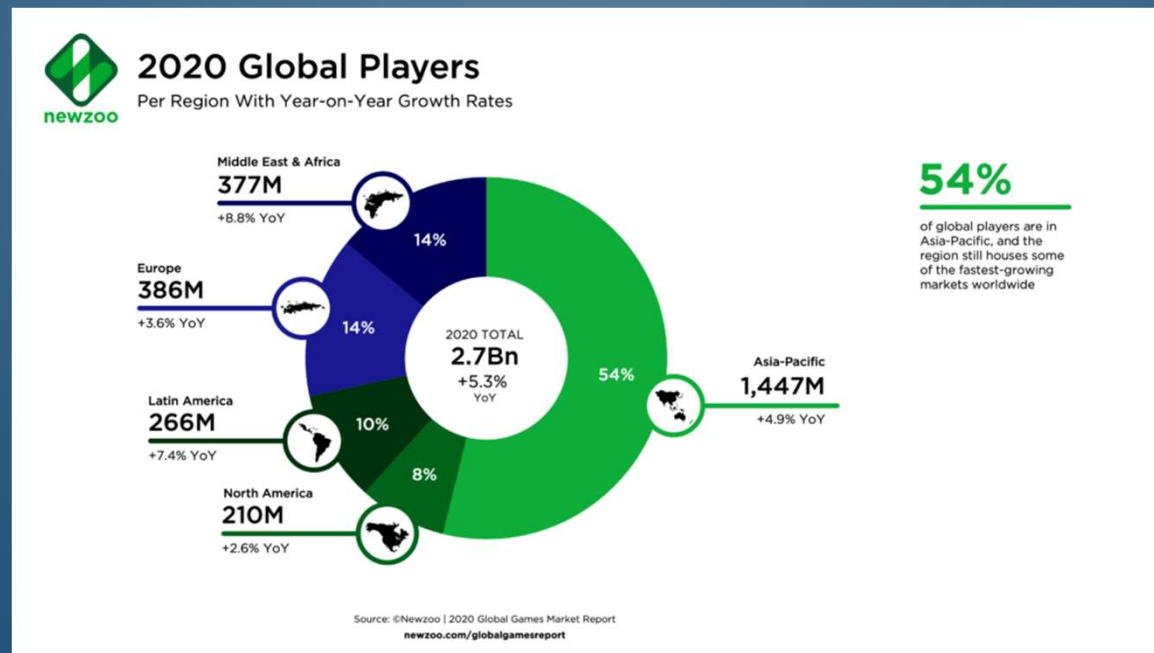




CSC3031 RESEARCH AND PROJECT SKILLS: VIDEO & ORAL PRESENTATION

BY IAN GIVERO

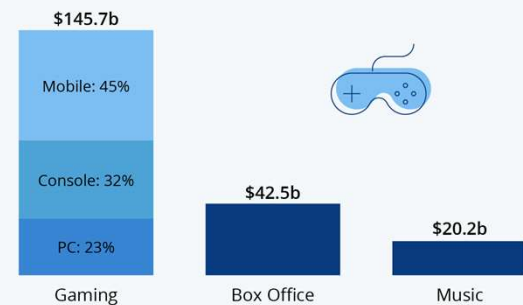
ACCESSIBILITY IN GAMES: INTEGRATING VIDEO GAME ACCESSIBILITY FEATURES TO LOWER BARRIERS TO ACCESS FACED BY PEOPLE WITH DISABILITIES.



OVERVIEW OF THE GAMING INDUSTRY

Gaming: The Most Lucrative Entertainment Industry By Far

Global revenue of selected entertainment industry sectors in 2019



Sources: Newzoo, Comscore, IFPI



statista

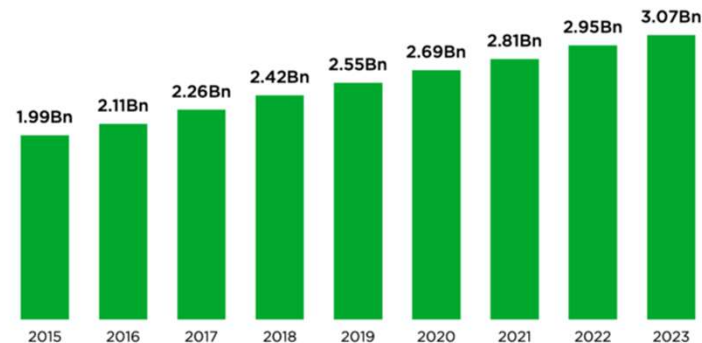
SIZE OF GAMING INDUSTRY

- Gaming is the biggest entertainment industry by revenue.
- Bigger than the movie and music industry combined!



2015-2023 Global Players

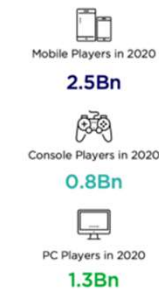
Forecast Toward 2023



Source: ©Newzoo | 2020 Global Games Market Report

+5.6%

Total Players CAGR
2015-2023



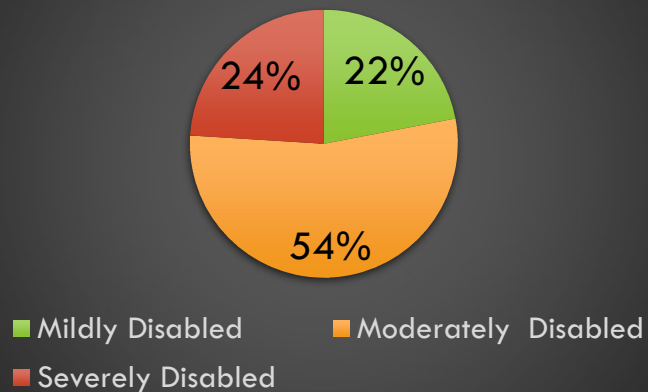
GAMING POPULATION

- Over 2 billion gamers across the world. That is 26% of the world's population [1].
 - ✓ Over 1/4 of the world's population are gamers!
- Gaming population is expected to continue growing.
 - ✓ Expected to rise over 3 billion by 2023

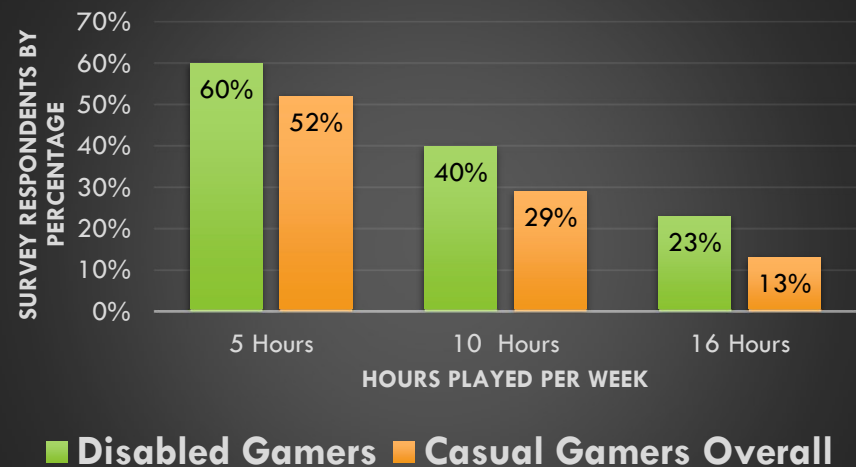
GAMERS FACING BARRIERS TO ACCESSIBILITY

- A billion people experience some form of disability, 15% of global population [2]
- Survey of 13,296 casual gamers, around 20.5% (2,728) identify themselves as having some form of disability [3]

Respondent's Disability Profile



- Statistically speaking, disabled gamers tend to spend more time gaming per week than casual gamers overall



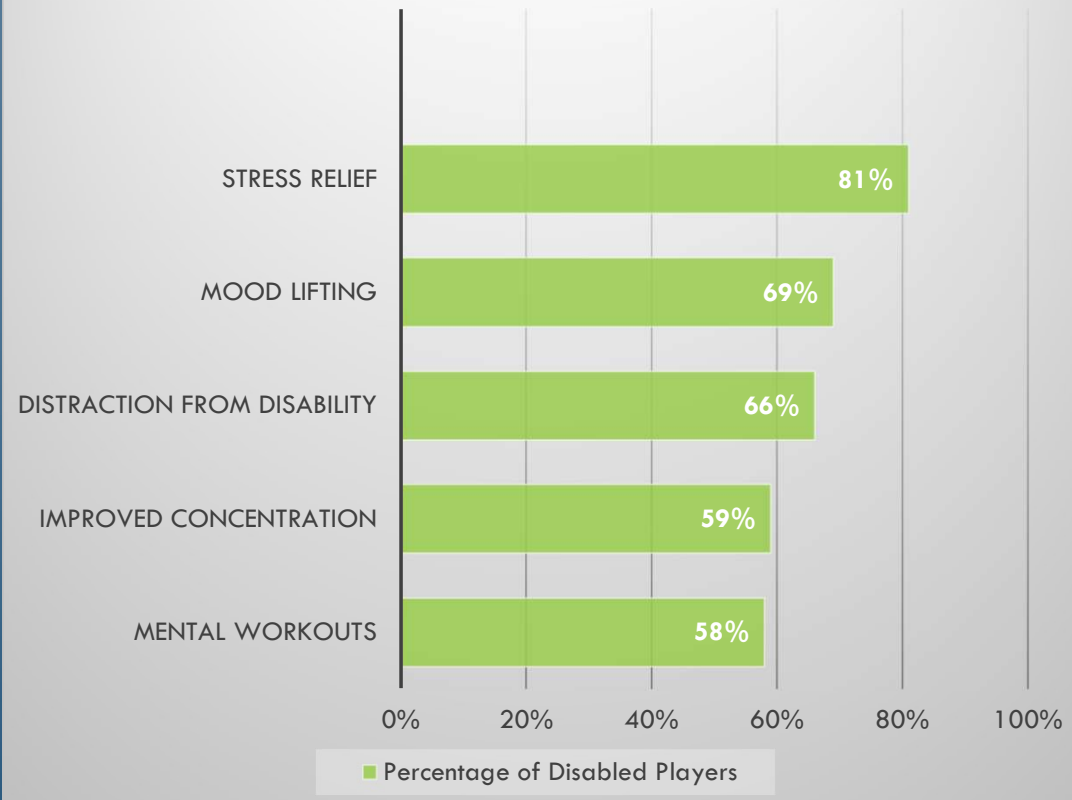
UNDERSTANDING WHY DISABLED PLAYERS CONTINUE TO PLAY GAMES DESPITE THE CHALLENGES

- Among surveyed players, 94% of disabled players continue to play [4]

WHY?

- ✓ Deeper sensations of achievement and belonging
- ✓ Distraction from loneliness or chronic pain
- ✓ A form of escape or refuge

Benefits Provided by Playing Casual Games according to Disabled Players



MOTIVATION & RATIONALE



Why put emphasis on Accessibility for Games?

- Gaming is the biggest entertainment industry in terms of revenue.
 - ✓ Second largest media industry, just behind TV industry (mainly due to advertising)
- 20% of Gamers are disabled.
 - ✓ Disabled gamers have more engagement compared to most gamers.
- Accessibility = Inclusivity = Bigger Target Audience
 - ✓ The numbers make good business sense
 - ✓ Human benefit: Barriers to access will be lowered for disabled people.

AIM: TO DEVELOP A UNITY GAME WHICH INCORPORATES ACCESSIBILITY FEATURES TO HELP FACILITATE THE EXPERIENCE AND CHALLENGES ENCOUNTERED BY PLAYERS WITH ACCESSIBILITY ISSUES.



Objectives:

- 1.) Explore and identify a set of common gaming accessibility barriers and investigate established audio-visual techniques that are used to assist players facing such accessibility barriers.
- 2.) Develop distinct, individual prototypes focused on each selected accessibility barrier.
- 3.) Develop a game that integrates all accessibility techniques into the main game loop.
- 4.) Analyse and evaluate how well the integrated accessibility features satisfy established accessibility guidelines in gaming as well as its impact on the game's performance.

THE CHOSEN APPROACH TO TACKLE THE PROJECT

➤ Research

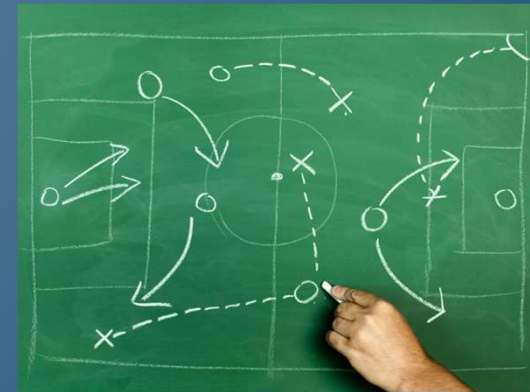
- ✓ Identify common accessibility issues experienced by users
- ✓ Identify accessibility techniques used in games

➤ Develop Unity Game

➤ Agile development methodology

- ✓ Adapt a Feature-Driven Development approach – Features to help with Visual Impairment, Motor Impairment, etc.

➤ Evaluate finished product: How well it satisfies Accessibility Guidelines



RISKS

- Hardware/device damage
 - ✓ University Clusters as alternative
- Storage compromised
 - ✓ Cloud storage backup
- Falling behind schedule/timeline
 - ✓ Use Easter break as buffer period



CURRENT PROGRESS AND WORKPLAN

- CSC3031 – Week 1: Initial Research
- CSC3031 – Week 2: Develop prototypes for Supervisor approval
- CSC3031 – Week 3: Continue developing prototypes
- CSC3031 – Week 4: Focus on Video & Oral Presentation
- CSC3031 – Week 5: Focus on Ethics Form & Proposal
- CSC3032 – Week 6-8: Develop main software artefact
- Easter Break – Week 9-12: Easter Break with occasional Dissertation Writing
- CSC3032 – Week 13-15: Evaluate Game and Finalise Dissertation

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REFERENCES

- [1] A. Beattie, “How the Video Game Industry Is Changing” Investopedia, Oct. 31, 2021. [Online]. Available: <https://www.investopedia.com/articles/investing/053115/how-video-game-industry-changing.asp>. [Accessed: Feb. 23, 2022]
- [2] World Health Organisation, “World Report on Disability,” World Health Organisation, 2011. [Online]. Available: https://www.who.int/disabilities/world_report/2011/report.pdf [Accessed: Feb. 23, 2022]
- [3], [4] Games Industry International, “PopCap Games research: Publisher's latest survey says that casual games are big with disabled people.” Games Industry, June 11, 2008. [Online]. Available: <https://www.gamesindustry.biz/articles/popcap-games-research-publisher-s-latest-survey-says-that-casual-games-are-big-with-disabled-people>