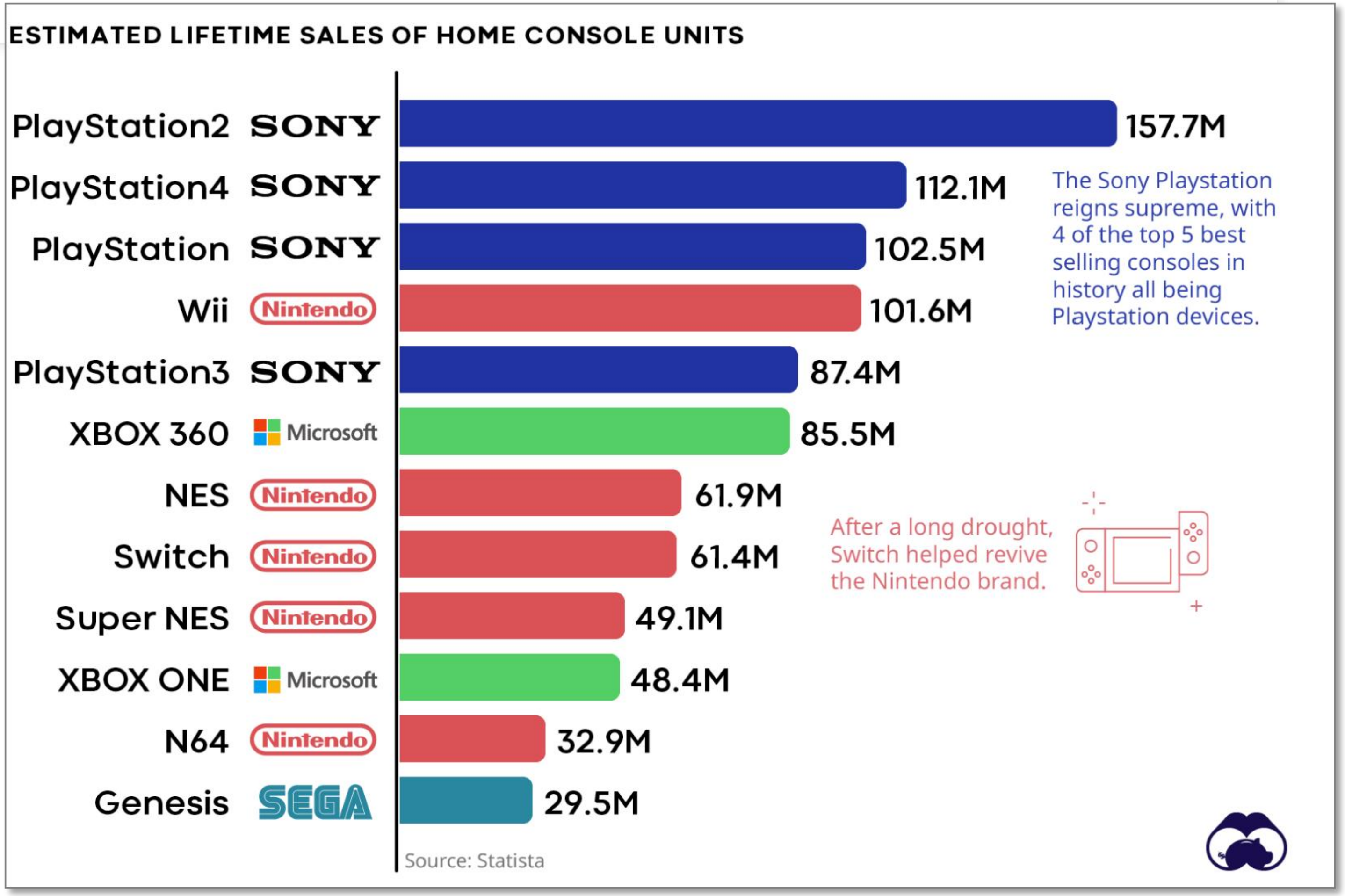
- The cake continue to grow for everybody, but mobile just grows faster.
  - May grow even faster in a post-Covid world that got used to game a lot more than before.
- Demographics are definitely wider than ever.
  - "Dad games", immersive single player
  - Female audiences are larger at 36+ years.
  - Senior gaming, huge market on mobile - puzzles, casino
- The other 20% of mobile gaming revenue:
  - Tablets
  - Feature phones - yes, they still exist, in India for example.



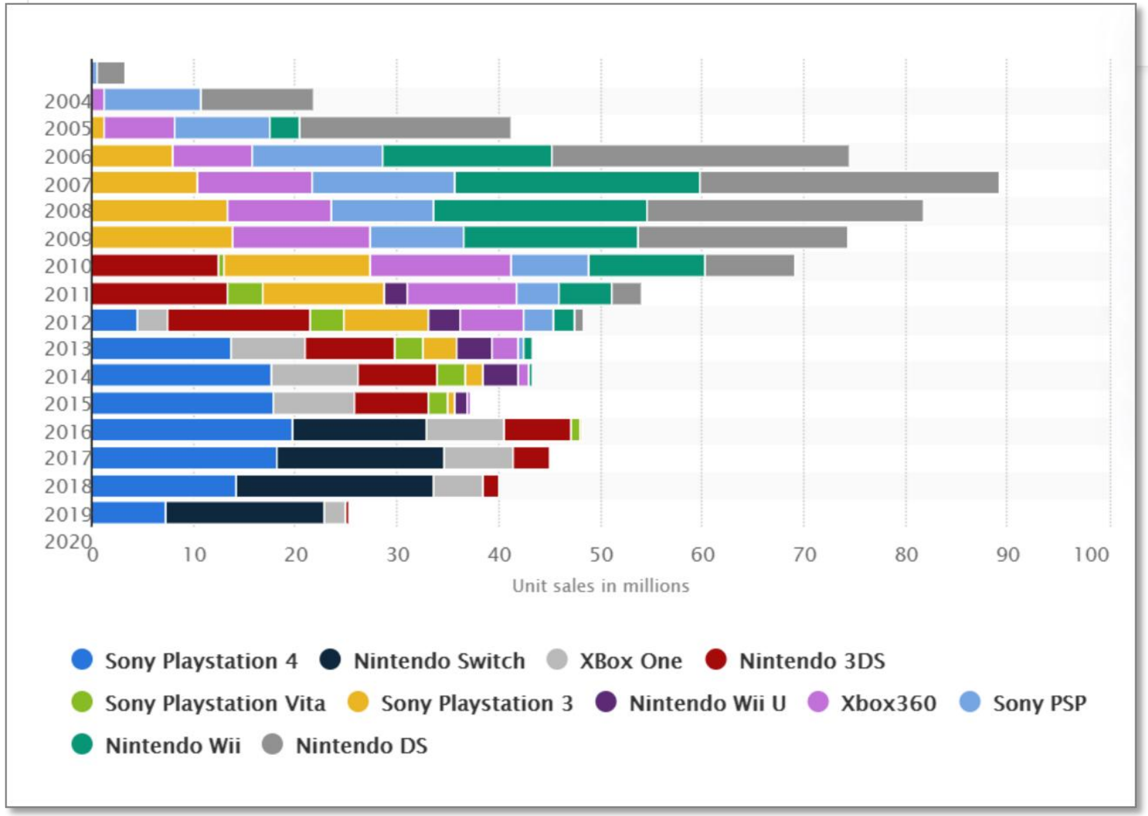


State of Consoles

- Recent consoles still sell the same order of magnitude of older ones.
  - Explains flat total revenue of the segment *when adjusted for inflation*.
- Games of today have similar potential installed bases than yesterday, ***but***:
  - *Upside*: digital distribution and Game Passes, potentially reaching a lot more of console owners with no package costs.
  - *Downside*: much higher *production costs* in higher tiers of quality.

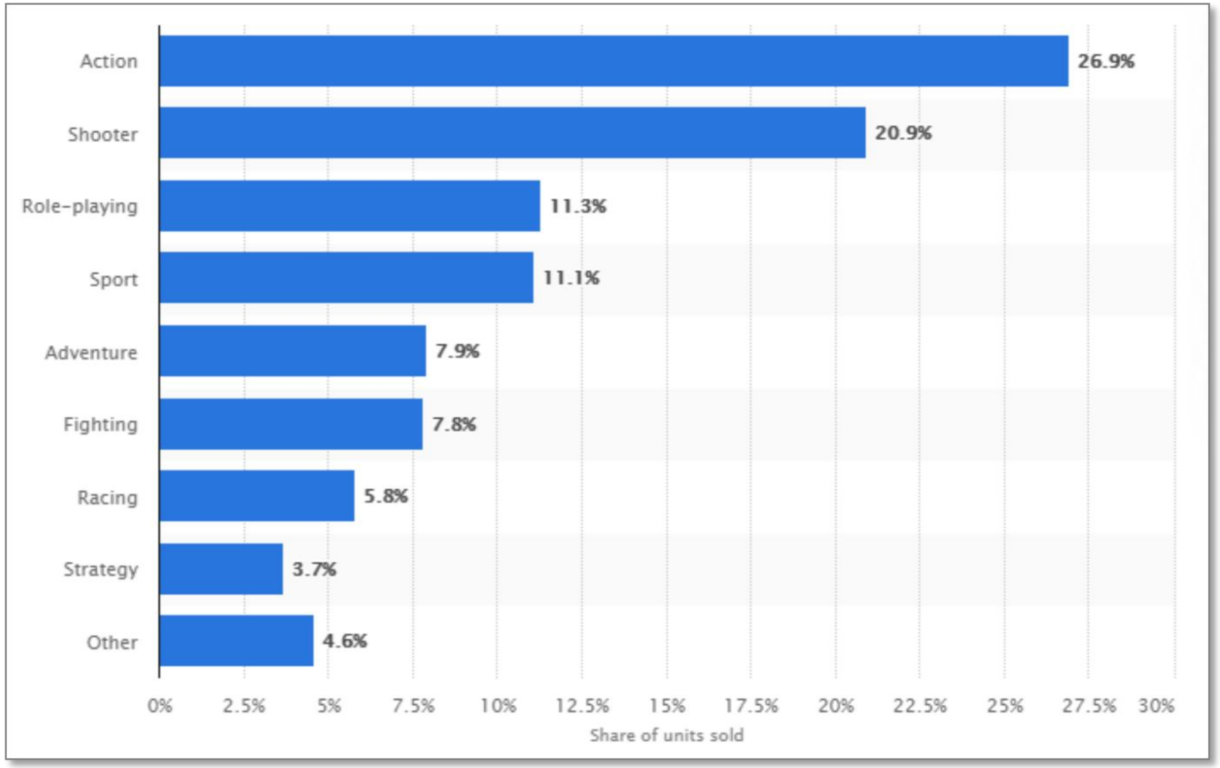


State of Consoles



Sales of console units per year. Source: Statista

Share of game genres in US retail, 2018. Source: Statista



Xbox

JULY 2023

	Game Title	Publisher	Change
1.	Fortnite	Epic Games	-
2.	Grand Theft Auto V	Rockstar Games	+1
3.	Call of Duty: Modern Warfare II/Warzone 2.0	Activision Publishing	-1
4.	Minecraft	Mojang Studios	-
5.	ROBLOX	Roblox Corporation	-
6.	Tom Clancy's Rainbow Six: Siege	Ubisoft	-
7.	FIFA 23	Electronic Arts	+2
8.	Rocket League	Psyonix	+2
9.	Diablo IV	Blizzard Entertainment	-2
10.	NBA 2K23	2K	-2
11.	Forza Horizon 5	Xbox Game Studios	+1
12.	Apex Legends	Electronic Arts	-1
13.	Call of Duty: Black Ops II	Activision Publishing	+20
14.	Exoprimal	Capcom	-
15.	Overwatch 1 & 2	Blizzard Entertainment	-2
16.	Madden NFL 23	Electronic Arts	-1
17.	MLB The Show 23	Sony Interactive Entertainment	-1
18.	Fall Guys	Epic Games	-1
19.	Halo: Infinite	Xbox Game Studios	-1
20.	Destiny 2	Bungie	-6

PlayStation 5

JULY 2023

	Game Title	Publisher	Change
1.	Fortnite	Epic Games	-
2.	Call of Duty: Modern Warfare II/Warzone 2.0	Activision Publishing	-
3.	Grand Theft Auto V	Rockstar Games	-
4.	FIFA 23	Electronic Arts	+1
5.	NBA 2K23	2K	-1
6.	Minecraft	Mojang Studios	-
7.	Rocket League	Psyonix	-
8.	Call of Duty: Black Ops Cold War	Activision Publishing	+25
9.	Tom Clancy's Rainbow Six: Siege	Ubisoft	-
10.	Apex Legends	Electronic Arts	-2
11.	Fall Guys	Epic Games	-
12.	Overwatch 1 & 2	Blizzard Entertainment	+2
13.	Final Fantasy XVI	Square Enix	-3
14.	Madden NFL 23	Electronic Arts	+1
15.	Diablo IV	Blizzard Entertainment	-2
16.	EA Sports UFC 4	Electronic Arts	-
17.	Call of Duty: Black Ops III	Activision Publishing	-
18.	Marvel's Spider-Man: Miles Morales	Sony Interactive Entertainment	-6
19.	Mortal Kombat 11	Warner Bros. Interactive Entertainment	-
20.	Destiny 2	Bungie	-2

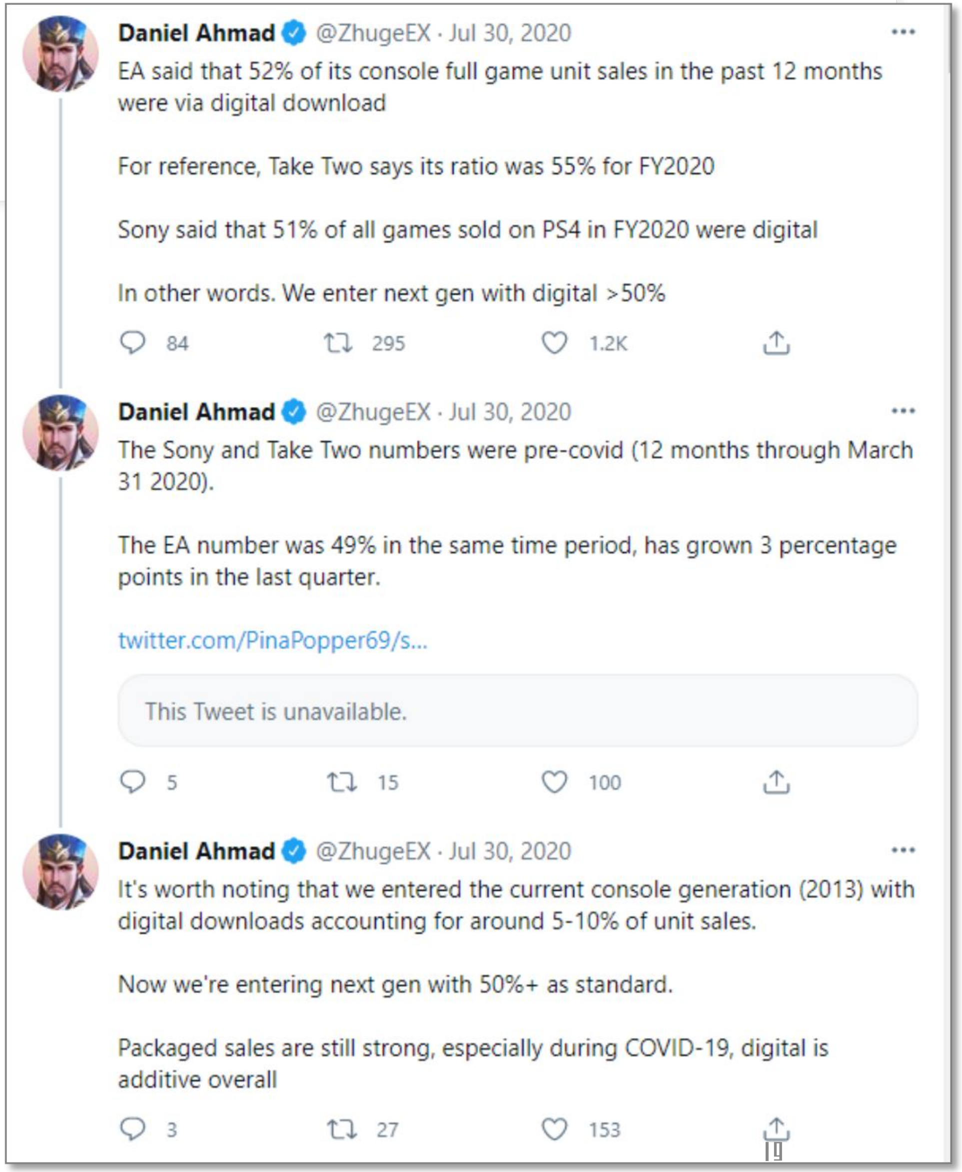
Top Revenue

Q1 2023

	Company	Revenues	Change
1.	Tencent	$7,556M	[illegible]
2.	Sony	$4,380M	[illegible]
3.	Apple	$3,683M	[illegible]
4.	Microsoft	$3,152M	[illegible]
5.	NetEase	$2,717M	[illegible]
6.	Google	$2,432M	[illegible]
7.	Activision Blizzard	$2,261M	[illegible]
8.	Electronic Arts	$1,874M	[illegible]
9.	Nintendo	$1,295M	[illegible]
10.	Take-Two Interactive	$1,266M	[illegible]
11.	Warner Bros. Entertainment	$1,007M	[illegible]
12.	Nexon	$935M	[illegible]
13.	Bandai Namco Entertainment	$731M	[illegible]
14.	Roblox	$655M	[illegible]
15.	Playtika	$608M	[illegible]
16.	37 Interactive	$548M	[illegible]
17.	Sea Group	$540M	[illegible]
18.	CyberAgent	$468M	[illegible]
19.	Embracer Group	$464M	[illegible]
20.	Netmarble	$462M	[illegible]
21.	Square Enix	$461M	[illegible]
22.	Konami	$429M	[illegible]
23.	Sega	$342M	[illegible]
24.	Century Huatong Group	$339M	[illegible]
25.	Ubisoft	$338M	[illegible]

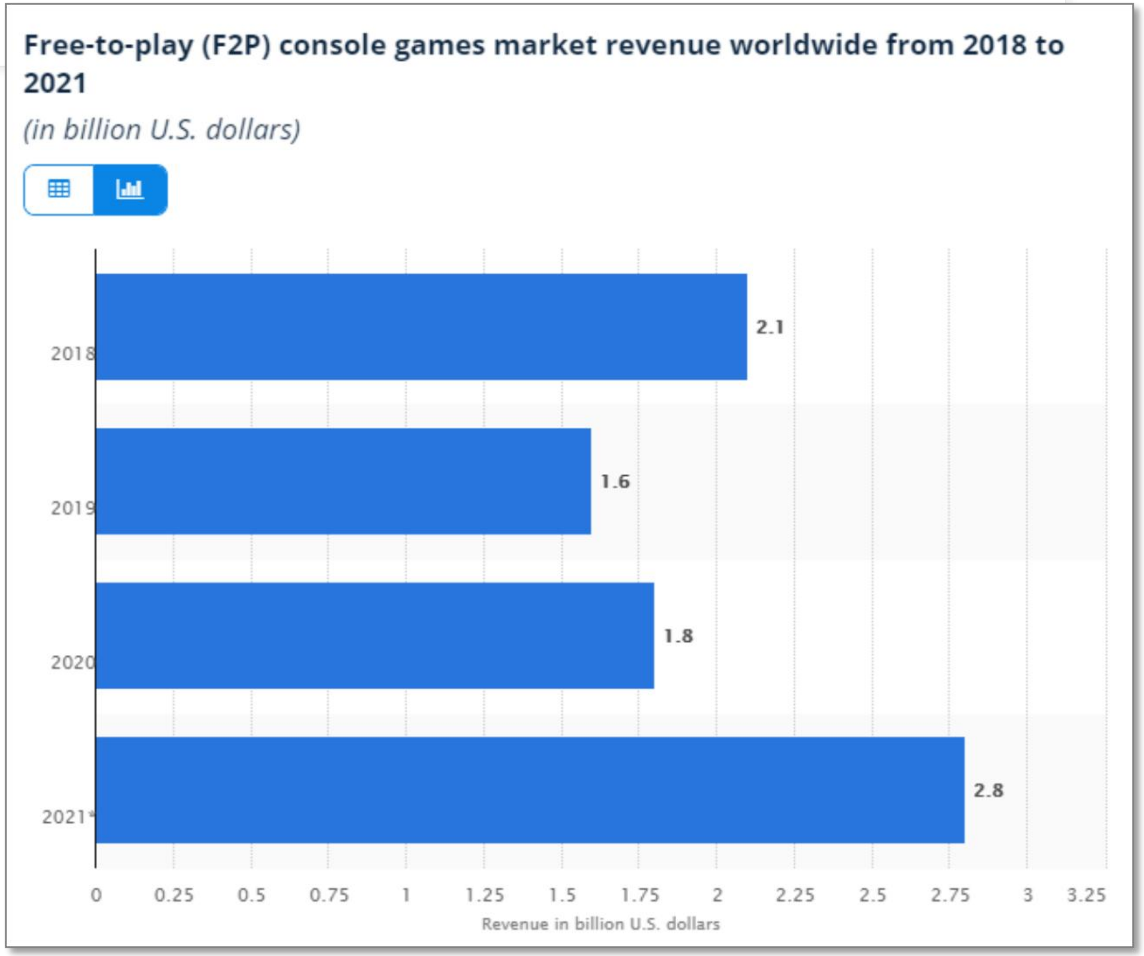
Monetizing on Consoles

- **Premium retail**
  - Still convenient for a segment of buyers. 49% of premium sales.
  - Very high publishing costs, second-hand sales.
- **Premium downloads**
  - Surpassed packaged for the first time in 2020.
  - Discoverability issues, require negotiation with the first-party for shop featuring.
- **Game Passes**
  - Xbox Game Pass and PS Now.
  - Process is opaque. Require specific negotiation with the first-party, like old Steam.
  - First pass is always to launch in traditional premium.



Monetizing on Consoles

- **In-game Purchases**
  - Can be implemented in premium and free-to-play titles.
  - Not implemented like mobile. Rules vary but basically IAPs are purchased *in the shop*, not *in the app*.
  - Creation of new packs may require re-submission of a build.
- **Free-to-play**
  - Still a small sub-segment of console revenue.
  - Growing, but slower than it grew on mobile or PC.



State of PC & Browser

- PC has always been the primary source of innovations in business models and monetization.
  - Cradle of subscriptions, free-to-play and games-as-services, all the way back to the first MMOs.
- All revenue is digital distribution
  - Majority downloadable.
  - A small share of 10% is browser games.
  - Market data is very fragmented though.
- Lots of "launchers" that double down as stores.
- Self-publishing is a possibility.

Top PC Game Stores:

1. **Steam**
2. Epic Games Store
3. GOG
4. Humble Bundle
5. Microsoft Store
6. Icht.io

Top "Launchers":

1. **Battle.net**
2. EA Origin
3. Riot Games
4. UPlay
5. Paradox Plaza

State of PC & Browser

- Most popular games on Steam are more varied than consoles, but no sports.
- Core gaming around competitive multiplayer + streaming in Twitch.

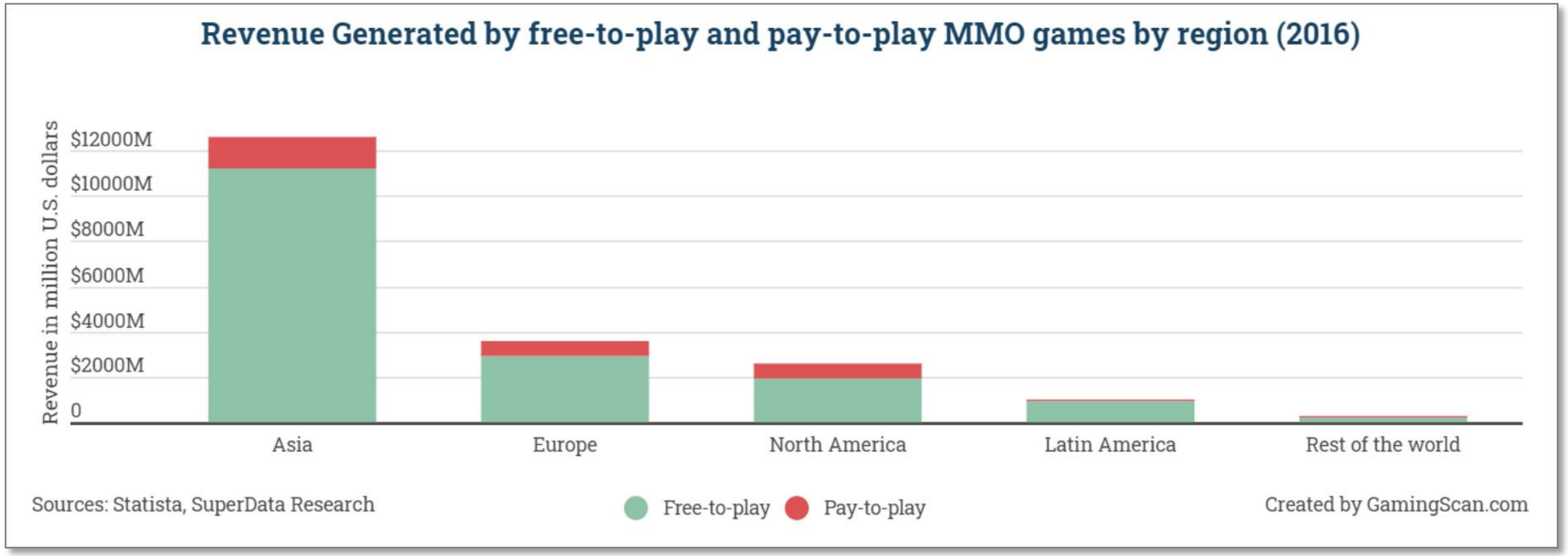
Top watched pc games on twitch

JULY 2023

	Title	Publisher	Total Hours	Esports Hours	Share Esports	Change
1.	Grand Theft Auto V	Rockstar Games	138.6M	0K	0%	+3
2.	League of Legends	Riot Games	108.7M	24.2M	22.26%	-
3.	Valorant	Riot Games	88.5M	6.8M	7.7%	-
4.	Counter-Strike: Global Offensive	Valve	59.7M	17.3M	29.07%	+1
5.	Dota 2	Valve	56.5M	25.5M	45.2%	+1
6.	Teamfight Tactics	Riot Games	41.1M	316.4K	0.77%	+6
7.	Minecraft	Mojang Studios	38.6M	4.5K	0.01%	+1
8.	Fortnite	Epic Games	38M	311.3K	0.82%	+1
9.	Apex Legends	Electronic Arts	33.6M	3M	8.96%	+4
10.	Diablo IV	Blizzard Entertainment	28.7M	0K	0%	-9

State of PC & Browser

- Revenue is much more split between premium and free-to-play titles, fragmented across multiple stores and ways of distribution.
- In some genres like MMO, the vast majority is in fact earned in free-to-play.



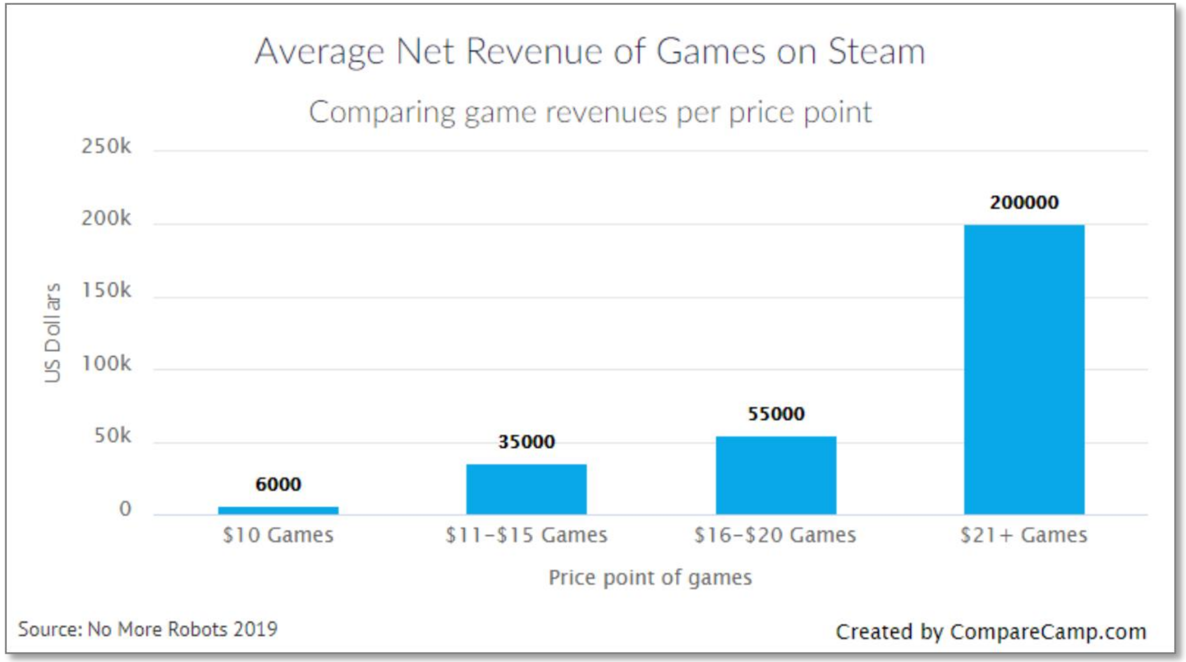
Top PC games by revenue, 2019

PC
League of Legends
Dungeon Fighter Online
Fantasy Westward Journey Online 2
Crossfire
Fortnite
World of Tanks
Tom Clancy's The Division 2
Sekiro: Shadows Die Twice
Hearthstone West
Counter Strike: Global Offensive

Sources: Future Game Releases, SuperData Research

Monetizing on PC & Web

- In online stores, Revenue always follow a **long-tail** distribution across all games available.
  - Top 20% games are 50% of revenue, represented by the green area.
  - The remaining 80% are the other half of revenue, in yellow area.
- That means that *an average* will be in the middle of this curve and don't look like much.
  - On Steam, very low-cost games are estimated to make in average only $6k.
  - This value close to the baseline across all the yellow area.
  - The green area can be a lot more.

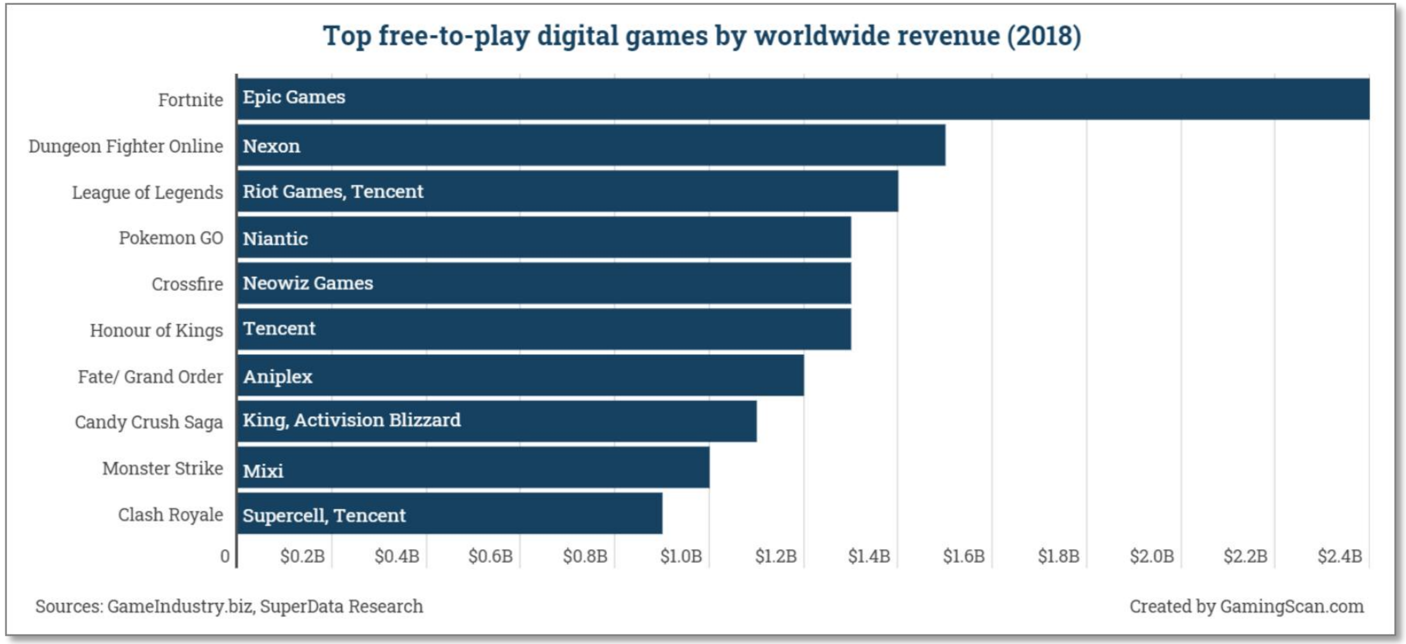


Monetizing on PC & Web

- **Premium downloads**
  - Big discoverability issues, require marketing and PR.
  - Players are used to look for promotions and discounts.
- **In-game purchases**
  - Commonly in the form of DLCs, like Civilization VI
  - Cosmetics may work depending on amount of users, like League of Legends
  - Battle passes since Fortnite
  - Some games sell resources/hard currency, like EVE Online
  - Implementation can use all sorts of providers, from Steam to Digital River.
- **Subscriptions and Passes**
  - Game-specific subscriptions only really work for very few games, World of Warcraft.
  - Game library subscriptions: Xbox Game Pass, Humble Monthly, EA Origin Access, UPlay+

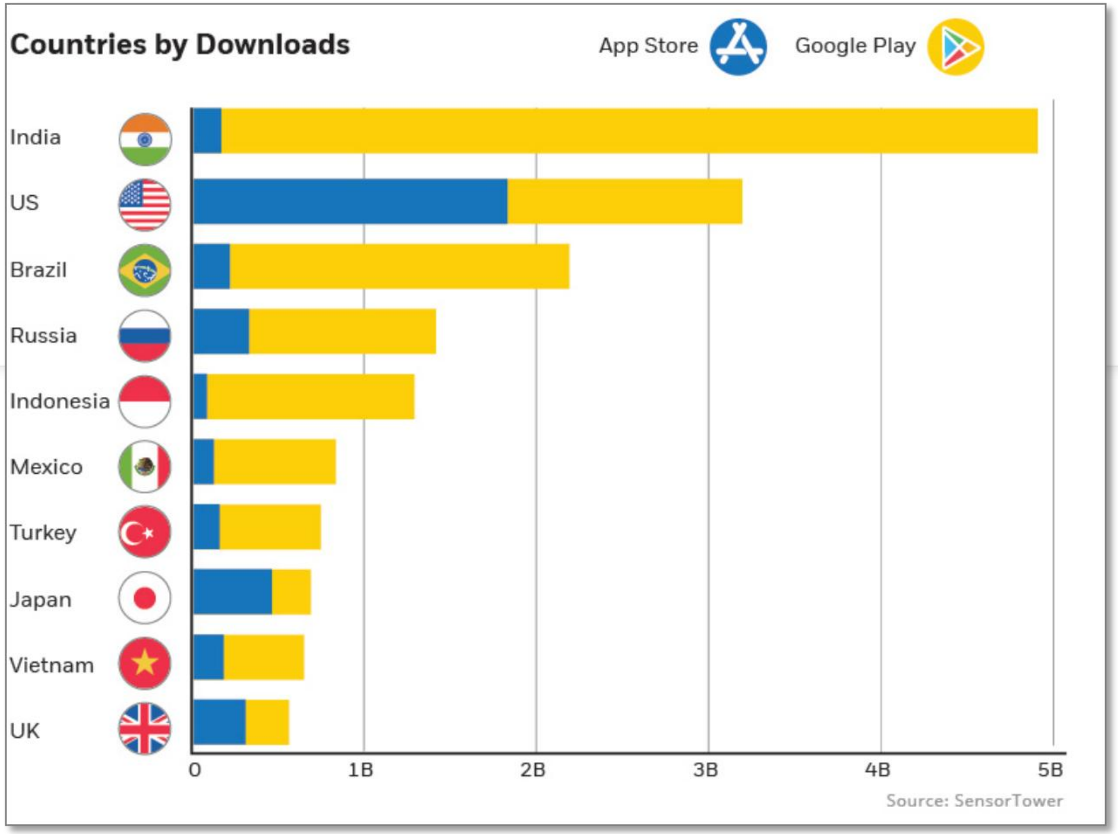
Monetizing on PC & Web

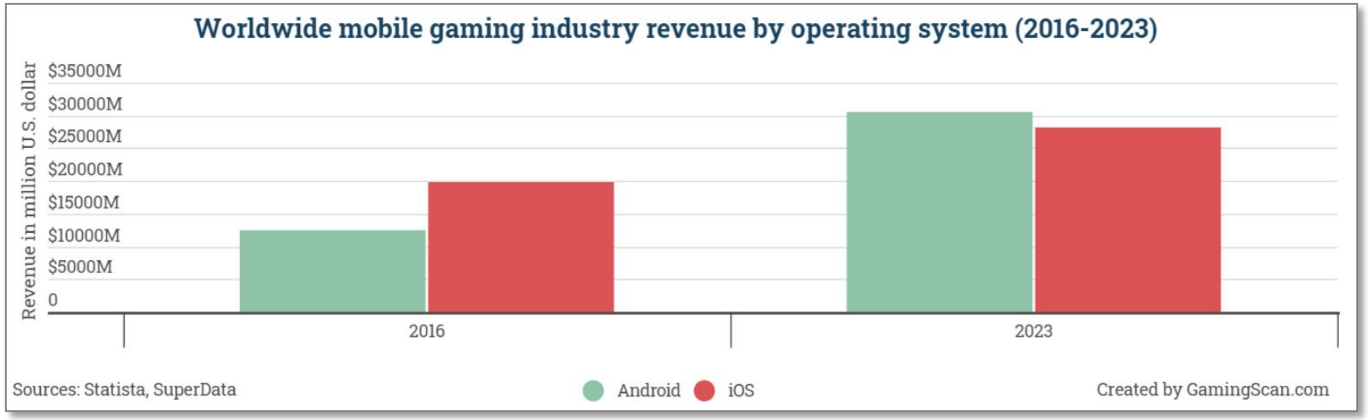
- **Free-to-play downloads**
  - Many of the most profitable free-to-play games in the whole market are PC-based: Fortnite, League of Legends, Dungeon Fighter Online, Crossfire, Monster Strike.
  - Other known offers include Path of Exile, Warpath, World of Tanks, Hearthstone, Counter-Strike.
- **Free-to-play browser-based**
  - Smaller market, in the past tied to Flash but now using either HTML5 or custom plugins.
  - Revenue with purchases and **advertising**
  - Main players include Kongregate, Facebook Gaming, Adult Swim, Armor Games, Miniclip



State of Mobile

- Largest market, but also *the most competitive*, with over thousand new games every day.
- Volume of downloads worldwide are mostly Android
- But revenue in 2020 is roughly 50/50% with iOS, because average purchases is higher among Apple users.
- Mobile games are mostly free-to-play, making money with IAP (In-App Purchase) and Ads.





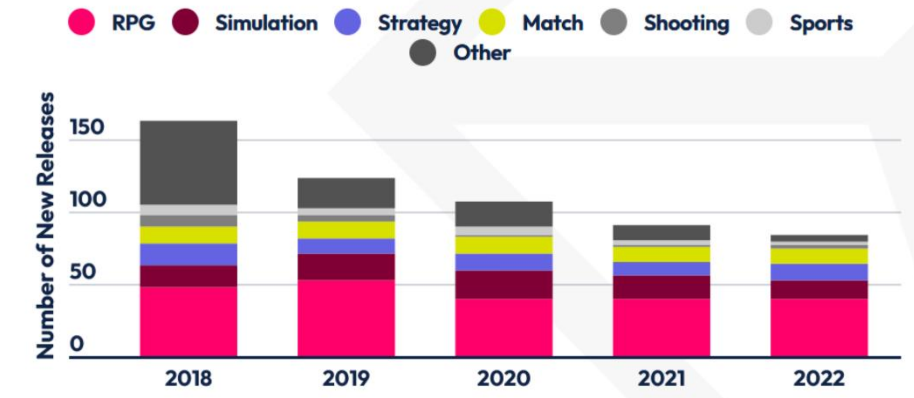
Older Games Continue to Drive Mobile Game Monetization ; Fewer New Titles Entered the Market, Yet Growth in Average Consumer Spend Among New Releases Remained Stable

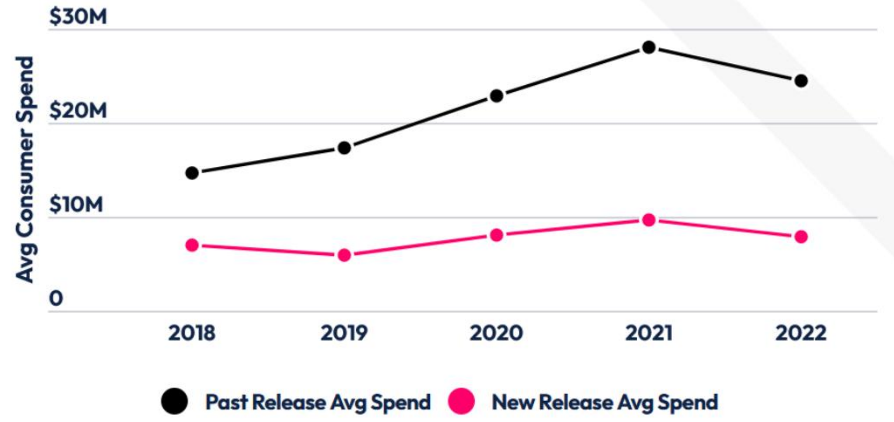
Number of New Games Released Per Year & Average Spend Per Game

Among Top 1000 Games by Consumer Spend

Powered by data.ai's Game IQ Taxonomy

United States





Top New Releases (Same Year) by Consumer Spend

	2018	2019	2020	2021	2022
1	Fortnite (Shooting | Battle Royale)	AFK Arena (RPG | Idle RPG)	Genshin Impact (RPG | Open World RPG)	Royal Match (Match | M3-Meta)	Diablo Immortal (RPG | MMORPG)
2	MARVEL Strike Force (RPG | Team Battle)	RAID: Shadow Legends (RPG | Team Battle)	The Seven Deadly Sins: Hikari to Yami no Grand Cross (RPG | Team Battle)	Cookie Run: Kingdom (RPG | Team Battle)	Dislyte (RPG | Team Battle)
3	Harry Potter: Hogwarts Mystery (RPG | Other RPG)	MLB Tap Sports Baseball 2019 (Sports | Simulation Sports)	MLB Tap Sports Baseball 2020 (Sports | Simulation Sports)	MLB Tap Sports Baseball 2021 (Sports | Simulation Sports)	Survivor!.io (RPG | Roguelike ARPG)
4	MLB Tap Sports Baseball 2018 (Sports | Simulation Sports)	Call of Duty: Mobile (Shooting | Team Deathmatch)	Redecor (Simulation | Home Design)	My Hero Academia: Strongest Hero (RPG | MMORPG)	GODDESS OF VICTORY: NIKKE (RPG | Team Battle)
5	PUBG MOBILE (Shooting | Battle Royale)	Lily's Garden (Match | Blast-Meta)	Arknights (RPG | Tower Defense RPG)	Family Farm Adventure (Simulation | Farming)	MLB Tap Sports Baseball 2022 (Sports | Arcade Sports)

Top Past Releases by Consumer Spend

	2018	2019	2020	2021	2022
1	Candy Crush Saga (Match | M3)	Candy Crush Saga (Match | M3)	ROBLOX (Simulation | Creative Sandbox)	ROBLOX (Simulation | Creative Sandbox)	Candy Crush Saga (Match | M3)
2	Pokémon GO (RPG | Location RPG)	Clash of Clans (Strategy | Build-Battle)	Candy Crush Saga (Match | M3)	Candy Crush Saga (Match | M3)	ROBLOX (Simulation | Creative Sandbox)
3	Clash of Clans (Strategy | Build-Battle)	Pokémon GO (RPG | Location RPG)	Coin Master (Party | Luck Battle)	Free Fire (Shooting | Battle Royale)	Coin Master (Party | Luck Battle)
4	Slotomania (Casino | Slots)	Fortnite (Shooting | Battle Royale)	Pokémon GO (RPG | Location RPG)	Coin Master (Party | Luck Battle)	Royal Match (Match | M3-Meta)

State of Mobile

TOP APPS & GAMES COMPANIES OF 2022

2022 Rankings by Market | Top Companies - Games

Worldwide

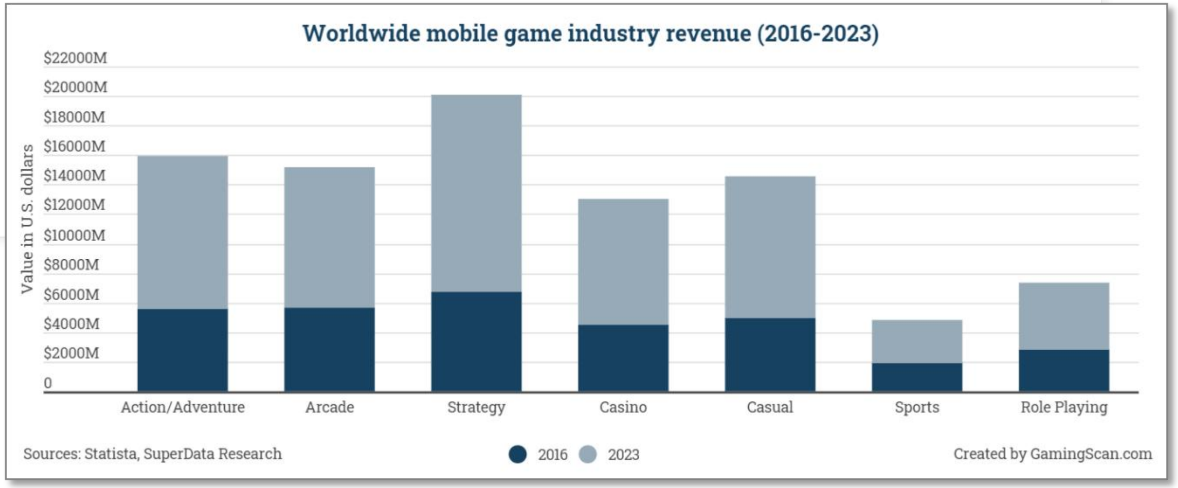
DOWNLOADS

	Company	HQ	Top Apps by Downloads
1	Azur Interactive Games	Cyprus	WormsZone.io
2	Embracer Group	Sweden	Phone Case DIY
3	Tencent	China	8 Ball Pool
4	OneSoft	Vietnam	1945 Air Forces
5	SayGames	Belarus	Race Master
6	ironSource	Israel	Bridge Race
7	AppLovin	United States	Papers Grade Please
8	Voodoo	France	aquapark.io
9	BabyBus	China	Baby Panda's Supermarket
10	Jinke Culture - Outfit7	China	My Talking Tom 2

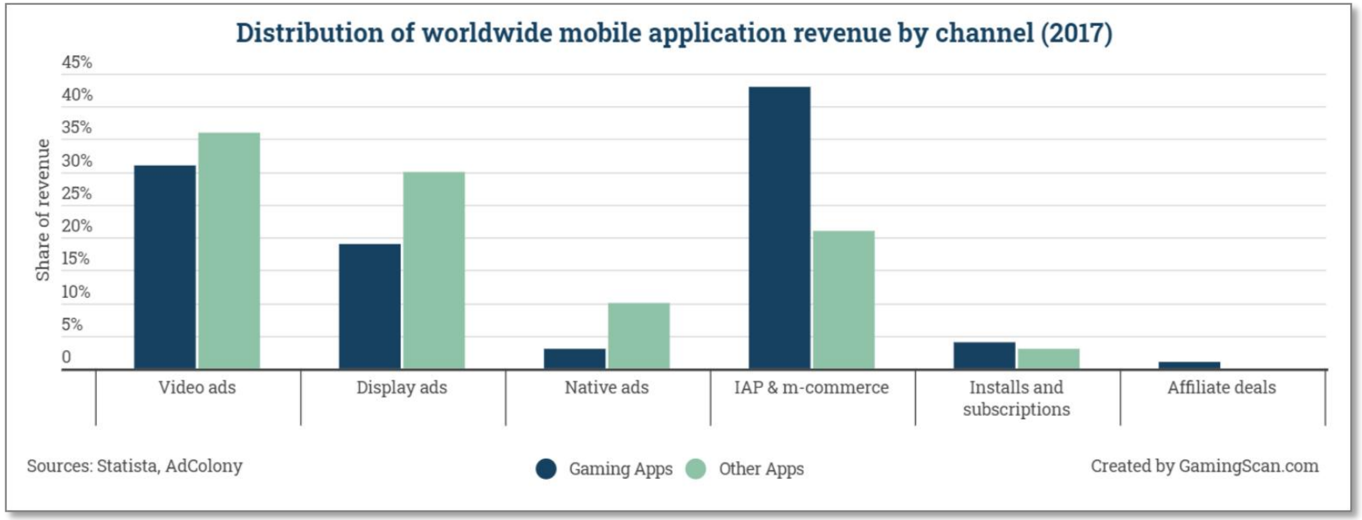
CONSUMER SPEND

	Company	HQ	Top Apps by Consumer Spend
1	Tencent	China	Honor of Kings
2	Activision Blizzard	United States	Candy Crush Saga
3	NetEase	China	Fantasy Westward Journey
4	Playrix	Ireland	Homescapes
5	Netmarble	South Korea	Marvel Contest of Champions
6	Playtika	Israel	BINGO Blitz
7	miHoYo	China	Genshin Impact
8	Aristocrat	Australia	RAID: Shadow Legends
9	Moon Active	Israel	Coin Master
10	NCSOFT	South Korea	Lineage W

Monetizing on Mobile



- **Premium downloads** still exists, but small market.
- **Free-to-play + In-game purchases**
    - Main source of revenue for most top-grossing games
    - Focused on selling resource packs. Cosmetics sometimes.
    - Battle passes popular since 2019.



- **Free-to-play + Ads**
    - Main source of revenue for many casual and *hypercasual* games.
    - Optimization of ads revenue is a big design topic.
- **Subscriptions and passes**
    - Almost no game implement Apple's or Google's API for app subscriptions, hard to implement + legal.
    - Apple's Arcade and Google's Play Pass have been around since 2019, no breakout hits yet. Require premium games.

Business Models

How each strategy monetizes.

Premium

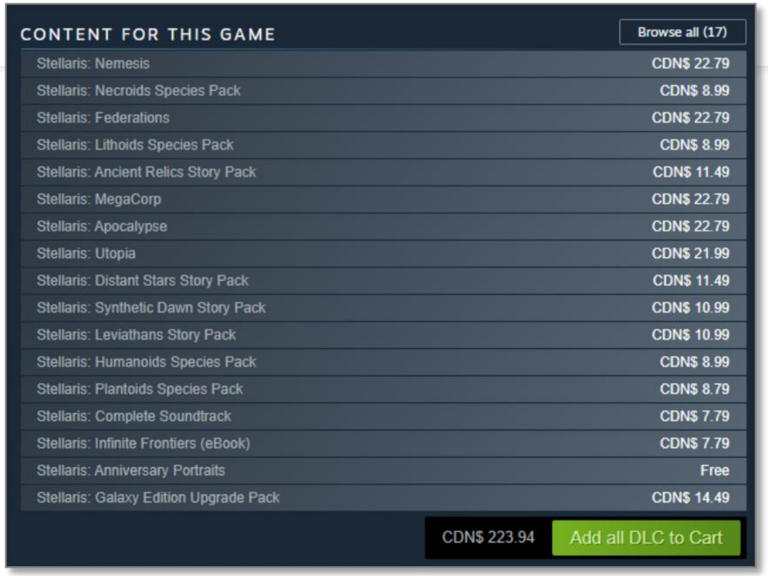
Characteristic	Rank
Call of Duty: Modern Warfare 2 (2022) (Activision Blizzard)	1
Elden Ring (Bandai Namco Entertainment)	2
Madden NFL 23 (Electronic Arts)	3
God of War: Ragnarök (Sony)	4
LEGO Star Wars: The Skywalker Saga (Warner Bros. Interactive)	5
Pokémon: Scarlet/Violet* (Nintendo)	6
FIFA 23 (Electronic Arts)	7
Pokémon Legends: Arceus* (Nintendo)	8
Horizon II: Forbidden West (Sony))	9
MLB: The Show 22^ (Multiple Video Game Manufacturers)	10
Mario Kart 8* (Nintendo)	11
Call of Duty: Vanguard (Activision Blizzard)	12
Gran Turismo 7 (Sony)	13

Source: SuperData

- **Selling downloads.**
- Market revenue very concentrated on few franchises
  - 10 titles made 34% of *all* revenue. In F2P, 19%.
  - But indies can thrive: Hades, Valheim, Among Us, Phasmophobia.
- Marketing is key, lots of focus on YouTubers and streamers + social media.
  - Can be supported by **demos / sharewares**, but extra development overhead on the team.
  - Nobody is using *playable ads* like free-to-play does yet. Could work as super-quick demos.
- Platforms:
  - Best revenue opportunities on Consoles, but costs to publish and update.
  - On PCs, make the game available in many online stores. Participating in bundles, seasonal promos, discount packs, etc. Managing this can be a full-time job.
  - Mac can be +3% to +8% revenue. (And keep in mind Mac is mostly US-only.)
- Selling *Early Access:* desktop-only, mobile maybe

DLCs

- **Selling extra playable content / expansions**
  - Usually complimentary to Premium.
  - Free-to-play focus on currency and cosmetics.
  - Mastered by [Paradox]() and The Sims
- Extra revenue from who are already buyers
  - Always easier to sell to who already is a client than to convince someone new to first purchase.



CONTENT FOR THIS GAME — Browse all (17)

Stellaris: Nemesis	CDN$ 22.79
Stellaris: Necroids Species Pack	CDN$ 8.99
Stellaris: Federations	CDN$ 22.79
Stellaris: Lithoids Species Pack	CDN$ 8.99
Stellaris: Ancient Relics Story Pack	CDN$ 11.49
Stellaris: MegaCorp	CDN$ 22.79
Stellaris: Apocalypse	CDN$ 22.79
Stellaris: Utopia	CDN$ 21.99
Stellaris: Distant Stars Story Pack	CDN$ 11.49
Stellaris: Synthetic Dawn Story Pack	CDN$ 10.99
Stellaris: Leviathans Story Pack	CDN$ 10.99
Stellaris: Humanoids Species Pack	CDN$ 8.99
Stellaris: Plantoids Species Pack	CDN$ 8.79
Stellaris: Complete Soundtrack	CDN$ 7.79
Stellaris: Infinite Frontiers (eBook)	CDN$ 7.79
Stellaris: Anniversary Portraits	Free
Stellaris: Galaxy Edition Upgrade Pack	CDN$ 14.49

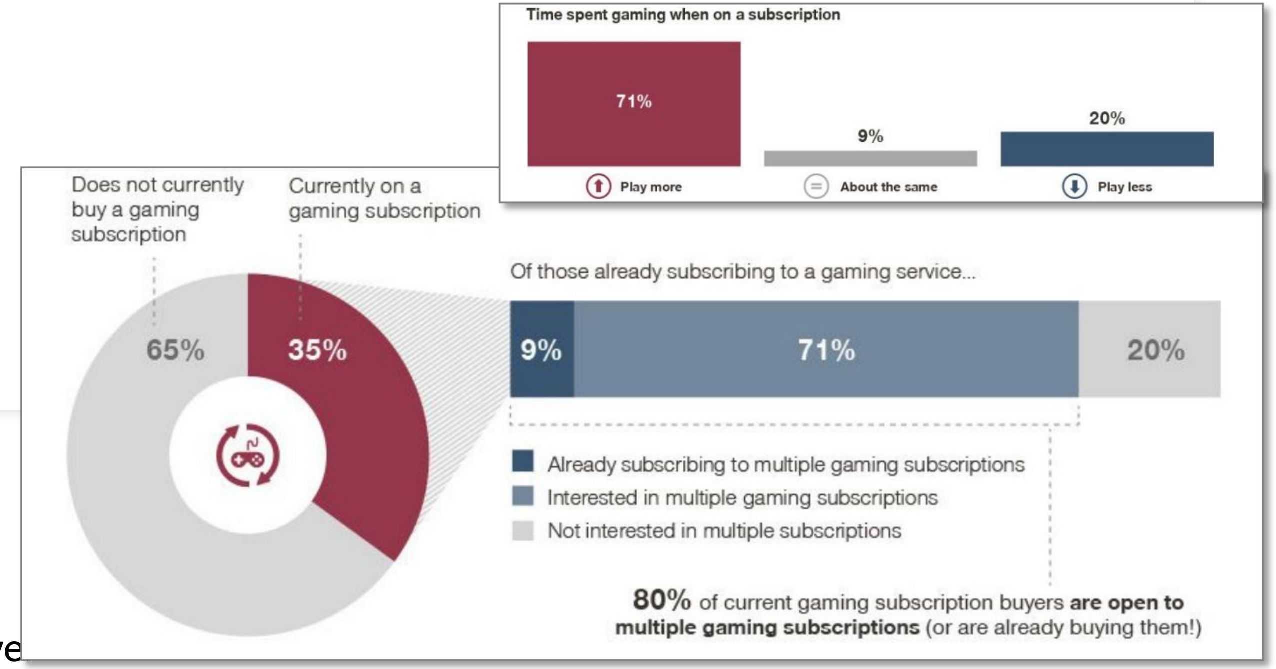
CDN$ 223.94 — Add all DLC to Cart

DLCs

- Lots of dev effort to create an extra one-time purchase.
  - Very important to do ***ROI analysis***!
  - DLCs don't sell to all players – expect 25% to 50% to buy the first DLC and continue as a descending log curve from there.
  - Second DLC will sell 10% to 40% less and so on. But you can break this pattern on the long run as your audience matures.
- Focus on **mileage**, not art

Subscriptions

- **Bundling the game in a monthly "pass".**
- 35% of gamers already pay some sort of subscription
  - Among MMOs, game passes, monthly bundles and multiplayer passes (PS Plus, Xbox Live)
- Titles in "passes" really *start as Premium* and after launch work their way into deals.
  - Will games be created from the ground up for passes? Eventually, yes. But the business model needs to mature more.
- "Passes" to consider: Xbox Game Pass, PS Now, Apple Arcade, Google Play Pass, Humble Monthly.
- Publishing/Revenue model is opaque but maturing:
  - Flat-fee deals to include the game in the pass.
  - Downloads
  - **Hours played**



source: simon-kucher

Perception of high gaming subscription prices are keeping gamers from subscribing

SIMON • KUCHER & PARTNERS
Strategy & Marketing Consultants

The second most prevalent reason is the desire to own, rather than to stream, games

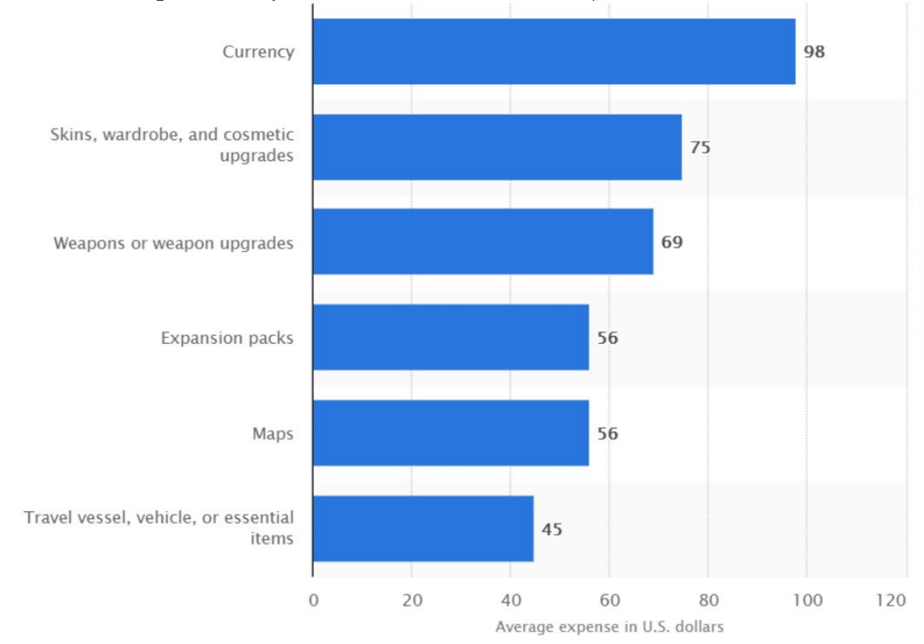
		Reasons for gamers not subscribing to gaming subscriptions		
	Ranking	Casual Gamers (<5 hrs/week)	Moderate Gamers (6-20 hrs/week)	Serious Gamers (>20hrs/week)
Most important reason	1	Price	Price	Price
	2	I don't play much	Other	I want to own the game
	3	I want to own the game	I want to own the game	Other
	4	Prefer status quo (standalone purchases)	Prefer status quo (standalone purchases)	I don't play much
	5	Quality of games	I don't play much	Quality of games
	6	Other	Quality of games	Prefer status quo (standalone purchases)
	7	Too much choice	Too much choice	Too much choice
	8	I don't have access to an available payment method	Limited Internet access	Limited Internet access
Least important reason	9	Limited Internet access	I don't have access to an available payment method	I don't have access to an available payment method

Source: Simon-Kucher & Partners; Gaming Monetization Quant Survey| Please rank the reasons why you subscribe to a gaming service (N = 4579)
Simon-Kucher & Partners | The Global Gaming Study: Video Game Subscriptions

Free to Play (Freemium)

- **Give the game away and sell extras.**
- The de-facto model of Mobile, also quite strong on PC.
- Solves a marketing problem and creates another one:
  - In theory, no money barrier for a new player to try your game.
  - But the market is flooded and new User acquisition is actually quite expensive.
- Sales in-game focus on currency and cosmetics
  - Scales much better in the long term, as production costs are cheaper.
  - Currency requires excellent game design on core systems to avoid inflation and de-valuation.

Average annual spend on extra content in the US, 2019. Source: Statista



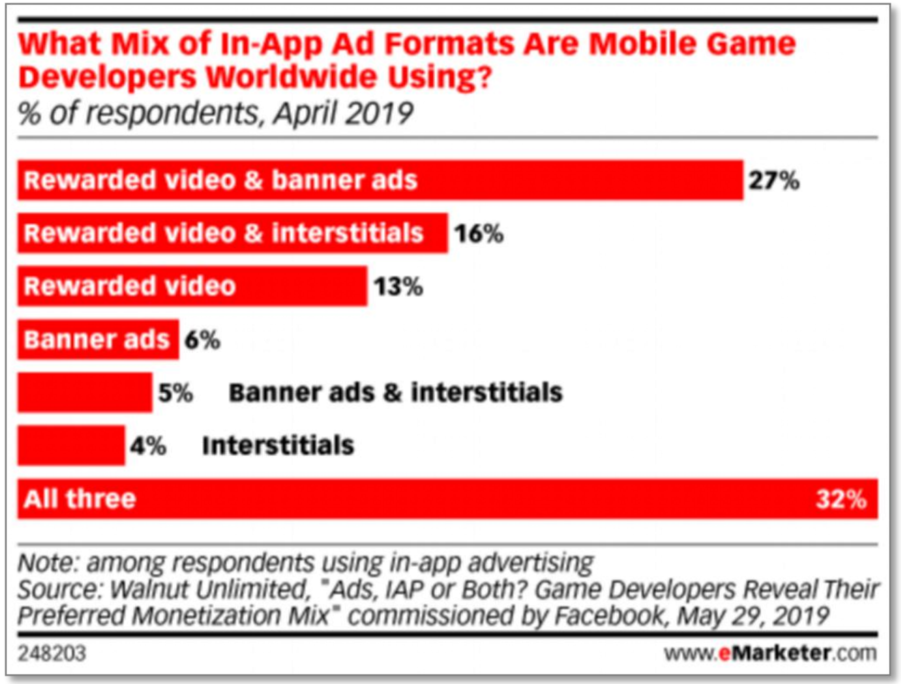
Free to Play (Freemium)

- Items and playable content on PC and Consoles.
  - Much more expensive content to produce.
  - On Mobile, selling expansions was abandoned years ago for practical reasons.
- ***Design of systems and UI needs to be specific for F2P.***
  - Only 1% to 5% of your users will pay and keep your company afloat.

In-game Advertising

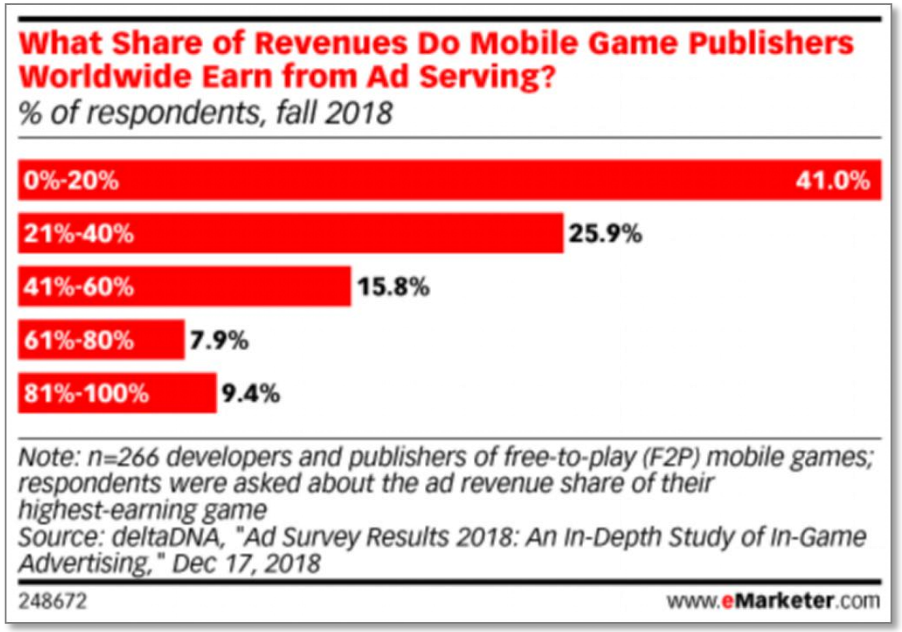
In-game Ads started way back!

- **Make money by showing Ads inside the game.**
- Important source of revenue for many Free-to-Play games.
  - Sometimes the *only* source, in case of hypercasual and Facebook games.
  - Technically possible to be in Premium games too, but community pushback.
- Ads monetize by impression (CPM) and/or click-through (CPC).
  - Percent of a penny for impression, 1 to 10 cents for click-throughs.
  - **Videos and playable ads** pay a lot better than banners.



In-game Advertising

- Major players developing next-gen tech for in-game Ads.
  - EA, Anzu, Google (AdMob), Zynga.
  - Indies should look for providers that aggregate reliable sources of inventory, like IronSource and Unity Ads.
- When implementing in-game Ads, design is necessary.
  - Ideally, non-intrusive and rewarding.



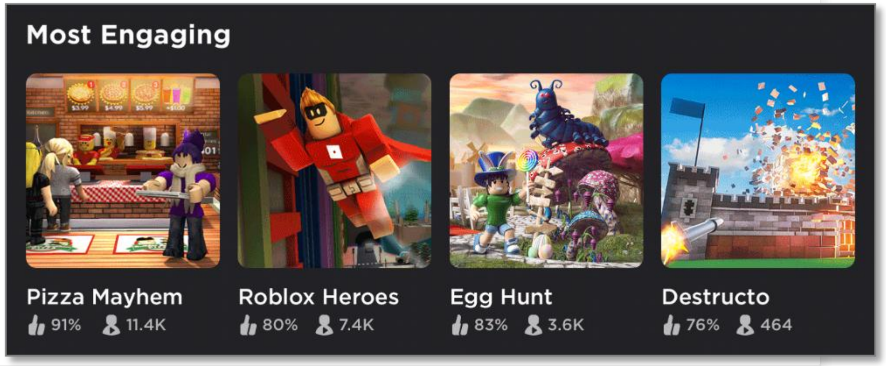
Battle Passes

- **Recurring fee that improves rewards in the game.**
- Pseudo-subscription system originally created in Fortnite.
  - Recurring but *optional*, players can continue to be free-to-play.
  - Participating users boost progression, earning more rewards.
- Recurs every 1 to 3 months.
  - Frequency vary by game and platform.
  - On mobile, often every 30 days. and purchased with currencies, not money transactions.
- Does 2 things: **monetize + keep high-value users playing.**
  - Less "pay-to-win" complains, as users still need to play and progress.
- *BUT*: *not* a ***main*** revenue-maker.
  - Even in Fortnite = 24%. On mobile games, between 6% and 12%.
  - Expect it to be an auxiliary monetization system, not the main one.

Battle Pass popularity in iOS US top-grossing

Source: game refinery

"Metaverse"

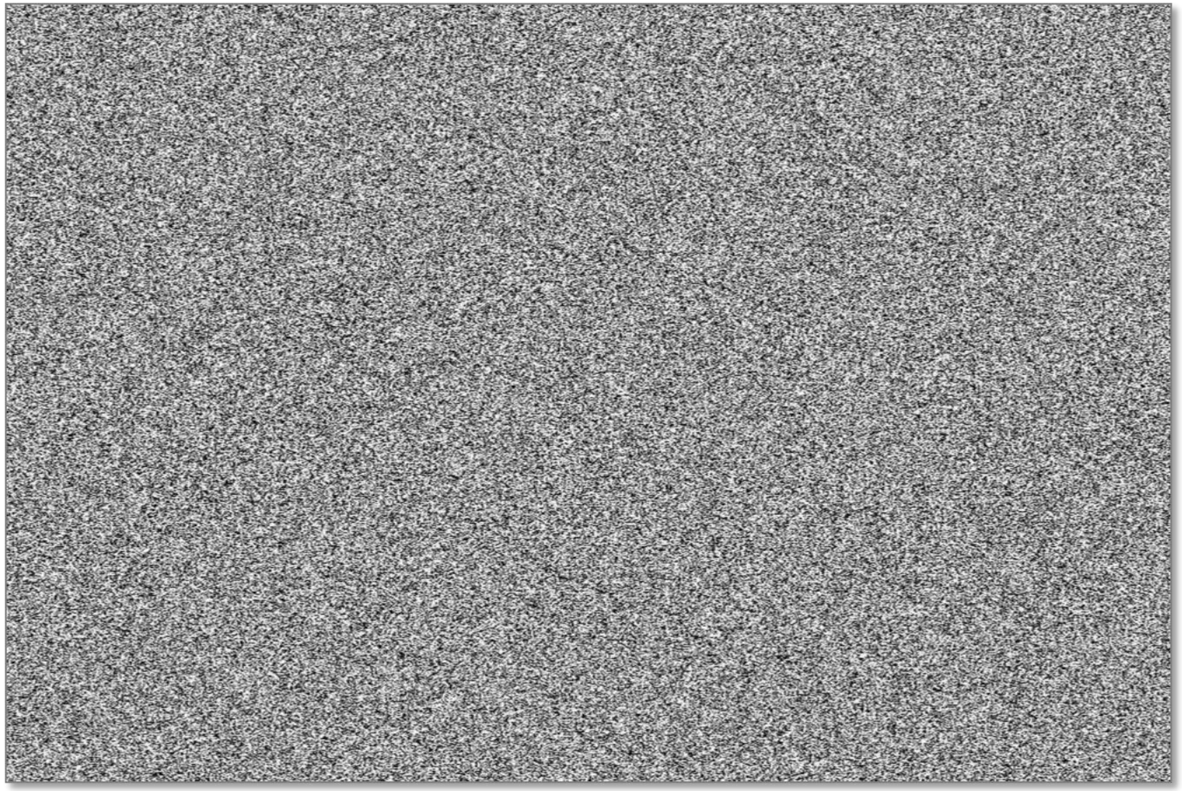


- **"Metaverse":** games as platforms for other businesses inside it.
  - Roblox, Minecraft Realms, Fortnite. Way back in 2007: Second Life.
  - A game that is *more* than a game: it's also a **place** where millions of us are hanging out in the virtual universe.
- Still lots of noise of what would be considered a "metaverse".
  - Facebook pushing hard on its "Second Life" approach.
  - But the term doesn't refer to a specific technology, but a broad shift in *how* we interact with technologies.
  - The term itself will eventually become antiquated.
- Gabe Newel: *"Most people talking about metaverse have no idea what they're talking about. They've apparently never played an MMO."*

Hot Topics

Things that usually provoke debate among gamers.

NFTs?



There's a **LOT OF NOISE** on this topic right now.

NFTs?

```
{
    "attributes": [
        {
            "trait_type": "Shape",
            "value": "Circle"
        },
        {
            "trait_type": "Mood",
            "value": "Sad"
        }
    ],
    "description": "A sad circle.",
    "image": "https://i.imgur.com/Qkw9N0A.jpeg",
    "name": "Sad Circle"
}
```

ethereum

AlphaWallet

Private key: 03bf350d282137515 8a608b51e3e898e507fe47f2d2e8c774de4a9a7edecf74eda

Public key: 99b1ebcfc11a13df5161aba8160460fe1601d541

- What is an NFT, exactly?
    - **Piece of data in a blockchain** like Ethereum.
    - Weblink or any other data artifact with a "certificate of ownership" attached to a specific crypto-wallet.
- Because of the way blockchains work, the "ownership" of this data artifact is guaranteed to be unique.
- But people can still download your Bored Ape JPEGs if they have the weblink in that JSON...
    - This is why some people claim to "steal" JPEG NFTs easily.
    - But they cannot steal the ***ownership*** assigned via blockchain, and ***that's*** what matters for collectors and enthusiasts.
- Why not serialize the image itself instead of a web link?
    - In a blockchain, size = speed = cost. Slower to mint, slower to transact.
    - Ethereum: $59 to $123 to transact, highly fluctuates with the daily price of ETH.

NFTs?

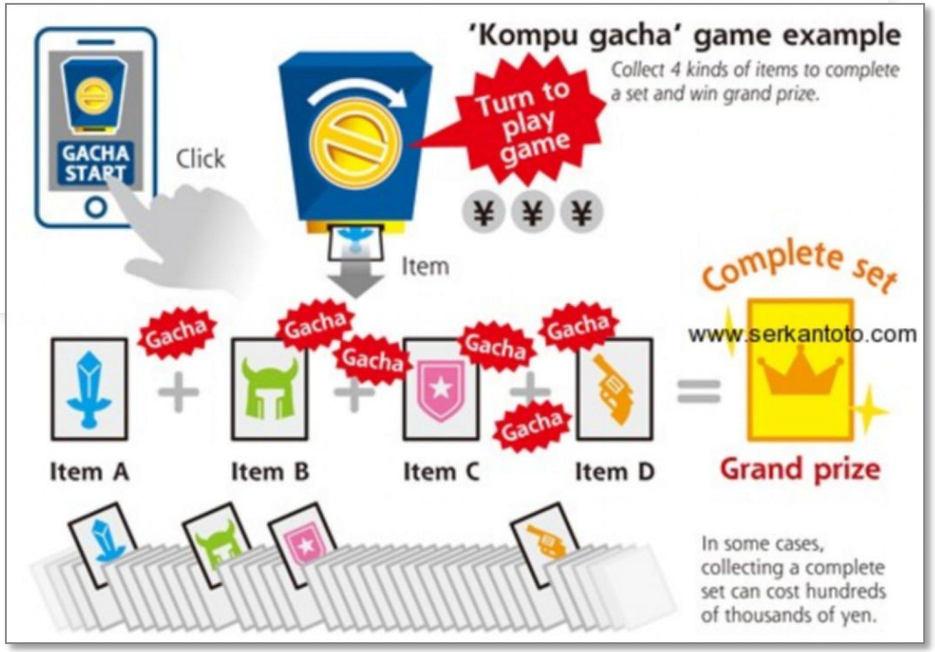
- Business model? No, **NFTs are a technology, not a business model.**
  - The primary business mode is **artificial scarcity of collectible items**, widely used since the 60's.
  - Other models around digital ownership are also viable, such as VIP clubs or early bidders.
- In theory, the promise of NFTs is to **enable "real" digital ownership.**
  - Able to transact your game items without being constrained by the game itself.
  - Market transparency: the playerbase can engage in real-time price discovery. Games could even "read" assets from competitors.
  - *Fractional* ownership of in-game assets is possible.
- In practice, lots of challenges to make this profitable.
  - Out-of-system player-to-player transactions won't generate any money…
  - Minting costs on a mainstream blockchain can be prohibitively high…
  - Transactional times can take several minutes to hours…
  - … *unless* **you own your own platform/blockchain**: Ubisoft's Quark and Axie Infinity's Ronin.
- A *lot of the same benefits* can **be done with existing, cheaper tech.**
- Potentially huge **environmental costs**: in Ethereum, 1 NFT transaction = 1 month of an average adult's electricity in the EU.

Axie Infinity

Gods Unchained

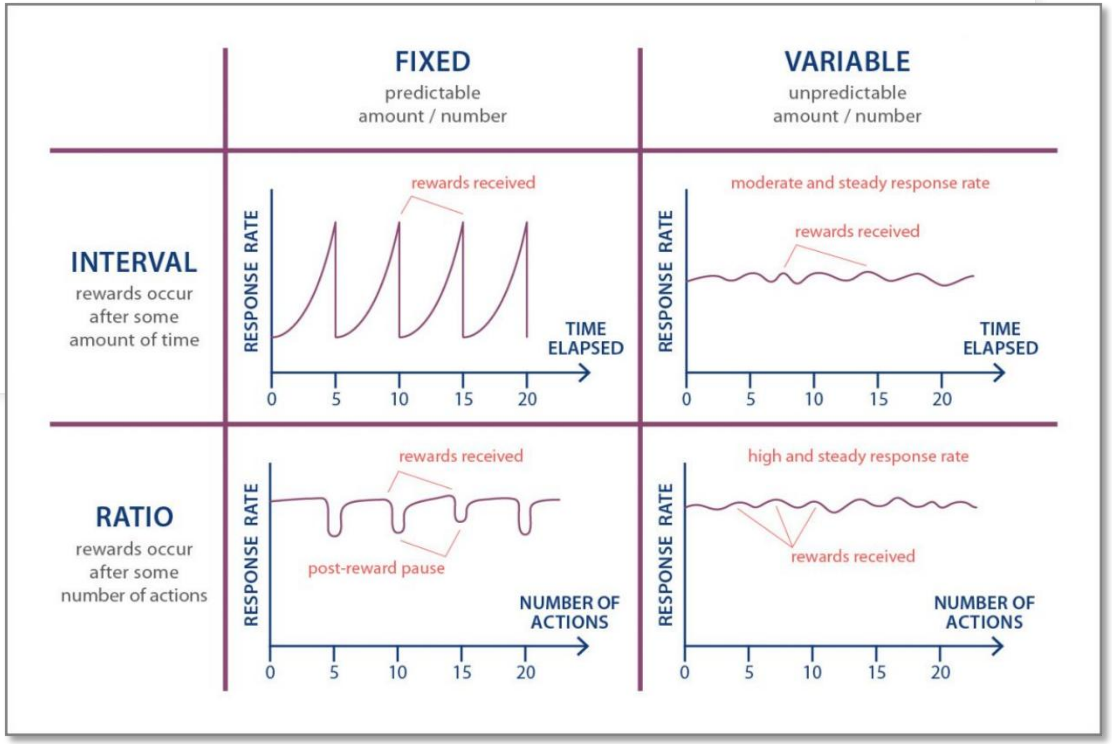
Loot Boxes

- Concept: a box or pack of random items that drop with probabilities that developers can manipulate.
  - It all started with Kompu Gacha in Japan until outlawed in 2012
  - Morphed into loot/fusion mechanics and regular Gacha
  - Bridged to the West circa 2011 and evolved to current form.
- Uproar among Console gamers when **bridging into Premium**
  - EA: Star Wars Battlefront 2 vs. Star Wars Galaxy of Heroes
- Regardless, it brought up seriously looking into psychological effects.
  - Legislation being considered or approved: Belgium, UK, Germany, Australia, Netherlands.
  - Lawsuits in others, like Canada.
- The central question: **is this gambling?**

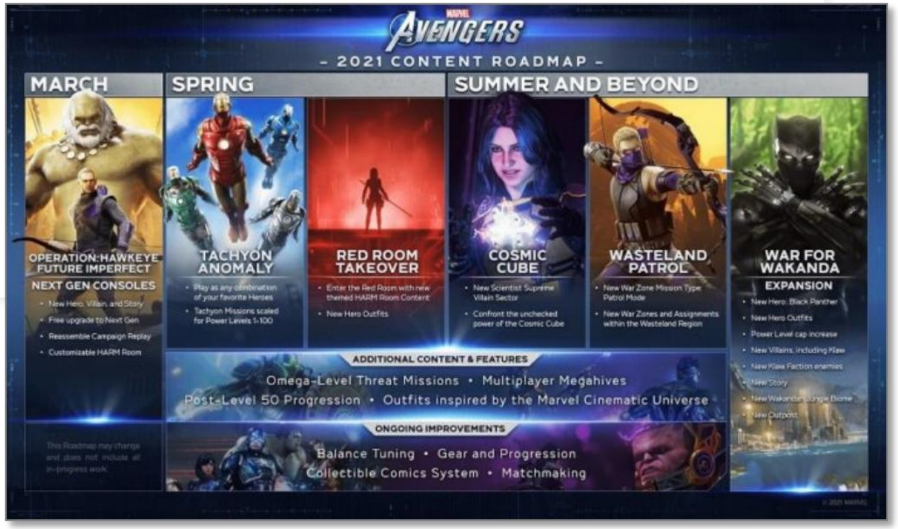


Loot Boxes

- The psychological trigger that rewards both gambling and loot boxes is the same: ***intermittent rewards***.
- Casinos and lotteries promise money for winners while games don't, but monetary value doesn't matter for the primitive brain.
  - The dopamine spike is in the *chase*, not the *catch*.
- However, intermittent rewards are also the reason entire games are fun!
  - **Loot is fun**, and it's using that same trigger.
  - For my granny, slot machines are the same of Diablo for me!
- What is concerning is:
  1. Tying loot boxes to monetization. [Yes, they can be merely a play mechanics.]
  2. Younger audiences, as game developers very rarely know who is playing. They can't control access like a casino or a liquor store.
- Good reading: [Celia Hodent on Ethics]

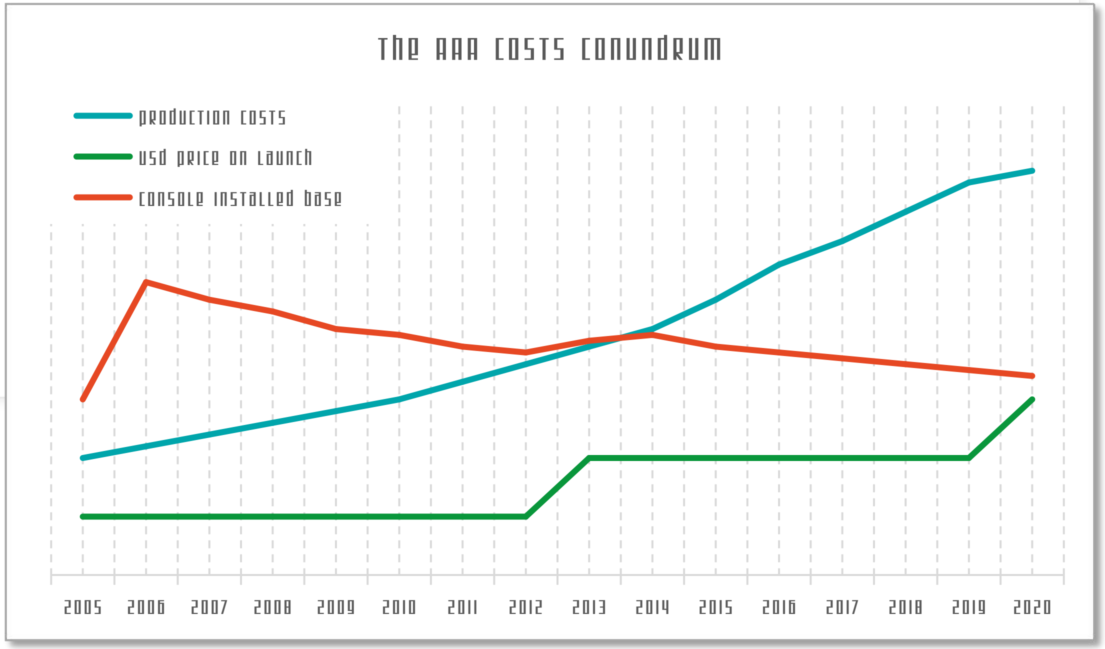


Games-as-Services

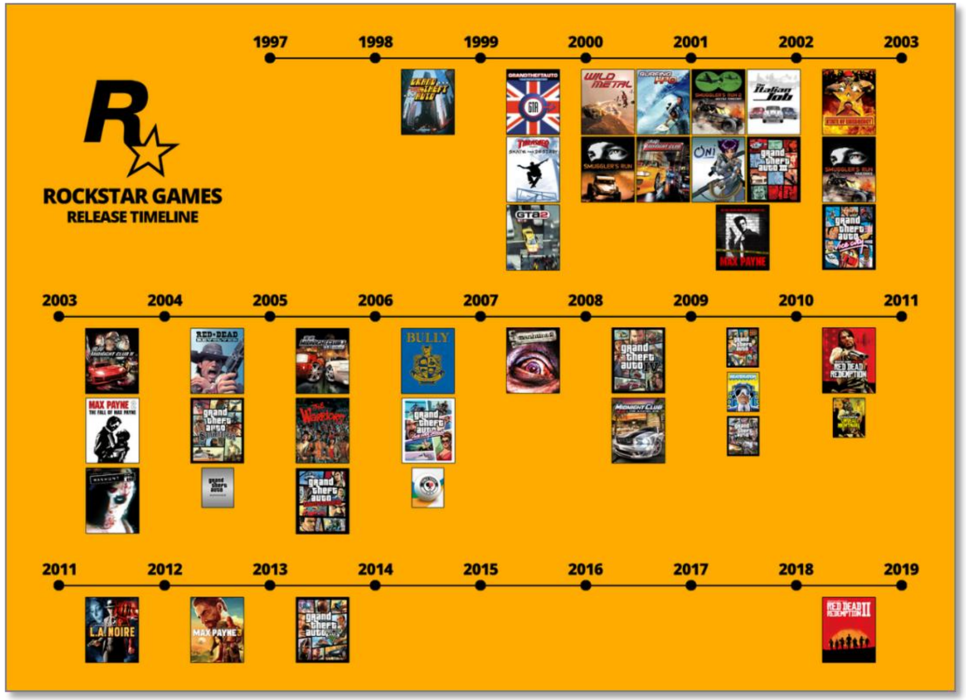


- Concept: games focusing on continuously monetizing players over time, launching frequent updates, activities and events.
  - Idea born with early MMOs + web startups working under SaaS
  - Adapted into free-to-play games by Zynga, Funzio, Riot and other new developers at early 2010's
  - Game design evolved to include systems with deep stats + crafting + vertical progression that could be faster to launch new content for.
- **Bridging into Premium** games in late 2010's has stirred players up.
  - Marvel's Avengers, Destiny 2, Final Fantasy XV
- Criticisms around grind that feel pointless, repetitive events, unrewarding progression, monetization of items, promotions.
  - "I already paid for the game, why all this?"
  - "I already finished the game, what's the point?"

Games-as-Services

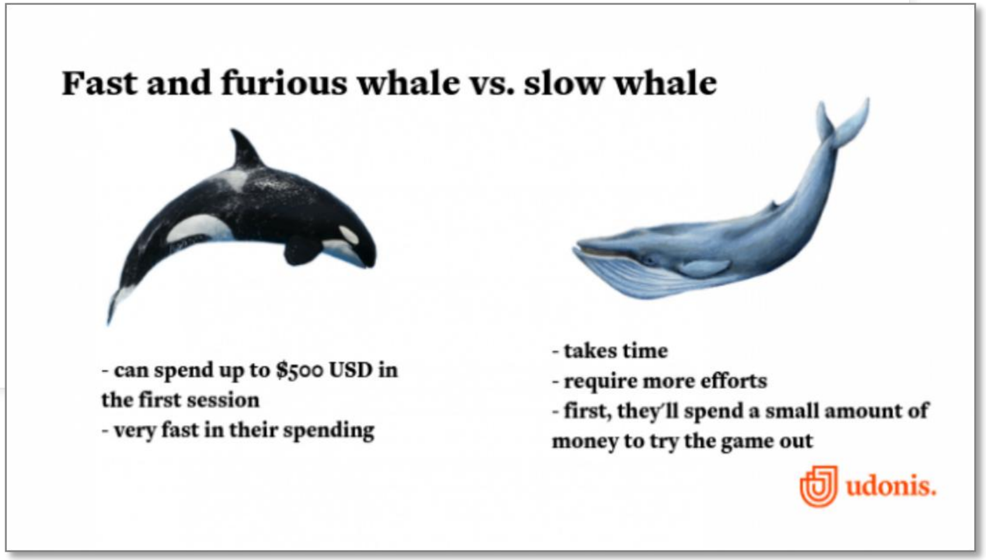


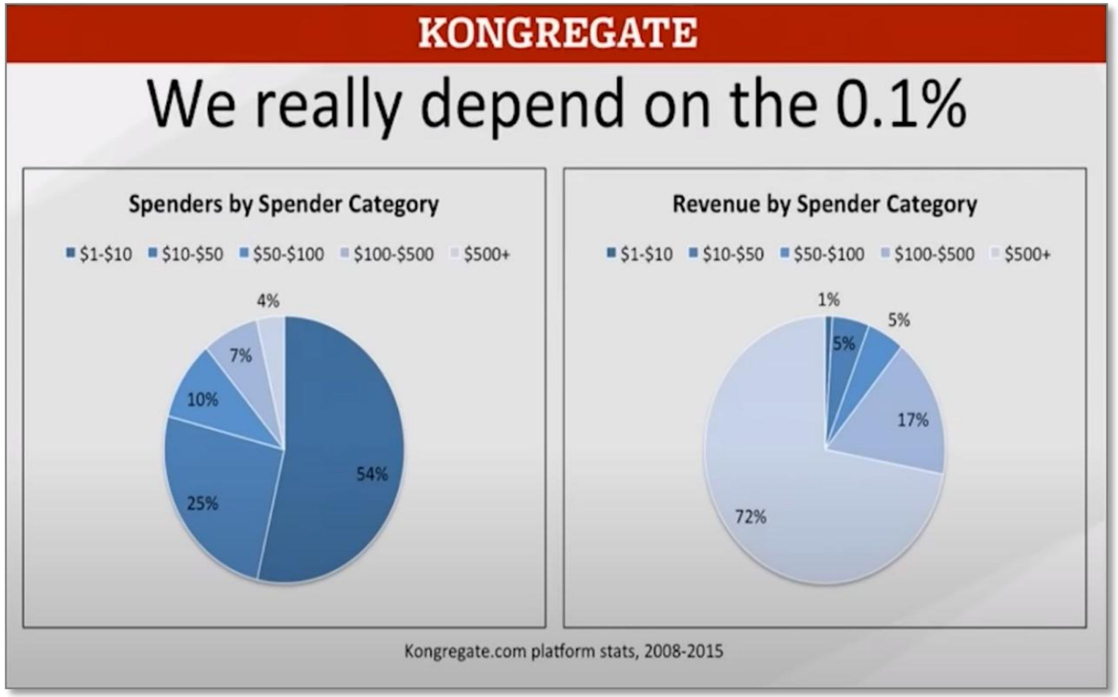
- Reasons:
  1. Escalating production costs of AAA.
  2. Using the Time invested by the team
     1. Big games require a lot of custom tools and familiarity with the engine.
  3. Marginal costs of new items are very low.
  4. More stable revenue in-between new games.
     1. Less dependent in bin discounts and launching more full games.
- Problems - or why users complain:
  - Designers and managers don't understand their audience, what players value and what they are fine to pay for.
  - Design needs to be very good to avoid systems that feel too repetitive or inflate the economy. Game Designers needs to understand the best free-to-play titles.
  - Requires other types of professionals, like data analysis, BI and community management. It's *not simple game maintenance* like in the 2000's.
  - The work in Live Ops is fundamentally different than Production. Some game devs burn out.



Whales

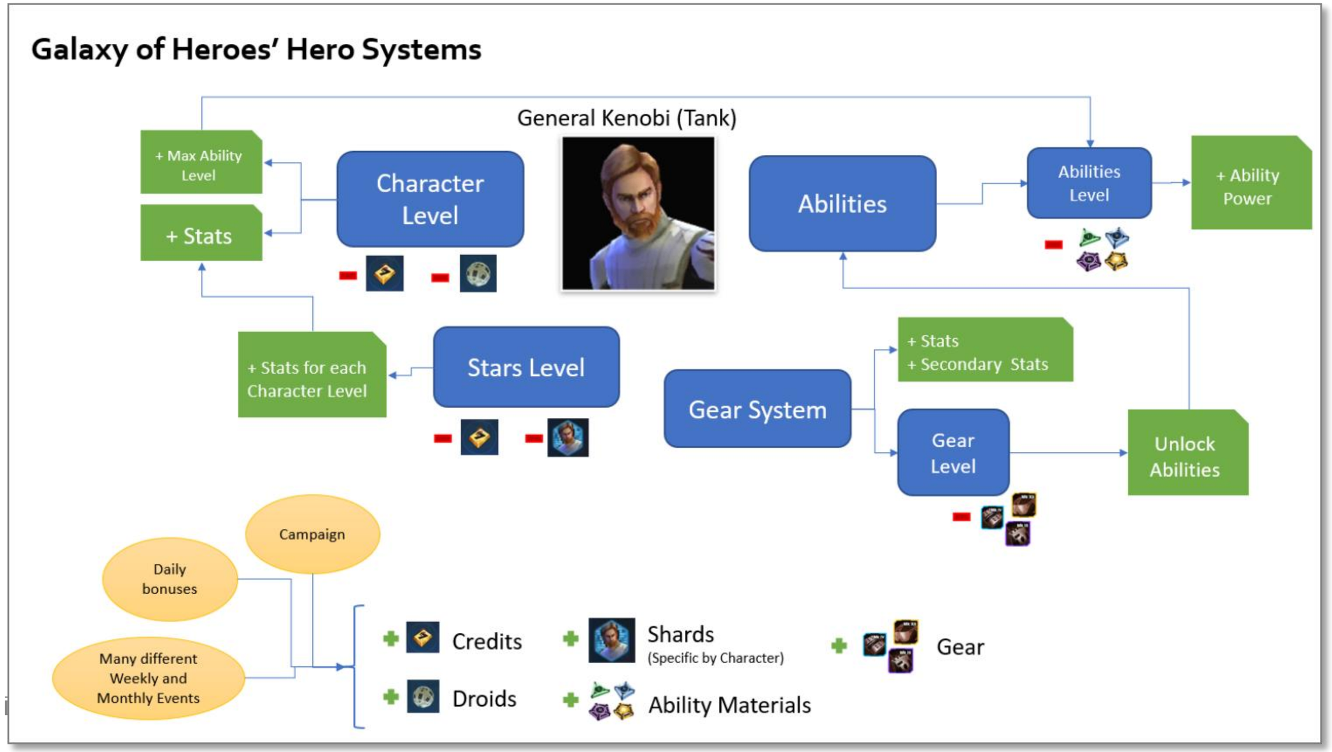
- Concept: a few users are so much into your game that they are willing to buy lots of extras.
  - In business, always much easier to sell to someone who already is a client than to sell to a new user.
  - Highest-spenders not uncommonly dish over a 1k dollars in a single game. Sometimes over 300k.
- Users who convert into complimentary in-game purchases are usually very few. But some of those spend a lot.
  - F2P: 1% to 5%. Premium: 5% to 10%.
  - Not uncommonly, 50% of revenue of a free-to-play game may come from 0.3% of users who are whales.





Whales

- But to support this level of spending, game systems need to go deep into committing to monetization.
    - Deep stats
    - Deep resource loops
    - Loot boxes
    - Timers
- This can turn off some new players and really upset when these concepts bridge to premium.
- **Companies that rely too much on whales have unstable revenue** and suffer when they quit.
    - It's better to have a healthier combination of spending profiles.
    - Launching in places like China forces a strategize that go wider, trying to convert more players at lower values.



Assignment

Q&A