

From exuberant youth to sustainable maturity

Competitiveness analysis of the UK games software sector

Executive summary

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This report was written by Spectrum Strategy Consultants, as a project managed by the DTI with the support and involvement of ELSPA (the European Leisure Software Publishers Association) and TIGA (The Independent Games Developers Association)

The full report is available online at
www.dti.gov.uk/cii/services/contentindustry/computer_games_leisure_software.shtml

Introduction

This document is the executive summary to the Spectrum Strategy Consultants report on the Competitiveness Analysis of the UK Games Software sector. The full report is available online at www.dti.gov.uk/cii/services/contentindustry/computer_games_leisure_software.shtml.

This document summarises the conclusions of the analysis and presents a review of the findings relating to the major issues impacting the competitiveness of the UK games software sector. The full findings and supporting data analysis is only available in the main report and accompanying appendices. The executive summary includes an overview of the current state of the industry, the key challenges restricting the UK's competitiveness. Finally a prioritised action plan is proposed.

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1 Executive summary

State of the industry - the highlights

- The global games software industry represents a massive potential prize, estimated as worth more than £11 billion in 2001. With a truly global market spanning the US (£4.6bn), Europe (£4.3bn) and Japan (£2.5bn).
- Future growth in games software is certain, with the concurrent launch of three competing game consoles fuelling increased competition and extending the demographic reach of games beyond their historical audience.
- Spectrum forecasts annual games software sales reaching £20 billion globally by 2007. The majority of this growth will be driven by console games, delivering annual growth of 15%, whilst PC games will grow more slowly in value.
- Over the same period, internet, mobile and interactive television will all develop as compelling new platforms for games, bringing new gamers and greater revenues.
- The UK has built a vibrant and highly valuable games software industry. The domestic market is the third largest in the world (behind the US and Japan) at £1.10bn in 2001 and the UK games industry generated £1.16bn of value for the UK in 2001 from retail, distribution and publishing margins, development advances and royalties.
- UK developers and publishers are highly respected for their creativity and for the strength of the titles that they produce. UK-developed titles took the top spot in both the US and UK markets in 2001 - Grand Theft Auto 3 (GTA3) in the US and Who Wants To Be A Millionaire in the UK.
- Furthermore the games software industry is a significant contributor to the UK balance of trade when compared to other creative industries, delivering a positive trade balance of £186m in 2000. It provided a total positive trade contribution of more than three-quarters of a billion (£757m) in the course of the preceding three years (1997-1999) comparing highly favourably to film (£462m) and television (a negative contribution of £944m) over the same period.

- The UK games industry employs more than 20,000 people. Of these, 6,000 are in the development sector alone, which compares with 2,600 for France and 580 for Germany, the closest of the European territories.

State of the industry - the concerns

- However, the UK industry is composed of two distinct and potentially fragile components:
 - a small (eight and potentially shrinking) base of UK-owned publishers competing in an increasingly global and consolidated market dominated by US, Japanese and French giants, many more than five times the size of the UK firms and often in acquisitive mood
 - a diverse and highly fragmented development sector, divided between independent studios (with an average of 22 employees, with only ten studios with more than 100 staff) and in-house or wholly-owned subsidiaries of UK or foreign-UK-based publishers.
- Whilst the UK industry is doing well, any view of its strength must be tempered by consideration of other countries in the global games market. In their home market, UK developers command over 35% market share, but this is closely followed by Japanese developers on 32% and US studios on 26%.
- Comparable data for those foreign markets shows the US developers attaining 80% dominance in their home market on PCs and 48% for PS2 compared to a distant 11% for UK on both platforms. Whilst in Japan, although no official data is available, all sources suggest a near total dominance by domestic developers - with less than 1% estimated as being non-Japanese.
- Meanwhile in Europe; Japanese, US and UK developers share the Playstation pie more evenly with a 22:34:33 split, but on PCs the US dominates with a 60% share compared to 23% for the UK.

- Globally Spectrum estimates that games created by UK developers account for £1.75bn or 15.6% of global sales, whilst games released by UK publishers account for £645m of sales, or 5.7% of the total market.
- As platforms become more powerful and storage increases massively (from 32 Megabits for a Super Nintendo cartridge to 4.7Gigabytes for a modern DVD-ROM - an increase of over 1200 times in 10 years) so the expectations of consumers grow ever more demanding - leading to a demand for higher production values (artwork, sound and graphics) and hence an increased requirement for higher human and financial resources for publishers and developers. With a development project lasting up to 18-24 months with a team of around 20-30 and costing £1-2m, small UK developers are increasingly stretched for both staff and funding.
- The advances required by developers have risen to match this funding need. However, the retail price of games has only risen by around 50% in the last 10 years (£25 to £40) and royalty rates have remained static. So, the number of units which a game must sell before advances are recouped by publishers and developers start to earn royalties is much higher. Developers thus increasingly need to produce a hit title rather than an average seller in order to earn royalties.
- Given that publisher advances are the dominant form of funding games development, operating on advances alone increasingly leaves developers effectively carrying out work-for-hire. Without royalty streams, developers will find it harder to fund growth and expansion.
- Add to this the continued exacerbation of the hits-dependent nature of the industry, where CTW (the Entertainment Computer Trade Weekly publication which has recently ceased publication) estimates that 55% of all sales could be accounted for by 3.3% of the titles in the UK in 2000. The need to maintain multiple projects to reduce the risk of backing no winners is further emphasised, an ability that can only be achieved with scale beyond the reach of most native UK firms.

Paths for growth

- In the UK, the lack of players with global scale, the comparative immaturity of the industry, its highly fragmented nature and the poorly developed industry-level infrastructure will all restrict the industry's ability to maintain and improve its competitiveness in the face of global competition.
- The UK is at a turning point in its development and there are no global parallels for it to follow. No other country has so globally strong a development sector with a comparatively weaker native publishing sector. Developing an industry model that allows UK developers to build a solid and sustainable base for serving all global publishers, whilst also playing a larger role in the ownership and exploitation of intellectual property, offers the most promising route for securing the future competitiveness of the UK industry.
- The UK must develop and nurture a model for funding to enable the retention of intellectual property and the effective exploitation of that IP to support growth, consolidation and future development. Without access to funding to support this key first step in growth, the UK industry will find itself totally exposed to the whim of overseas publisher funding - leaving it as little more than a creative and technical bodyshop.
- Government and industry must continue to attract the inward investment of overseas publishers, whilst at the same time "pump-priming" the under-developed games investment industry within the UK. Emerging finance models (such as completion bonding) and examples of games-focussed funds, such as Fund4Games, and Capital Entertainment Group should be publicised to encourage the development of more similar initiatives within the UK.

Major challenges restricting UK's competitiveness

- **Industry profile/reputation** - despite the active efforts of industry groups (especially ELSPA - the European Leisure software Publishers Association) games software does not enjoy the profile of comparable industries. Firstly, the value of the industry to the UK is poorly understood or appreciated and secondly the media coverage retains much of the historically negative bias with games seen as "violent" and "antisocial" and the games industry as "not a real job".
- **Access to finance** - historically disappointing or inconsistent performance of games companies has left many investors wary of UK games businesses. The games industry has attracted city interest and continues to do so but the hit driven nature of the business, the immaturity of the industries business acumen, the increasing squeeze on profit margins and reluctance of publishers to fund company overheads, are stifling investment. In the absence of direct investment in companies there are several initiatives to set up development funds in the offing.

These may or not be successful but if they are they are likely to fundamentally alter the shape of the development sector by funding projects not companies mimicking past developments in the film industry.

- **Industry data availability and use** - there is a lack of affordable, comprehensive and consistent market data. This issue is made worse by the lack of transparency (and trust) within the industry, with the limited flow of data leading to poor market understanding.
- **Skills development** - there is a shortage of senior-level business and management skills of the calibre required to drive companies and the industry through the next stage of development. Consolidation and investment expansion will demand greater "City-friendly" professionalism. Further, the industry must formalise its approach to general skills recruitment and development. This includes addressing a lack of role descriptions, career paths and entry routes.

- **Model of IPR ownership** - much of the potential value in games software resides in the ownership and exploitation of intellectual property rights. Typically, due to the publisher-funded development approach, these rights reside with publishers. If the UK industry is to share in the value of IPR, it must develop a model where developers can share in these rights, a model acceptable to publishers, developers and the financiers that must support the IPR acquisition.

Priority actions for the UK games industry

In a wide-ranging series of interviews and workshops with a broad range of industry participants Spectrum has identified five key objectives that must be the focus of immediate industry action. We have produced in consultation with the industry and the DTI a number of focused actions to achieve these goals. These aim to:

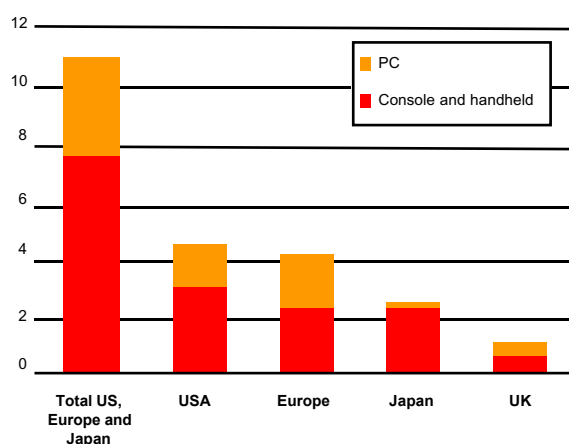
- **Improve the external perception of games as a "serious" industry**
- **Foster an environment for effective funding of growth and consolidation**
- **Mitigate the lack of a strong domestic publishing base**
- **Improve industry-level infrastructure and communication**
- **Enhance the professionalism of the industry.**

2 Competitiveness analysis - the state of the industry

2.1 The UK domestic retail market

The UK represents the third largest retail games market in the world, after the US and Japan, and is the largest within Europe. However, while it represents a retail market of around £1.1bn in 2000 it is still significantly smaller than the US and Japan at £4.5bn and £2.4bn respectively and the UK represents only 8.7% of the total global market, compared with the US at 35.6% and Japan at 19.2%.

Exhibit 1: US, European and Japanese software market, 2000 (£bn)



Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

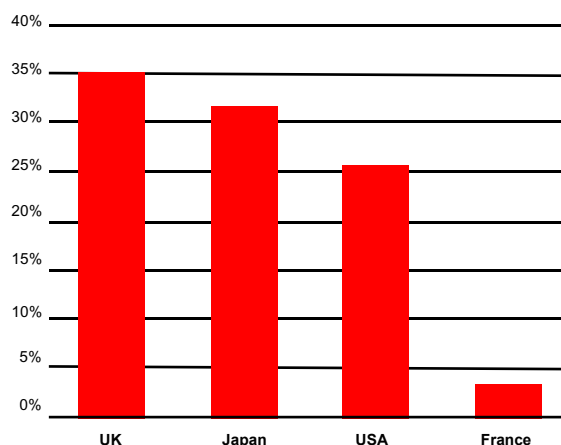
Taken as a whole, the European market approaches the US in value and easily exceeds Japan. However, unlike them, Europe is not a single unitary market and so is more expensive and complex to serve due to differing languages and widely varying national regulations and cultural preferences.

2.2 UK share of global markets

2.2.1 UK market share

UK-developed games have a 35% market share of the UK market, but this is closely followed by Japanese and US developers with 32% and 26% respectively. In addition to the games which bring such strong success in the global markets, many of the top selling UK-developed titles are also highly UK-specific. For example, Who Wants To Be A Millionaire, based on the leading television quiz show, including the digitised image of presenter Chris Tarrant, and Championship Manager, focused primarily on English football leagues and their teams.

Exhibit 2: UK 2000 market share by country of development (% by volume)



Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

Exhibit 3: Top 10 titles of 2001 in the UK and country of development, by unit sales

Rank	Console	Country	PC	Country
1	Who wants to be a millionaire	UK	The Sims	USA
2	WWF Smackdown 2	Japan	Who wants to be a millionaire	UK
3	Grand Theft Auto 3	UK	Championship Manager: Season 00/01	UK
4	Harry Potter & the Philosopher's Stone	UK	Age of Empires II: The Age of Kings	USA
5	Gran Turismo 3	Japan	Championship Manager: Season 01/02	UK
6	Zelda - Ocarina of Time	Japan	The Sims: Livin' It Up	USA
7	FIFA 2001	Canada	Command and Conquer: Red Alert 2	USA
8	WWF Smackdown ! Just Bring It	Japan	Rollercoaster Tycoon	UK
9	FIFA 2002	Canada	Half-Life: Generation	USA
10	007: Agent Under Fire	Canada	Black & White	UK

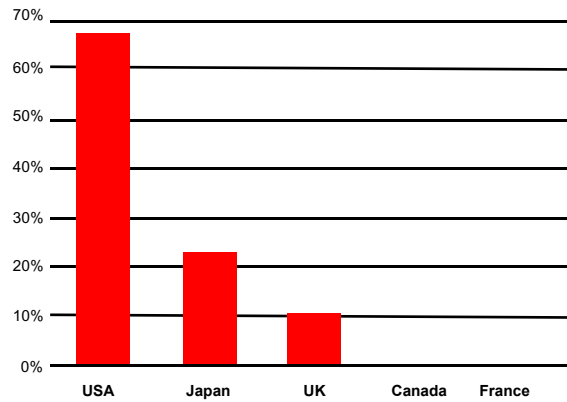
Source: Chart-track

The UK has a leading position but this lead is narrow, with the US and Japan also very strong - there are more Japanese-developed titles in the UK console Top 10 and an equal number of US-developed ones in the UK PC Top 10. The UK's lead is thus highly title-dependent, subject to change and vulnerable.

2.2.2 US market share

UK developers' market share in the US has held steady in recent years, with an overall market share of 10.5% in 2000¹. However, this success is fragile as a small number of titles account for those sales. For example, while the UK produced two each of 2001's top selling PC and console games in the US, Grand Theft Auto III alone accounted for over half of UK-developed games' 11% share of the Playstation II market².

Exhibit 4: US 2000 market share by country of development (% by volume)



Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

Exhibit 5: Top 10 titles of 2001 in the US and country of development, by unit sales

Rank	Console	Country	PC	Country
1	Grand Theft Auto 3	UK	The Sims	USA
2	Madden NFL 2002	USA	Roller Coaster Tycoon	UK
3	Pokemon Crystal	Japan	Harry Potter & the Sorcerer's Stone	USA ³
4	Metal Gear Solid 2	Japan	Diablo 2 Expansion Set: Lord of Destruction	USA
5	Super Mario Advance	Japan	The Sims: House Party Expansion Pack	USA
6	Gran Turismo 3: A-Spec	Japan	The Sims: House Party Expansion Pack	USA
7	Tony Hawk's Pro Skater 3	USA	The Sims: Hot Date Expansion Pack	USA
8	Tony Hawk's Pro Skater 2	USA	Diablo 2	USA
9	Pokemon Silver	Japan	Sim Theme Park	UK
10	Driver 2	UK	Age of Empires II: The Age of Kings	USA

Source: NPDPtechworld

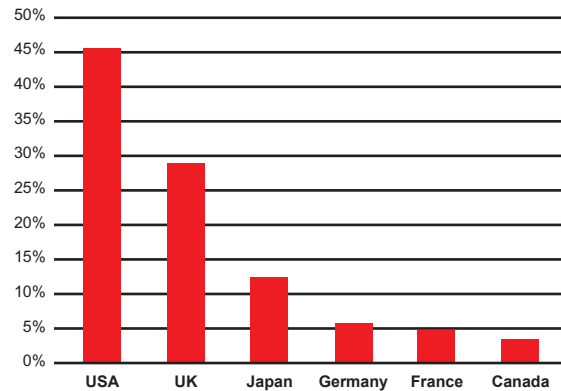
Source: NPDPfunworld TRSTS Video Games

The UK is firmly entrenched in third place, being a long way ahead of its next nearest competitor and with some hits on both the console and PC platforms. However, this is a very distant third to the US and Japan and does not threaten their positions in any way.

2.2.3 European market share

Market share in the European market is more evenly split than in the US, but once again US-developed games capture the largest share of the market, particularly on the PC (59.7% for the US compared with 23.1% for the UK)⁴.

Exhibit 6: European 2000 market share by country of development (% by volume)



Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

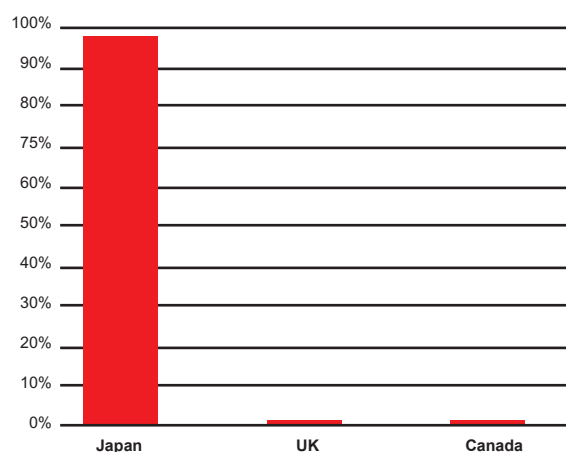
Understanding the reasons for the UK's strong showing in Europe will be vital to both maintaining its position in the European market and to identifying ways to improve market share in the US and Japanese markets.

2.2.4 Japanese market share

Limited data is available on the Japanese market but evidence available suggests the Japanese market is overwhelmingly dominated by domestically developed titles. The sum total of non-Japanese representation in the 50 top selling titles of 2001 consisted of just two UK and one Canadian-developed titles accounting for 1.0% and 0.7% respectively. Similarly, anecdotal evidence from interview subjects places the overall market share for non-Japanese developed titles at sub-1%.

¹ Source: Spectrum analysis of Screen Digest data
² Source: IDG analysis of US sales data
³ Source: PC version developed by US studio KnowWonder Digital Mediaworks
⁴ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

Exhibit 7: Japanese market share of 2001 Top 50 titles by country of development (% by volume)



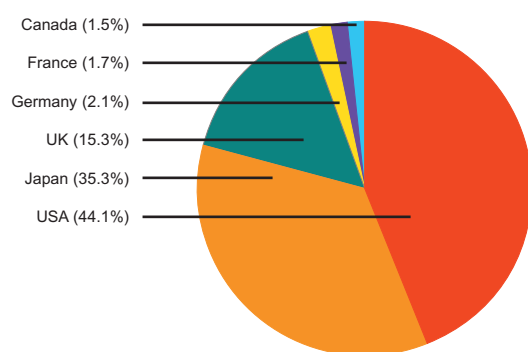
Source: Arcadia Investment Corp – 2001-2002 Home Interactive Entertainment Market Update

Clearly, the Japanese market is largely closed to foreign games. There is little UK developers can do to change this. Opening up this is a job for publishers but UK publishers lack scale and so are unlikely to be able to do so.

2.2.5 Global market share

Taken overall, the UK is the third largest developer of games but, once again, is a considerable way behind the US and Japan.

Exhibit 8: Global market share for 2000 (% by volume)



Source: Spectrum analysis of Screen Digest data

The key priority for the UK industry is to identify and understand the drivers of its success in Europe in order to defend that position and use the lessons to make further inroads into the US market. The Japanese market should be left to others to initially open up because of the closed nature of the Japanese market and the general lack of scale of UK games companies.

2.3 Balance of trade

The UK games industry is a significant export earner for the UK, with Screen Digest estimating that UK developed games generated more than £1.1bn in retail sales outside the UK in 2000⁵. In 1999 and 2000, the level of net exports fell from their 1998 level but this was largely due to the transition to the new generation of consoles and was accompanied by a strong fall in imports in 1999, leading to a net increase in the balance of trade. Import levels rose dramatically again in 2000, reflecting the launch of the Playstation 2 in Japan and the US before the UK, with a launch catalogue largely composed of US and Japanese-developed games. However, in 2000, the UK games industry still delivered a positive trade balance of £186m.

It provided a total positive trade contribution of more than three-quarters of a billion (£757m) in the course of the preceding three years (1997-1999) comparing highly favourably to film (£462m) and television (a negative contribution of £944m) over the same period.

It should be noted that this level of exports is achieved without industry-specific incentives such as those enjoyed by the film industry.

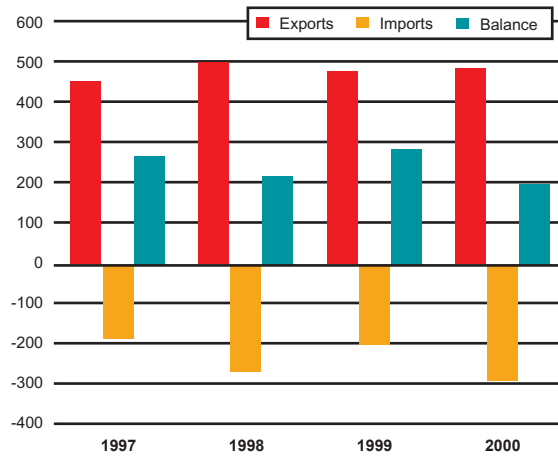
Exhibit 9: UK cultural balance of trade (£m)

	1997			1998			1999			2000		
	exp	imp	bal	exp	imp	bal	exp	imp	bal	exp	imp	bal
Leisure software	454	192	262	503	284	219	482	206	276	488	302	186
Film	438	419	19	427	374	53	984	592	392	-	-	-
Television	313	606	-293	444	692	-248	440	843	-403	-	-	-

Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

⁵ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

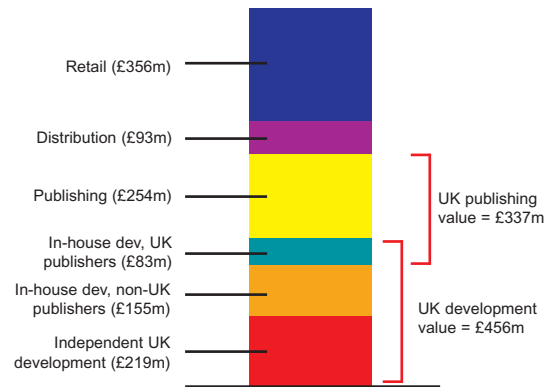
Exhibit 10: UK balance of trade for leisure software (£m)



Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

The definitions used here differ from those used by the ONS in its calculation of value-added.

Exhibit 11: UK value of PC and console software markets, 2001 (£m)



Source: Spectrum games industry forecasts

2.4 Total value generated

The UK has built a vibrant and highly valuable games software industry which generated £1.16bn of value for the UK in 2001 from retail, distribution and publishing margins, development advances and royalties⁶.

The value captured by each sector in the UK PC and console games industry value chain has been defined as follows:

- Retail: Estimated gross profit for PC and console games software sales
- Distribution: Estimated gross profit for distribution
- Publishing: Estimated gross profit from publishing activities. Value generated from in-house publishing activities is specifically excluded and included in the value of the development sector (see below)
- Development: All activity generated by development activity by UK-based teams. This has been separated out into UK based independent developers, UK based in-house developers for UK publishers and UK based in-house developers for non-UK publishers⁷. This value encompasses development costs, royalties generated for independents and profits for in-house studios.

⁶ Source: Spectrum games industry forecasts

⁷ Note: We have included developers owned by non-UK publishers because much of the value generated by these is likely to be kept within the UK, unlike non-UK publishing activity, the contribution of which to the UK is more difficult to measure in value terms

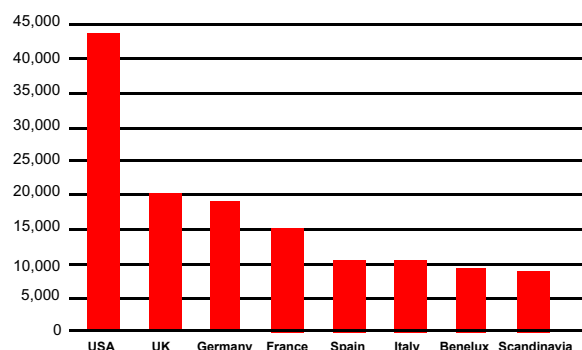
⁸ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

2.5 Commentary on UK domestic industry

2.5.1 The UK games industry is the largest in Europe

The UK games industry employs more than 20,000 people across all subsectors⁸, including development, publishing, distribution, retail and other associated functions such as manufacturing and legal services, the largest number in Europe but considerably fewer than in the US industry, which is estimated to employ close to 43,000. No reliable data is available regarding the size of the Japanese games industry.

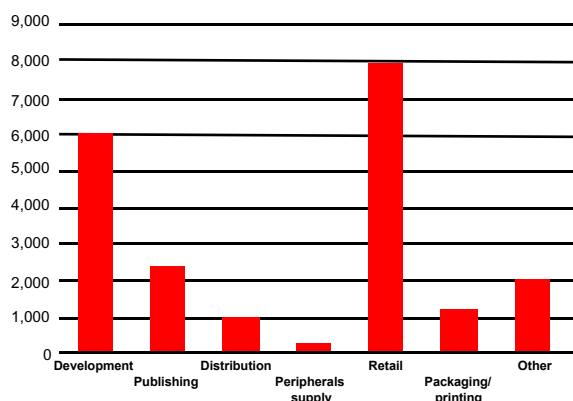
Exhibit 12: Number of people employed in games industry in European territories (2000)



Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005
IDSA - Economic impacts of the demand for playing interactive software

Within the UK, employment is broken down by sector as follows:

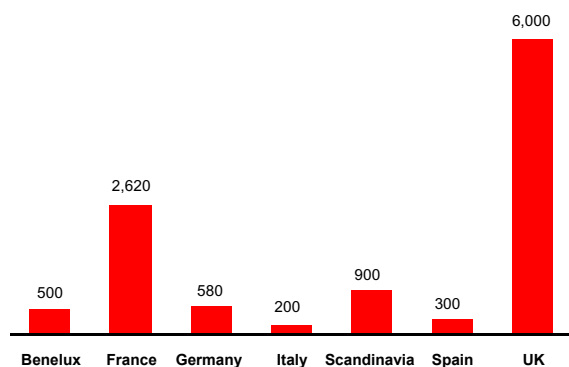
Exhibit 13: Breakdown of employment in the UK games industry



Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

Thus, of the 20,000 people employed in the UK games industry, 6,000 of these are in the development sector alone. This compares with 2,600 for France and 580 for Germany, the closest matching European territories⁹. The UK's development community, is particularly large when compared to the size of the UK's population.

Exhibit 14: Number of people employed in computer games development in European territories (2000)



Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

2.5.2 Development sector is fragmented

The UK development sector is diverse and highly fragmented, divided between independent studios (with an average of 22 employees, with only 11 studios with more than 100 staff) and in-house

studios of UK or foreign (but UK-based) publishers. The scale and cost of games development mean that the industry is now very much a business rather than a hobby and developers face the need to scale up to match. However, a potential obstacle is a common-held belief that large teams restrict the creativity UK developers are noted for.

Exhibit 15: Independent and in-house developers

Independent		Publisher in-house / wholly-owned	
	No. of UK staff		No. of UK staff
• Argonaut	240	• Infogrames (incl. Reflections) *	300
• Climax	225	• Codemasters	250
• Rare	180	• Rage	200
• Warthog	150	• Electronic Arts (incl. Bullfrog)	350
• Blitz	140	• Take 2 (incl. DMA) *	100
• Silicon Dreams	105	• Empire	100
• Vis Entertainment	100	• Eidos (incl. Core)	130
• RuneCraft*	100	• Acclaim *	75
• Kuju	100	• Sony *	70
• Hotgen	100		
• Eurocom Developments	80		
• Rebellion	80		
• Elixir Studios	60		
• Criterion (middleware)	45		
• Lionhead	25		

Source: Company data
* RuneCraft, Infogrames, Take2, Acclaim and Sony taken from Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

Note: Eurocom quotes total staff of 150, development staff approximately 80. Criterion total only includes staff directly related to games development, excludes middleware platform development staff

2.5.3 The UK has a low publishing base

While publishing in general has undergone a period of consolidation and scaling up to deal with an increasingly global market, British publishers have remained comparatively small and are lacking in global scale and global reach compared with their overseas competitors. While leading Europe at one time, the base of UK publishers has now shrunk to a small group of eight UK-owned publishers with many others being acquired by non-UK publishers.

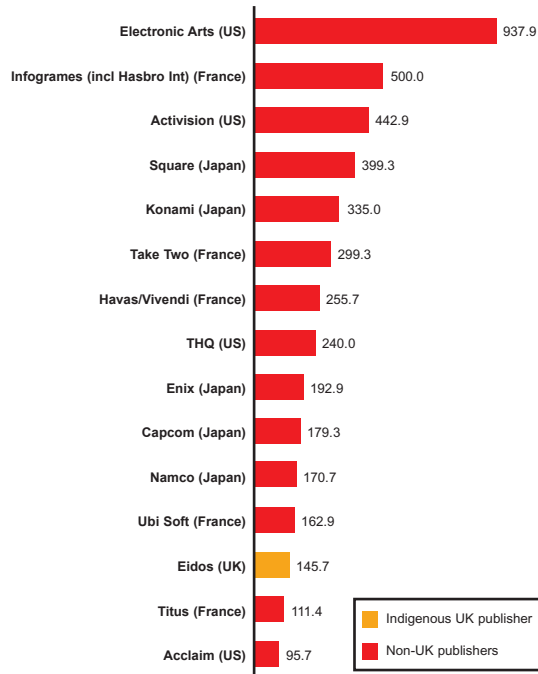
These remaining UK publishers are competing in an increasingly global and consolidated market dominated by US, Japanese and French giants, many more than five times the size of the UK firms and often in acquisitive mood. Of these eight, only Eidos is represented amongst the largest global publishers. UK publisher sales total £645m and account for around 5.72% of global sales¹⁰.

⁹ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

¹⁰ Source: Spectrum analysis of Screen Digest data

Publishing is increasingly a scale game and to attain it, either by organic growth or acquisition, publishers have typically tapped the financial markets. However, the UK markets have been less supportive of the games industry than the US and French ones.

Exhibit 16: Top publishers by sales value, 2000 (£m)



Source: Merrill Lynch - European Games Software, 8th October 2001

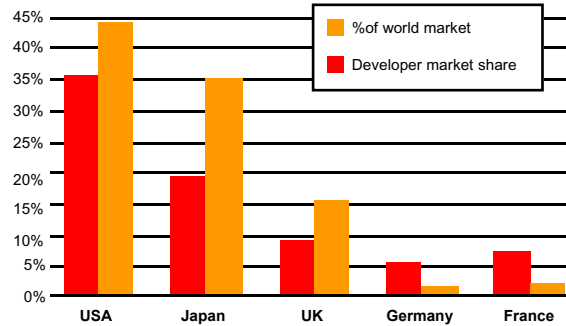
2.6 Competitiveness summary

The UK games industry is often anecdotally described as "punching above its weight", suggesting that it achieves levels of success disproportionately higher than the size of the UK or the size of the UK's games industry might suggest.

An initial review of the data supports this popular hypothesis. On the demand side, the UK is the third largest retail games market in the world, constituting 8.7% of the total world market whilst, on the supply side, UK developed games accounting for 15.5% of sales globally¹¹.

Comparing the UK's world market shares on the demand and supply side, the UK does indeed "punch above its weight". However, as the chart below shows, the same is also true for the US and Japan with both players doing so with shares two to three times larger than the UK's.

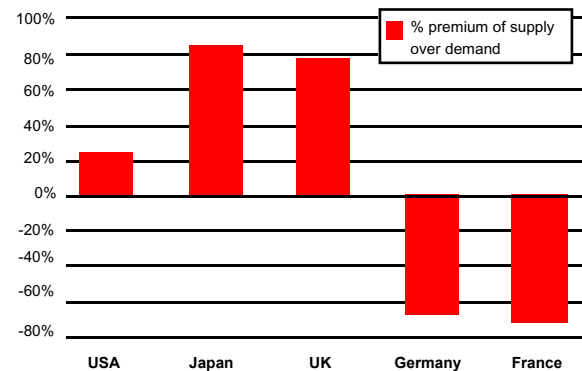
Exhibit 17: National markets' shares of world market compared with development industries'



Source: Spectrum analysis of Screen Digest data

A simple comparison of the over- or -under-performance of the games software development industry relative to the domestic market's share of the global retail market shows that the UK is out-performed by Japan, whose absolute market share is anyway double the UK's.

Exhibit 18: Over or under-performance of national development industries



Source: Spectrum analysis of Screen Digest data

The UK games industry is performing well overall. It is doing best in Europe but the reasons are not thoroughly understood yet. It is also performing well in the US but this success is dependent on a small number of titles. The Japanese market is largely closed so its relative performance will naturally be very strong.

The UK games industry thus needs to maintain and enhance its competitive position in Europe where it performs best, but is under threat from US and Japanese developed games, whilst at the same time building its position in the US market. At the present time, the Japanese market should take a lower priority.

¹¹ Source: Spectrum games industry forecasts

3 Challenges restricting UK's competitiveness

3.1 Industry issues

Before reviewing the specific challenges restricting the future development and competitiveness of the UK games software sector, the context must first be set by examining a number of key global industry trends and developments.

3.1.1 The scale and cost of games development is rising

A typical development project now lasts around 18-24 months and requires a team of around 20 with a budget of £1-2m compared with a budget of a few hundred thousand pounds for a team of a dozen for 6-12 months in 1992. The increased cost of development has been largely driven by higher production values (much higher quantities of artwork, sound and graphics), enabled by improved hardware and massive increases in storage media capacity (e.g. 32 Megabits for a Super Nintendo cartridge to 4.7Gigabytes for a PS2 or Xbox DVD-ROM). Rising development costs have also been driven by the cost of development kits and software. Typically, the former costs €10,000 per kit, the latter €3,000. With around 10 kits per team required, this makes for a total of €130,000 per project team.

Publishers have historically been the source of funding for developers and these rising requirements make small UK developers more dependent than ever on publisher funding. As publishers are taking on the bulk of the risk by providing funding, they typically also take ownership of the intellectual property rights (IPR) of the game and so, much of the future potential value. These rising costs also increase publishers' need for access to funding.

Licences, for example, to sports rights such as FIFA or World Rally Championship and to films or books such as Harry Potter or James Bond, have also become very important as means of improving a game's chances of success in the market. However, the cost of acquiring licenses again increases the cost of producing a game. A strong funding base is needed to be able to acquire such valuable licences and scale or global reach is critical to being able to fully exploit them.

3.1.2 Developers are finding it harder to earn royalties

The cost of games development has risen sharply from a decade ago as set out above. The advances required by developers have risen to match this funding need. However, the retail price of games has

only risen by around 50% in the last 10 years (£25 to £40) and royalty rates have remained static. So, the number of units which a game must sell before advances are recouped by publishers and developers start to earn royalties is much higher. Developers thus increasingly need to produce a hit title rather than an average seller in order to earn royalties. This is illustrated below:

Exhibit 19: Comparison of sales required to earn royalties

	1992	2002
Platform	PC	PC
RRP	£25	£40
Wholesale price	£14	£22
Royalty rate	20%	20%
Developer's royalty per unit	£2.75	£4.40
Advance	£200,000	£1,000,000
Sales required to repay advance	72,727	227,273

Source: Spectrum analysis, industry interviews

Developers thus increasingly need to produce a hit title in order to earn royalties, leaving many developers effectively carrying out work-for-hire.

3.1.3 An ever more hits-driven market emphasises the need for scale

The games market, like its parallels in film and music, has always been hits-driven. However, this has reached new levels, with CTW estimating that 55% of all sales were accounted for by 3.3% of the titles released in the UK in 2000. Combined with the rising cost of games development, this has made games production increasingly risky. Developers and especially publishers need to have multiple projects underway in order to mitigate their risks. This need to maintain multiple projects again requires a higher degree of scale than many UK games companies possess, leaving them exposed to the risks of not backing a winner or avoiding the risk altogether by carrying out "work for hire", with no share in any upside.

3.1.4 The industry needs fresh blood to sustain it and grow

There is concern about how to sustain the supply of talent for development sector. Self-taught enthusiasts, the foundation of the current industry, are no longer a sustainable source of recruits - the training and facilities required to develop games (e.g. console development kits at approximately £10,000

each) has become more extensive as consumer expectations have risen to match increase PC and console capabilities. Increasingly, the industry is looking to universities, colleges and other educational establishments to produce future generations of appropriately qualified recruits.

3.1.5 Intellectual property ownership and protection is key

A key value creation route for any games company is the creation or acquisition and exploitation of intellectual property IP. The creation, retention and successful exploitation of IP is often the only real route of expansion for independent developers. Historically, publishers have retained the majority or all of the IP rights for a game, as a result of the developer's dependence on publishers to fund development. A model for development funding that allowed publishers and developers to share more equitably in both the risk of a game's development and in the reward arising from any IP generated would help the development of both sectors.

Given the importance of IP to the games industry, commercial scale piracy is therefore a major problem - the low cost of manufacture makes games piracy a highly lucrative business. ELSPA continues to lead the charge in promoting and co-ordinating the game industry's activities against piracy.

3.2 Key challenges for the UK

In interviews and workshops with industry participants, the following were identified as the key challenges facing the UK games industry, in order of priority:

- Industry profile/reputation
- Access to finance
- Industry data availability and use
- Skills development
- PR protection & exploitation

3.2.1 Industry profile/reputation

Despite the active efforts of industry groups (especially by ELSPA) to improve the industry's press coverage, the games industry does not enjoy the same level of public profile or quality of coverage as other creative industries.

Firstly, the size and value of the industry to the UK is poorly understood or appreciated, especially by the financial community which has been disappointed by the industry's performance in the past. Educating the financial markets about the industry as it is today is seen as especially important by the industry due to the need for investment and capital to fund games production.

Secondly, the industry's media coverage and profile, while greatly improved, is still poor compared with more mature creative industries. The games industry still carries the stigma of still being viewed as "not a real job" while games, and the industry as a whole, often tend to be indiscriminately labelled as "violent", "antisocial" and "a waste of time".

This poor profile and understanding of the industry is seen as the root cause of many of the other challenges facing the industry. Improving the industry's reputation with the finance sector and government is especially crucial to improving the industry's prospects.

3.2.2 Access to finance

Rising costs, risks and the increasingly global nature of the market mean games companies have a very strong need for funding for development, marketing and expansion. However, the UK financial sector has been less supportive of the UK games industry than the French and US ones have been of theirs. Listed UK companies feel their valuations are poor compared to their French and US counterparts. This largely attributed to a lack of understanding of the industry, an out-of-date view of the industry's cyclicity and its effects, based on the cartridge console period, and past disappointments by UK games companies.

However, much of this problem stems from the games industry's poor ability to present itself effectively to the investment community. There has been a dearth of individuals or companies with credibility both with the finance community and the games industry who can help bridge this critical gap. This is beginning to change but there is still some way to go. The industry needs to better understand the requirements of the finance sector, develop a consistent story for the industry and better communicate it - for example, how companies have become much better at managing through the different stages of the console cycle and so smoothing cyclical revenues.

3.2.3 Industry data availability and use

As this study has once again highlighted, there is a lack of affordable, comprehensive and consistent global market and consumer data. Even what is available, many small UK developers are unable to afford or do not appreciate the value of. Addressing this is seen as vital to better understanding consumer demands for games and hence improved market success.

There is also a lack of communication and trust between parties in different parts of the value chain. This lack of transparency, communication and trust within the industry leads to further limits on the flow of data which in turn leads to companies having a poor understanding of the market outside their specific experience.

This situation is typical of a fragmented and immature market experiencing significant competitive threats. However, the need to work together to develop and make available sound data is key. The potential role of the trade associations and government in this effort will be critical - see chapter 5 of the main report, Conclusions and action plan.

3.2.4 Skills development

There is a general shortage of business and management skills within the industry which is holding back the industry in its efforts to develop its level and image of professionalism. However, while these skills are urgently required, it is also important that any training is also relevant to the industry as managers will have to maintain or establish their credibility within industry.

There is also a limited pool of labour to hire from and a shortage of new recruits into the industry. The industry currently lacks clearly defined role descriptions, entry routes and career paths for the industry. This shortage of basic skills is acute both for programmers and, increasingly, for artists, mainly due to the increased emphasis on high production values and quantities of artwork in modern games.

3.2.5 A model of IPR ownership for the UK market

The UK industry is in a unique position with the strength of its independent domestic industry residing in the development sector. Historically, publishers have owned IP rights in return for funding the development process, but this leaves developers with little opportunity to share in the potential upside.

In order for the UK industry to enjoy more than royalties from the games they develop and potentially share on the higher value components of the business, whilst not being exposed to the full risk of the project, the industry must construct a new model. This model must allow properly funded developers to share more fully in both the risk and rewards of their games through increased (if not complete) retention of IPR.

4 Conclusions and proposed action plan

4.1 Conclusions

The UK games industry as a whole is a significant global player and a major export earner for the UK. The development sector in particular is highly thought of, creatively and technically, and very successful in terms of global sales compared to the size of the sector.

However, the industry continues to suffer from a lack of recognition, given its size and value, and understanding, especially within the financial sector and government bodies. This is especially crucial as rising games project sizes and costs mean that UK developers and publishers need to consolidate or scale up to cope but face major obstacles to raising the funds needed to do so.

In the UK, the lack of players with global scale, the comparative immaturity of the industry, its highly fragmented nature and the poorly developed industry-level infrastructure will all restrict the industry's ability to maintain and improve its competitiveness in the face of global competition.

The UK is at a turning point in its development and there are no global parallels within the games sector for it to follow. No other country has so globally strong a development sector with a comparatively weaker native publishing sector. Developing an industry model that allows UK developers to build a solid and sustainable base for serving all global publishers, whilst also playing a larger role in the ownership and exploitation of intellectual property, offers the most promising route for securing the future competitiveness of the UK industry.

In particular, success in attracting funding to enable the retention or ownership of intellectual property and the effective exploitation of that IP to fund future growth, consolidation or development will be critical. Without access to funds that can support this first step to growth, UK development companies and the UK's games industry as a whole, risks becoming simply a creative and technical "bodyshop" for overseas publishers and developers. In this scenario the imminent "golden age" in the games sector would not be reflected in a healthy outlook for the UK's industry. Instead there would be a continued hand-to-mouth existence and increased financial frailty within the domestic sector, whilst the majority of the fruits of the UK's labour were retained overseas.

The UK industry and Government must make balanced progress on two fronts - continuing to attract inward investment in the UK's games sector and "pump-priming" an as yet under-developed domestic games investment industry.

The UK must continue to attract the levels of inward investment that it is receiving from overseas publishers. This will involve promoting the attractiveness of the UK (size and talent of the domestic development community, proximity to Europe, English language etc.) and ensuring that the UK remains competitive for these firms in terms of conducting business from the UK.

At the same time, the Government and industry should seek to attract, promote and ensure the success of the games industry specific funding schemes within the UK. There are a number of models now emerging in the UK and overseas - Fund4Games (UK), Interactive Finance (Belgium/France) and Capital Entertainment Group (US) all offer models of what is required to nurture the sector at this crucial stage in its development. Whilst the development of completion bonding approach to project funding provides a more widely applicable model for the industry. Without these project level funding mechanisms and the environment to see them first arise and then succeed, the domestic games industry will not prosper to the fullest of its potential.

With no strong domestic publishing base (a situation that would worsen should Eidos be acquired) the UK development industry must ensure that it is well connected and maintains good exposure to overseas publishers. Despite the fact that many publishers have their European headquarters in the UK, this will involve establishing and maintaining contact with these companies in their home territories. For US and Japanese publishers (the key parties) whilst this will certainly involve attendance at key industry conferences, such as E3, but contact beyond these hectic occasions will be essential - a cost of sales that again is likely to favour developers of scale.

In terms of global markets, the UK should seek to understand better the nature of and reasons for its current success. In Europe, in particular, where the UK share compares well with that of US and Japanese developers, the industry must explore the underlying drivers more closely. How much is due to cultural compatibility between the UK and Europe?

How much is due to development relationships with native European publishers, who are strong in their domestic markets? How much is due to the nature of the installed base of consumer devices? A better understanding of these issues would inform an approach for defending and improving share in Europe.

At the same time, any transferable lessons must be adapted and rapidly applied to the US market where UK performance, whilst strong, is more vulnerable and heavily title-dependent at present. If the European market provides a model of the share that the UK can attain in the face of US and Japanese competition, then it suggests that there is scope for significant growth of share in the US.

Whilst the Japanese market is significant, there is little that developer-led activity can do to influence success in a market so closed to foreign games. At this time, UK publishers are likely to lack the scale and funding to significantly and sustainably open the market. Japan is most likely a task best left for the global publishing houses to open first and the UK industry to then explore. In the meantime, trade missions to Japan can (and do already) provide useful opportunities to learn how a much larger and more mature game development and publishing market operates, and to provide opportunities to identify partners for inward investment into the UK.

The UK industry has the potential to seize a significant opportunity and secure its role in the global market. The major challenges and associated actions set out in the report present an achievable and sensible approach for enhancing the UK's competitiveness. Success will rely on effective co-operation within the industry and a new-found level of maturity and professionalism. The role of Government and trade bodies will be important in ensuring the appropriate level of collaboration, but ultimately success will depend upon the ability of the industry to engage and secure the support of the financial community.

4.2 Proposed action plan

Spectrum has developed the action plan on the basis of a clear view of the objectives that must be achieved if the UK industry is to negotiate the challenges facing it and to take the significant opportunity available in improving its competitive position. There is at present a gap between the challenges being faced and the current industry activities to meet these challenges. Specifically, Spectrum believes that the following five key objectives must be the focus of immediate industry action:

- Improve the external perception of games as a "serious" industry
- Foster an environment for effective funding of growth and consolidation
- Mitigate lack of strong domestic publishing base
- Improve industry-level infrastructure and communication
- Enhance the professionalism of the industry

The actions set out below, grouped under the five objectives, set out a structured path to providing the best opportunity for improving the competitiveness of the UK games industry at this time. For each action point Spectrum has identified who should take lead responsibility although it should be made clear that many actions will require co-ordinated effort between Government, the industry and the trade associations (TIGA and ELSPA).

Exhibit 20: Summary of allocation of responsibility for actions

Government actions 2, 4, 14, 15, 17	Joint actions 6, 9, 13, 16, 18, 20, 21, 22
Industry actions 5, 11	Trade association actions 3, 7, 8, 10, 12, 19

The action points have also been given an initial ranking according to the importance that Spectrum attaches to them in improving the competitiveness of the industry. These rankings (essential, necessary and desirable) should be subject to review by the implementation steering group that forms the first proposed action of this report.

Exhibit 21: Action prioritisation summary

Essential actions	1, 2, 3, 6, 9, 11, 14, 15
Necessary actions	4, 7, 12, 19, 20, 21
Desirable actions	5, 8, 10, 13, 16, 17, 18, 22

Action 1: Establish implementation steering group

The DTI, TIGA and ELSPA to create a joint implementation steering group to ensure effective and appropriate follow-up on the actions identified in this action plan. The group membership should seek broad and balanced representation from across the industry (i.e. extend beyond just developers and publishers), but should be limited in size to ensure that it can be effective.

Lead responsibility: DTI

Priority: Essential

Action 2: Creation of a distinct SIC code for the industry

The establishment of a separate SIC code for the video and computer games industry is an essential step in recognising and tracking the size and significance of the industry. The SIC code allows proper allocation of the value generated by the industry and would raise the industry's profile with government and investors.

Lead responsibility: DTI
(with industry support in defining the industry)

Priority: Essential

Action 3: Industry briefings for the financial community

The trade associations need to take the lead in developing a sector level briefing pack and series of events targeting all levels of financing institutions - banks, VCs, and business angels. The briefings should raise awareness of the value of the UK industry, the investment opportunity, the industry's risk profile and mitigation strategies and the funding requirements. Briefings aimed at fund raising for specific companies should be organised individually and not by trade associations.

Lead responsibility: TIGA and ELSPA

Priority: Essential

Action 4: Continued Government and ministerial briefings

The DTI Digital Content and Publishing group must continue to ensure that the profile of games is maintained within Government - with their minister and in other departments. In particular efforts should be made to ensure that government backed schemes and initiatives are aware of the significance of the games industry and its specific assistance requirements.

Lead responsibility: DTI

Priority: Necessary

4.2.1 Improve the external perception of games as a "mainstream/serious" industry

The games industry in the UK suffers from a poor profile resulting in a lack of awareness and understanding. On one side, the size, value and significance of the industry is poorly recognised by both the financial community and by Government. Whilst on the other side the industry is held responsible (particularly in certain sections of the popular press) for a range of social ills from increased violent crime to poor exam performance in teenage boys. The industry is often viewed as being populated by all manner of eccentrics and "game-geeks" more interested in playing games than making money from them.

The games industry must actively seek to establish its place alongside other creative industries, such as film, television and music as a more mainstream industry. It must demonstrate that the UK's excellence in games creativity provides not only "cool" games, but opportunities for strong financial returns (for investors), strong prospects for employment and exports (for Government) and career progression and recognition (for potential employees).

Action 5: *Establish higher public profile UK games award*

Although games may not have the public appeal of pop music or film with their associated awards ceremonies of the Brits or the film BAFTAs, it is desirable to have a games-specific award series that pushes the industry to publicly recognise its successes. Whilst, the BAFTA interactive awards carry the benefit of a highly recognised brand, they also suffer by being overshadowed by their film and television mainstay.

Lead responsibility: *Industry*

Priority: *Desirable*

4.2.2 Foster environment for effective funding of growth and consolidation

The increasing cost and scale of games development requires games companies to scale up to match. Many UK companies remain sub-scale and hugely dependent on the success, or failure, of single titles. However, in order to grow games companies require access to finance to fund expansion and development. The latter is especially important for developers as, the more that development can be funded by the developer themselves, the better the terms they can reach with a publisher for royalties and the retention of IP. This in turn will allow it to self-fund growth or future development.

Models for development funding are now being developed both domestically and overseas (e.g. Fund4Games, Capital Entertainment Group, and Interactive Finance) the industry and Government must be mindful of these and ensure that the UK does all that it can to ensure that it represents an attractive location for such initiatives. More so than the US or continental European market, without a sizeable domestic publishing industry, the UK needs such initiatives to provide its domestic industry with the financial support to grow and to succeed.

Action 6: *Ensuring best use is made of already available financial support*

There is a wide range of public support schemes already available, described in Appendix E Existing Support. However, it is difficult to get a full picture of what options are available to a company. These need to be collated and clearly communicated to games companies along with case studies for successful grant applications, especially for R&D tax credits, which can be a major benefit if used properly.

Likewise, the relevance of existing schemes, tax incentives and funds can be improved for games companies by ensuring administrators and managers are briefed on characteristics and needs of the games industry and giving them latitude and flexibility in applying scheme rules. Investigating the possibilities of benefiting from the current R&D tax regime more fully may provide a further source of potential funding, TIGA has already begun exploring the opportunity here.

Lead responsibility: *DTI, with support of trade bodies*

Priority: *Essential*

Action 7: *Guidance for games companies on accessing finance*

In addition to improving the financial sector's understanding of the games industry, games companies need to better understand the financial sector's priorities and expectations if they are to secure investment. A guide to the different sources of funds available (e.g. angels, RDAs and regional VC funds, VCs etc), the amounts they will typically invest, their criteria for evaluating opportunities and their expectations for stakes, returns and timescales should be developed. Skills sessions on how to present to funding sources could also be organised.

Lead responsibility: *Trade organisations*

Priority: *Necessary*

Action 8: *Directory of private sector games-related investment funds*

There is a growing range of private sector investors and funds specialising in the games industry. A directory of these funds, the amounts they will invest and their specialisation (e.g. prototypes, completion bonding) should be developed and disseminated among UK games companies.

Lead responsibility: TIGA

Priority: Desirable

Action 10: *Establish other cross-industry events*

Intra-industry understanding and knowledge could be further enhanced by organising events for companies in adjacent sections of the value chain to communicate and understand each other's perspectives. These would include:

- *Publisher-developer commissioning days, which are already being organised by TIGA and ELSPA*
- *UK publisher showcase for retailers*
- *Retailer briefings for publishers and developers on what games sell and what do not*

Lead responsibility: Trade bodies

Priority: Desirable

4.2.3 Improve industry-level infrastructure and co-operation

As the games industry grows and matures, it must develop more robust industry structures to improve intra-industry communication. Trade bodies such as TIGA and ELSPA already perform a valuable role by providing a forum for companies within the same sector but improved communications between different sections of the value chain are required to enhance the competitiveness and effectiveness of the UK games industry as a whole.

Action 9: *Establish pan-industry forum*

There is a general lack of understanding within the industry of issues facing companies in other parts of the value chain, often accompanied by a level of suspicion and antagonism. This lack of understanding and trust makes (and will continue to make) industry-level initiatives difficult to implement.

To address this, an all-industry group should be established, under the aegis of the DTI, which would include parties across the whole value chain, including distributors, retailers, hardware manufacturers and professional services providers as well as developers and publishers. The objective of the group would be to facilitate debate on key UK industry issues between parties from different sections of the industry and hence build understanding, trust and confidence and potentially develop solutions.

Lead responsibility: DTI, trade bodies

Priority: Essential

Action 11: *Improve industry data availability - data flow along value chain*

Access to market data is essential for UK games companies to understand markets, trends, threats and opportunities. Market data needs to flow in both directions from retailers back to games companies down the value chain all the way to developers, and vice versa. Establishing a data form that does not reveal competitive or commercial sensitive data but provides valuable industry benchmark data is non-trivial but has been achieved with good success in other creative industries and is a sign of industry maturity. For example an industry-wide accepted view of sales whilst not fully publicly available is essential, at a minimum it would provide standard format for royalty reports within the industry and would provide a reliable common data source for publishers/developers working with different partners.

Games companies also need to seek to negotiate discounted access rates for established data sources such as Chart-Track and Screen Digest for the UK market.

Lead responsibility: Industry, facilitated by the Trade organisations

Priority: Essential

Action 12: Pooling of global markets industry data

There is a lack of detailed, consistent global market data, which restricts UK games companies visibility and will ultimately deteriorate their decision-making. Data from different countries and regions typically vary in their scope and level of detail. In order to form a consistent view of the world market, it will be necessary to liaise with data collection and research organisations to correlate data collected in different regions and improve cross-comparability of data on a global level. A first step should be the centralised subscription to established data sources such as CESA for the Japanese market, and NPD and IDSA data for the US.

Lead responsibility: Trade bodies

Priority: Necessary

Action 13: Collective commissioning of industry level research

While retail and sales data is available, albeit sometimes in inconsistent formats, there is a general shortage of market research data. Commissioning market research work to investigate key areas such as games' move to the mass market or the changing nature of the console cycle would greatly benefit the industry's ability to plan its investment in development.

Similarly, sponsoring research in the UK would help the UK to maintain a technological lead over global competitors. This would require industry requirements to be matched to academic research bodies.

Lead responsibility: DTI and Trade bodies

Priority: Desirable

4.2.4 Mitigate lack of strong domestic publishing base

Consolidation in the global publishing sector has led to the emergence of strong, dominant US, Japanese and French publishers. The US and Japanese publishers, in particular, support strong local development industries. By contrast, the UK publishing sector has largely missed out on this consolidation - UK publishers lack scale and resources by comparison, only Eidos remains as a UK domestic publisher with global scale. While in many cases the UK is the European base for many US and Japanese publishers, key creative and financial decisions are taken at head office.

This lack of a strong domestic UK publishing base means the UK development sector has to take additional steps to establish its profile in the international marketplace, to publishers, retailers and consumers. The Government and industry trade bodies must co-ordinate their activity and provide focused support to ensure that effective marketing and promotion of the UK development sector in these overseas markets.

Action 14: Promote the UK development sector to encourage inward investment by overseas publishers

The UK games industry and government must specifically seek to promote the UK as the prime location for regional headquarters for international publishers establishing a presence in Europe to ensure exposure for UK developers to international publishers. With greater UK presence should also come greater autonomy for UK offices, allowing UK developers to more easily sign deals with international publishers.

The DTI and trade bodies must draft a target list of companies that could establish or increase their presence in the UK and lobby them, working with Invest UK to create briefing documents for these companies to highlight the benefits of setting up in the UK.

Lead responsibility: DTI and Invest UK

Priority: Essential

Action 15: *Establish DTI backed UK development industry presence at E3 and other major industry events*

E3 is the premiere games industry event and it is vital for UK games companies, especially developers, to be able to establish a profile there in their own right, rather than as an adjunct to a publisher or other larger international company. However, they generally lack the resources required to do so.

The DTI should thus take the lead in setting up a high profile stand at E3 to highlight the UK games industry and make the stand and meeting rooms available for the use of UK games companies wishing to use it. This should also be done at other similar major industry events such as the Milia and the Tokyo Games Show, for example.

Financial support is already available for companies wishing to attend trade fairs. Information on the support available and how to access it needs to be disseminated within the games industry through seminars and briefing papers.

Lead responsibility: *DTI lead with full industry participation*

Priority: *Essential*

Action 16: *International commissioning programmes*

Commissioning events provide an organised forum to allow developers to show their wares to publishers. Such events are an important way for allowing non-UK publishers to meet and work with UK developers or, similarly, help UK publishers to sign non-UK developed titles. On the basis of market receptivity and sheer size, these events should initially focus on the US and Europe. The Japanese market, while massive, is effectively closed to non-Japanese games and opening it should be a much longer-term objective.

Lead responsibility: *Trade bodies and DTI*

Priority: *Desirable*

Action 17: *Co-ordinated international promotion and market development*

In order to develop a strategy for the UK games industry for international market development, the DTI should ensure that the Digital Content and Publishing group co-ordinates all relevant activity within government. With so many different agencies within government leading activity that might usefully promote the UK games industry overseas, a prime point of contact is essential. The DTI must act to co-ordinate the promotion and market development activities of these agencies, and communicate them effectively to the trade bodies and the industry.

Lead responsibility: *DTI*

Priority: *Desirable*

4.2.5 Enhance industry professionalism

The rising scale and cost of development and increasingly hits-driven market are increasing the risk in games development. Companies need to mitigate the risks they face by working on multiple concurrent projects which further adds to the complexity already arising from larger scale projects. Likewise those funding the development projects or the company's expansion need to be confident in the developer's ability to deliver games to quality, budget and deadline.

Scaling-up in this manner will not only requires increases in funding, but also an associated increase in management competence and professionalism. There is a recognised shortage of senior business and management skills within the industry, compounded by the fact that the industry's low profile makes it difficult to attract external business talent.

The industry therefore needs to ensure a high level of professionalism and to ensure that this professionalism is recognised by those funding them.

Action 18: Spread best practices within the industry

The small scale and wide geographic spread of games companies within the UK means that there is little opportunity from learning from one another. The development of best practice case studies and open seminars for their dissemination and discussion should be actively encouraged. The topics for review should be driven by industry demand, but should include a focus on those issues likely to become more complex with increased scale for example, managing multiple projects and managing funding partners expectations.

As well as the sharing of UK best practice, examples should be drawn from abroad, especially the US and Japan through fact-finding missions such as those organised by the International Technology Service. Recent visits to Japan have provoked interesting thinking on project organisation and skills. Whilst lessons may not be immediately applicable to UK companies, there is a certain need to ensure exposure to the working practices of successful games companies from around the globe.

Lead responsibility: Trade bodies, working with ITS for overseas fact-finding missions

Priority: Desirable

Action 19: Draft standard or benchmark contracts and deal terms

Clear, standard or reference contracts and deal terms would expedite the process of concluding development deals and reduce the chances of misunderstandings or disputes. Developers and publishers should work with law firms to draft standard contracts and make them available, along with checklists and guides for completing them. Games companies should then be strongly encouraged to adopt them or at least refer to them before signing contracts.

Lead responsibility: TIGA and ELSPA, working with leading law firms active in the games industry e.g. Osborne Clarke, Theodore Goddard

Priority: Necessary

Action 20: Define and adopt industry standards

Games companies' professionalism needs to be recognised by external parties. One way to ensure this is to adopt and adhere to recognised quality standards. Key standards would include ones for:

- Certification of companies meeting defined criteria for management and development processes
- Consistent security processes across the entire value chain to prevent games content leaking into the hands of pirates, shifting the emphasis on combating piracy from enforcement to prevention
- Copy protection of games content and evaluation of current and future solutions against them for robustness and compatibility
- Industry accreditation of games-related education and training courses

In addition, high profile support for the upcoming rollout of the new pan-European content classification scheme based on the existing ELSPA system would show the industry acting in a responsible manner.

Lead responsibility: TIGA, ELSPA and Skillset, working with educational establishments for course accreditation and DCMS for rollout of new content classification system

Priority: Necessary

Action 21: Define career paths for industry

In order to support the emergence of a growing, professional industry, the games industry needs to be able to attract sufficient numbers of recruits with the correct skills and to offer them a well-defined career path which includes the development of existing and new skills.

This work, already underway with TIGA, ELSPA and Skillset, needs to encompass the following:

- *Definition of key industry roles (e.g. design, creative, technical and management) and associated skill sets, establishing recognised career paths and qualification structures*
- *Collaboration with educational establishments to ensure graduates learn skills the industry requires. This is particularly true for the specialist games-related courses*
- *Disseminate list of training options available to games companies. The list must include training opportunities to acquire business and management skills*
- *Improve the relevance of training available by representing the needs of the games industry to training bodies, highlighting the size, value and importance of the sector and working with them to tailor course to match the needs of games companies*

Lead responsibility: Skillset and Trade associations

Priority: Necessary

Action 22: Promote improved business and management training

Recognising the need to raise the standards of business management skills, the DTI should ensure that the industry is able to make fullest use of business management training resources available. Co-ordinated by Skillset, potentially as part of the broader effort to define the industry's training requirements there is a need to structure and make available access to structured business and management training. There is significant potential to draw upon the efforts of University for Industry, Small Business Service and Business Link.

Lead responsibility: Skillset with DTI and the industry associations.

Priority: Desirable

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Our thanks for assistance from

Skillset,
Trade Partners UK;
Digital Content Forum;
Screen Digest Publications;
plus the large number of publishers,
developers, finance partners and
other key players across all the
industry sectors who gave their
valuable time, help and advice
through interviews, focus groups,
workshops and email feedback etc.

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Executive summary



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