

Contemporary Gaming Architectures and Ecosystems

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Current and Future Trends

- Global gaming market is growing
 - Estimated revenues of **\$159.3Bn** for 2020 ^[1]
- Market trends towards Games as a service and cross-platform play
 - Increased focus on data analysis
 - Drive towards persistent worlds/data
 - Improvements to delivery through Cloud/5G
 - Advancements in AI
- **2.7 Million** gamers, and growing
 - Estimated to reach 3 million by 2023



2020 Global Gamers

Per Region With Year-on-Year Growth Rates

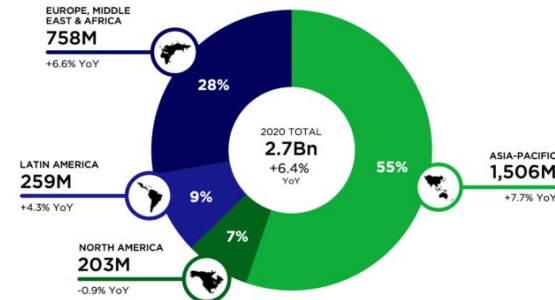


Image credit: newzoo.com

Number of active video gamers worldwide from 2015 to 2023
(in millions)

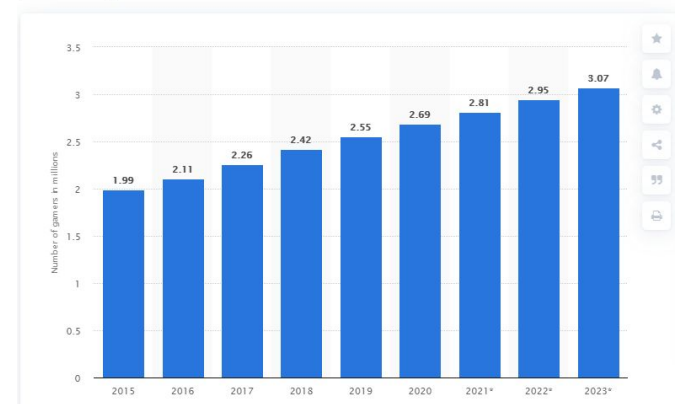


Image credit: statista.com

[1] newzoo.com/insights/articles/newzoo-games-market-numbers-revenues-and-audience-2020-2023/

Digital Savvy Warfighters

- Average gamers:
 - Play **6.3 hours** a week ^[1]
 - Play with multiple devices ^[2]
 - **63%** play with others ^[2]
- Hardcore gamers:
 - Can play **15+ hours** a week
 - Plays with multiple devices
 - **71%** frequently play games with a focus on teamwork or co-operation
 - **78%** use third-party programs or addons to supplement their experience

[1] Limelight - "The State of Online Gaming - 2020"

[2] ESA - "2019 Essential Facts About the Computer and Video Game Industry"

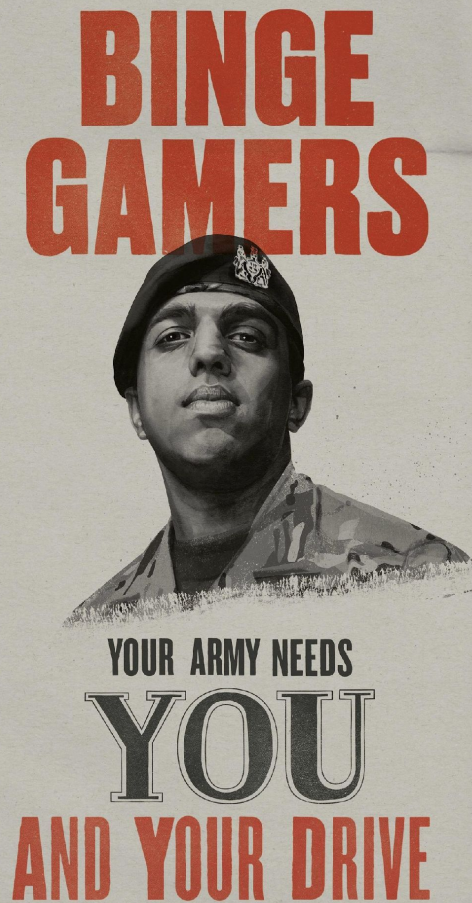


Image credit: British Army

Areas of Focus

- **Architectures**

- The game's systems and interfaces
- Data collection & exploitation
- Content and update delivery
- Player accessibility

- **Ecosystems**

- Third-party systems
- System integrations
- Enhance and supplement
- Community creation, interaction and support



Architectures

- XR - MR, AR and VR
- Increasing use of MMO network structure
- Retroactive recording and gamestate playback
- AI improvements
 - Flocking systems
 - Player backfill



Image credit: DVIDS

Ecosystems

- Extends beyond the games themselves
- Strong community focus and integration
- Increased Engagement
- Cross platform play
- Strong community focus



Ecosystems - Discord

- Free, Customisable, Lightweight
- Strong community focus
- Direct line from developer to community
- Tools to support community formation and moderation
- Integration into existing systems for reduced friction
- Extends the players interaction with the game beyond their play

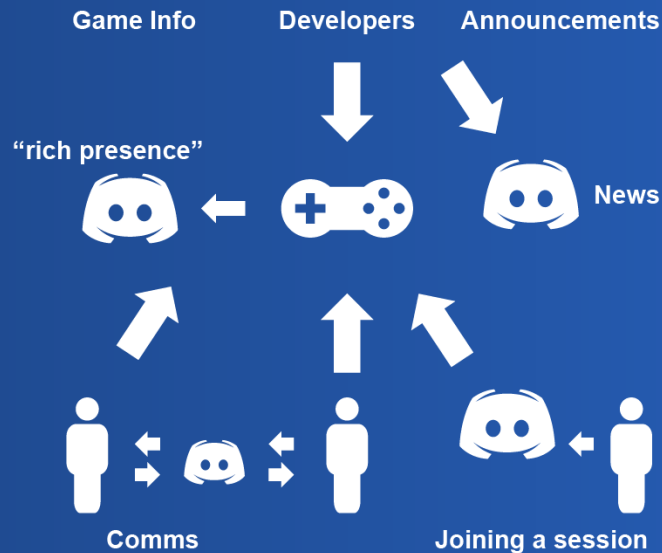


Ecosystems - Discord's reach

Old



New



Applications for the military

- Familiarity of the modern warfighter with gaming technologies and communities should be utilised as much as possible
- Creating a wider simulation ecosystem
 - MSaaS Reference Architecture
- Community building through a wider simulation ecosystem



Image credit: Gov.uk

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