



Esports as an Enabler of STEM Outputs for European Football

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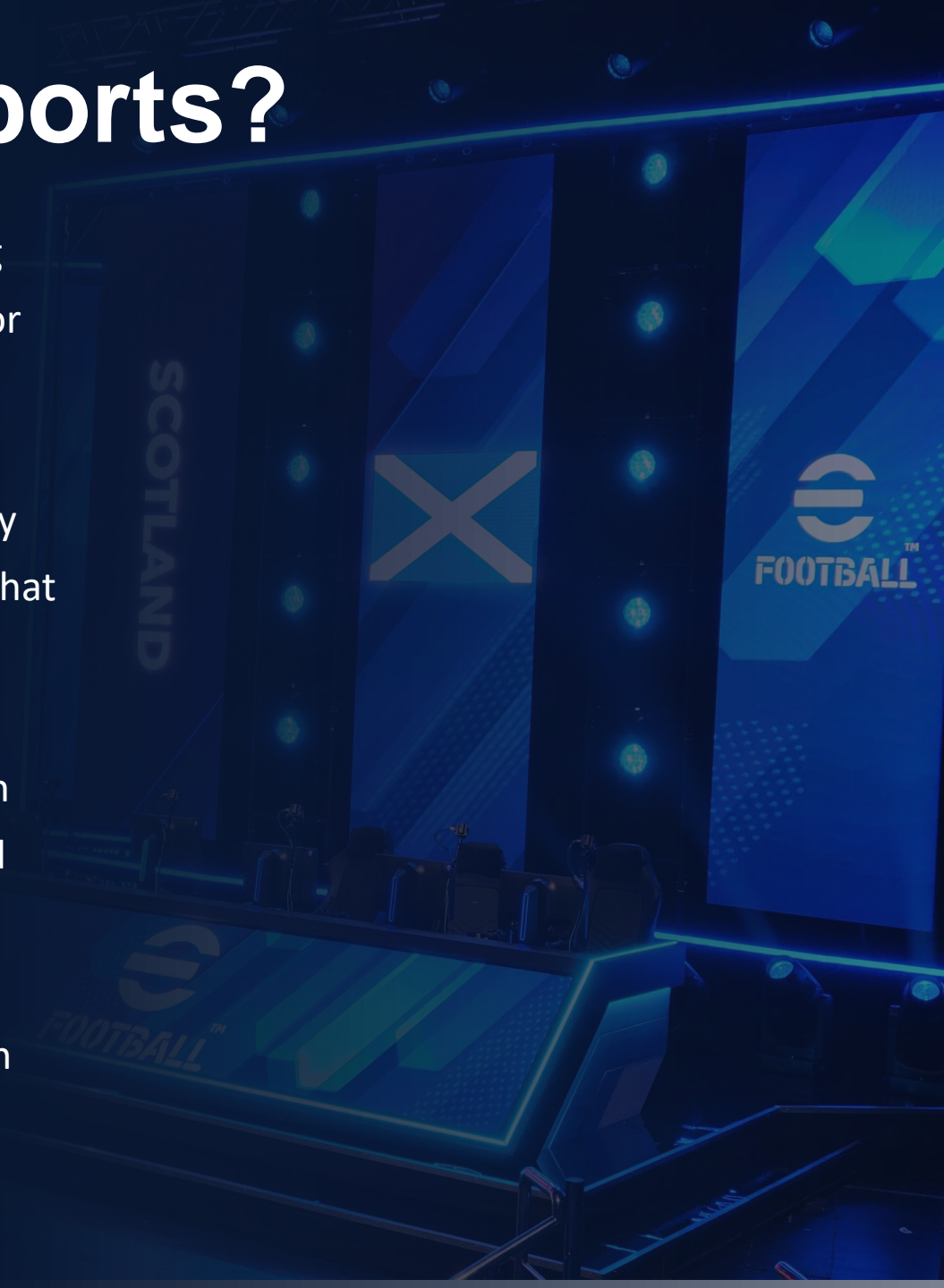
Who are Esports Scotland

- Esports Scotland (ESS) founded by James Hood in 2017
- Leading gaming and esports events company in Scotland
- Partnerships with global brands like Microsoft, Red Bull, Sony, Lenovo, Irn-Bru.
- Organized Five Scottish Esports League events
- Multidisciplinary organization: events production, player development, B2B services, Education consultancy, white & label solutions
- Crowning achievement: Two Silver Medals at the 2022 Commonwealth Games
- Commissioned by SPFL for Esports research in Scottish Professional Football augmentation.



What is Esports?

- Esports is organised, competitive, human-versus-human video-gaming where people play against each other both online, and at live spectator events across numerous game genres.
- Esports is played by both amateurs and professionals and is completely inclusive, regardless of gender, ability, and recent studys have shown that Esports transcends socio-economic status.
- Esports can be played on PCs, consoles and mobiles, with participation developing soft skills such as team working, meta cognitive ability, and leadership.
- Professional teams and players are well known in popular culture, with significant commercial power.



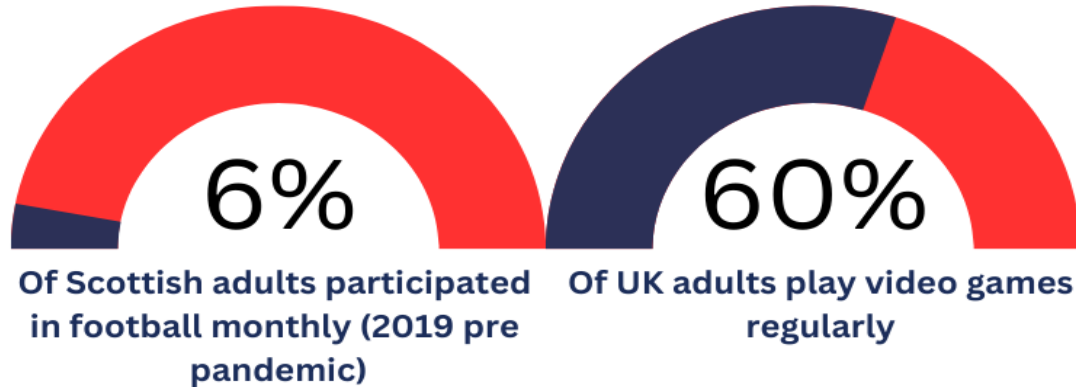
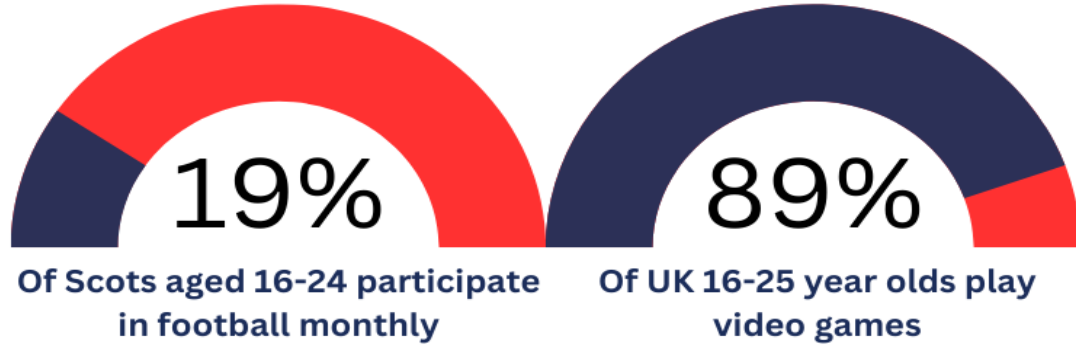
Key Market Insights

- Global value £1.45B with growth of 21%PA, the worlds fastest growing sports and digital entertainment sector.
- 91% of UK 3-15 year olds play video games, along with 60% of UK adults.
- The video games sector as a whole contributed £350M to the Scottish economy in 2022, employing 6,500 people (disproportionate 11% of the UK workforce).
- Becoming more exploitable by traditional sports enterprises. Formula 1 enjoying 5% audience transfer to the eF1 series, with 23 million viewers.
- Sector straddles Digital, Cultural, Media, and Sport areas, with high demand for STEM skills to support exponential growth.



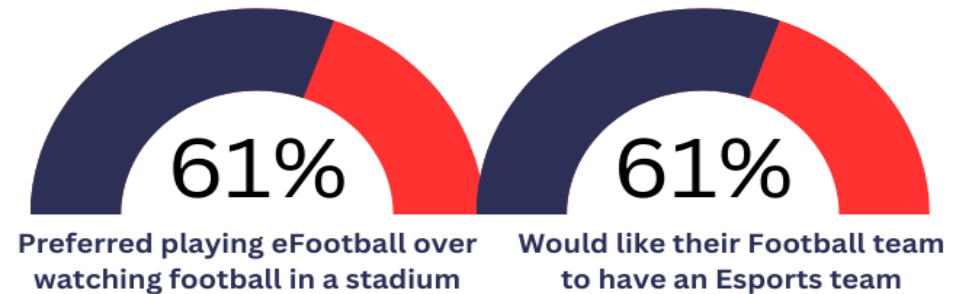
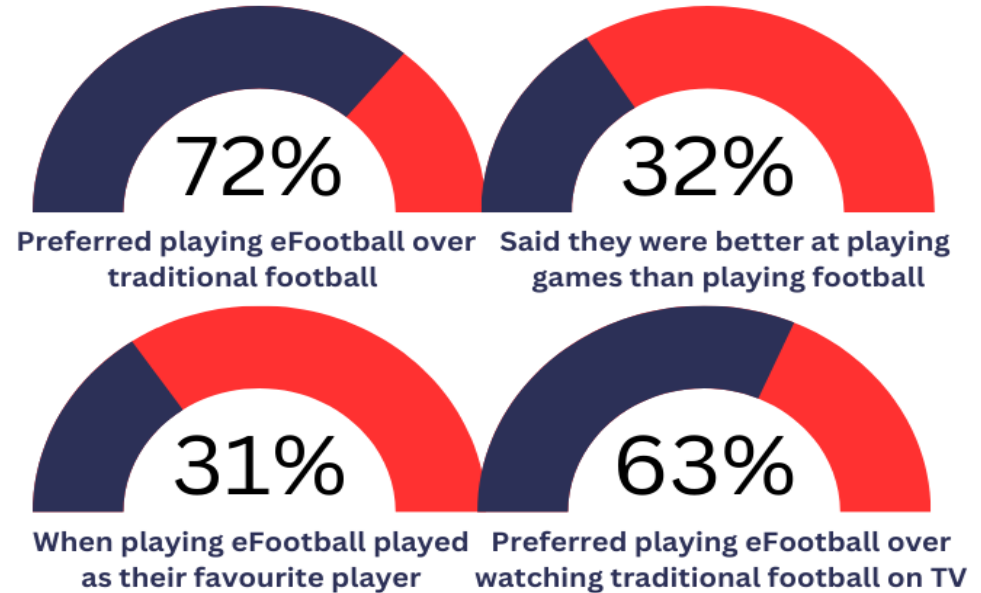


Esports and Football Stats



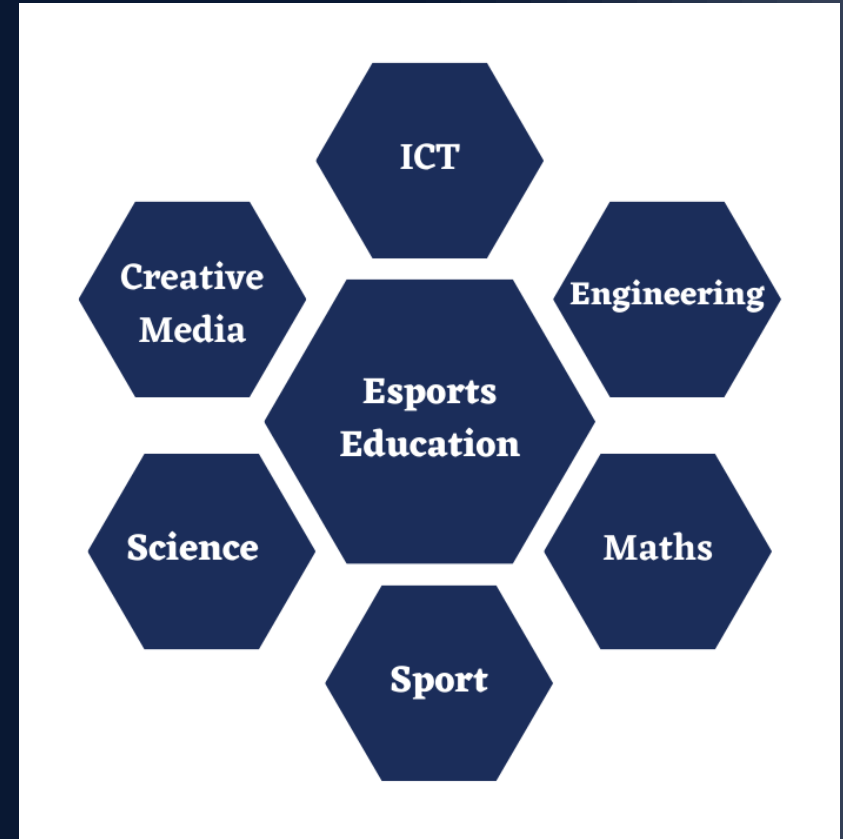
Approximately 0.85 in 10 Scottish school pupils are registered with the Scottish Youth Football Association, compared to 9.1 in 10 UK 3 to 15 year olds who play games

Survey of 1,000 English Millennial Football Fans



Esports and STEM

- **Technological Advancements.** Esports depends on cutting edge human-machine performance technology, innovative streaming technology, virtual reality, and more. STEM fields are critical to innovation.
- **Data Analysis, Statistics, and Human Performance.** Skilled data scientists with STEM backgrounds are key to providing insights to match performance, strategy, and unlocking high performance in electronic sports.
- **Industry Support Roles.** The online and financially lucrative nature of Esports makes it a unique target for cyber attacks, requiring high quality ethical hackers. Large energy use across the sector requires scientific innovation to reduce carbon, such as green data centres. The requirement for STEM skills is broad.
- **The Result?** In recent years (ca.2020), formalised Esports education courses have been created covering all STEM and DCMS areas. These are UCAS accredited, attracting between 56-168 points (SCQF level 6). These courses teach valuable STEM skills in a fun, engaging way, boosting child engagement, and promising to act as an invaluable marketing tool for further education to attract students to institutions.



Real World Esports STEM Impact

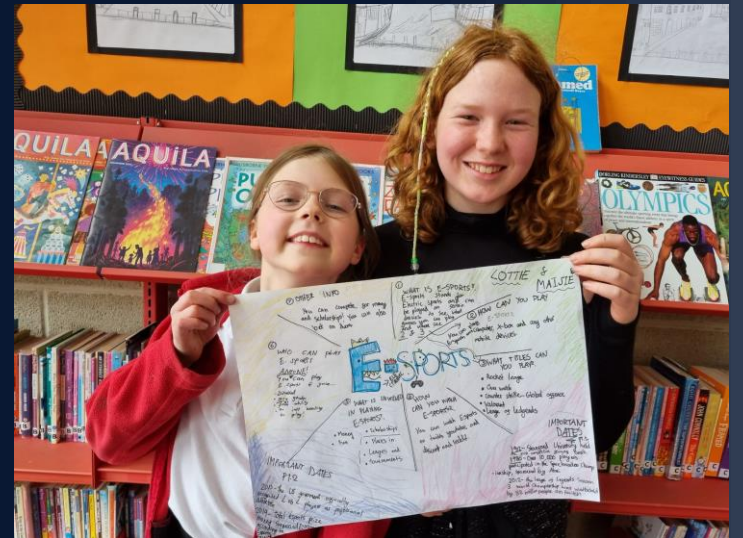
- EU Young Females aged 13-14 who play 9 hours of video games per week are 3.3 times more likely to study a STEM subject, regardless of their socio-economic background.
- Esports as an extra curricular activity is having a real soft skill impact in Scottish secondary classrooms, with educators reporting high levels of engagement from usually less engaged children.
- The first Esports BTEC and MA graduates in the UK are emerging, with a well rounded skill set setting them apart from their peers.
- ESS, through a strategic partnership with Microsoft UK and Angus Council is delivering Esports STEM lessons to primary school children, aiming to boost STEM attainment in higher education.
- Forbes Magazine recognises that structured Esports education is building inclusive, pro-social learning environments, praising its promotion of scientific methodology and data skills.
- All 15 Scottish universities now have Esports societies, with 9 producing graduates in game design.



Case Study: ESS STEM Impact

When asked to evaluate the ESS pilot Esports STEM project across 5 schools and 300 students, Staff and Pupils said:

- Are you likely to recommend the program to colleges? - 100%
- Esports develops skills for life - 100%
- Using Esports as context will engage learners - 100%
- Esports has nothing to do with the curriculum and cant be used for education - 0%
- I enjoy playing games and working as a team - 4.36/5
- I enjoy playing games as part of my education - 4.67/5
- I enjoyed learning about Esports/STEM careers - 4.22/5





Esports Specific Career Outcomes

Professional Player

Analyst

Coach

Shout caster/Caster

Team Manager

Sponsorship Manager

Content Creator/Streamer

Social Media Manager

Marketeer

Game Tester

Esports Journalist/Writer

Event Coordinator

Tournament Organiser

Game Developer

Transferability to Football Careers

Professional Player

Sports Coach

Team Manager

Operations
Manager

Coach

Football/Sports
Performance Coach

Analyst

Technical Scout

Shout caster/Caster

Commentator

Sponsorship Manager

Football
Commercial
Operator

Social Media Manager

Club Media
Manager

Content Creator/Streamer

Digital Media
Specialist

Game Tester

Cyber Security

Esports Journalist/Writer

Football Journalist /
Writer

Marketeer

Football Marketeer

Event Coordinator

Matchday Assistant

Game Developer

Graphic Designer

Tournament Organiser

Project Manager

So How Can European Football Use Esports to Enhance STEM Outputs?

- Enhance STEM Attainment - By offering fun, engaging, and helpful STEM Esports courses as part of community outreach. Facilitate Esports participation to develop soft skills, boosting employability.
- Support Woman in STEM - With proven impact, boosting EU young female STEM engagement by up to 3.3 times, European Football can use Esports to support more woman into STEM and support levelling up.
- Help Young People Pursue Football Careers - Use Esports participation and education to develop well rounded individuals, with skills transferable to football careers.
- Bolster Community Contributions to Public Health - Esports infrastructure in stadia such as gaming suites and hubs can be warm, digitally connected safe spaces within the strategic 10 miles of stadiums. Tackling issues such as fuel poverty and the digital divide.

How Is This Achieved?

Currently, the opportunities in the Esports space are widely recognised by Scottish football clubs, however many lack the technical know how/resources to manage exploitation.

- Education - Partnerships. Collaboration with experts to facilitate Esports education courses. ESS Education has experienced course writers and validators, as well as an extensive academic network.
- Esports Marketing. Some clubs have found success in marketing Esports events directly via existing social media channels.
- Infrastructure Development. Investment in developing gaming suites / hubs (basic cost ca.£7,000) to conduct community outreach. Proven success stories, such as the HMFC Innovation Hub.
- Expert Training & Support. Training provided to club outreach teams to deliver Esports events and support club representative teams.



Summary

Esports yields significant potential to unlock new and exciting STEM opportunities for young people across Europe. As Scotland's Esports company, ESS is committed to working with Scottish football to aid Esports development, and are happy to work with European partners to support wider growth.

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