

Microsoft

vs.

Nintendo

vs.

Sony

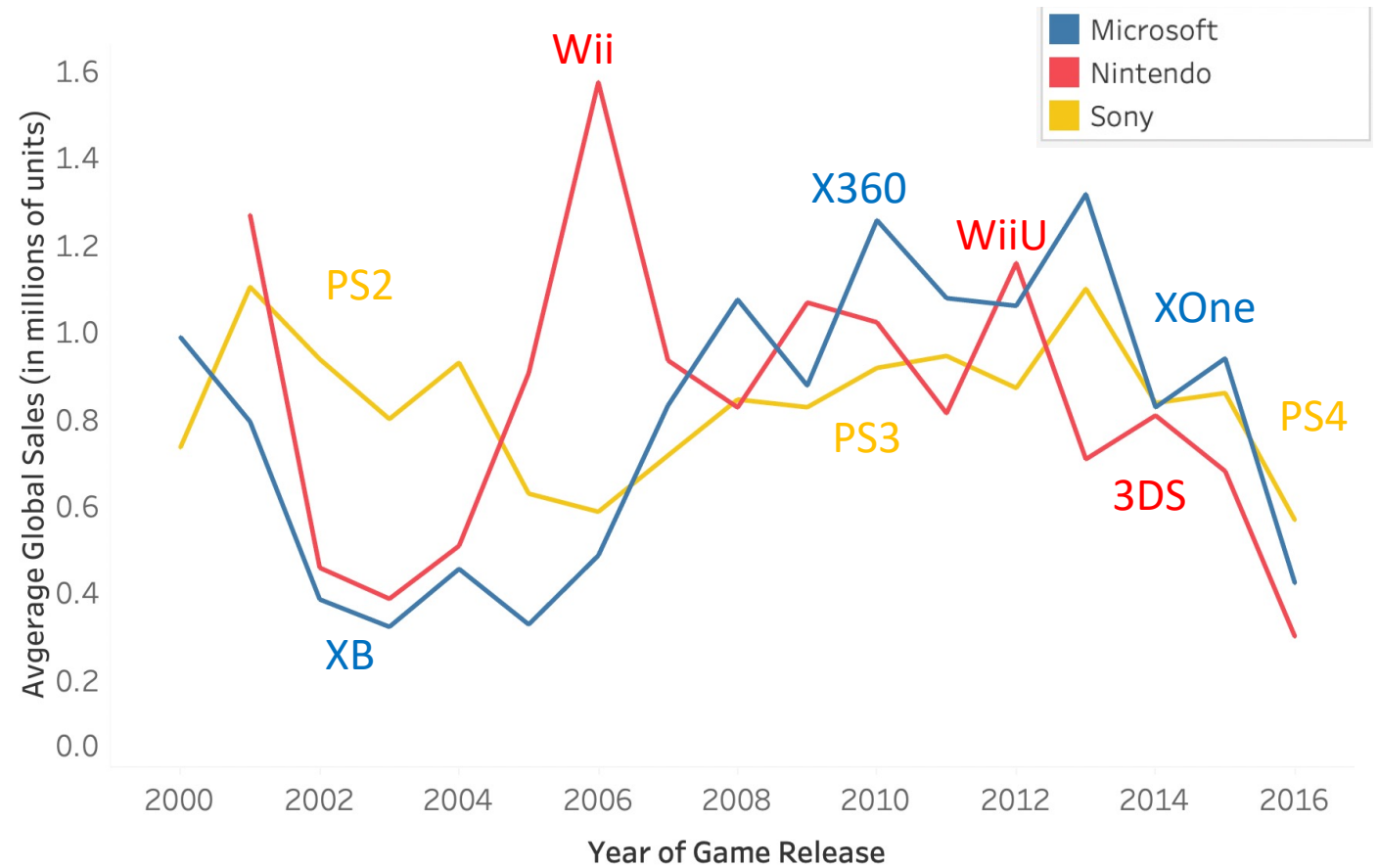


Rachel Goodridge



Flashback to the 2006 Console Wars

Turbulent History



Three-Pronged Solution Path

Problem



What can give
Microsoft an
advantage
over Nintendo
and Sony?

Three-Pronged Solution Path

Problem



Impact



What can give Microsoft an advantage over Nintendo and Sony?

Improving upon current popular games and the diversity of games available may increase the number of people playing or rate at which people purchase Xbox games.

Three-Pronged Solution Path

Problem



Impact



Data



What can give Microsoft an advantage over Nintendo and Sony?

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Collect dataset from Kaggle about games sold on different platforms including genre, sales, critic scores, and ratings.

Three-Pronged Solution Path

Problem



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Data



EDA



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Use Google Sheets and Tableau to perform some Exploratory Data Analysis and observe patterns.

Three-Pronged Solution Path

Problem



Impact



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EDA



Grouping



Use unsupervised machine learning to cluster games into categories and treat each category with a specific growth strategy.

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Three-Pronged Solution Path

Problem



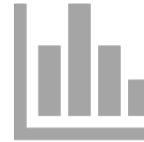
Impact



Data



EDA



Prediction



Grouping



Use unsupervised machine learning to cluster games into categories and treat each category with a specific growth strategy.

Use time series analysis to predict the growth rate of different game categories and game sales rate in different consoles.

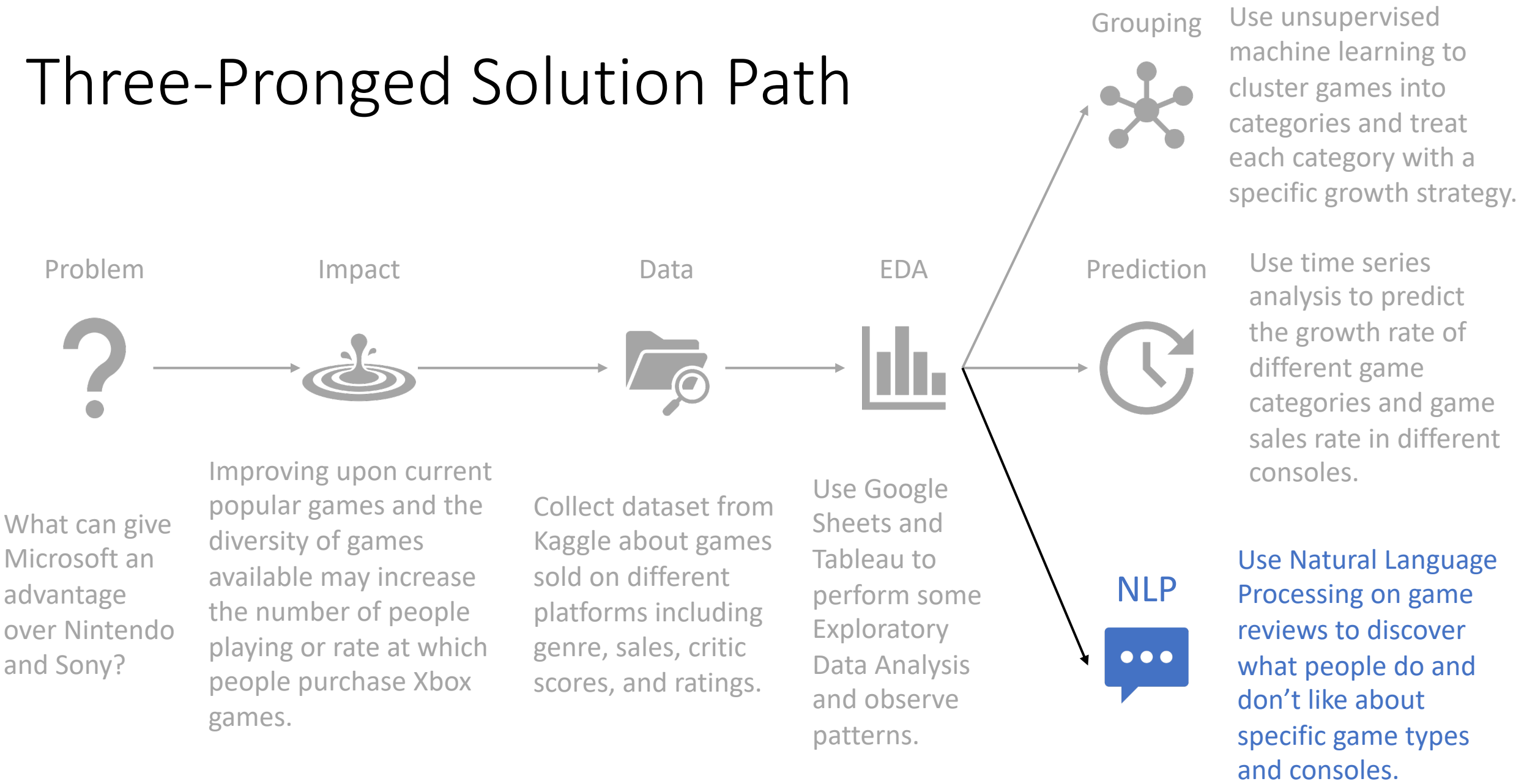
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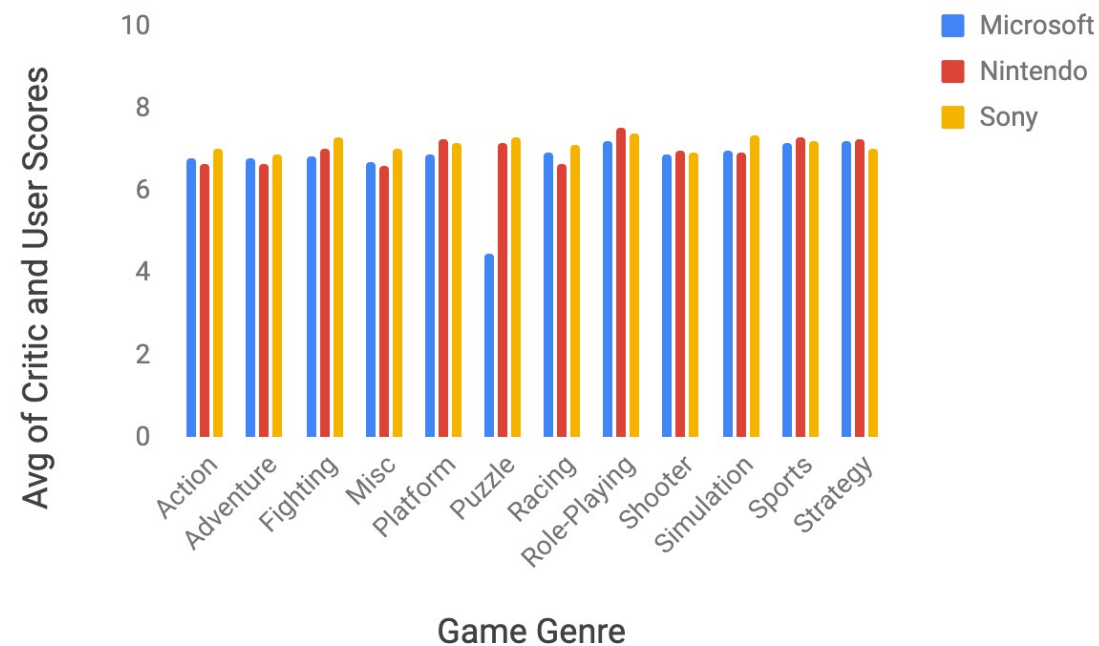
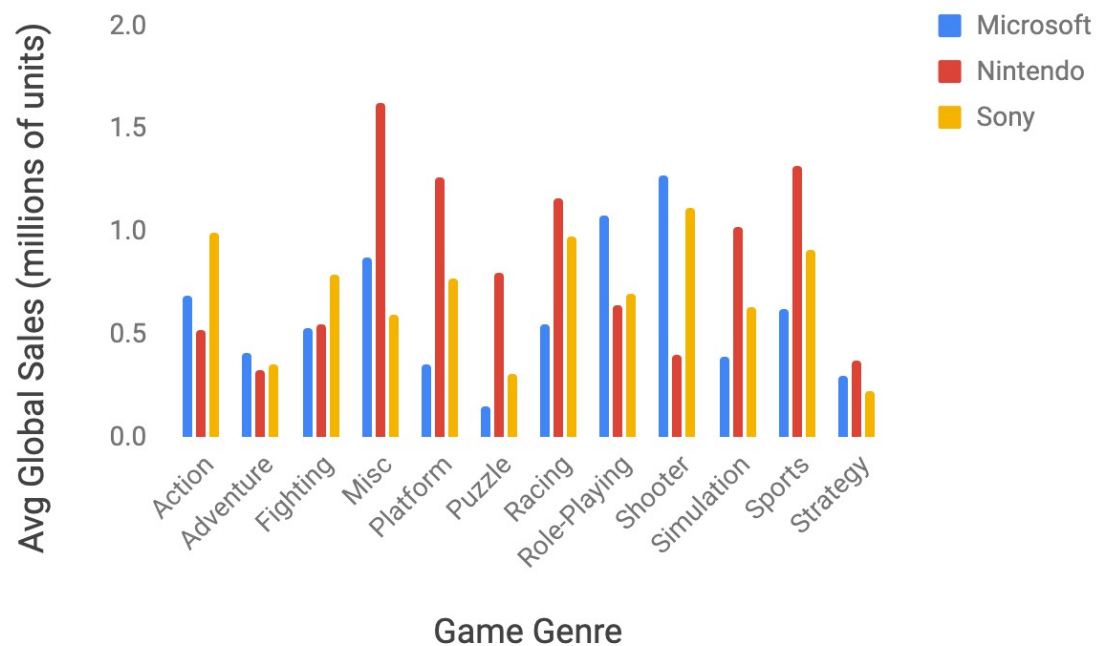
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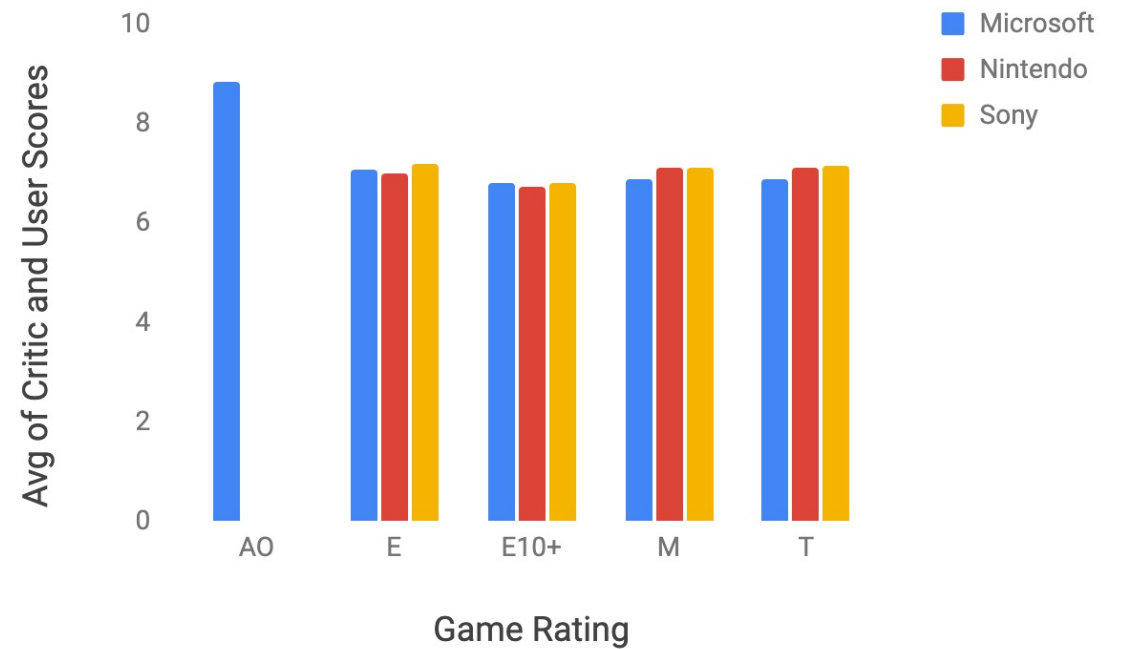
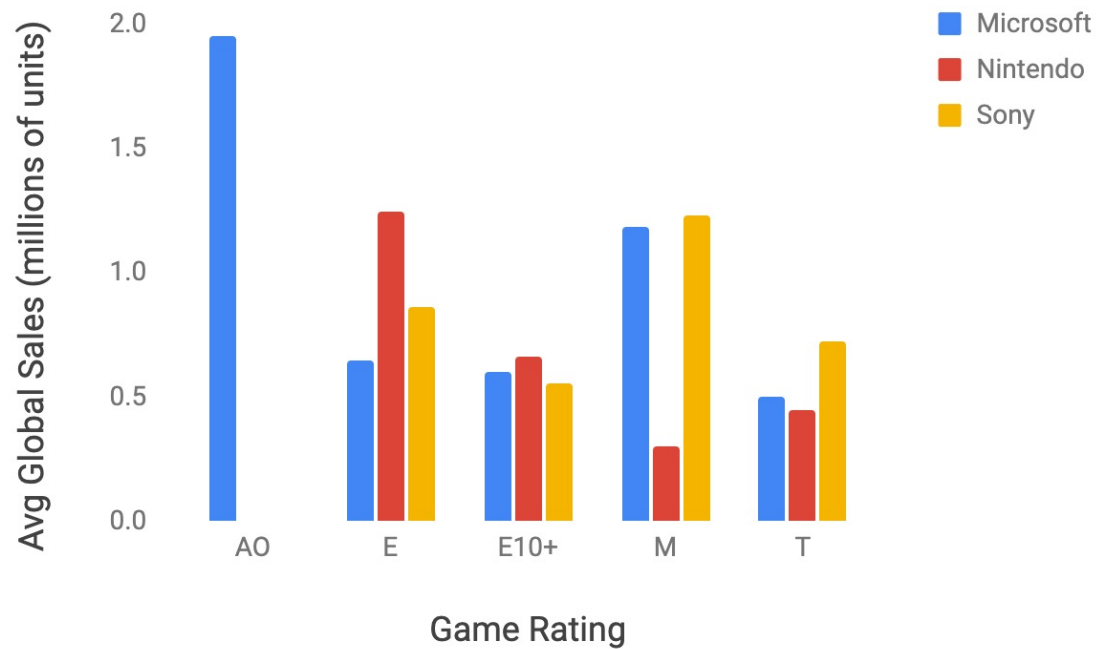
Three-Pronged Solution Path



Game Comparison by Genre



Game Comparison by Rating



Conclusions from Initial Analysis

If game diversification is the goal, Microsoft should focus on . . .

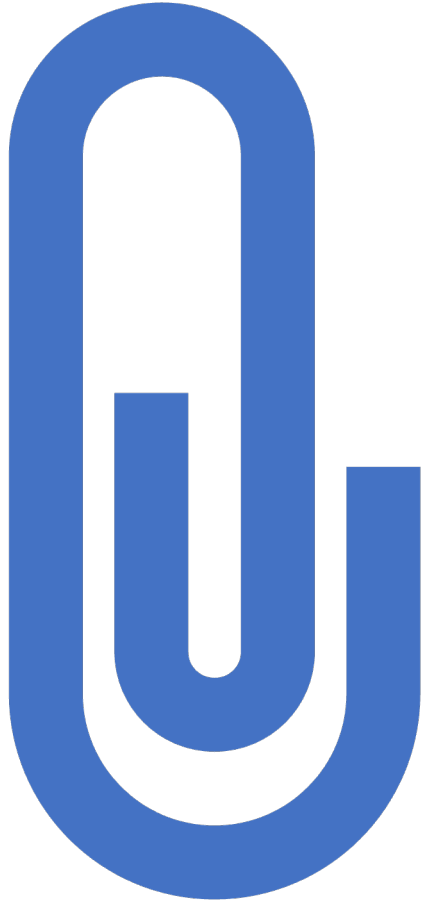
- Platform games
- Puzzle games
- Racing games
- Simulation games
- Sports games
- Games rated for everyone
- Games rated for teens

If game specialization is the goal, Microsoft should focus on . . .

- Role-playing games
- Shooter games
- Games rated for adults only
- Games rated for mature audiences



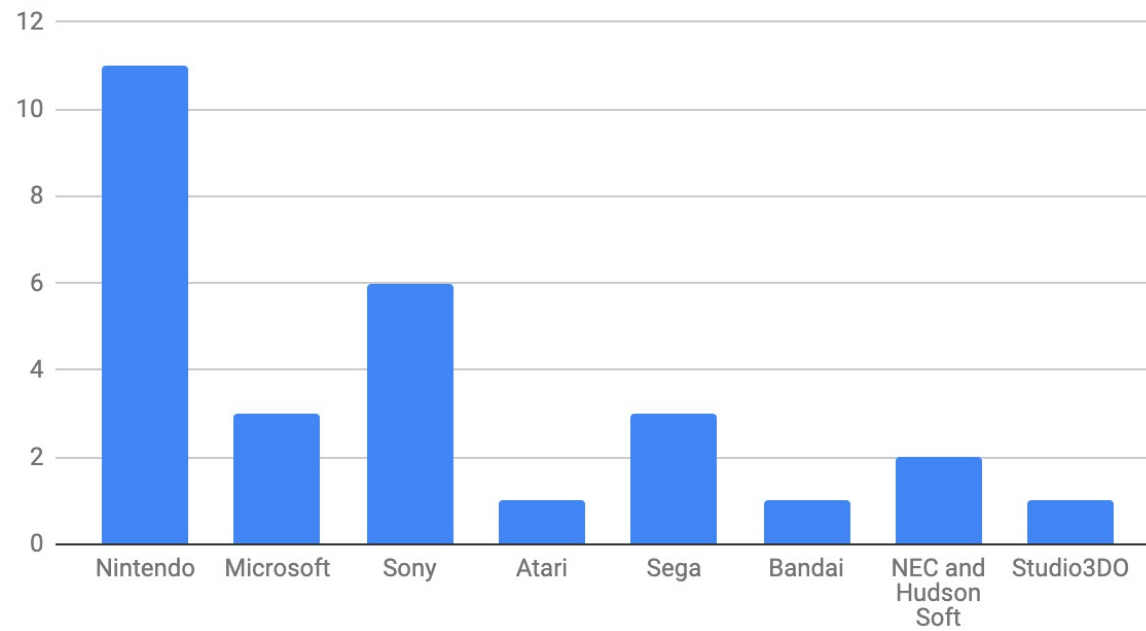
Thank you



Appendix

Consoles

Number of Consoles



Console	Company	Full Name of Console
Wii	Nintendo	Wii
NES	Nintendo	Nintendo Entertainment System
GB	Nintendo	Game Boy
DS	Nintendo	DS
X360	Microsoft	Xbox 360
PS3	Sony	PlayStation 3
PS2	Sony	PlayStation 2
SNES	Nintendo	Super Nintendo Entertainment System
GBA	Nintendo	Game Boy Advance
PS4	Sony	PlayStation 4
3DS	Nintendo	3DS
N64	Nintendo	Nintendo 64
PS	Sony	PlayStation
XB	Microsoft	Xbox
PC		
2600	Atari	
PSP	Sony	PlayStation Portable
XOne	Microsoft	Xbox One
WiiU	Nintendo	Wii U
GC	Nintendo	GameCube
GEN		
DC	Sega	
PSV	Sony	PlayStation Vita
SAT	Sega	
SCD	Nintendo	Supplemental Computing Device
WS	Bandai	
NG		
TG16	NEC and Hudson Soft	
3DO	Studio3DO	
GG	Sega	
PCFX	NEC and Hudson Soft	

Pivot Tables (part I)

<i>Company</i>	AVERAGE of Global_Sales	AVERAGE of Critic_User_Score
Nintendo	0.8587979684	6.969567508
Sony	0.854828938	7.115632253
Microsoft	0.755335019	6.924912649
Grand Total	0.8304188312	7.024634665

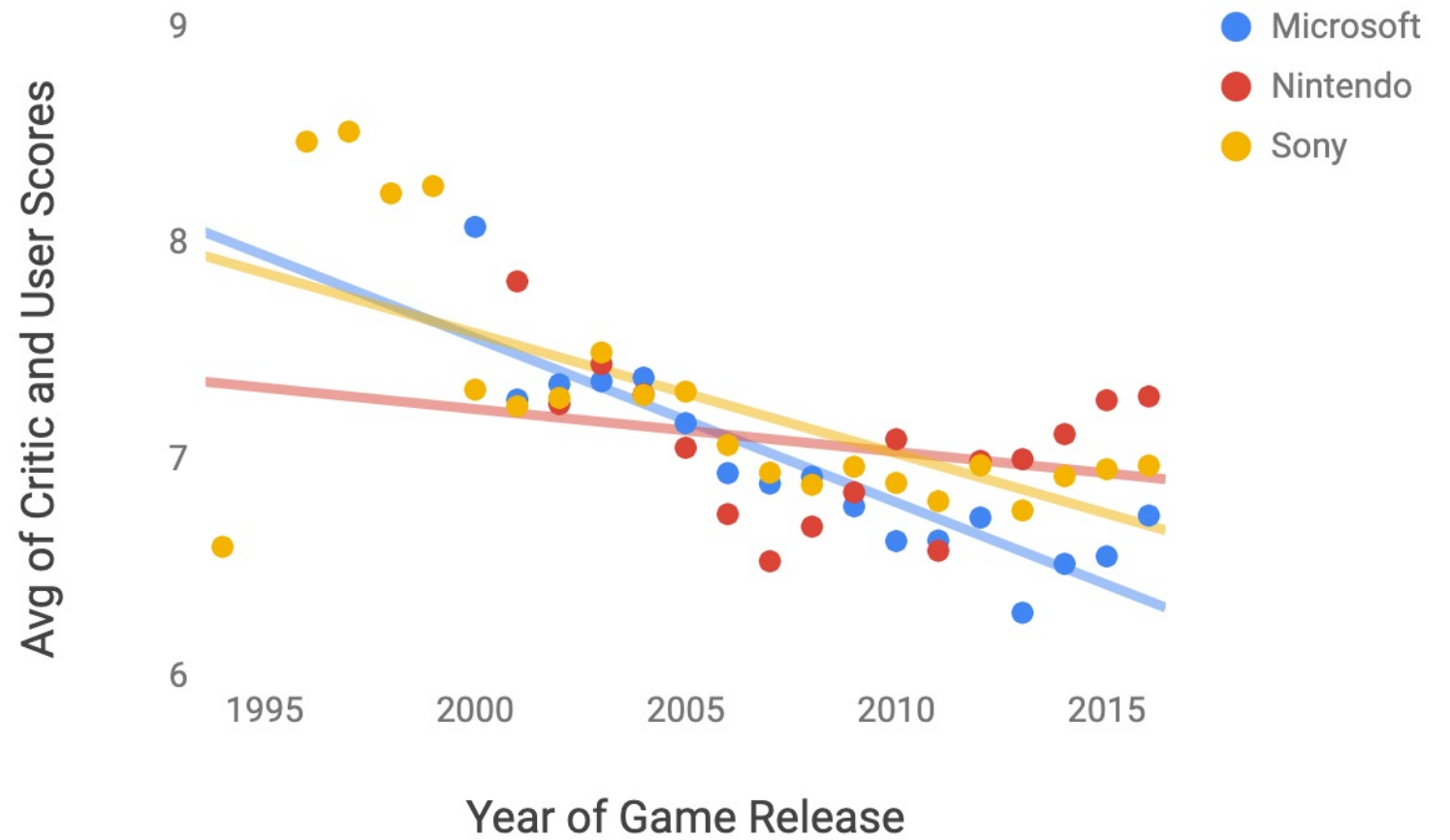
<i>Platform</i>	AVERAGE of Global_Sales	AVERAGE of Critic_User_Score
PS	1.377	7.709264843
Wii	1.375741127	6.638129374
PS3	1.019895969	6.86109255
PS4	1.016861925	6.791304551
X360	0.9945221445	6.75080646
PS2	0.8297982456	7.271640478
DS	0.823987069	6.835160984
XOne	0.8149056604	6.595433975
3DS	0.7950322581	6.881489354
WiiU	0.7424719101	7.033392159
GBA	0.555907173	7.352195238
PSP	0.4818461538	7.056094546
GC	0.4581034483	7.367304407
XB	0.3753451327	7.28202808
PSV	0.2616949153	7.36631693
Grand Total	0.8304188312	7.024634665

Pivot Tables (part II)

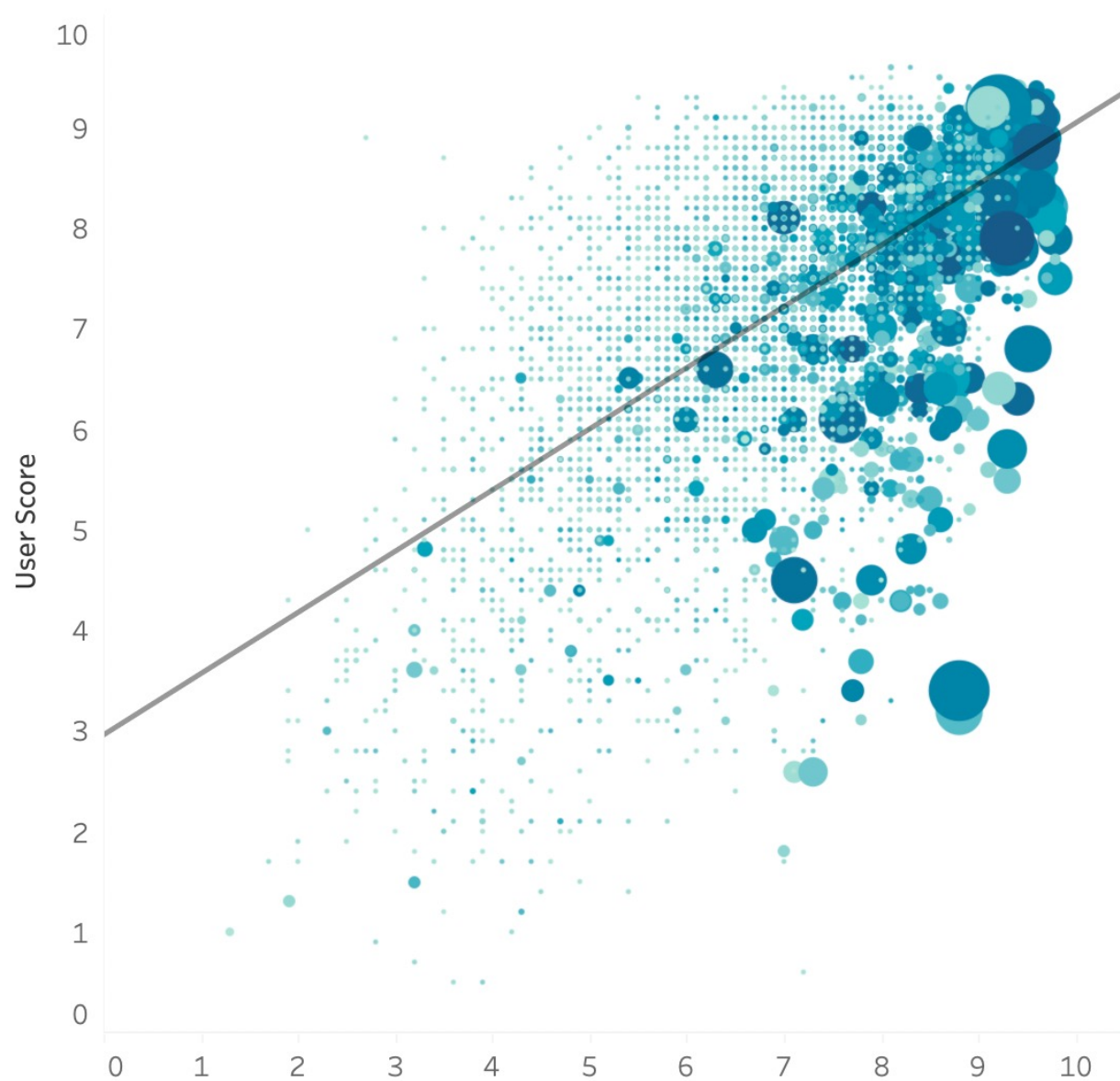
<i>Genre</i>	AVERAGE of Global_Sales	AVERAGE of Critic_User_Score
Misc	1.084619423	6.782640256
Shooter	1.062792916	6.921030368
Platform	0.9622959184	7.154501597
Sports	0.9039606127	7.202485189
Racing	0.8821641791	6.951582038
Action	0.78514	6.852820348
Simulation	0.7423853211	7.073968844
Role-Playing	0.729616	7.404518391
Puzzle	0.6904385965	7.116434112
Fighting	0.6682573727	7.111389537
Adventure	0.3529411765	6.768338894
Strategy	0.2910526316	7.138413423
Grand Total	0.8304188312	7.024634665

<i>Rating</i>	AVERAGE of Global_Sales	AVERAGE of Critic_User_Score
AO	1.95	8.830681818
M	1.133067227	7.020042806
E	0.981706209	7.080611121
E10+	0.6121453287	6.780765442
T	0.6080103725	7.073764095
Grand Total	0.8304188312	7.024634665

Time Series



Critic vs User Scores



Company

- ☒ (All)
- ☒ Microsoft
- ☒ Nintendo
- ☒ Sony

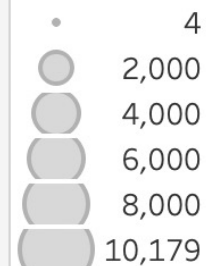
Critic Count



Critic Count



User Count

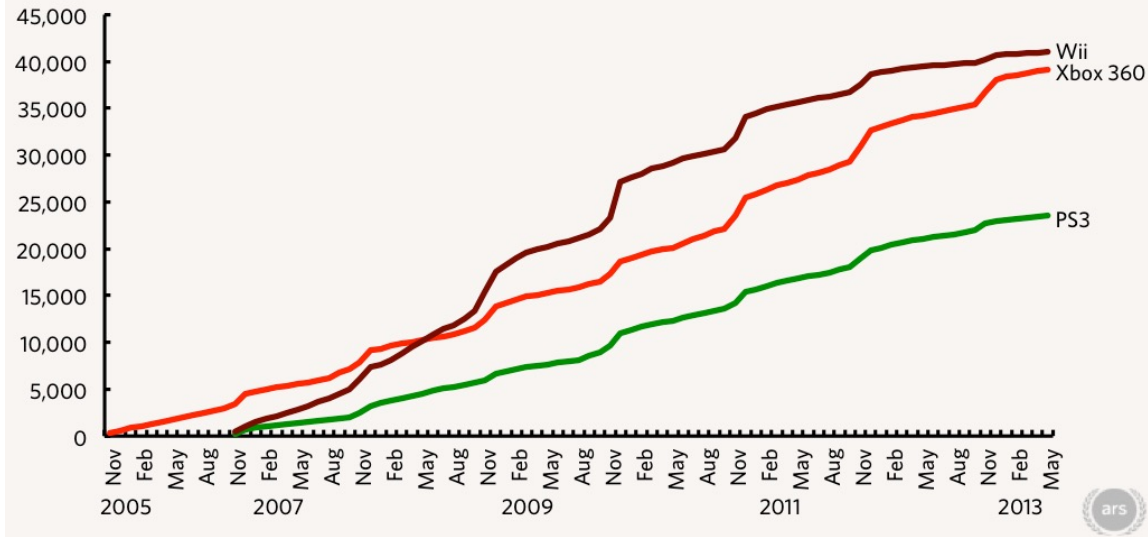


User Count

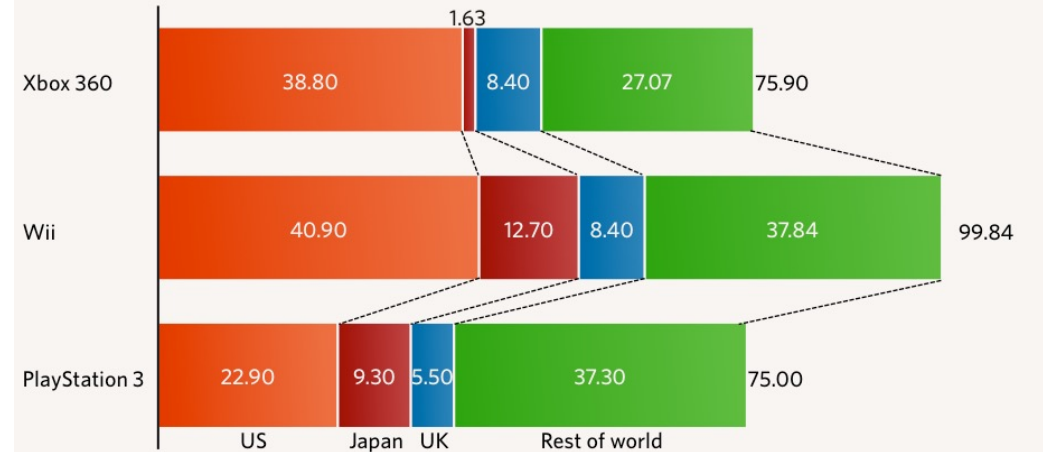


Xbox 360 vs Wii vs PlayStation 3

Cumulative US console sales by month: Nov 2005-May 2013
Thousands



Total console sales since launch
Millions



Kyle Orland - Jun 27, 2013 9:56 pm UTC, and sominiArs Centurion jump to post. "Analysis: Xbox 360 Poised to Pass Wii in US Sales by Year's End." *Ars Technica*, 27 June 2013, <https://arstechnica.com/gaming/2013/06/analysis-xbox-360-poised-to-pass-wii-in-us-sales-by-years-end/>.

Console Sales

Million-selling game consoles						
Platform	Type	Firm	Released ^[2]	Units sold	Ref.	
PlayStation 2	Home	Sony	2000	>155 million	[note 1]	
Nintendo DS family	Handheld	Nintendo	2004	154.02 million	[17]	
Game Boy & Game Boy Color	Handheld	Nintendo	1989, 1998	118.69 million	[note 2]	
PlayStation 4 #	Home	Sony	2013	116.6 million	[22]	
PlayStation	Home	Sony	1994	102.49 million	[33]	
Wii	Home	Nintendo	2006	101.63 million	[17]	
Nintendo Switch #‡	Hybrid	Nintendo	2017	92.87 million	[34]	
PlayStation 3	Home	Sony	2006	>87.4 million	[note 1]	
Xbox 360	Home	Microsoft	2005	>84 million	[note 3]	
Game Boy Advance family	Handheld	Nintendo	2001	81.51 million	[17]	
PlayStation Portable	Handheld	Sony	2004	80–82 million (estimate)	[note 1]	
Nintendo 3DS family	Handheld	Nintendo	2011	75.94 million	[34]	
Nintendo Entertainment System	Home	Nintendo	1983	61.91 million	[17]	
Xbox One #	Home	Microsoft	2013	51 million (estimate)	[note 3]	
Super Nintendo Entertainment System	Home	Nintendo	1990	49.1 million	[17]	
Nintendo 64	Home	Nintendo	1996	32.93 million	[17]	
Sega Genesis/Mega Drive	Home	Sega	1988	30.75 million	[note 4][45]	
Atari 2600	Home	Atari	1977	30 million	[46]	
Xbox	Home	Microsoft	2001	24 million	[47]	
GameCube	Home	Nintendo	2001	21.74 million	[17]	

“List of Best-Selling Game Consoles.” *Wikipedia*, Wikimedia Foundation, 6 Nov. 2021, https://en.wikipedia.org/wiki/List_of_best-selling_game_consoles.

Cost-Benefit Analysis

- Microsoft doesn't make profit from console sales. They may even lose money, because it is so expensive to make quality electronics. This is just how they attract new customers.
- Profits are made from game sales and online service subscriptions. Microsoft takes a 30% cut from all games and in-game purchases sold through the console's store under its standard developer agreement. Developers would be given a deal by Microsoft, so they would be paid to have their game appear on Game Pass.
- Microsoft also gets about 45% from physical copies of games purchased. As long as people are buying games, Microsoft will make money, whether you buy the Blu-Ray / physical disc version or purchase it digitally through the online store.
- For example, the Xbox 360 is about \$180 and Microsoft takes roughly a \$126 hit per console sold. Current games cost \$60 on average and Microsoft gets 30% from each game, so about \$18 per game profit. This means users would need to buy at least 7 games to make up for the loss of the console sale.

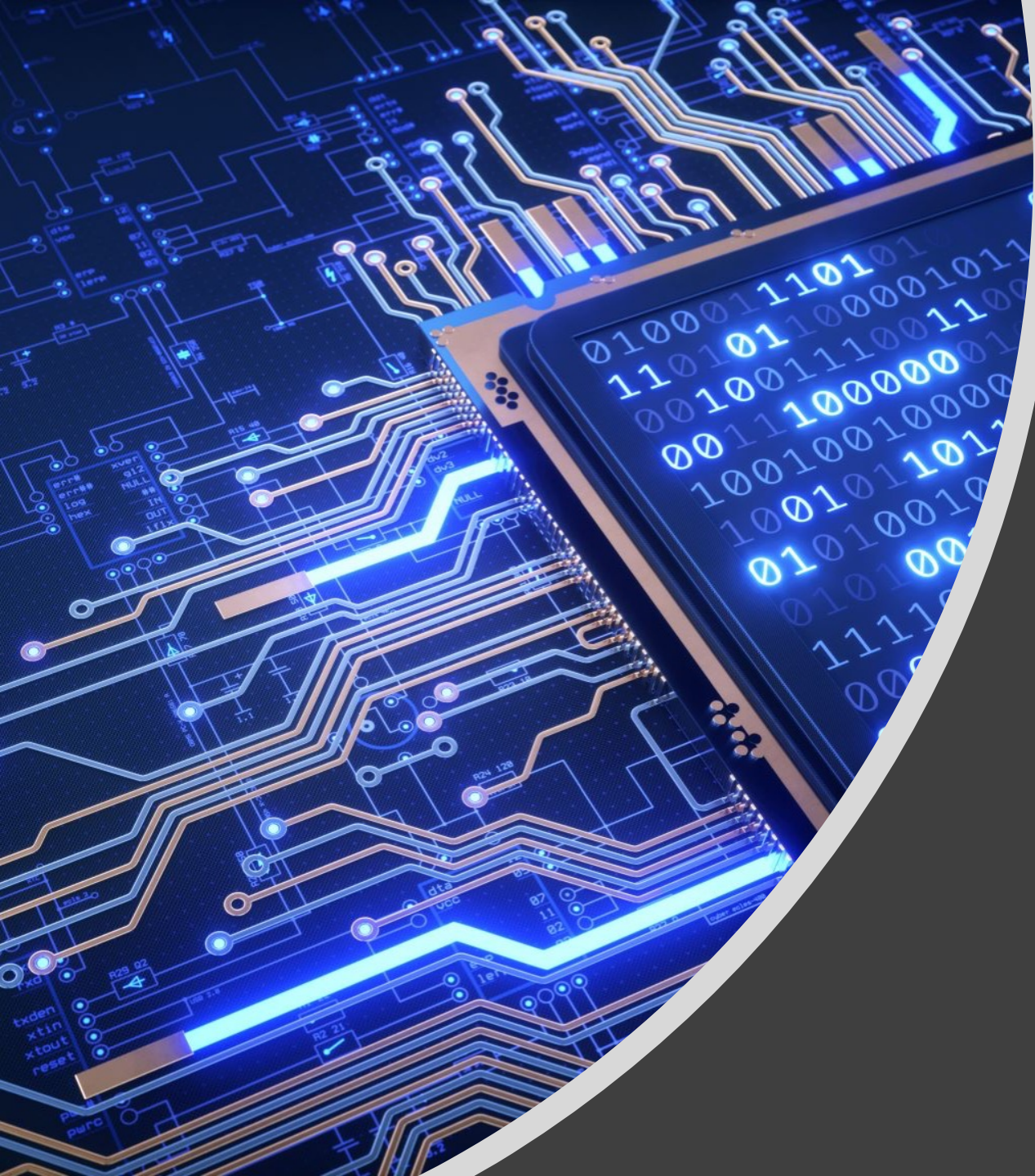


Criteria for Success

- Measure the current rate of game sales on all consoles as a baseline.
- Success would be increasing this rate of game sales (ideally on all consoles, but overall is fine).
- Measure the overall net profit made per month compared to Nintendo and Sony.
- Success would be a higher rate of profit increase (need to adjust for inflation).

Assumptions

- We assume that focusing efforts on game availability and diversification will not only attract new customers, but also encourage existing customers to purchase additional games.
- We assume that adapting to the style of the competitors will have a positive impact.
- We also assume that the number of consoles owned by each company does not play a role in this. (Nintendo has developed far more gaming consoles than Microsoft or Sony, so this may bring them an advantage by sheer numbers.)



Risks

- Microsoft seems to have a niche gaming audience that we could potentially start to lose if energy is spent diversifying too widely.
- Maybe the available games are not the reason for disinterest in Microsoft products. In this case, changing the games available would not address the problem.
- We don't want quality or other areas to decline because of this shift in focus.



Future Directions : An Argument for Diversification

- Microsoft is moving towards cloud gaming.
- Xbox Game Pass is a video game subscription service from Microsoft for use with its Xbox Series X/S and Xbox One consoles, Windows 11 and Windows 10, as well as Android and iOS devices via Xbox Cloud Gaming. It costs \$120 per year.
- Subscribers to Xbox Game Pass are playing 40% more games (including titles outside the Game Pass catalogue) than they did before joining.
- An impressive 91% of subscribers say they have played a title they would not have tried without Xbox Game Pass, while Microsoft has noticed members are playing 30% more genres than they did before joining.