

# Scotland's Games Ecosystem

## The State of Play: challenges and opportunities

The **University of Glasgow** and the **University of Stirling** in collaboration with the **Scottish Games Network** and **InGAME**

Briefing paper to accompany **Scotland's Games Week 2022** presentations

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# INTRODUCTION

The project investigated the challenges facing Scotland's games industry. It was undertaken by a team from University of Glasgow and University of Stirling, in collaboration with the Scottish Games Network (SGN) and InGAME, with support from the Economic and Social Research Council (ESRC) Impact Acceleration Account and ASPECT.

An ecosystem-based approach was adopted, drawing on data from the following sources:

- (i) organisational statistics about companies and HE/FE organisations, collated by SGN from secondary data.
- (ii) industry challenges data from SGN and InGAME, collated from an industry survey and workshops with key industry stakeholders.
- (iii) two workshops with representatives from games clusters in Europe, North America, Australia and UK, identifying good practice in games industry development.

This interim briefing paper provides context for the presentations made during Scotland's Games Week 2022 to industry and policymakers. A summary is provided of the challenges and opportunities for Scotland's Games ecosystem. Feedback about the issues is welcomed and will be considered as part of the final report. Should you wish to comment, please email [Helen.Mullen@glasgow.ac.uk](mailto:Helen.Mullen@glasgow.ac.uk) by 11th November 2022.

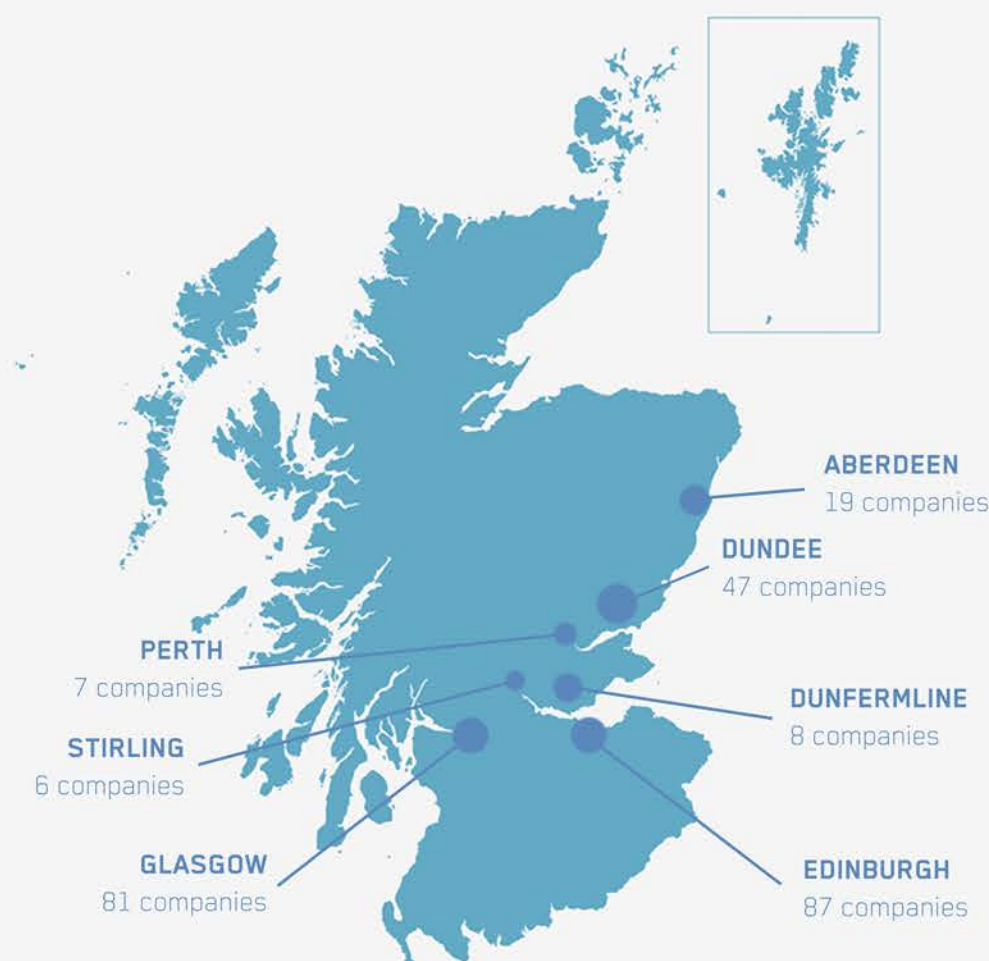


## SCOTLAND'S GAMES INDUSTRY

Scotland's games industry has enjoyed notable successes and is well-regarded internationally. From early hits such as Lemmings and Grand Theft Auto, through to 4J Studios' work on Minecraft, and contemporary successes such as No Code's Observation, Scotland's reputation as a centre of excellence for games is well deserved.

The composition of the industry in Scotland can be difficult to determine due to the industry-wide issues around data accuracy and availability<sup>1</sup>. However, TIGA data for December 2021, identified the Scottish industry as having 7.9% of UK's total games companies, and 10.8% of developer headcount, with 2269 permanent and FTE creative staff in games development across 147 companies plus additional 4,148 indirect jobs. Games developers were estimated to have invested £141m in salaries and overheads, and to have contributed £129m in direct and indirect tax revenues, making a direct and indirect contribution of £312m to UK's GDP.

Analysis of the company-related data collected by SGN during 2020-2021<sup>2</sup> provided information about the company volume, activities, and geographic location. While there were several limitations with the data, it was a more nuanced dataset than previously available, particularly in relation to freelancers and micro businesses (under 10 employees).



Locations of micro-companies also include East Kilbride, Inverness, Paisley, Ayr, Broughty Ferry, Coatbridge, Elgin, Hamilton, Kilmar-nock, Lanark, St. Andrews, Bathgate, Bellshill, Cupar, Dalkeith, Grangemouth, Inverurie, London, Musselburgh, Nairn, North Berwick, South Queens, Tayport, Turiff, Westhill, Ardrie, Alloa, Alva, Angus, Ardrossan, Argyll, Auchterarder, Balquhidder, Banff, Berwick-shire, Biggar, Blairgowrie, Brechin, Bridge of Weir, Lockerbie, Mid Calder, North Lanarkshire, Orkney, Peebles, Peterhead, Polbeth, Prestonpans, Renfrew, Roslin, Rosyth, Stevenston, Stonehaven, Ullapool, Wishaw, and Clydebank

Source - SGN Dataset, Game Developers

- There are companies of all sizes but the majority are micro-studios, solo-developers and freelance workers, with the sector generally skewed towards micro and small enterprises
- Companies were located across Scotland: Glasgow (81), Edinburgh (87), Dundee (47) and Aberdeen (19), indicating density in each key city plus activity across Scotland (see left)
- There were high levels of tech-related activity across the country, with some evidence of densities in artistic projects and Extended Reality (XR) in Glasgow, and a significant number of indie developers indicating service and market specialisms such as accessibility, and Gaelic language games
- There were a number of companies involved in IT/software production, gamification/ digitisation development, and audio, music and animation service provision to the games and other sectors.

The games industry is highly innovative with evident opportunities. The global market revenues (excluding esports) generated games revenue of US\$214.2bn (with growth of 32% between 2019 and 2021), and projected average annual growth at 8.4% to US\$321.1bn in 2026<sup>3</sup>.

In the UK, games are a notable contributor to the economy. The BFI<sup>4</sup> identified that video games developed, published and sold in the UK accounted for employment (FTEs) of 71,400 and GVA of £5.12bn, with a total UK

spend/turnover of £2.77bn relating to the direct impact of video game development in the UK. Games are also of critical importance in our contemporary culture and have notable cross-sector potential in areas such as education, crisis planning<sup>5</sup>, film and television animation<sup>6</sup>, healthcare, and tourism<sup>7</sup>.

However, while Scotland has demonstrated some amazing successes, and seems well-placed to take advantage of the evident opportunities that exist, there is a sense that the industry may be underperforming. Mark Logan, Scotland's Chief

Entrepreneur, recently commented that the industry was "still fledgling" and "could be a lot bigger"<sup>8</sup> and Our Scottish Futures<sup>9</sup> advocated for a more strategic plan.

There is therefore a great track-record to build on, evident potential to fulfil, but also several challenges to address which will be contextualised within an ecosystem framework in the next section.



# SCOTLAND'S GAME ECOSYSTEM - CHALLENGES

FIGURE. 1



# SCOTLAND'S GAMES ECOSYSTEM

## THE CHALLENGES

We have adopted an ecosystem-based approach to illustrate the key dynamics that affect the performance of Scotland's games sector. An ecosystem approach is already evident in the development of Scotland's technology sectors<sup>10</sup>. The ecosystem framework offers a systemic view on the factors that affect entrepreneurial activity in any sector. Most notably, it recognises that businesses are affected not only by internal factors but also by their wider environment that may offer them valuable resources, information, or connections<sup>11</sup>.

It differentiates between ten different elements whose mutual complex interactions impact the quality and quantity of companies<sup>12</sup>. Using this framework, we analysed the data generated by SGN and InGAME about the challenges facing the industry with the aim of identifying where improvements could be made. It was evident that such challenges were recognisable across other geographic regions, making it possible to learn from successful interventions elsewhere. The ecosystem framework and associated challenges are summarised in Figure. 1 and subsequently discussed.



### Positioning

The games sector sits at the intersection of creative industries, screen industries, and the tech sector but does not fit well into any one of these. It is indeed a "a fusion of tech and creative"<sup>13</sup>.

While this presents great opportunities, it also means that the sector can be insular and isolated, with developers not tending to engage with the activities and support available in other sectors.



### Entrepreneurial Identity

Although games development is inherently an entrepreneurial activity, there is a lack of an entrepreneurial culture and mindset among game makers, who do not identify as entrepreneurs.

This makes them less likely to engage with the plethora of entrepreneurship support initiatives already on offer in Scotland.



### Tensions between Creativity and Commerce

A successful studio needs to combine both creative content creation and commercial business development.

However, game makers are not always interested in building companies, nor have access to business-related training, and therefore studios often struggle with sustainability and longevity.



### Appropriate Support

Games companies require support with the commercial aspect of starting, running, and growing the business. However, there is limited engagement with the support infrastructure for creative and technology sectors.

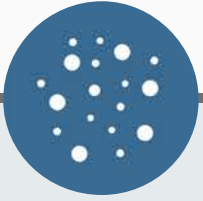
Companies do not consider the existing support provision adequate for their industry because they find that many of the support organisations do not sufficiently understand their specific business models, needs, and challenges.



### Market Readiness

The markets in which games companies operate are global and highly competitive.

Companies do not always have the appropriate products, business skills or business models to successfully respond to and compete in the changing requirements in the marketplace.



## Siloed Communities

The geography of Scotland also affects the ecosystem. Games companies are scattered across different parts of the country. Although the majority are in the Central Belt or Dundee, they are not well connected and the community is siloed.



## Visibility and leadership

Despite various notable successes, Scotland's games sector has a relatively low and narrow profile, with no evident leaders. While there are key individuals, companies, and initiatives within the sector, these are relatively under the radar or not at sufficient scale to create momentum. Historical successes are regularly featured but new and emerging stories are less so.

There are gaps in the provision of role models who could inspire future generations, advise aspiring entrepreneurs, or represent and advocate for the different elements of the sector.

# IMPROVING SCOTLAND'S GAMES ECOSYSTEM EFFECTIVE STRATEGIES

Addressing these challenges will require time, collective effort, and resources but it can be achieved as evidenced in other geographies. The ecosystem perspective helps illuminate those key areas where intervention may lead to beneficial knock-on effects across multiple elements<sup>14</sup>. In some cases, targeting a few key issues and securing small wins can trigger positive impacts across the ecosystem that could kickstart the rejuvenation of the sector<sup>15</sup>. Specifically, our data suggests that the following strategies may be effective in catalysing the games ecosystem.



## Targeted Resources

Ecosystems cannot be built overnight. It often takes a decade, which means that the buy-in from key stakeholders and their long-term support are crucial.

This needs to be underpinned by a clear and well-resourced strategy that articulates the sector's position within Scotland and supports its development.



## Value Recognition

The value of the games sector and its contribution to the economy need to be recognised across society. It is important to raise the profile of games as a reputable industry among key stakeholders, including but not limited to the government.

This can be achieved by having games recognised as a key sector for the Scottish economy, setting a distinct vision for the sector, and promoting successful games companies both locally and internationally.





## Leadership and community

The sector needs leadership across all levels, from the government, who can provide strategic resource and support, to individual game makers, who can serve as role models and mentors. To achieve this, it is necessary to nurture grassroots community building and give those involved the opportunity to build the ecosystem so that it caters for their needs.

A mindset of successful individuals 'giving back' to their community is the hallmark of thriving ecosystems and will strengthen the networks among the players in the ecosystem.



## Understanding the Sector

It is necessary to spread awareness about how value creation works in the games sector, the specific needs and challenges faced by games companies, and their unique business models. The standard frameworks for technology or creative businesses are not adequate.

The need for industry data accuracy and availability is also critical in supporting this aim.



## Metrics

It would be beneficial to define the features of a successful games ecosystem and the associated metrics. Different stakeholders will have different definitions of success, but clearly defined metrics are critical in the design of support initiatives and their subsequent evaluation. Such metrics should not be driven exclusively by economic objectives.

They should reflect the breadth of activity and outputs within the ecosystem and recognise the characteristics of Scotland's industry and its aspirations on a global scale. Ideally, the strategic focus and accompanying metrics should relate to the creation of an ecosystem that enables local talent to generate original intellectual property that can succeed on a global scale.



## Entrepreneurial spirit and commercial awareness

It is crucial to ease the tension between the creative and commercial sides of games through demystifying and incentivising game makers to engage in business planning and development. Also, it may be necessary to make the language more accessible, for example by focusing on ambition rather than growth and innovation.

The entrepreneurial spirit needs to be more prominent in the education sector, which should aim to educate not just future employees but also entrepreneurs. Schools and universities need to equip students with an entrepreneurial mindset. There also needs to be provision in the support infrastructure for new entrants to make games, 'learn-by-doing', and fail fast, before taking more ambitious steps, all of which were emphasised by all the international experts.



## Leverage Success

The games industry and Scotland itself have much to offer. It is important to recognise the Scotland-specific assets and resources within the ecosystem, and leverage these more strategically both domestically and internationally.

The success stories, the benefits of living and working in Scotland, the education system, and other industry/location strengths, can all be used to position Scotland more clearly as a global games hub, while supporting other ecosystem elements to develop.



## Focal Point

The sector would benefit from an industry-led body addressing key ecosystem-wide issues that individual companies cannot tackle alone. Such a body could represent, connect, and advocate for the sector nationally and internationally, celebrating success stories, connecting people, encouraging aspiring game makers, attracting international talent, promoting business opportunities, and actively nurturing the ecosystem.

There are excellent examples of such organisations internationally which have extensive experience and are willing to share experiences and collaborate.

## CONCLUSION

Scotland's games industry is globally recognised but lacks strategic focus on a local or national level. There is also a lack of collective representation. The challenges facing the industry's development are evident in comparable international games ecosystems, and analysis of comparator ecosystems suggests that these challenges may be addressed via targeted resources and appropriate focus.

There is a significant opportunity to take advantage of the increasing global market in videogames and the cross-sectoral potential of games to generate revenue. The creation of a vibrant games ecosystem would support Scotland's profile as a leading games hub, and positively impact on the economy, people and ecosystem-related objectives, particularly in areas such as entrepreneurship, network creation, business growth, and the talent pipeline.

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