# Gaming industry, theory of Russian doll effect on AI selling computers gaming industry WASD 19 th international conference annual conference DISAPORA 10 th international annual con…

**Article** · December 2021

CITATIONS
0

READ
1

**2 authors:**

Doaa M. Salman Abdou
October University for Modern Sciences and Arts
**79** PUBLICATIONS **180** CITATIONS
SEE PROFILE

Omar El-Mohamady
October University for Modern Sciences and Arts
**1** PUBLICATION **0** CITATIONS
SEE PROFILE

# MAKING UNIVERSITITES WORK FOR THE UN SUSTAINABLE DEVELOPMENT GOLAS

## WASD 19TH INTERNATIONAL CONFERENCE ANNUAL CONFERENCE
## DISAPORA 10TH INTERNATIONAL ANNUAL CONFERENCE

3- 5th December, 2021

# Gaming industry, theory of Russian doll effect on AI selling computers gaming industry

**Doaa Salman Abdou & Omar El Mohamady**
*October University for Modern Sciences & Arts, Egypt*

**DAY02- Saturday 4th December 2021**

# Agenda



- Objective and hypothesis
- Introduction
- Literature review
- Analysis of video games industry and sales
- Conclusion

## Research hypothesis

H1: AI is the main factor that chains the electronic industries together and to interface with one of the industries the consumer or the creator will inevitably interface with the industry prior to it in the hierarchy.

## Research question

Is AI is the Russian doll of all the Electronic industries?

Can AI keep producing more smaller industries and make more job opportunities?

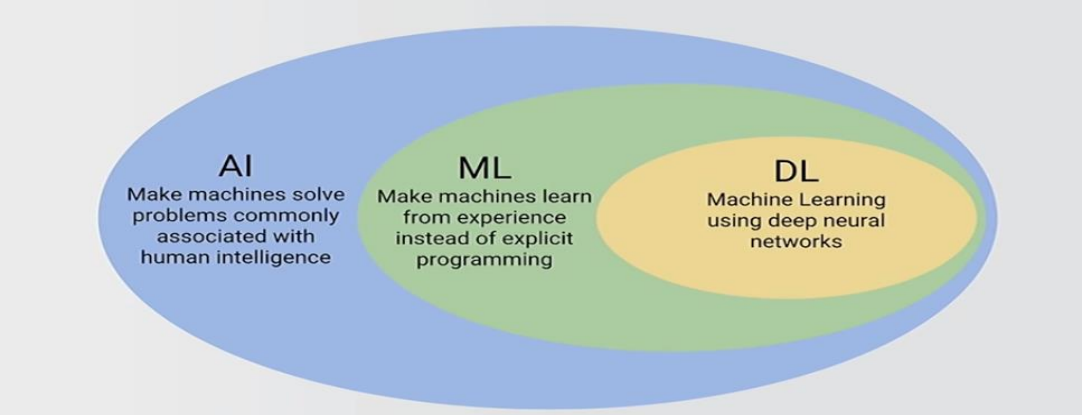
What is the next step of AI ?

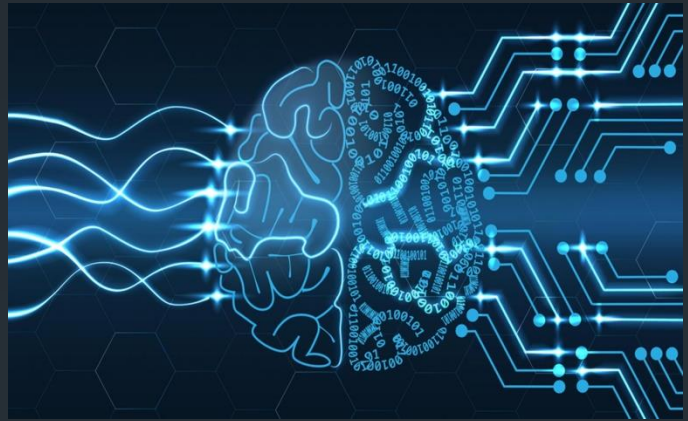
## Research objective

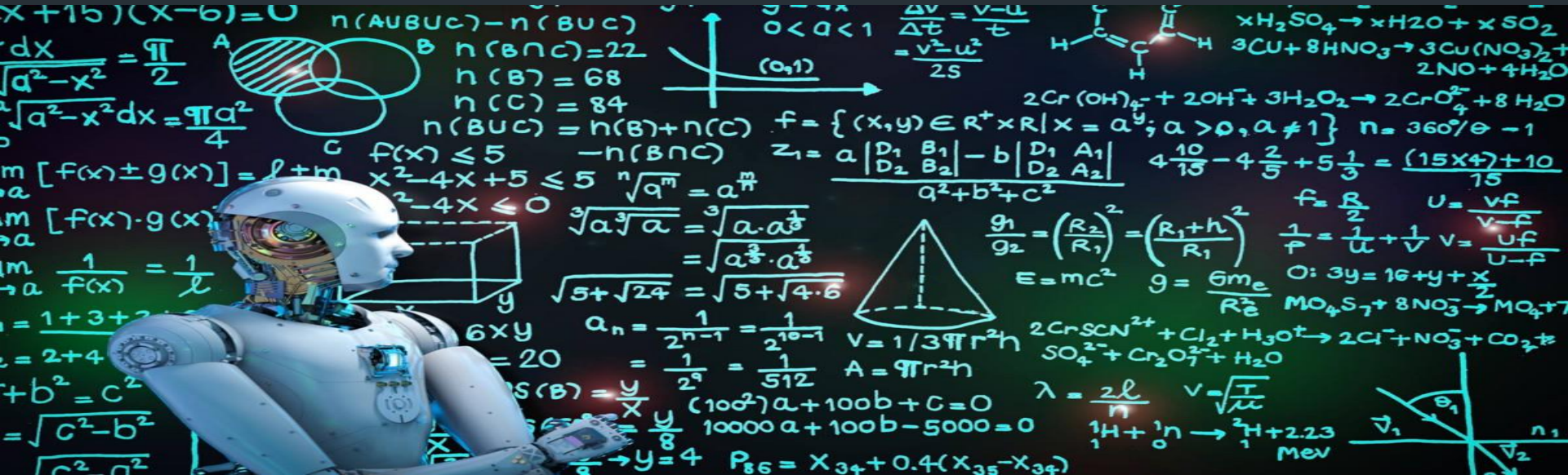
Finding the effect of AI on smaller industries, case of the video games industry.

# Theoretical Review

## What is AI and how it is functioning?



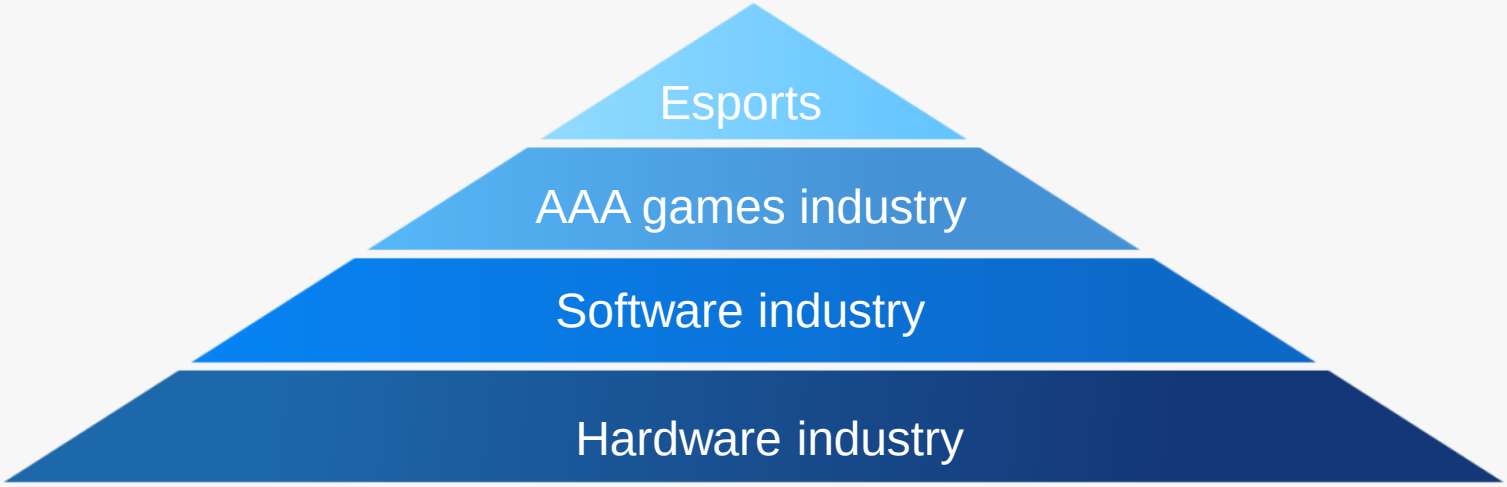





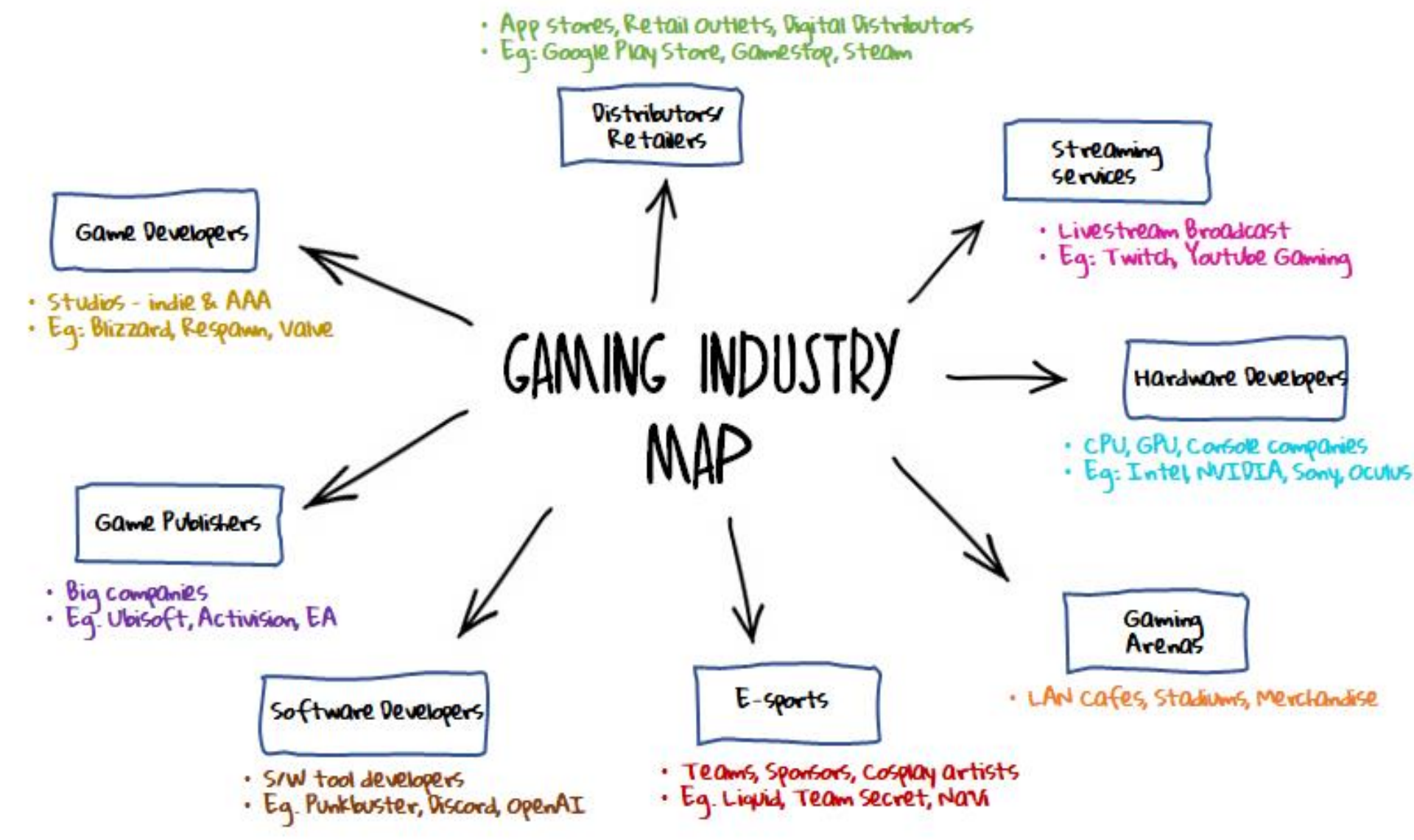
# AI and the Russian doll or Matryoshka Effect



**Hardware to software to AAA Gaming industry to Gatcha and Esports gaming industry**

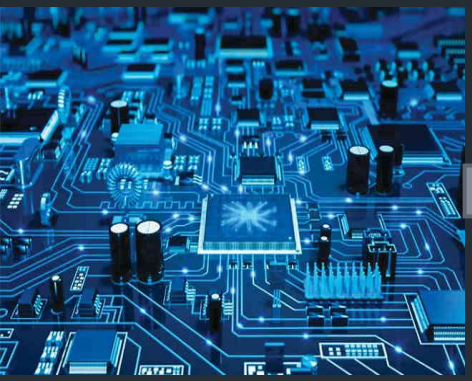


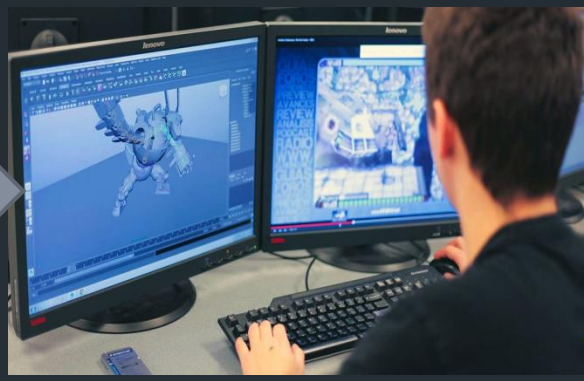
# Gaming industry map



# AI creation in Gaming industry to both developer and consumer

## Game Development process



## Gaming process



# Evolution of games across the years

Gaming Evolution =
Individual Play → Global Collaborative Play (1967-2017)...

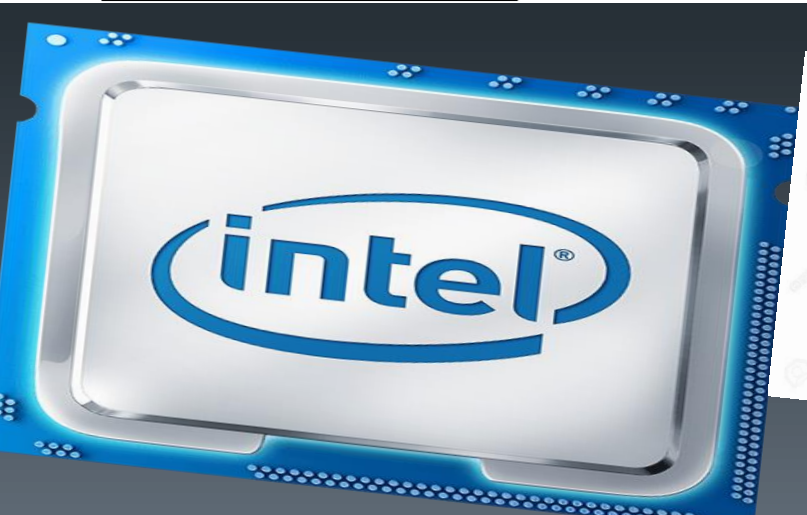
Moore's Law (Processing) → Zuckerberg's Law* (Sharing)

| 1 Player = Arcade | 2 Players = Consoles | 2+ Players = Consoles + LAN | Millions of Players = Online Network | Millions of Players + Spectators = eSports |
|---|---|---|---|---|
|  |  |  |  | MLG, ESL, twitch |

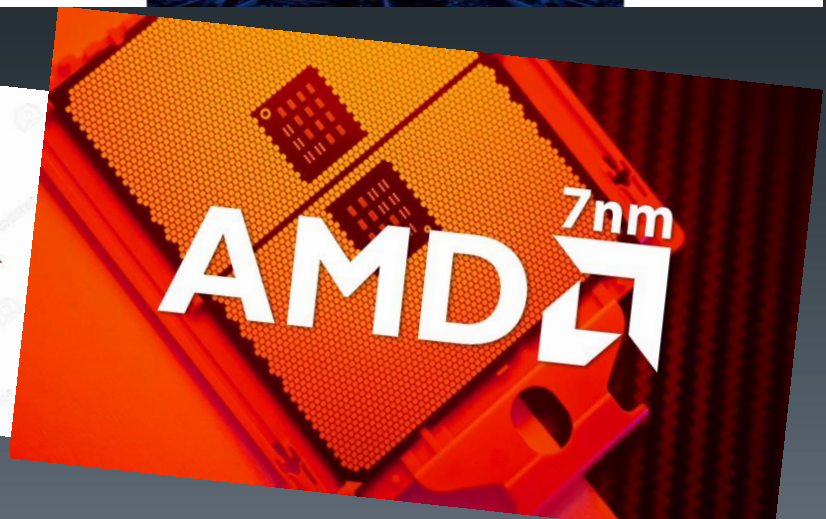
Solo – Living Room...

45 Years

...Many – Arena (Thousands)... Online (Millions)



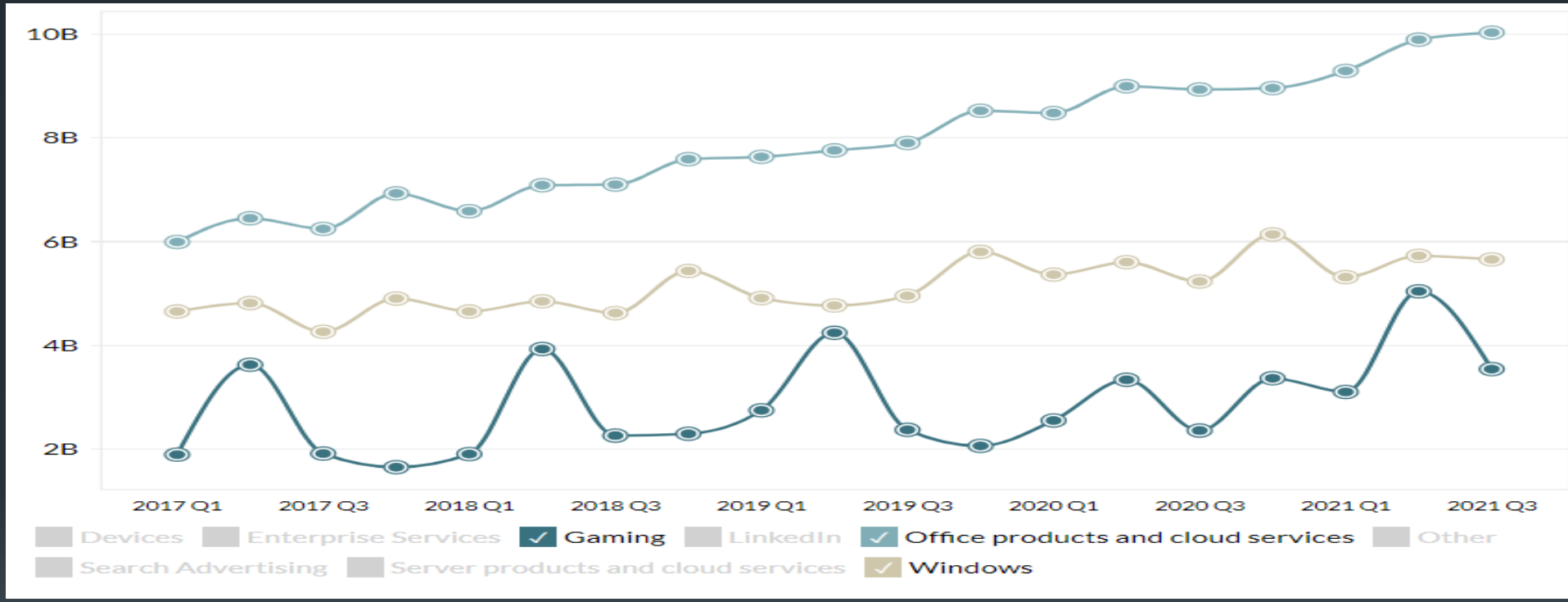




# Software



**Microsoft relatively 50% of its income and revenues comes from Microsoft office, windows and gaming. As in 2019, the revenues of office products reached 7.7B$ while windows reached 4.2B$**




Source: Statista,2021

# Game publishing companies



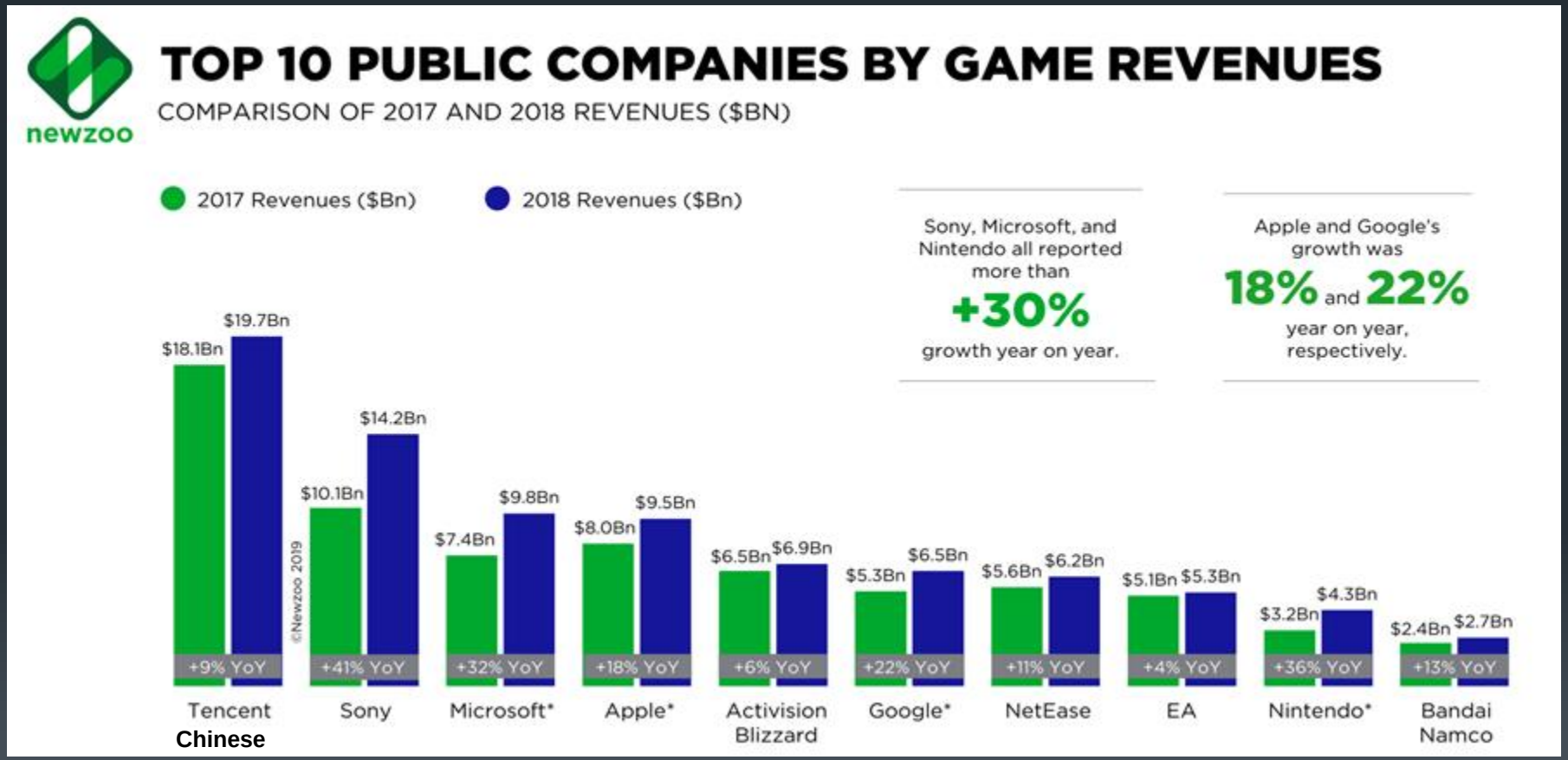

## Top Mobile Publishers by Worldwide Revenue for Q2 2019

SensorTower

| | Overall Revenue | Non-Game Revenue | Game Revenue |
|---|---|---|---|
| 1 | Tencent | IAC Mobile | Tencent |
| 2 | NetEase | Google | NetEase |
| 3 | Supercell | Tencent | Supercell |
| 4 | King | Netflix | King |
| 5 | Bandai Namco | Naver | Bandai Namco |
| 6 | Playrix | Baidu | Playrix |
| 7 | Netmarble | Pandora | Netmarble |
| 8 | Naver | Microsoft | Playtika |
| 9 | Playtika | OneSmile | Zynga |
| 10 | IAC Mobile | WarnerMedia | Mixi |

Note: Does not include revenue from third-party Android stores in China and other regions.

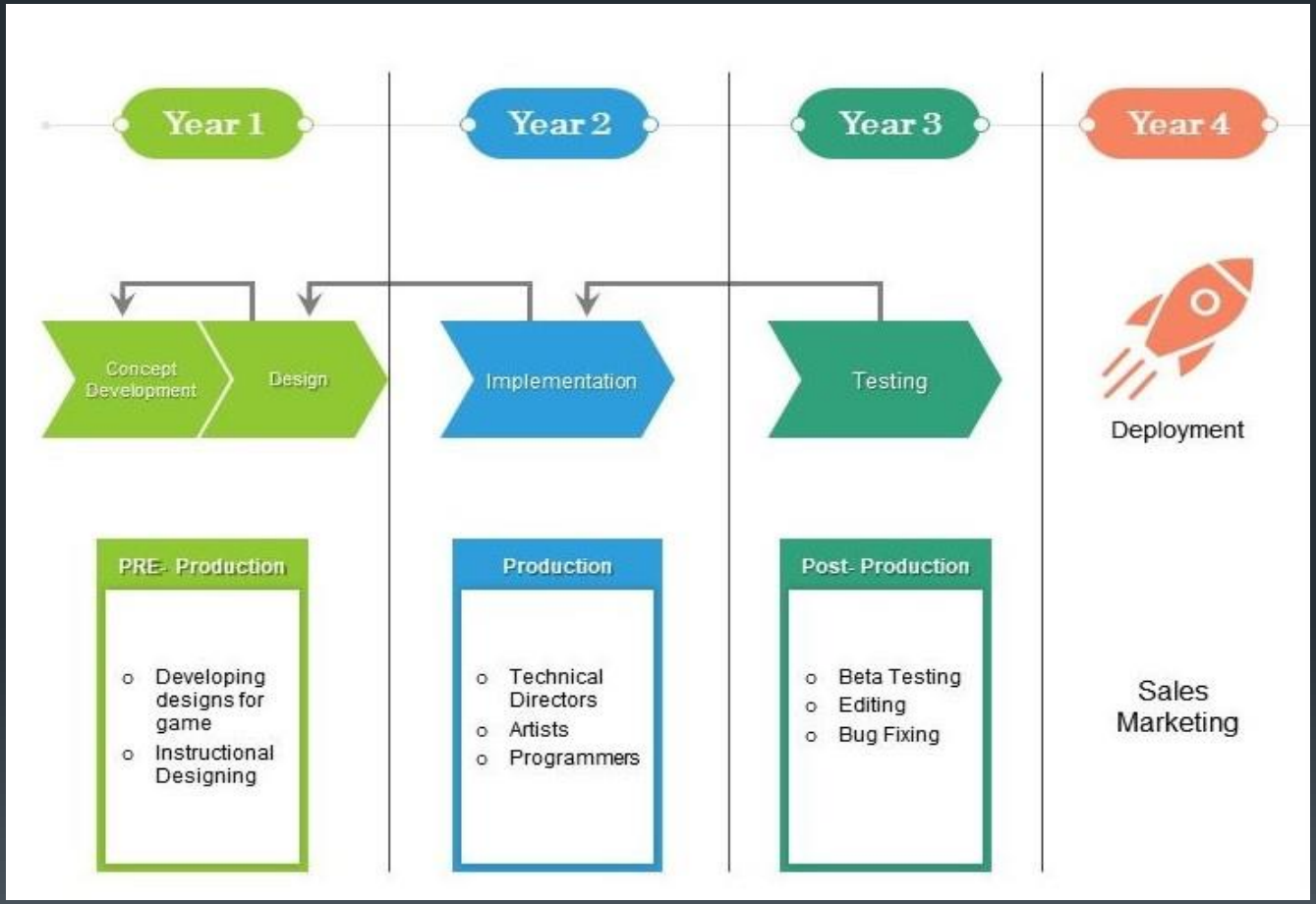
# Game publishing companies revenues in 2017 and 2018




Source: Newzoo,2019

# Game developers- Job opportunities

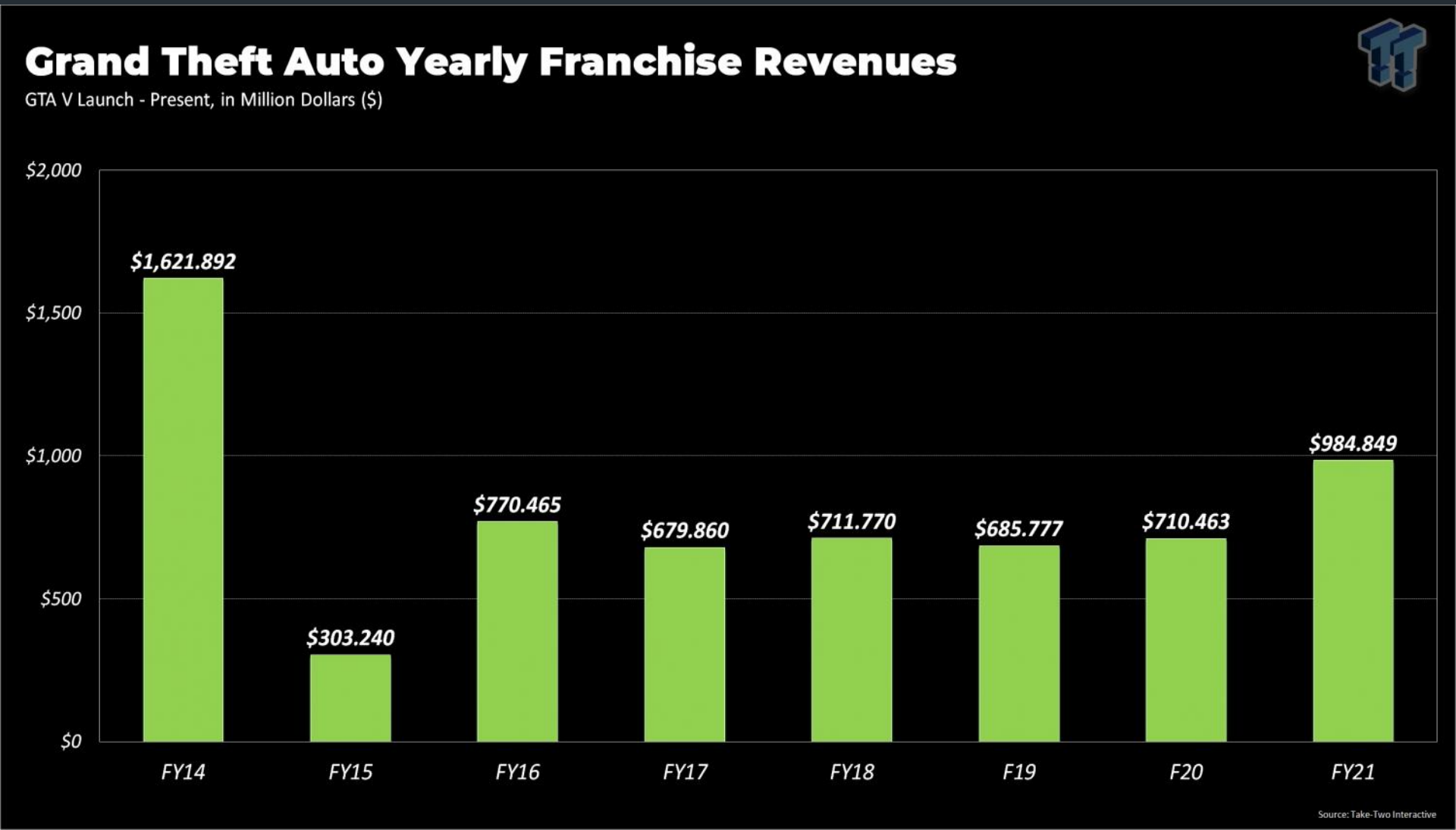






# Rockstar and GTA V greatest game revenue of all time

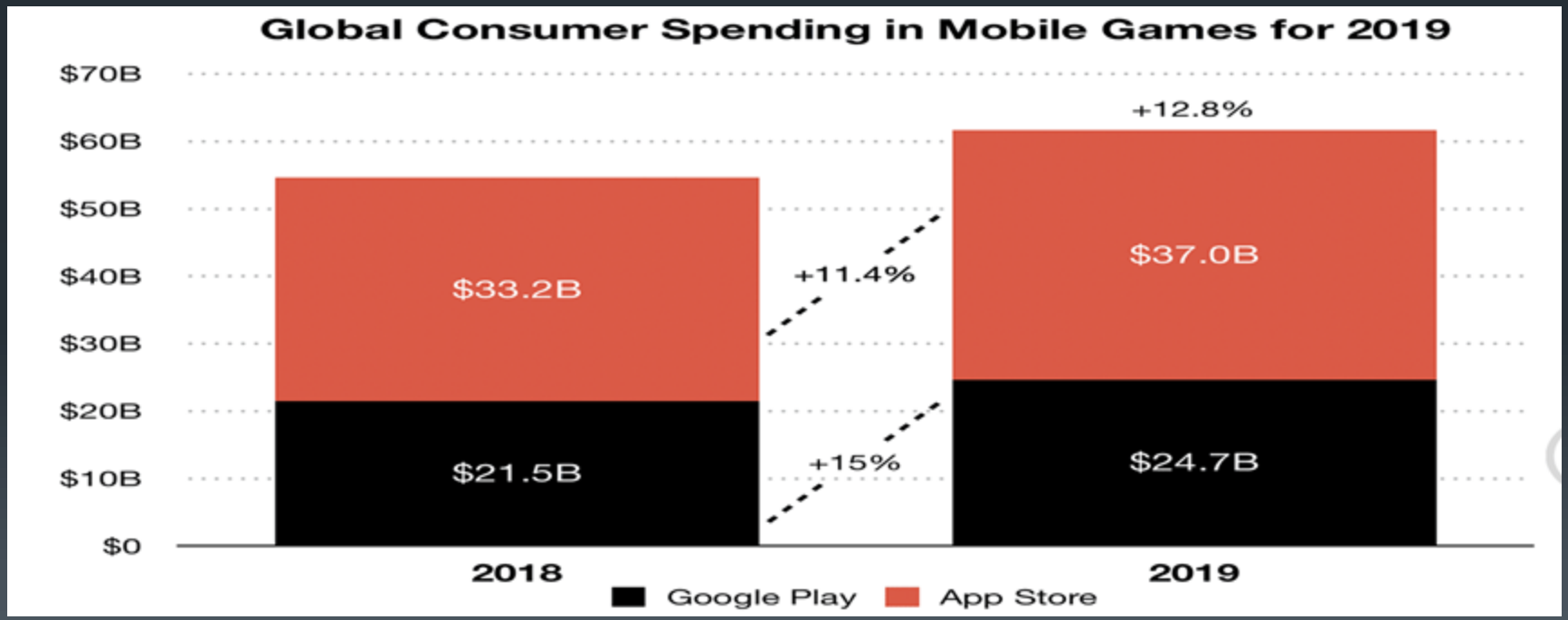




# Distributors/Retailers



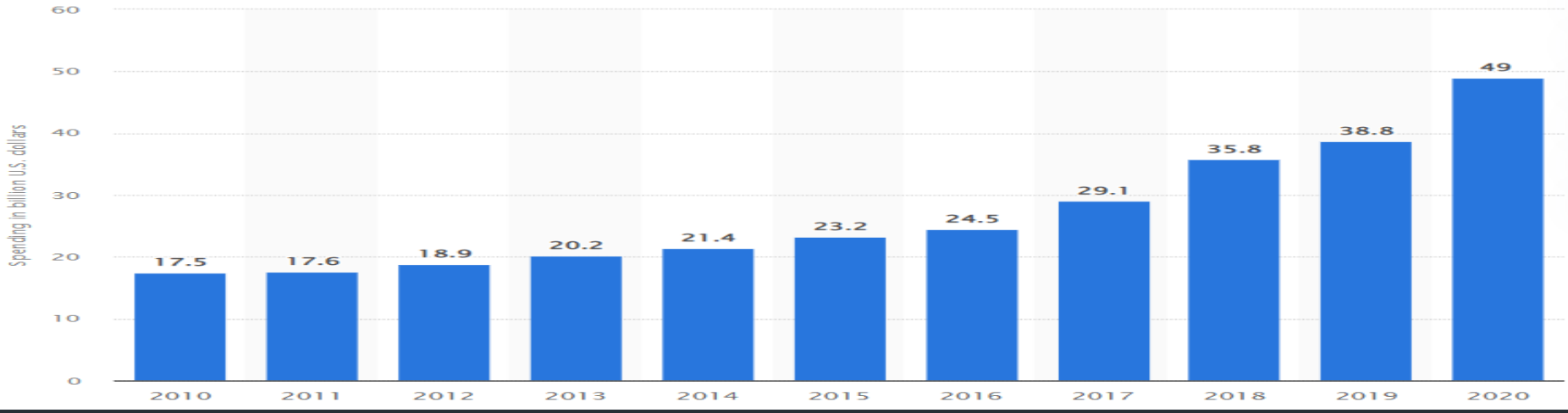
App Store Versus Google Play




Source: sensor Tower, 2021

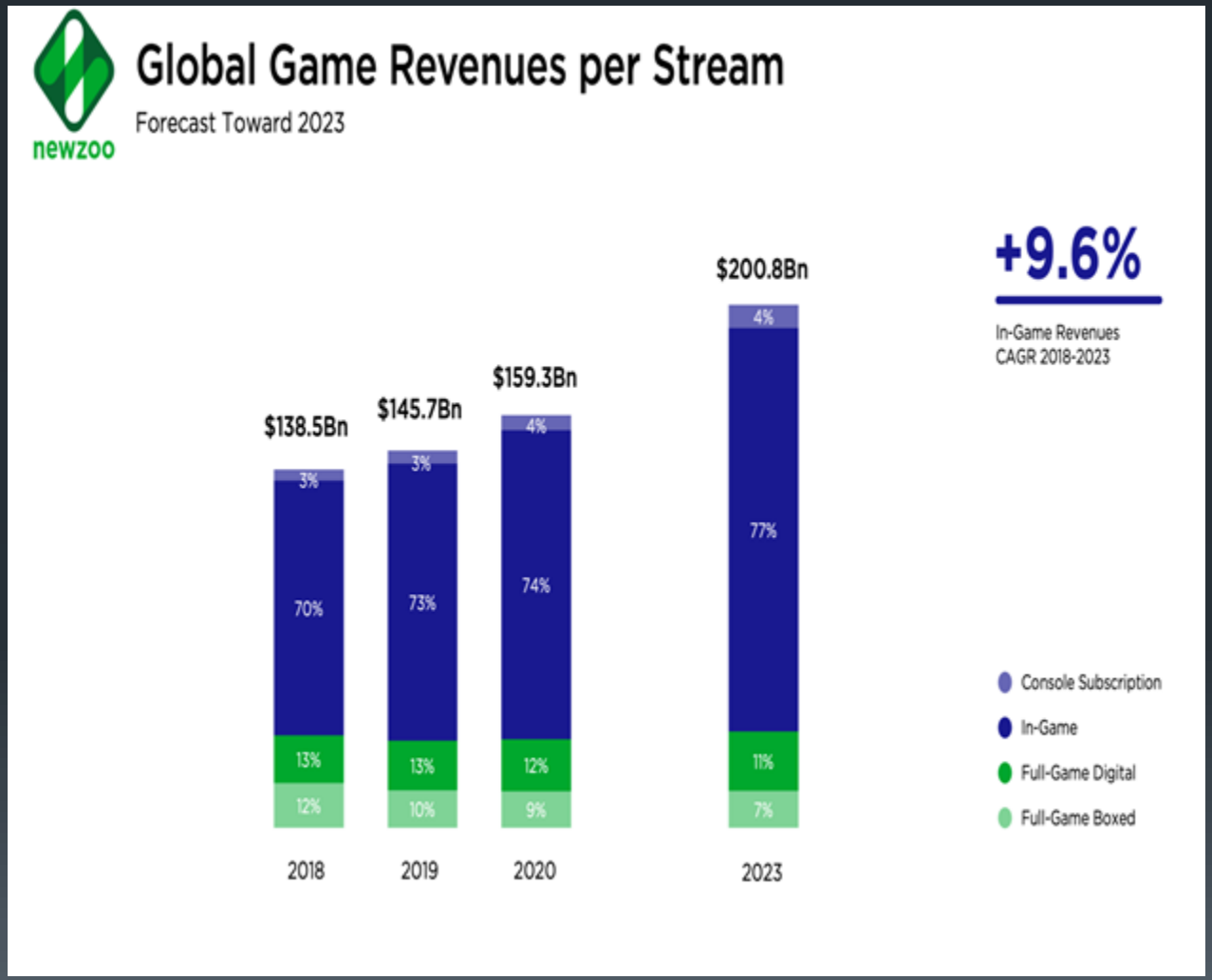
# US consumer expenditure on gaming






# Gaming Arenas


# Games streaming services




# Esports and how digitalization and AI made a new kind of social and competitive activity





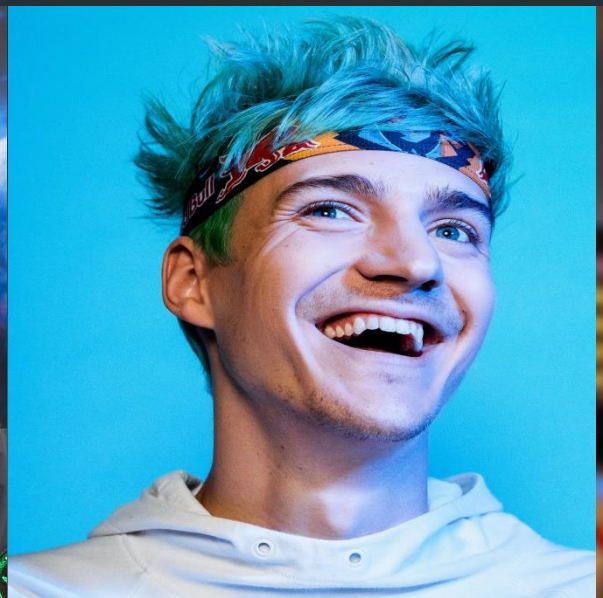





# America & South Korea recognition of Esports as any regular sport





# Egypt and MENA region in Esports





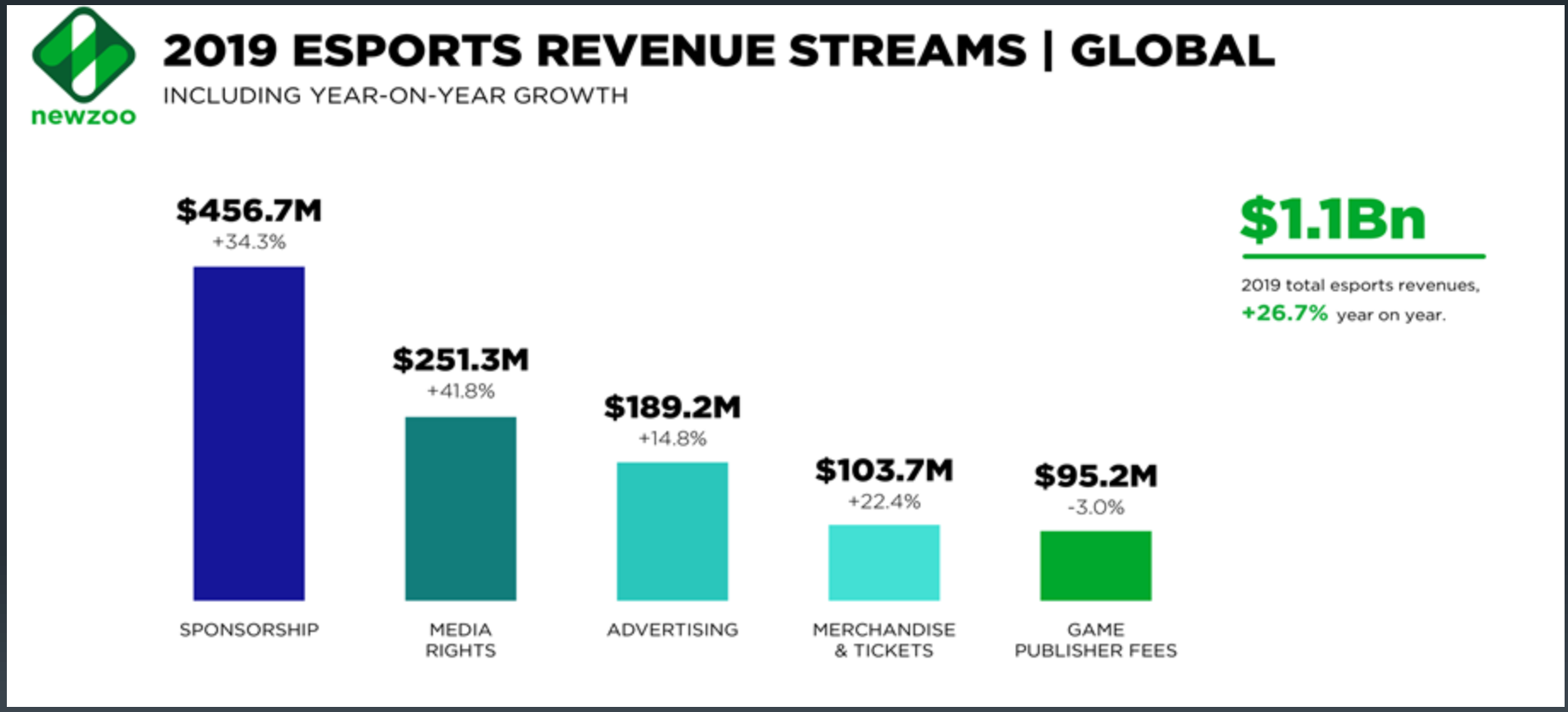

# Esports revenue and exposure

**Dota 2 holds the highest prize pool of Esports history as the competition prize pool reached 40M+ in 2021**


**League of legends on the other side held one of the most viewed finals in sports history as the final of world championship in 2019 reached 99M+ views**

# Esports revenue






Source: Newzoo,2019

# What is the next step in evolution



Meta


# Conclusion

- To conclude the idea that in the last three decades, humankind has experienced a tremendous advancement in artificial intelligence (AI), which has resulted in the creation of new professions and industries, as well as a shift in the trend of traditional school jobs to more computer-based jobs.

- The AI is a concept in its name and power many of the industries has been created and many markets have an open duo to it and the most special thing about the AI that all of the markets that the AI created are connected together and to reach or consume from certain market inside of it the consumer will interface with other markets also created by it.

- That is like the AI has been like the Russian doll that holds many other smaller dolls inside of it as continuing its legacy and creation and by time many more markets will open inside of it that is connected to all other markets inside.

- Policy makers are urged to invest in educating student and prepare them to join the market and create a Matryoshka Effects and get benefit from this industry

# References




- Lu, Z. (2016). From e-heroin to e-sports: The development of competitive gaming in China. *The International Journal of the History of Sport*, *33*(18), 2186-2206.
- Das, S. (1995). Size, age and firm growth in an infant industry: The computer hardware industry in India. *International Journal of Industrial Organization*, *13*(1), 111-126.
- Campbell-Kelly, M. (2001). Not only Microsoft: The maturing of the personal computer software industry, 1982-1995. *The Business History Review*, 103-145.
- Clay, K., Krishnan, R., & Wolff, E. (2001). Prices and price dispersion on the web: evidence from the online book industry. *The Journal of Industrial Economics*, *49*(4), 521-539.
- Ratchford, B. T., & Ford, G. T. (1976). A study of prices and market shares in the computer mainframe industry. *The Journal of Business*, *49*(2), 194-218.
- Hamari, J., Alha, K., Järvelä, S., Kivikangas, J. M., Koivisto, J., & Paavilainen, J. (2017). Why do players buy in-game content? An empirical study on concrete purchase motivations. *Computers in Human Behavior*, *68*, 538-546.
- Balakrishnan, J., & Griffiths, M. D. (2018). Loyalty towards online games, gaming addiction, and purchase intention towards online mobile in-game features. *Computers in Human Behavior*, *87*, 238-246.
- Wilson, H. J., Daugherty, P., & Bianzino, N. (2017). The jobs that artificial intelligence will create. *MIT Sloan Management Review*, *58*(4), 14.
- Davis, R., & Lang, B. (2012). Modeling game usage, purchase behavior and ease of use. *Entertainment Computing*, *3*(2), 27-36.
- Anantrasirichai, N., & Bull, D. (2020). Artificial Intelligence in the Creative Industries: A Review. *arXiv preprint arXiv:2007.12391*.
- Whiteson, S., & Stone, P. (2004). Adaptive job routing and scheduling. *Engineering Applications of Artificial Intelligence*, *17*(7), 855-869.
- Lescop, D., & Lescop, E. (2014). Exploring mobile gaming revenues: The price tag of impatience, stress and release. *Digiworld Economic Journal*, (94), 103.
- Shekhar, S. (2017). *Homing choice and platform pricing strategy* (No. 247). DICE Discussion Paper.
- Kim, J. H., Prince, J., & Qiu, C. (2014). Indirect network effects and the quality dimension: A look at the gaming industry. *International Journal of Industrial Organization*, *37*, 99-108.
- Feijoo, C., Gómez-Barroso, J. L., Aguado, J. M., & Ramos, S. (2012). Mobile gaming: Industry challenges and policy implications. *Telecommunications Policy*, *36*(3), 212-221.
- Statman, M., Fisher, K. L., & Anginer, D. (2008). Affect in a behavioral asset-pricing model. *Financial Analysts Journal*, *64*(2), 20-29.
- Kshetri, N. (2009). The evolution of the Chinese online gaming industry. *Journal of Technology Management in China*.
- Young, K. (2009). Understanding online gaming addiction and treatment issues for adolescents. *The American journal of family therapy*, *37*(5), 355-372.
- Zhang, L., & Fung, A. Y. (2014). Working as playing? Consumer labor, guild and the secondary industry of online gaming in China. *New Media & Society*, *16*(1), 38-54.
- Tomić, N. (2017). Effects of micro transactions on video games industry. *Megatrend revija*, *14*(3), 239-257.
- Statista. (2021, nov)
- Newzoo, (2019,dec)