

Provided is a submission by Codeplay Software Ltd in response to the Call for Evidence from the Economy, Energy and Tourism Committee on the Economic impact of the creative industries.

Background on Codeplay

Codeplay Software Ltd (Codeplay) is an internationally recognised software company, known for expertise in smartphones, games consoles, graphics processors and next-generation custom hardware. Codeplay has delivered development tools, optimization consultancy, and worked to achieve standards compliant systems for the largest semiconductor companies in the world - focusing on high-performance mobile and graphics applications - on devices which have sold hundreds of millions of units globally.

Codeplay is also at the forefront of developing for the latest consumer and research hardware feature sets through participating in the HSA Foundation and Khronos group. Codeplay is currently active in helping define the next graphics standards, essential for game development.

Drawing from expertise in the industry, Codeplay undertakes extensive R&D. Codeplay is currently active in several European research projects, the results of which will be incorporated into products made available to customers and associated developers.

Codeplay is an Investors in People accredited employer, based in Edinburgh.

General Comment

A point must be stressed that under the 'Video Games' industry headline exist many different disciplines and types of company, from the actual developers of games, to those who provide services such as motion capture, cinematic production, and developer tools and associated technologies.

Codeplay is a company which has very strong ties to Game Development. We deal with software engineering at a very low level – yet a level which now exists in everyone's pockets via smart devices. In the past we worked on games consoles, but now the term is skewed where smartphones have enough computing power to themselves be called a games platform. We have worked on projects including Android™ and PlayStation® amongst others, but would not be considered to sometimes be in the 'Video Games industry'. What many fail to grasp is that the graphical capabilities of tomorrow's smartphones are a direct result of pull from the Video Games industry for more features, power, and flexibility. We often find ourselves being asked by a semiconductor company to implement a certain feature on their smartphones because of pull from game developers wishing to create content on their device. The Video Games sector really integrates into the underlying Technology industry, of which Codeplay is currently at the forefront when mobile graphics is concerned.

Because of our ability to understand these new technologies, we are often asked to provide advice to Games Developers, who must exploit every area of computer

hardware to implement new games effects, artificial intelligence, or pursue new trends, such as Virtual or Augmented Reality.

We have also at times been contacted by the TV/Film industries, who utilize huge computational power when creating CGI effects, or other computer animated productions, for help in optimizing their technology.

As Codeplay is a services company, interested mainly in the implementation of games, 'Tools and Middleware', and technical consultancy, we have responded to specific points which we feel are most appropriate to our experiences in the field. I do believe, however the point above about the Video Games industry crossing technology boundaries is a strong one which is often overlooked.

["The role of public sector agencies and the effectiveness of the support they provide."](#)

We have found the support provided by Scottish Development International (SDI) in particular to be of utmost importance and value. Most of our customers reside outside of the United Kingdom, and we are present at many global conferences each year, including the Games Developers Conference in San Francisco and Mobile World Congress in Barcelona. The presence SDI gives Scottish companies at these events is excellent, with stands on the show floors, meeting room facilities and networking opportunities. Codeplay has negotiated contracts in excess of \$1M from these facilities and each year they prove how effective they are at driving interest in Scottish companies, and doing business in Scotland.

In addition to this, they provide knowledge to those who wish to come and work in Scotland for companies within this sector. This should continue to be encouraged. The grants offered to companies wanting to showcase with SDI at these events are very useful, and allows us to achieve the maximum possible return in terms of new leads, customers and knowledge.

Codeplay also takes advantage of SMART: SCOTLAND R&D grants. The administration by Scottish Enterprise is excellent and staff are very helpful.

I hope these public sector agencies are helped to continue their excellent work.

[How to retain in Scotland those with the necessary creative skills.](#)

There is a lack of new graduates with the required technical Skills to fill positions at Codeplay. Our work is of course very different to the vast majority of Video Games training offered, but a strong Computer Science or Software Engineering background is useful as a base for on the job learning that we offer all new graduate employees. The resurgence in enthusiasm for teaching computer programming/coding at a young age will help bring more people into these disciplines, but much damage has been done by the dip in knowledge to this point. Codeplay is a licensed visa sponsor with the UKBA and is hiring worldwide.

One issue also may be the lack of exposure the Video Games and Technology industry gets in Scotland. Dundee is a well known games hotspot, but many seem not to realise Edinburgh is a thriving technology centre with many companies all

providing technical services to the Video Games industry. Students need to see that there are opportunities for them in Scotland, and they need not move to Silicon Valley to realise them.

I hope the above comments are useful.

Colin Riley

Director of Games Technology, Codeplay Software Limited.

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