

From exuberant youth to sustainable maturity

Competitiveness analysis of the UK games software sector

Main report

From exuberant youth to sustainable maturity

Competitiveness analysis of the UK games software sector

Main report

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

Contents

1	Introduction	4
1.1	Purpose and scope of the study	5
1.2	Definition of competitiveness	5
1.3	Approach	6
1.4	Access to data	6
1.4.1	Sources used	6
1.4.2	Sources available	7
1.4.3	Data availability issues	7
2	Games market overview	8
2.1	Games industry structure	9
2.2	Global market size	10
2.3	Key developments	11
2.3.1	Increasingly hits-driven market	12
2.3.2	Massively increasing scale of projects	12
2.3.3	Progress to mass-market for games consoles	13
2.3.4	Development of new platforms and e-commerce	14
3	UK competitiveness summary	16
3.1	Outputs	17
3.1.1	UK market share	17
3.1.2	US market share	17
3.1.3	European market share	18
3.1.4	Japanese market share	18
3.1.5	Global market share	18
3.1.6	Balance of trade	19
3.1.7	Total value generated	19
3.2	Inputs	20
3.2.1	The UK domestic retail market	20
3.2.2	The UK games industry	20
3.3	Efficiency	21
3.4	SWOT	22
3.4.1	UK development SWOT	22
3.4.2	UK Publishing SWOT	23
3.5	Key challenges	23
3.5.1	Profile / reputation	24
3.5.2	Access to finance	25
3.5.3	Industry data availability	26
3.5.4	Skills development	28
3.5.5	Protection of IP	30
3.6	Competitiveness Summary	30

Contents

4	Detailed UK sub-sector review	32
4.1	Development	33
4.1.1	Sector structure and employment	33
4.1.2	Sector size and profitability	34
4.1.3	Development sector challenges	35
4.2	Publishing	36
4.2.1	Sector structure and employment	36
4.2.2	Sector size and profitability	38
4.2.3	Publishing sector challenges	39
4.3	Middleware and tools	39
4.3.1	Sector overview	39
4.3.2	Key challenges	40
4.4	Outsourcing and service companies	41
4.4.1	Sector overview	41
4.4.2	Key challenges	41
4.5	Format holders / console manufacturers	42
4.6	Distributors	42
4.6.1	Sector overview	42
4.6.2	Distribution key challenges	43
4.7	Retailers	43
4.7.1	Sector overview	43
4.7.2	Retail key challenges	44
5	Conclusions and proposed action plan	46
5.1	Conclusions	47
5.2	Proposed action plan	48
5.2.1	Improve the external perception of games as a "mainstream/serious" industry	49
5.2.2	Foster environment for effective funding of growth and consolidation	50
5.2.3	Improve industry-level infrastructure and co-operation	51
5.2.4	Mitigate lack of strong domestic publishing base	52
5.2.5	Enhance industry professionalism	53

Preface

This report presents the findings of a competitiveness review of the UK's games software industry commissioned by the Department for Trade and Industry. The study was conducted over the period January to July 2002 in collaboration with many leading industry figures and companies, and the active support of the industry trade associations (TIGA and ELSPA) and the DTI.

The report is accompanied by two complementary documents, a shorter Executive Summary, which provides a summary of the findings and analysis and a set of supporting Appendices, which include detailed economic forecasts and an e-commerce impact assessment.

Electronic versions of this full report, the Executive Summary and the accompanying Appendices are available from the DTI website at www.dti.gov.uk/cii/services/contentindustry/computer_games_leisure_software.shtml

1 Introduction

1.1 Purpose and scope of the study

The study provides a historical and current-snapshot view of the competitiveness of the UK games software industry. It aims to set out how the UK industry compares with respect to the games software industries of other countries. It also presents a view of the comparative performance of the games industry with respect to other creative industries within the UK.

Beyond the data-driven analysis of the UK's competitive position, the report seeks to offer some perspective and insight on the issues and challenges that will limit the competitiveness of the industry in the future. It provides an outline view of how the UK industry might seek to secure its future and improve its competitiveness, and sets out an industry-level action plan aimed at helping to address some of the key issues.

This main report includes analysis in the following areas:

- Mapping of the industry structure and global market size, including industry issues, future trends and new technologies
- Evaluation of the UK's competitive position
- Detailed review of the sub-sectors within the industry, including SWOT analyses
- Action plan for industry and Government to take forward

The appendices provide supplementary data and analysis on the following topics:

- Detailed examination of new markets and technologies provided by convergence
- Economic assessment of the industry including scenario building and forecasting
- E-commerce impact assessment for the industry
- Summary of existing Government support available to the industry
- Review and summary evaluation of research sources used in the study.

1.2 Definition of competitiveness

In seeking to evaluate the competitive position of the UK games industry we have made comparisons of two sorts, the first with other major markets (chiefly the US and Japan) and the second with other UK domestic creative industries. Clearly, each type of comparison has different uses and the report attempts to be selective and deploy the most appropriate comparison in each instance, rather than drown the reader in multiple analyses and raw data.

The analysis of competitiveness contained within the report is defined along three axes in line with the DTI's approach to all studies of this type. These are as follows:

- **Outputs** - This covers key market performance indicators such as turnover, volume and value of production, value added, market share (domestic and key overseas markets), export performance and balance of trade and, as illustration, individual product performance details
- **Inputs** - This covers the quantity and quality of inputs to the UK games industry such as the size of the domestic games market and industry and employment statistics
- **Efficiency** - This examines measures of how efficiently inputs are used, primarily by comparing inputs against outputs for the leading national games industries

In order to add some qualitative "colour" to these comparisons, a further level of analysis is provided in the form of a SWOT analysis of the overall industry and subsidiary SWOT analyses for each of the major sub-sectors.

1.3 Approach

The analysis for the study was driven from two parallel streams of work.

The first, an extensive data-driven analysis and desk research process to assemble, review and evaluate existing data on the games industry. The data gathered was cross-checked and verified with industry sources in interviews.

This data was used as the basis for an economic model to estimate and forecast the value generated at each stage in the value chain of the UK's games software industry (development, publishing, distribution and retail). The model was also used to forecast the size of the UK and global markets to 2012.

In parallel, in order to support the data analysis and to provide a sense-check mechanism for validation, a wide-ranging process of industry interviews was conducted. Over 60 interviews were carried out with a range of people occupying key positions along the entire value chain, with the purpose of data gathering and validation. A full list of those organisations interviewed in the course of preparing the report is provided in Exhibit 1 below.

Finally, in the development and preparation of the report and its recommendations, a series of workshops, roundtables and reviews has been conducted with a small industry group (including representatives of both UK games industry trade bodies) and members of the DTI.

Exhibit 1: Spectrum games industry interviews

Developers	Publishers	Console manufacturers	Education
Blitz Games	Konami	Sony	IC Cave
Walrus Ltd	EA	Microsoft	IC DC John Moores
Lost Toys	Eidos		
Broadsword Interactive	Virgin	Retail / distribution	Government
Wide Games	Infogrames	Pinnacle	Tax office
Visual Sciences	Vivendi	A major retailer	Small business loan guarantee scheme
Hotgen Studios	Midas	Just Flight	SBS
Kuju	Codemasters		Cambridgeshire Business Link
Revolution Software	Activision	Independents / agents	SGRIN (WDA funded)
Rebellion		Les Edgar	Scottish Development International
Vis Entertainment	New markets	Eugene Evans (US)	North West Development
Creations	Telewest	Gameproducer.com	Trade partners UK
Code Monkeys	Vizzavi	Bad Management	MEDIA
Argonaut	Digital Bridges	TC Associates	EC Framework
Elixir Studios	Iomo		
	Motorola	Legal and finance	
Middleware / technology	Online plc	Osborne Clarke	Trade organisations
Criterion		Livingstone Guarantee	TIGA
Math Engine	Services	Beeson Gregory	ELSPA
Trymedia	Babel Media	Fraser Stone	
	International Hobo	Innovators International	
		START! Games	

Source: Spectrum

1.4 Access to data

In the course of this study, we have obtained and reviewed a large body of existing data on the UK and global games industry. These are summarised below. Their validity has been checked by comparison with other sources and discussions with industry representatives. Where possible, gaps or issues with the data have been identified and resolved in interviews.

However, in the process of our research we have been able to identify a number of critical gaps in data which have made a comprehensive assessment of the UK's competitive position difficult. These issues are explored further below.

1.4.1 Sources used

The following are the key sources of data used in the course of this study.

- Screen Digest - An annual report which provides a good, detailed overview of the UK industry structure, including forecasts and detailed market data based on aggregated Chart-Track data (see below). The data provided for the European, US and Japanese industries and markets is less detailed and often does not provide data suitable for like-for-like comparison. The data sources used come from a variety of sources for different markets with varying organisation and levels of detail and so are generally hard to compare directly.
- Chart-Track data - Detailed information on UK retail sales only. The level of detail has, however, recently been reduced at the insistence of leading retail chain Electronics Boutique (now rebranded as GAME Group).
- CESA White Paper - An annual report on the Japanese games market published by the Computer Entertainment Software Association of Japan. This annual report provides a comprehensive survey of Japanese sales and consumer behaviour. However, it lacks data on the structure of the Japanese industry and the English text accompanying the survey data can be hard to understand.

- Broker/analyst reports - These generally provide high level overviews of the global, US or European games markets and, typically, detailed financial analysis of particular listed US and European publishers. Some reports did include coverage of listed UK developers but this was uncommon. The 2000-2001 and 2001-2002 Home Interactive Entertainment Market Updates from Arcadia Investment Corp. was especially useful as it also included detailed coverage of title and publisher sales in the US and UK markets.
- Specialist/trade press - Industry publications frequently publish background/overview articles on markets and industries at a high level (e.g. Edge's March 2002 article on the Japanese market), but these generally do not provide a high level of detailed data or make comparisons with other markets. A notable exception is an article in the March 2002 edition of Develop examining UK developers' share of the US market.
- Mobile, interactive TV, Internet and ecommerce research reports - Used for metrics and forecasts for new platform/market size, growth and value. Forecasts varied widely from source to source, with notable declines in optimism in more recent reports.

1.4.2 Sources available

The following sources of data are also known to be available. Elements of data from these sources have been used or have been referred to in other sources but they have not been used in this study as a source in their own right.

- GfK Marketing Services - Monitors retail sales of games in a number of European markets (Austria, France, Germany and Spain).
- NPD - Aggregates retail sales data a sample of 23 chains representing approximately 80% of total industry sales in the US.

1.4.3 Data availability issues

In the course of reviewing data available on the global games industry to assess the UK industry's competitive position, we identified the gaps below. For these gaps, we found the data to be either unavailable or only available at a very high level. While more data was available for the UK industry and companies, the lack of comparable data on other countries made comparisons for assessing the UK's competitive position difficult.

- Lack of publications or reports which provide detailed histories and overviews of the structure of the US and Japanese games industries in a similar way that Screen Digest reviews the UK industry - this made it difficult to identify structural differences and hence potential reasons for these differences.
- Lack of detailed data (e.g. headcount, turnover, profitability and costs) on games companies other than large, publicly listed publishers. This problem was especially acute for non-UK developers.
- Lack of information on industry metrics such as employment, and unit labour costs for other national games industries. Even Cesa, the Japanese trade organisation, when contacted directly, had no data on employment figures.
- Lack of comparability for what data was available because different sources used different levels of detail, organisation, structure, time periods, basis for collection or units.
- Lack of detailed surveys of consumer behaviour, attributes and tastes for the US and European markets

2 Games market overview

This chapter provides an introduction to the games industry. It offers a brief analysis of the overall industry structure and examines the role of each of the sub-sectors (an area explored in more detail in Chapter 4). The chapter also provides data on the size and value of the global market and considers some of the key factors driving growth in demand for each platform. Finally, the chapter explores some of the key trends and developments affecting the industry and their likely development.

2.1 Games industry structure

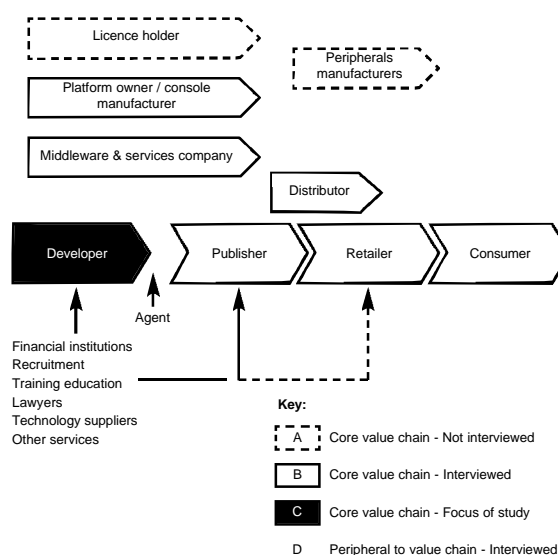
2.2 Global market size

2.3 Key developments

2.1 Games industry structure

The computer games industry is similar in structure to other creative and software industries such as film, music, computer software and books in that it is based around the creation, publication and distribution of intellectual property products. The industry value chain is illustrated below.

Exhibit 2: The games industry value chain



Source: Spectrum analysis

The core participants in the value chain are briefly described below:

- Developer:** Games developers are responsible for the process of creating a game. This task has evolved from something which could be undertaken by one or two programmers part-time to a highly complex, intensive 1-2 year process requiring teams of dozens of specialised designers, programmers, artists, musicians, scriptwriters, project managers and possibly even actors.
- Publisher:** Publishers are responsible for selecting games titles, either from independent developers or from in-house teams, funding their development, overseeing or terminating production by assessing progress against project milestones, management of testing, localisation, marketing, manufacturing and, to varying extents, distribution to retailers.
- Distributor:** Distributors are intermediaries between publishers and retailers. Their original role was more that of a wholesaler when the UK games retail market was primarily composed of small independent stores. However, more recently, increased consolidation in the publishing and retail areas has led to a shrinking of the distributor's role to more of a simple fulfilment and delivery function as publishers increasingly deal directly with large retailers. Some publishers will also form exclusive relationships with distributors.
- Retailer:** Retail stores are by far and away the most common channel for sales of games. UK retail is now highly concentrated among the large retail chains, with one chain in particular, games specialist retailer Electronics Boutique, now rebranded as GAME Group, having an estimated 25% market share¹ and less than 10% of the 6000 stores remaining independent². Retail stores face potential threats from online retail and delivery of games, but the games industry in general believes that physical media sold through stores will remain the dominant retail channel for the foreseeable future.
- User platform:** Games are now played on a wide variety of devices, including PCs, dedicated games consoles, mobile phones, on the Internet and on interactive TV (iTV) platforms. The primary markets are PC and console games, but the Internet, mobile and iTV are emerging as new means by which to reach game-playing customers.

¹ Source: Spectrum interview with industry analyst

² Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

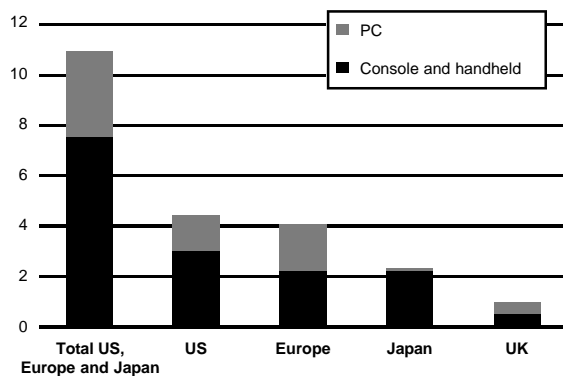
- Console manufacturer:** Manufacturers heavily subsidise the cost of the console hardware itself but charge a license fee for each unit of software sold. The console hardware is thus a loss leader for selling games. As a result, manufacturers spend very heavily every five years to promote their new console platforms (e.g. Microsoft has an estimated \$500m budget to market the Xbox). Consequently, manufacturers control access to their console platforms very closely through licensing developers and access to development tools, approval of titles at concept and manufacturing stage and control of the manufacturing process.

The console manufacturers also have in-house development and publishing arms which are able to produce high production value games for their own platforms as flagship titles as license fee payments do not apply to them.

2.2 Global market size

The global leisure software industry has experienced rapid growth over the last five years and is now estimated to be worth c £13bn. Of this total, games software represents the majority of the market, approximately £10bn (the remainder is accounted for by educational, children's, reference, utility and home office software). The US is the largest leisure software market in the world, accounting for £4.5bn in 2000, followed by the European (£4.1bn) and Japanese (£2.4bn) markets.

Exhibit 3: US, European and Japanese leisure software market, 2000 (£bn)

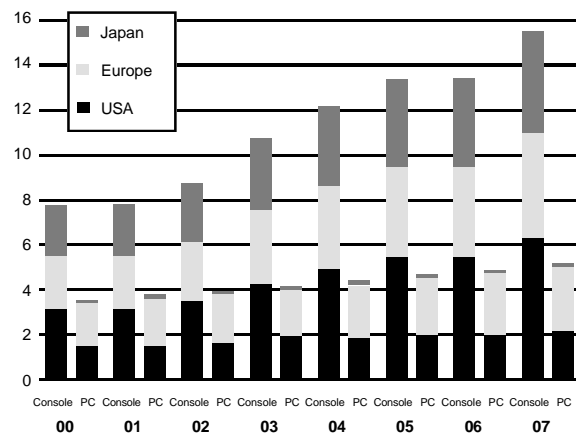


Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

Worldwide, the console (as opposed to PC) games software market accounts for 68% of all leisure software sales. This varies regionally, console software represents only 55% of the European market but 94% in Japan. The console software market total includes software sales for handheld devices, which are estimated to represent 6-7% of US and European market, but closer to 25% of sales in Japan³. PC games software sales in Japan are low because the PC is very closely associated with the work environment, rather than a leisure device.

The console software market is predicted to grow by 15% CAGR (Compound Annual Growth Rate)⁴ over the next five years both in terms of volume and value with the introduction of the new generation console devices. In contrast, whilst the PC games market is expected to continue to grow as strongly in volume terms over the next five years, downward pressure on retail prices is expected to significantly slow, if not halt, growth in the overall value of this market with only 6% CAGR⁵ growth expected.

Exhibit 4: PC and Console games software global market growth forecasts (£bn)



Source: Spectrum games industry forecasts

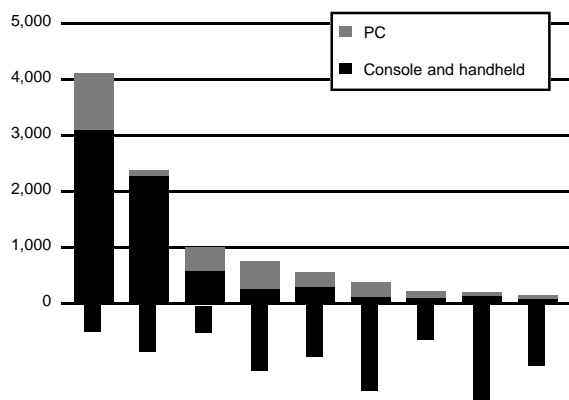
The UK is the largest games software market in Europe and the third largest in the world. Valued at £0.93 billion in 2000, the UK represented 26% of the total European games software market, and 8.7% of the world market. This is compared to the US and Japan markets which represented 36% and 20% of the total market value respectively in 2000. This is due primarily to the significantly higher penetration of games consoles and larger populations in Japan and the US.

³ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

⁴ Source: Spectrum games industry forecasts

⁵ Source: Spectrum games industry forecasts

Exhibit 5: UK and other leisure software markets, 2000 (£bn)



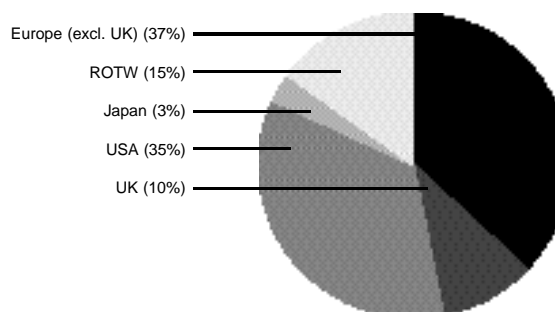
Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

Taken as a whole the European market is considerably bigger than that of Japan, and almost equal in size to the US market. However, it has often been treated as secondary to those of the US and Japan by global players such as the console manufacturers. The European market does not exhibit the same degree of homogeneity and suffers from localisation requirements and diverse cultures, making it more complex and expensive to serve than the unitary US and Japanese markets.

The view of software sales by platform, PC versus console, provides an interesting perspective. It highlights more clearly the different predilections of each market, with Japan almost non-existent with regard to PC games and Europe (including the UK) representing the largest market opportunity for PC games by some way.

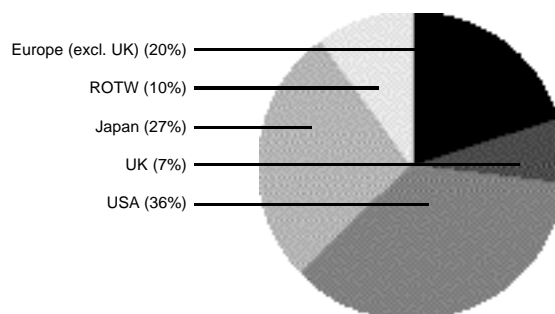
In the console market the US is the largest by some distance from Japan and Europe who each represent 27% of the global total. Within Europe, there is a further level of complexity with console games representing approximately 60% (£586 million) of the total UK games market, equivalent to the size of the French and German console markets combined. In contrast, Germany has a very strong PC games market (the largest in Europe) with 66% of all German games software spending going on PC titles⁶.

Exhibit 6: Global PC games software market, 2000



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

Exhibit 7: Global console games software market, 2000



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

2.3 Key developments

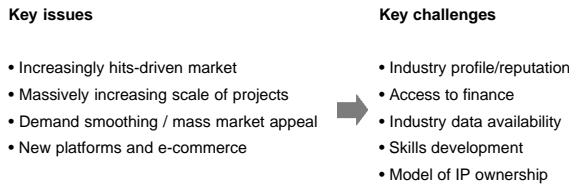
The games software industry is facing a number of key changes in the nature and level of demand. These developments will drive change along the entire value chain and will have significant impact on future success of the UK industry.

Games are on the verge of becoming truly mass-market, with the latest generation of more powerful consoles and falling price points attracting new types of consumer to the market in droves. At the same time, the increased production values, by which so many new consumers are attracted, are leading to greater levels of sophistication in the end product, driving up the cost and complexity of games production.

⁶ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

These developments are explored further in this chapter, whilst their specific impact as challenges to the competitiveness of the UK games industry are discussed in UK Competitiveness section - Chapter 3.5.

Exhibit 8: Key developments and challenges facing the UK industry



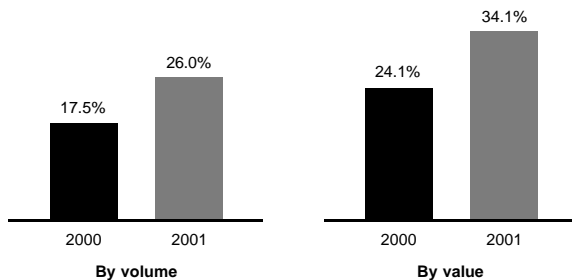
Source: Spectrum analysis; Spectrum games industry interviews

2.3.1 Increasingly hits-driven market

The computer games market is becoming ever more hits driven. CTW estimated that of the 3000 games reported to have been released in the UK in 2000, the top 99 titles (3.3% of development) accounted for 55% of all sales. Whilst the US market data, as illustrated in the exhibit below is showing significant concentration around a smaller number of titles. This trend will exacerbate further as the games industry becomes more mass-market, and the power of marketing budgets or recognised titles will be strengthened.

Also, the majority of sales for a title will usually occur in the first 3 months following their release, reducing the amount of time publishers have to recoup their investment⁷. Computer game back catalogues have, to date, had a limited value compared to the back catalogues of other industries, with a 51% market share by units sold but only 26.3% by value in the week ending 25 August 2001⁸.

Exhibit 9: Percentage of US PC market sales accounted for by top 50 titles

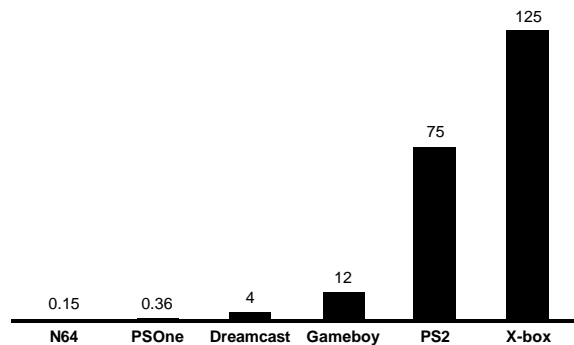


Source: 2000-2001 and 2001-2002 Home Interactive Entertainment Market Update, Arcadia Investment Corp

2.3.2 Massively increasing scale of projects

The advancements in console technology, processing power and vastly increased storage capacities of the optical media now used are enabling the development of increasingly complex gameplay and large quantities of realistic graphics. Games are becoming more lavish and cinematic, setting a standard which consumers are now beginning to expect. Whilst this increases the potential for computer games to appeal to the mass market, the resource required to produce games with such high production values has significantly increased.

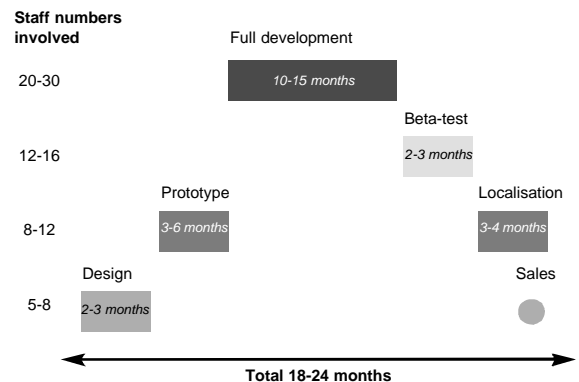
Exhibit 10: Advancing visual processing power of consoles (polygons per second - millions)



Source: Sector Review, June 2002, Beeson Gregory

The average development budget for a premium console title is now in the range of £1-2m and requires a team of at least 20 people working for 18-24 months. UK teams tend to be smaller than US teams and much smaller than Japanese teams - some Japanese projects, such as Capcom's Resident Evil, are reported to have cost in excess of £15m with teams of up to 60 people⁹.

Exhibit 11: Increasing project complexity



Source: Argonaut

⁷ Source: Spectrum industry interviews
⁸ Source: MCV, 31 August 2001
⁹ Source: Spectrum industry interviews

2.3.3 Progress to mass-market for games consoles

Consoles are beginning to attain mass-market levels of penetration, with over 150 million consoles in the key US, PAL and Japanese markets and games consoles have already reached mass-market penetration levels in Japan (c. 70%) and the US (c. 50%).

Exhibit 12: Estimated consoles installed base, June 2002(m)

	US	PAL ¹⁰	Japan
Sony Playstation/PSOne	26.8	34.6	17
Sony Playstation 2	9.2	7.6	8.5
Nintendo 64	18.1	7.6	6.6
Sega Dreamcast	4.1	1.8	2.0
Microsoft Xbox	2.1	0.45	0.18
Nintendo Gamecube	1.7	0.45	2.0

Source: Nick Parker, Screendigest

Intense competition between the latest generation console platforms is already leading to hardware price cuts, making them more appealing to the mass-market and thus broadening the audience for games. The PS2 currently retails at £169 down from £199 and whilst the initial Xbox price was comparatively high (£299), it was swiftly reduced to the same £199 price point as the PS2, and now retails for slightly less at £159. Likewise, the retail price of the Gamecube was reduced to £129 even before its UK launch.

In addition to price cuts, the three platform manufacturers are spending significant amounts on marketing their new consoles, with Microsoft allocating a \$500m budget to promote the Xbox. This enhanced marketing spend will also boost the profile of games and broaden their appeal. This has not only driven demand for consoles, but also raised the general level of awareness of games to the benefit of all games platforms. The lower cost of the optical media used by current generations of consoles, compared with cartridges, also broadens the audience of games players as it allows publishers to profitably release budget software.

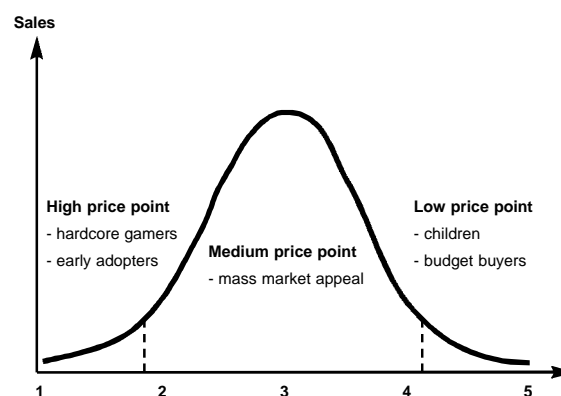
However, intense competition may cause manufacturers to bring in the next generation of consoles sooner. A number of interviewees felt Microsoft in particular might follow a more PC-based release schedule with more frequent, incrementally upgraded platforms (in effect a Xbox 1.5).

The ability of some of these new consoles to play DVDs (Playstation 2 and Xbox, with optional add-on controller, but not Gamecube) also enhances their mass-market appeal by providing potential purchasers with another reason to buy them.

The enormous storage capacity of the optical media used by the new generation of consoles (4.7Gb for PS2 and Xbox, 1.5Gb for Gamecube, compared with 650Mb for Playstation) and their improving graphics capabilities allow the creation of games with very production values - high quality, very realistic sound and graphics. This provides more realistic and engaging user experiences, again broadening the appeal of games.

The demographics of the user base are also determined by the console's current lifecycle stage which, in turn, determines the nature and degree of marketing and the pricing of hardware and software. The exhibit below demonstrates the typical transition in appeal of consoles from the early-adopting hardcore gamer, through mass-market to budget buyers and children. The PS2 is already beginning to emerge from the early adopter stage of its lifecycle.

Exhibit 13: Console user demographic cycle



Source: Spectrum analysis

¹⁰ Note: PAL territories are defined as Europe, the Middle East, Africa and Oceania

2.3.4 Development of new platforms and e-commerce

One of the major developments beginning to occur in the games market is the growth of new platforms for games playing. The PC and console platforms form the bulk of the market for games at the moment and are likely to do so for the foreseeable future, other platforms such as iTV, mobile and the Internet are now emerging. Although these are not expected to compete directly with the more sophisticated and established PC and console markets, they do offer additional opportunities for different types of games experiences. However, their business models are as yet uncertain and it will take some time before these platforms present a major opportunity for the games industry.

A detailed analysis of the development of new platforms for games playing is included in Appendix B - New Markets. This section contains a summary of the salient points of our analysis.

a) iTV

Games are amongst the most popular interactive services delivered through digital TV. For example, Tetris achieved over a million plays in a 21-day period on Sky's Open.... (now Sky Active) platform, at a charge of 25p per game¹¹. Currently, around 8.5 million homes receive digital TV, forecast to grow to half of UK homes by 2005¹². While PCs have a comparable level of household penetration, PC penetration is expected to tail off at 54% of households compared with 98% for digital TV¹³. This suggests a significant potential for iTV games. However, while the UK market is highly developed, the global market is still relatively immature, business models are still emerging, iTV set-top boxes have serious technical limitations compared with consoles and PCs, and technical standards are far from established.

The drivers of demand for iTV gaming will be the availability of games designed to fit around the TV viewing experience, both a steady stream of new, simple games and ones based around TV programming, availability of bandwidth from iTV platform operators and the development of a straightforward charging mechanism. Networked multi-player gaming, as recently launched on the Static 2358-owned PlayJam channel, is predicted to be a key driver of consumer uptake in the longer term, allowing viewers to compete against each other

in real-time, but remains a niche opportunity for the present.

We project the value of the iTV games market in Europe, the US and Japan will grow from £0.38bn in 2001, to £1.75bn by 2005. However, this value will be shared across multiple players with channels and pay-TV platform operators keen to gain a slice of a potentially lucrative market. The anticipated UK share is 29% in 2001, shrinking to 17% by 2005 once other countries begin to catch up in terms of digital TV penetration. Europe, in particular the UK, with its high penetration of digital TV, will be instrumental in driving growth over the next few years¹⁴. (See Appendix C, Market Forecasts)

b) Mobile

Mobile network operators are faced with the need to develop new applications, beyond voice, that will stimulate network usage as they seek revenues to support their investment in new high-speed networks and offset falling voice traffic prices. While many different applications are being developed, mobile games are considered to be a potentially lucrative area for handset manufacturers and network operators alike.

In 2001, there were just under 0.9bn mobile phone subscribers worldwide. 38% of these are European¹⁵. Many of these phones are capable of receiving SMS messages, but fewer are able to handle WAP and fewer still are GPRS, Java or UMTS enabled. It will be a number of years before the current installed base of phones is replaced with handsets that are more capable and more suited to games. Many mobile games developers believe that the capability of the handset - particularly the introduction of colour screens - will be the strongest driver of demand for mobile games.

Due to the nature of the mobile device - the small size, limited processing power and low-resolution screen - mobile games need to be developed specifically for this platform. Already, handset manufacturers like Ericsson have bought licences from games publishers e.g. Tetris, to enable these games to be embedded onto the handset. Already it is possible for users to download new games from the network, and to pay for them directly via their phone bill. In addition, network games playing will be possible, creating valuable network usage revenues for the mobile operators.

¹¹ Source: iTV games developer - IIR interactive games conference November 2001

¹² Source: Jupiter MMXI - European DTV Forecasts 2001-2007, 25th February 2002

¹³ Source: Forrester

¹⁴ Source: Spectrum games industry forecasts

¹⁵ Source: EMC - Mobile Subscriber forecasts to 2005, January 2001

We project the value of the mobile games market in Europe, the US and Japan to grow from £73m in 2001, to over £1.4bn by 2005. Japan dominates this market in 2001 with over 50% share (largely driven by the popularity and success of DoCoMo's i-mode service). But this decreases over time as other countries begin using mobile games more. The UK contributes 5% initially, growing to 9% by 2005¹⁶. (See Appendix C, Market Forecasts)

c) **Online games**

The UK has high Internet penetration (38%)¹⁷ driving demand for Internet usage and simple gaming. However, high quality online, networked gaming requires high-speed broadband connections and with broadband penetration of just 3.1%¹⁸, the demand base for high-quality games remains small.

Online, networked gaming has the potential to turn games playing from a largely solitary activity to a social one involving potentially thousands of other concurrent players located around the globe. To date, this has been largely the province of PC games but the new generations of consoles either have online connectivity built-in or have it planned. Online gaming has also largely been an extension to single-player games but also offers a potential new revenue model in the form of subscription-based gaming.

The key driver of demand for online gaming will be the availability of cheap, reliable broadband connectivity.

We project the value of the online games market in Europe, the US and Asia to be £0.5bn in 2001, growing less than mobile and iTV to only £0.89bn by 2005. Due to its high broadband penetration, particularly in South Korea, Asia mainly drives online gaming, followed by the US. The UK contributes only a tiny fraction of this for the first few years, as broadband connectivity is highly limited¹⁹. (See Appendix C, Market Forecasts)

d) **Web games**

There are already many portal operators who have launched online games services over the Internet. Distinct from the download of PC games, the Internet games platform caters to leisure surfers and casual gamers.

Demand will be driven by the need for convenience, but, until broadband networks are widely available, the lower graphics, sound and effect quality of these game experiences are likely to limit demand. The key selling point of Internet games is simplicity and availability of content at low or no cost.

The value of this market will be based almost entirely on advertising revenues.

¹⁶ **Source:** Spectrum games industry forecasts

¹⁷ **Source:** Continental Internet Report Quarter 4, November 2001

¹⁸ **Source:** Jupiter -Broadband forecasts, October 2001

¹⁹ **Source:** Spectrum games industry forecasts

3 UK competitiveness summary

3.1 Outputs

This chapter summarises the competitive position of the UK games software sector in a global context. Structured around a review of the three types of competitiveness measure (input, output and efficiency) supported by a SWOT analysis of the sub-sectors, it offers a snapshot view of the UK industry's competitiveness. Finally, the chapter summarises the key challenges that the UK industry must face in improving and defending its position and sets up the key issues that must be addressed by the Action Plan in Chapter 5.

This section is structured as follows:

3.1 Outputs

3.2 Inputs

3.3 Efficiency

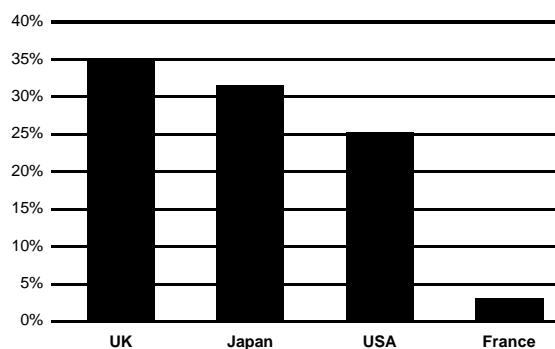
3.4 SWOT

3.5 Key challenges

3.1.1 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. 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 14: UK 2000 market share by country of development (% by volume)



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

²⁰ Source: Spectrum analysis of Screen Digest data

²¹ Source: IDG analysis of US sales data

Exhibit 15: 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

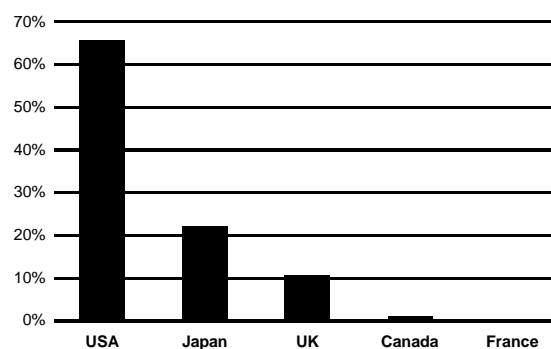
Source: Reports compiled by Chart-track, copyright ELSPA 2002

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.

3.1.2 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 2000²⁰. 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 market²¹.

Exhibit 16: US 2000 market share by country of development (% by volume)



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

Exhibit 17: 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 ²²
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

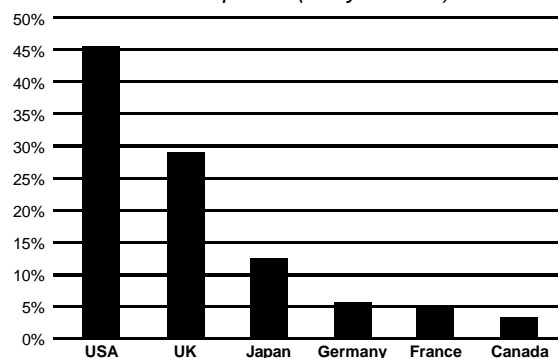
Source: NPDPtechworld TRSTS Video Games

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.

3.1.3 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)²³.

Exhibit 18: European 2000 market share by country of development (% by volume)



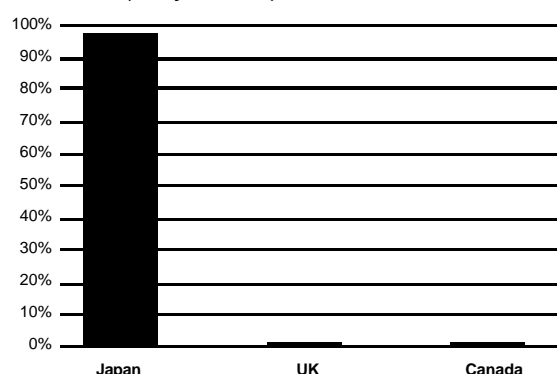
Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

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.

3.1.4 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%.

Exhibit 19: Japanese market share of 2001 Top 50 titles by country of development (% by volume)



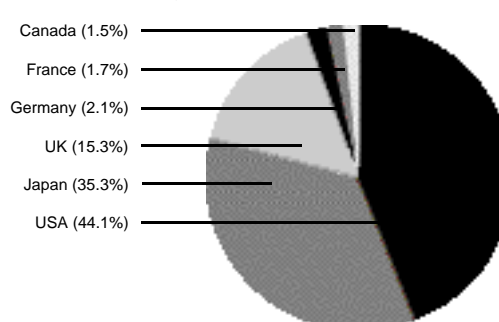
Source: Arcadia Investment Corp – 2001-2002 Home Interactive Entertainment Market Update

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.

3.1.5 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 20: Global market share for 2000 (% by volume)



Source: Spectrum analysis of Screen Digest data

²² Source: PC version developed by US studio KnowWonder Digital Mediaworks

²³ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

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.

3.1.6 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 2000²⁴. 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.

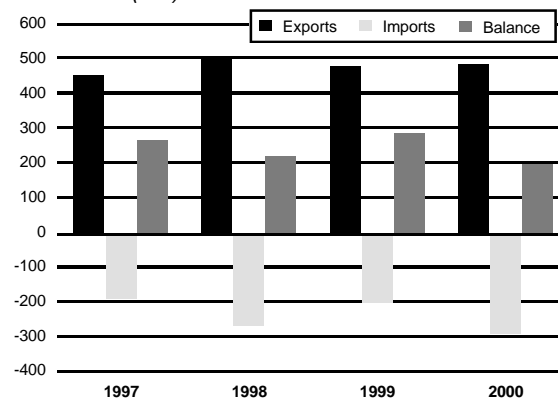
It should be noted that this level of exports is achieved without industry-specific incentives such as those enjoyed by the film industry.

Exhibit 21: 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

Exhibit 22: UK balance of trade for leisure software (£m)



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

3.1.7 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 royalties²⁵.

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 publishers²⁶. This value encompasses development costs, royalties generated for independents and profits for in-house studios.

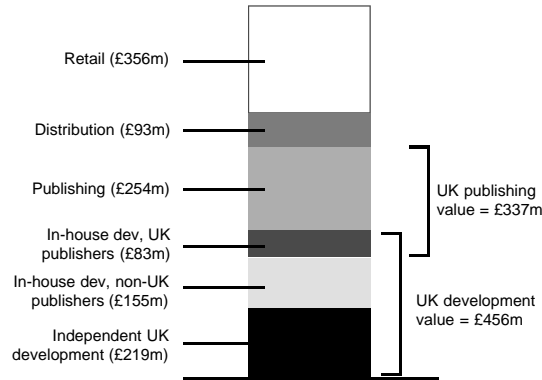
The definitions used here differ from those used by the ONS in its calculation of value-added.

²⁴ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

²⁵ Source: Spectrum games industry forecasts

²⁶ 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

Exhibit 23: UK value of PC and console software markets, 2001 (£m)



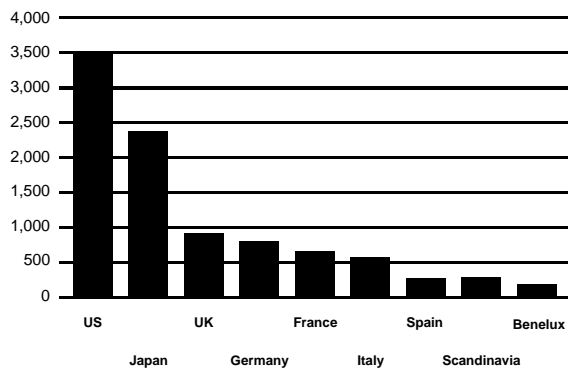
Source: Spectrum games industry forecasts

3.2 Inputs

3.2.1 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. The UK represents only 8.7% of the total global market, compared with the US at 35.6% and Japan at 19.2%.

Exhibit 24: Retail market value (£m)



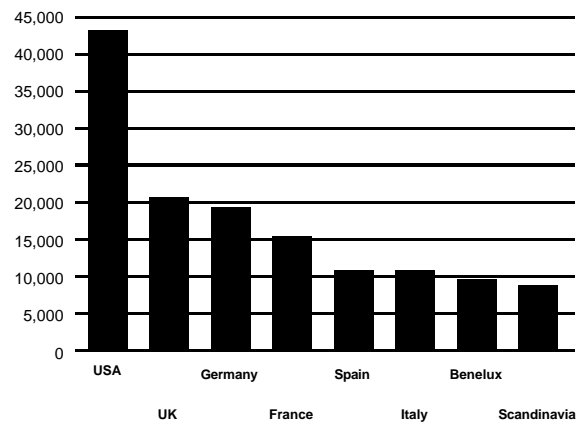
Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

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.

3.2.2 The UK games industry

The UK games industry employs more than 20,000 people across all subsectors²⁷, 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.

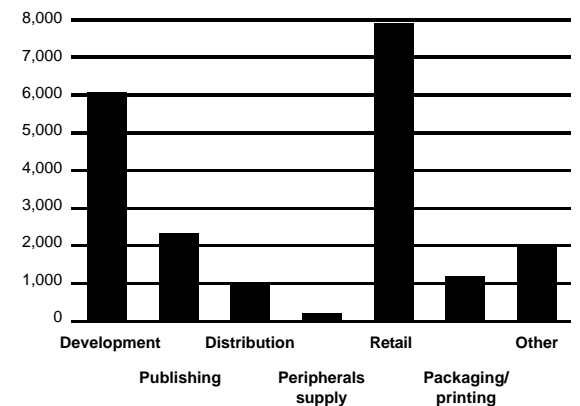
Exhibit 25: Number of people employed in national computer games industries (2000)



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 26: Breakdown of employment in the UK games industry

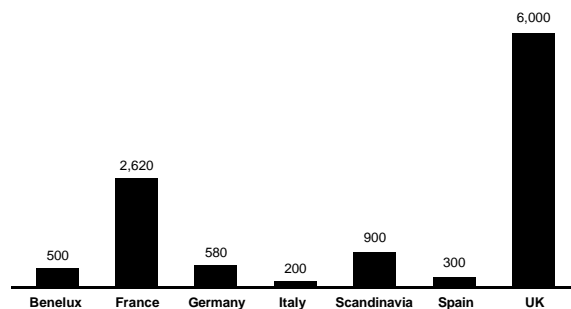


Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005

²⁷ 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 territories²⁸. The UK's development community, is particularly large when compared to the size of the UK's population.

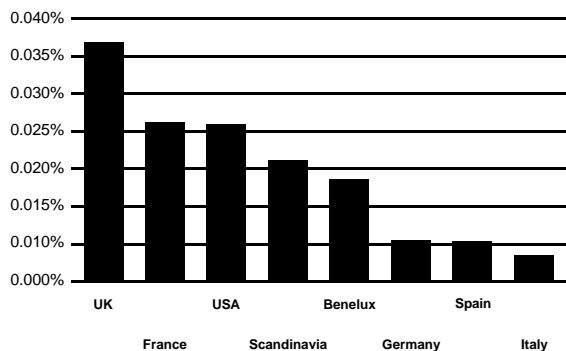
Exhibit 27: Number of people employed in computer games development in European territories (2000)



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

Further, as a percentage of the national workforce, the UK's production sector is far the largest of any market in the world.

Exhibit 28: Production sector (development and publishing) as proportion of workforce



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

3.3 Efficiency

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.

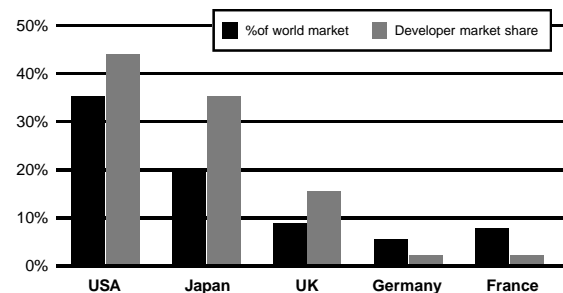
²⁸ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

²⁹ Source: Spectrum games industry forecasts

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 globally²⁹.

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 absolute shares two to three times larger than the UK's.

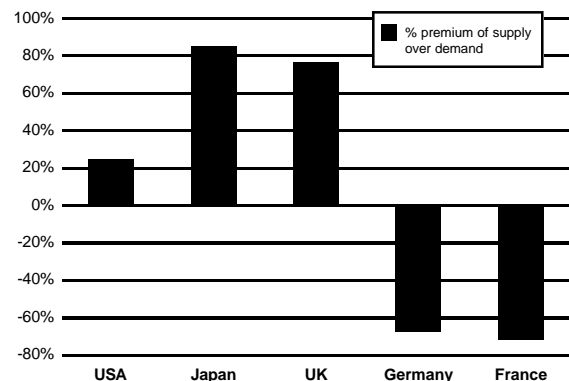
Exhibit 29: National markets' shares of world market compared with development industries'



Source: Spectrum analysis of Screen Digest data

These "power ratio" analyses provide a good insight into the efficiency of the UK's native industry. 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 also double that of the UK.

Exhibit 30: Over- or under-performance of national development industries

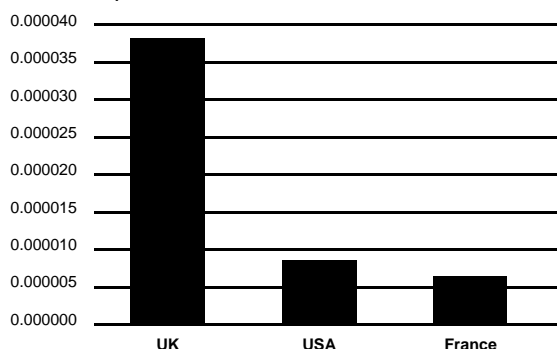


Source: Spectrum analysis of Screen Digest data

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.

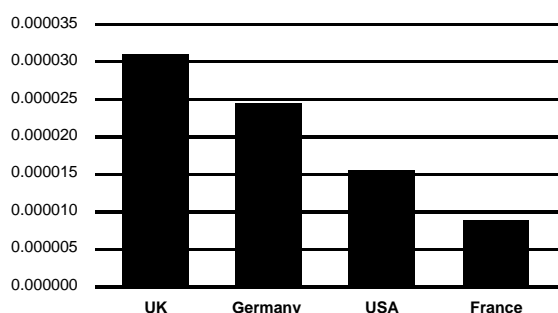
The UK games industry thus needs to maintain and enhance its competitive position in Europe and take those lessons to the US market. At the present time, the Japanese market should take a lower priority and be left to others to attack.

Exhibit 31: Ratio of UK market share to size of production sector



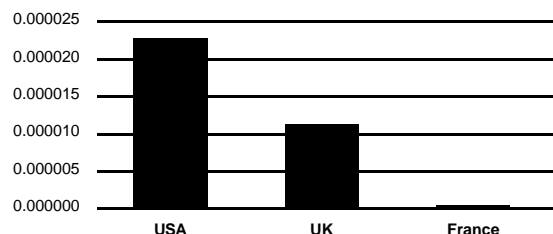
Source: Screen Digest – Interactive leisure software, market assessment and forecasts to 2005. IDSA - Economic impacts of the demand for playing interactive software

Exhibit 32: Ratio of European market share to size of production sector



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

Exhibit 33: Ratio of US market share to size of production sector



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

3.4 SWOT

3.4.1 UK development SWOT

The UK's development talent is highly regarded throughout the industry as a whole, particularly for its combination of technical, art and gameplay skills, and is fundamental to the future of the games industry in the UK. It is vital that the UK continues to reinforce its development expertise by keeping up the talent pool and fully exploiting the IP that the industry creates and realising the maximum value possible from it.

The industry is championed by the more established, high-profile developers. These companies are strong and ambitious. They can be helped to grow by increasing the profile and understanding of the industry with the aim of achieving better access to funding and attracting more talent into the field. Entry-level companies face more challenges, particularly growing barriers to entry and growth.

A weakness of some development companies is a lack of global appeal - some titles lack appeal to the vital US market while producing titles that appeal to the Japanese market, where domestically developed product dominates, is even harder. Similarly, the growing base and diversity of console owners means a mass market approach is now needed. Many UK developers will have to broaden their focus to cater for these new consumers.

E-commerce and new markets such as digital television, mobile and online also represent new opportunities. Although these markets are unproven, the UK has a number of advantages that could make it a leader in some of these fields, warranting close further consideration.

A key threat is new development talent from emerging markets. Nurturing relationships with publishers and reinforcing the value of the quality, reliability and creativity of the UK's development community can combat this.

The following chart lists all the major strengths, weaknesses, opportunities and threats (SWOT) facing the UK development sector. These are discussed in greater detail in Appendix A, Detailed subsector overviews.

Exhibit 34: Development SWOT

Strengths	Weaknesses
<ul style="list-style-type: none"> Strong, well respected development talent Proximity to US and European culture Strong local market UK often European HQ for international publishers Strong trade body - TIGA 	<ul style="list-style-type: none"> Low understanding and profile of games industry Limited access to finance Limited appeal/narrow focus of titles Skills - both new talent, and business skills Limited home market (c.f. US and Japan)
Opportunities	Threats
<ul style="list-style-type: none"> Growing installed base, of increasing diversity Better awareness and use of Government support Option to move up the value chain (into publishing) Better use of middleware E-commerce and new platforms 	<ul style="list-style-type: none"> Undercutting - growth of cheap development talent in emerging markets High barriers to growth leading to lower competition, innovation and skills Foreign acquisition of key development talent

Source: Spectrum analysis; Spectrum games industry interviews

3.4.2 UK Publishing SWOT

The strength of the UK publishing sector lies in the quality and creativity of its products. It is made up of one established international player, Eidos, and a series of well regarded publishers, such as Codemasters, Rage and SCi, who simply do not have the global reach or the size of portfolio to compete with the larger international players. The possibilities for these companies to grow on an international scale are limited without strong support from the UK financial community. These relationships have to be improved through a process of information and communication. Without significant growth, UK publishers can survive, but are in a risky position.

There are many opportunities for publishers including maximising the value of their IP, boosting their portfolios with low risk third party developed and funded products, adding value and revenue from products through e-commerce and targeting sales activity at other new retail outlets such as supermarkets.

The following chart lists all the major strengths, weaknesses, opportunities and threats (SWOT) facing the UK publishing sector. These are discussed in greater detail in Appendix A, Detailed subsector overviews.

Exhibit 35: Publishing SWOT

Strengths	Weaknesses
<ul style="list-style-type: none"> Strong local development English language Some valuable IP Strong local market Strong trade body - ELSPA 	<ul style="list-style-type: none"> Limited access to finance Limited skills base - project and business management etc. Lack of global presence Small scale (staff / turnover / cash) Strength of retailers
Opportunities	Threats
<ul style="list-style-type: none"> Growing installed base, of increasing diversity Console marketing battle New retail outlets Cheap development talent in emerging markets E-commerce 	<ul style="list-style-type: none"> High barriers to entry / growth Scale of competitors Not close to origination of major licenses (most US) Acquisition by other publishers Reliance on console titles makes more vulnerable

Source: Spectrum analysis; Spectrum games industry interviews

3.5 Key challenges

In interviews and workshops with industry participants, the issues identified in the table below were cited as the key challenges facing the UK games industry. They are presented here in order of perceived importance with brief supporting issues, which are further explored in more detail in the bulk of this section.

Exhibit 36: Key issues - summary

Issue	Details
Profile/reputation	<ul style="list-style-type: none"> Size and value of industry to UK not widely appreciated / understood Perception of industry as 'not a proper job' Poor national media coverage and perception of games - 'violent', 'antisocial', 'waste of time'
Access to finance	<ul style="list-style-type: none"> UK financial community limited understanding of nature of games industry Limited options for exit routes for investors Historical disappointments by games companies on the financial markets UK games industry's limited appreciation of values of financial industry
Industry data availability	<ul style="list-style-type: none"> Predicting global nature of market Choosing platforms Adapting to mass-market developments of the market Lack of comprehensive global market and consumer data Lack of communication (and trust) within the industry
Skills development	<ul style="list-style-type: none"> Limited mobility in experienced labour force Need for formal routes into the industry - education for new talent Lack of business and management skills Lack of in-house training Fear of loss of UK talent to other countries
Model of IP ownership	<ul style="list-style-type: none"> Acquisition, creation, retention and protection of IP Full exploitation of IP

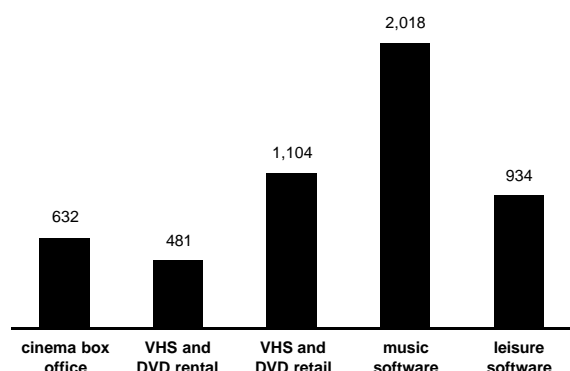
Source: Spectrum analysis; Spectrum games industry interviews

3.5.1 Profile / reputation

Value and importance of games industry to UK not widely appreciated or understood

In 2000, the UK's expenditure on leisure software exceeded spending at the cinema box office and on VHS and DVD rental (however, note that cinema box office only makes up 30% of revenue from films).

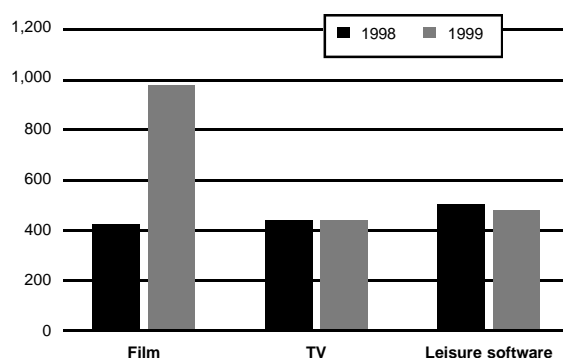
Exhibit 37: UK leisure purchases for comparable industries, 2000 (m units)



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

In 1999, the UK games industry created exports of £482m, in line with TV, but significantly less than film. In the previous year film exports were actually lower than those from leisure software³⁰.

Exhibit 38: Export values for comparable industries, 1999 (£m)



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

Note that while the value of exports of leisure software declined from 1998 to 1999, so did the value of imports into the UK and that the positive balance of trade in leisure software actually increased from £219m to £276m³¹.

The importance of the industry to the UK economy is not widely appreciated, however. Financial institutions, in particular, have a far more limited awareness of the games industry than they have of other creative industries. And there is as yet no specific Standard Industry Classification (SIC) code for games - the design and development of games software is currently classified under "software consultancy and supply", whilst publishing of all games software is classified under "other publishing" and the manufacture and wholesaling of video games is classified under "miscellaneous toys".

The low profile of the industry is due to lack of communication both at the business and consumer levels. Until very recently the industry had little attention from Government, certainly in comparison to the film or TV industries. Most notably, the film industry has secured both funding from Lottery receipts and a unique framework of tax breaks for investors.

There is no doubt that the film industry has managed to build its profile on the back of mass-market consumer appeal, and a glamour that appeals to consumers and policy-makers alike. The games industry is unlikely to develop this type of profile, particularly given the hitherto 'niche' demographic of hardcore gamers to which it has appealed. However, most games companies have done little high profile advertising, or marketing - preferring specialist press and in-store promotions.

Sony's mass-market promotion of the Playstation is the singular, and highly important, exception to this rule.

"Sony did more for the profile of the industry than anyone else. Their marketing campaign transformed games from geeky to cool. They are the reason that we are now targeting 26-year-old males" [Publisher]

Games companies are beginning to increase their mass market marketing spend and profile. For example: games can now be seen on supermarket shelves and petrol stations and hit games are being advertised on mainstream television channels (e.g. Xbox and Halo). Following the launch of the Xbox and Gamecube, the profile of games in the mass media is likely to grow once more. The Industry as a whole could benefit from this enormously. In addition, publishers, through ELSPA, are aiming to lift reviews of games onto the same pages as book, film and video reviews.

³⁰ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

³¹ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

Poor press and perception of games - 'violent, antisocial', 'waste of time'

This is an important issue for the industry as a whole and something that ELSPA has been active in addressing. Video games have been subject to negative press for many years with accusations of violence in games engendering real violence and more general suggestions that playing video games is low on the pecking order of entertainment activities. There is mixed opinion about whether this is a key issue for the industry. Most interviewees were concerned about the perception that video games are inferior pastimes to film and TV. This concern ties in with the general opinion that the games industry needs championing and profile raising at every level.

Perception of the industry as not offering serious career potential

The UK games industry has its roots in the programming enthusiasts who made full use of the early Sinclair Spectrum computers. This gave the industry a "hobbyist" culture, which has persisted to this day, and to some extent gives the industry a reputation for not being able to offer structured career opportunities. There is certainly a lack of a clearly defined career path for people who enter the industry, as has been established for film and TV. This issue is discussed further in the skills section below.

3.5.2 Access to finance**UK financial community has a limited understanding of the nature of the games industry**

The exploitation of IP is the key to the development of cash flows by which both developers and publishers can invest in future growth. However, in order to fund development and to build IP ownership (discussed below), significant investment is required. Beyond investment from within the industry, or government bodies, the main options for financing growth centre on the financial community:

- Private equity - venture capital, business angels
- Public equity - including AIM for smaller companies
- Banks - loans, guaranteed loans, completion bonding

Both developers and publishers have historically had difficulty communicating with and gaining the support of the financial community. There are only a few publicly listed companies in the UK today - e.g. Eidos, SCi, Argonaut, Bits or Warthog. Some, such as Codemasters, have attempted flotation but encountered difficulties in doing so. More are wary of floating because of the additional work and maintenance required to keep shareholders happy.

"I have considered it, but wouldn't do it. It takes up so much time in meetings and paperwork that you can't run the business anymore" [Established developer]

Private equity funding is also difficult to secure. The UK has few business angels, many of whom are more likely to invest in film than games due to the former's higher profile and industry-specific tax allowances. Venture capitalists have limited interest in funding games companies because the investment required typically falls below their minimum thresholds. For example, Argonaut's early £2.4m VC funding in 1996 was well below APAX's standard threshold of £5m³². Other companies interviewed had been forced to find alternatives to VC funding for this reason.

Another factor that discourages private equity is the lack of a clear exit route for the investor, due largely to the problems that the games industry has in tapping public equity markets. The only alternative exit option for a private investor is therefore acquisition by a larger player.

The key concern is that the financial institutions frequently do not have a sufficiently developed understanding of the nature of the industry to enable them to judge what is or is not a sound investment. Those that have considered raising money through the city have received poor reactions for the following reasons:

- There are very few brokers specialising in the games industry. Most institutions still group games with other software or entertainment products, so there is limited understanding of the idiosyncrasies of the industry

³² Source: Spectrum games industry interviews

- The long-term value of the games industry is not recognised using the short-term approach to risk that is prevalent in the city. For example, a small delay in the delivery of a game may result in missed sales targets for one period, with sales accruing to a later period, at times creating significant variations in the company's quarterly accounts. These issues are commonly understood within the industry and, while not posing a serious threat to the investment, discourage investors who tend to have a short term view
- The city has on occasion been stung by past disappointments and a lack of professionalism in the management of some games companies. In the words of a financial services expert on the games industry "the city has an elephantine memory"
- The cyclical and hits-driven nature of the games market has meant some serious peaks and troughs in company results over past years. Many finance players may expect similar patterns going forward. However, as we have indicated, the console cycle appears to be smoothing. This will help to make the peaks and troughs of the industry more manageable, making games a more attractive prospect

In addition, market valuations of UK games companies are significantly lower than those of comparable French or US companies. This has severely limited the UK's growth options over recent years. Furthermore, French accounting principles are seen as more flattering of company performance than UK ones.

UK games industry limited appreciation of the values of the financial industry

In addition to lack of understanding on the part of the finance community, there has also been a reciprocal lack of understanding of the values and requirements of the financial community on the part of some games industry players. Some companies, such as Bits, Warthog and Argonaut, have managed the finance community well. Others have experienced difficulty understanding how they should present their strategies and business plans and communicate industry trends and forecasts in order to inspire confidence in investors.

3.5.3 Industry data availability

Adapting to the global nature of market

The UK's games developers and publishers have hitherto focused their activities on the UK and Europe, with the US and (rarely) Japan as secondary target markets although the US has proven to be much easier to enter than Japan due to greater similarities in language and culture.

Limiting factors may be:

- The lack of global presence of UK companies, resulting in a greater focus on the core home market
- Expertise in games genres that have their greatest appeal in the UK, and a lack of understanding of the popular genres in other key markets although most games have some degree of international appeal and publishers will often provide an international perspective to developers
- Resistance of overseas domestic markets to foreign product

Choosing platforms

Games companies - both developers and publishers - need to decide upon a platform strategy - whether to produce for all consoles, PCs, handhelds, or to opt for new platforms such as mobile and interactive TV. However, strategic decisions, such as Rare's link with Nintendo or, to a lesser extent, Eidos' commitment to PS2, can tie the fate of the developer or publisher closely to the fate of their chosen preferred console manufacturers. This carries an element of risk. In addition, many smaller developers will be compelled to specialise due to the high cost of development kits for consoles.

The move into mobile or digital television brings with it other risks and challenges that are discussed further in Appendix B, New Markets.

Adapting to the mass-market

A common accusation leveled at UK games companies is that they tend to be too inward-looking and self-referential, creating titles for themselves and their peers rather than responding closely to the evolving needs of the emerging mass market audience. While the industry is well aware of the pressing need to produce games that attract the mass market, this attitude is still prevalent, as it is in many creative industries.

"When you look at the level of complexity of some of the games coming out of the UK, you often have to have 5 years of experience in playing games to work out how to play them" [Expert]

Games are therefore frequently produced by hardcore gamers for hardcore gamers. They are in turn reviewed by devoted gamers in the press.

As console and PC penetration increases and price points drop, the potential audience is growing in size and diversity. Targeting these users is becoming increasingly important. As with TV and film, games companies may be able to reduce risk and increase the chances of market success by diversifying and producing populist or mass market titles; the industry is beginning to do this with licensed products - e.g. EA /Argonaut's Harry Potter, Blitz's Chicken Run. License owners also typically have clear ideas on their target demographics which will help drive design and implementation for the mass market. There is a fear, however, that this involves a loss of creativity - this is debated as some interviewees take the view that more creativity is needed to create a great game within the constraints of a licence than from an original concept.

However, greater awareness of the console cycle and the demographics of the user groups would certainly help; very little research is done in this area by developers, and publishers rarely see games that tie in with their strategies or the nature of the console cycle.

Lack of comprehensive global market data

The most comprehensive UK data is Chart-Track data. This is expensive (but heavily discounted to ELSPA members) and has suffered from recent moves by EB to reduce detail in weekly statements. In addition to being UK-specific, Chart-Track data covers retail figures only.

The Screen Digest reports provide useful aggregated data, but focus mainly on the UK market. It is therefore of limited use to developers and publishers who are targeting international markets. There is no clear source of easily digestible data that takes a global perspective - companies have to collect, correlate and compare data sources for individual markets, such as Screen Digest and GfK for the UK/Europe, the CESA white paper for Japan and NPD for the US.

Many developers and publishers rely on information decanted down the value chain to keep them up to date. This does not give an accurate comparative picture of their position, and also reinforces an out-of-date view of the characteristics of game player demand. It is also very useful to be able to check these figures against independent data in order to remain confident of their accuracy.

Lack of comprehensive consumer data

There is little available data tracking consumer demographics or consumer behaviour in using games. Currently, most information gained by the industry is garnered from registration cards, included in games packages, completed by self-selected respondents. This does not give a sufficiently detailed picture of demand characteristics. Forrester consumer surveys are another example of industry data, but the level of detail included in the surveys is not sufficiently high. As games are rapidly becoming mass-market products, it is important to know and understand the people who are playing games. This data would be extremely useful to the industry as a whole.

Lack of comprehensive industry data

While information is available on public companies, (typically larger ones such as publishers and retailer), through company and investment analyst reports, there is a lack of available detailed data on developers in general. This is chiefly because few of them are listed. Some data on UK developers is available from sources such as Companies House, the data is highly variable in detail. Information on overseas developers is even harder to obtain.

Lack of communication (and trust) within the industry

Relationships along the value chain have historically been difficult; lack of transparency, poor communication and management have affected the level of trust between players. Increased focus on professionalism, project and business management throughout the value chain, and the implementation of more formal systems of communication should help strengthen these relationships.

3.5.4 Skills development

The UK has a history of producing strong games talent across technology, art and design, but there is concern amongst many developers that there is a growing skills gap. However, views on the nature and extent of the skills gap vary.

Limited pool of experienced labour

Some established developers feel that there is a serious shortage of experienced talent. A number of the firms interviewed have experienced great difficulty recruiting sufficient appropriately experienced people for new project teams.

"The only way for me to recruit experienced people is to buy another developer" [Established developer]

"I could employ another 70 people today - but where do I find them?" [Established developer]

Games industry employers exhibit a marked preference for full-time permanent employment over contract-based employment. As a result there is a far smaller pool of available contractor talent than in the film or TV industries which operate primarily on a contractor basis. The games industry has not adopted this model as it is seen as much more crucial to tie staff into projects rather than risk losing them part way through.

The industry could clearly benefit from experimenting with contract types that balance the employees need for job security with the flexibility that is desired by the employers. These could, for instance, be project-based contracts with incentives to tie employees in should this be desired.

Need for formal routes into the industry - education for new talent

Regarding the recruitment of newcomers or graduates, the industry view was more mixed. Some publishers and developers have had no problem recruiting new talent as they tend to prefer to recruit enthusiastic graduates with pure art or science skills and train them up:

"I'll go to Oxbridge for a maths graduate or Bournemouth for fine arts - that is the grounding, they can learn all the other skills" [Developer]

Some would also consider new talent with a history of independent work and a demonstrated commitment to games design - these don't necessarily have to have strong formal education, but they do have to have a track record. In general, standards are high, but starting salaries are low in comparison with other industries such as IT, despite the recent decline in the fortunes of technology industries, meaning that employers look for a certain level of devotion to games in candidates to ensure they are likely to stick with the industry.

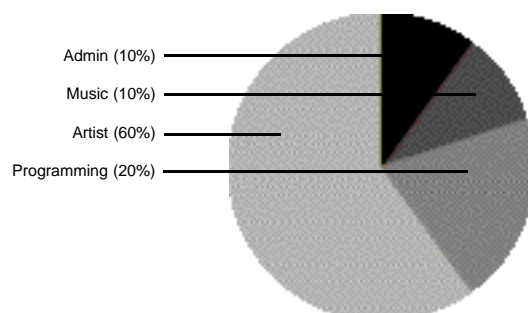
There is great enthusiasm for the concept of games-oriented courses not only for the nurturing of new talent, but also for the profile-raising effect that they many have for the industry. However, since most courses are still very new, very few interviewees had encountered graduates from these courses - only one of our interviewees had employed a games course graduate. Too early for proven success, there is some skepticism about how effective these courses would be in practice:

- *"Universities are setting up games courses because they are attractive to pupils - and that meets targets. The concern is that colleges will realign existing courses to give them a games tag, rather than design specifically relevant courses for the industry. For example, adjusting a programming course to become a games course makes it seem more creative, whereas moving from a fine arts course to a games course adds an industry focus and suggests more prospects for employment" [Academic]*
- *"Who is going to teach these courses? Academics are too far removed from the industry and industry experts are too busy. Even if we could persuade industry experts to take up teaching posts, their knowledge would rapidly become out-of-date." [Developer]*
- *"I am not convinced that you can have one course producing good games developers - the mix of art, programming and project management could produce a jack-of-all-trades. In addition, these graduates may expect to bypass the 'apprenticeship stage' or receive higher salaries without having gained the experience. They would still have to spend time learning the process of making a game, before they can take a certain level of responsibility in the team." [Publisher]*

- "I want to encourage the courses because they raise the profile of the industry but they may be more useful for the process than the content" [Developer]

One tension is the balance of art and programming on a design course. One games course, run by ID DC John Moores, aims to produce designers by covering art, design, history and project management but does not specifically teach programming. This reflects the changing emphasis in design teams - particularly evident in Japan. However this is not necessarily the accepted pattern in the UK where programming skill has traditionally been more prevalent. Through TIGA and ELSPA and individual companies in some cases, the industry is attempting to build links with academic institutions in order to define the necessary skills and inform the development of the courses to suit its needs.

Exhibit 39: Example of split of talent on typical Japanese development team



Source: Spectrum games industry interviews

Lack of business and management skills

Most developers and publishers interviewed agreed that business and management skills are lacking at all levels throughout the industry. Of particular concern are small, inexperienced developers who are often directed by technically proficient programmers or artists but who may not have the experience to run the business. Areas for focus are:

- **Sales and communication skills:** Developers need sales skills to explain and communicate titles to publishers. Publishers need sales skills to communicate portfolios to retailers. Both need sales skills to communicate with financial communities

- **Business skills:** Both retailers and publishers interviewed were concerned about the lack of solid business skills within publishing and development. Both publishers and developers need to know what to present - such as business plans, projections, marketing plans, technical plans, project plans etc - and how to create these.

"They (developers) can be terribly enthusiastic about their products, but they find it hard to explain the benefits to me according to my priorities" [Publisher]

- **Project management:** There is a growing emphasis on the importance of project management, in both development and publishing, as budgets and team sizes increase. Publishers claim that very few projects are delivered on time and to budget. Much of this is attributed to poor project management on the part of the developer and the publisher's producer. Both project managers and producers are rarely given specific training. They are often successful programmers, designers or QA testers who are moved into project management. Training in basic tools and skills is therefore urgently needed - from using MS Project, to keeping budgets, and the development of interpersonal skills. As project budgets grow, project managers are finding themselves responsible for budgets of £2m or more. Producers have been known to be responsible for producing up to five projects at a time (although it's more likely they will only produce two projects simultaneously as their scale rises), can therefore have a responsibility for total development costs of c. £5m or more. Project management skills are therefore essential.

In-house training

In-house training has always taken place informally within games companies. Most companies are too small to consider more formal training options, although a few of the larger companies have HR staff and are beginning to develop training plans. This is a stark contrast with the Japanese approach, where development companies are large and often have in-house training schools. However, there are higher expectations for training in Japan, due to the longer term (job-for-life) approach to employment. The UK is unlikely to be able to follow this model, as staff are much more mobile within the industry.

Fear of loss of UK talent

In the 1990s there was concern that the UK was losing a large number of talented developers to the US. This is still happening to some extent, but some interviewees believe that this same talent is now being attracted back to the UK to settle after having spent a number of years abroad.

"I know a lot of guys who went out to the West Coast in the 90s, attracted by sun, sea and higher salaries. Many of them are coming back now to settle down"
[Developer]

The UK does not appear to be attracting international talent into the country at the same rate as it is losing talent to other countries although one developer interviewed stated that he employed European development staff as "places like Italy and Germany don't have the critical mass so they come here".

3.5.5 Protection of IP

Recognition of IP as core asset created by Industry

The ownership of brand IP is a key determinant of how cash-generative a developer or publisher will be (however, there are exceptions such as Climax which has built a successful business carrying out work-for-hire development). Without IP ownership, a developer will be constrained to a work-for-hire revenue model, and it will find it hard to grow and invest in new development projects. As within most 'content' industries, IP is therefore recognised within the games industry as essential to sustainable growth and value creation. Publishers have bought development houses to acquire IP (e.g. EA acquired Westwood in order to secure the Command and Conquer franchise) and development houses are aiming to maximise the amount of original material produced in order to maximise the creation of value from IP ownership.

It is important to distinguish between the game brand/character-related IP (e.g. the Tomb Raider name or the character of Lara Croft) and technological IP associated with the game code. Whilst publishers often acquire the rights to game brand/characters it is unlikely that the technology IP will be included in any agreement. Even work-for-hire agreements generally allow the developer to retain the technological IP developed as, without this, the developer would not be able to develop similar games again.

Exploitation and protection of IP

Developers and publishers are battling for control of IP. Often, contracts include the hand-over of all IPR to the publisher because the latter are typically taking on the risk of development by providing the funding. More established developers are working to change this model.

Both developers and publishers are also looking at other opportunities to collect IP. For example, Rebellion purchased the 2000AD comic titles in order to attain the rights to Judge Dredd and 2000AD's other characters. Developers and publishers are also trying to find more ways of exploiting IP (e.g. the film adaptation of Eidos's Tomb Raider/Lara Croft). Although film deals are still a rarity, merchandising and other smaller scale opportunities certainly present themselves (e.g. the Quake, Tekken and Metal Gear Solid ranges of action figures).

3.6 Competitiveness Summary

The UK games industry as a whole is a significant global player and 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 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 terms of global markets, the UK must 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.

Once success in Europe is better understood, the lessons must be adapted and rapidly applied to the US market where UK performance is vulnerable and heavily title dependent at present.

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.

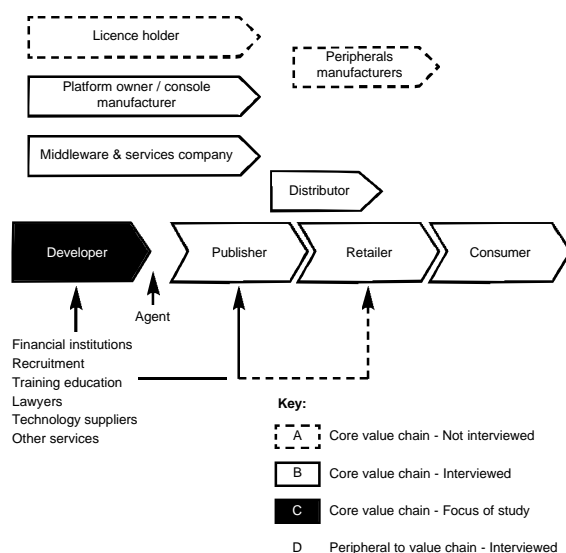
The UK industry has the potential to seize a significant opportunity and secure its role in the global market. The major challenges and associated actions set out in the report present an achievable and sensible approach for enhancing the UK's competitiveness. Success will rely on effective co-operation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

The action plan set out in Chapter 5 of this document attempts to chart a course that would successfully support the growth and enhanced development of the industry into the future.

4 Detailed UK sub-sector review

The core focus of our analysis was on issues facing development and publishing. However, in order to understand the issues facing these sectors we also examined a number of other players in the value chain (see below).

Exhibit 40: The games industry value chain



Source: Spectrum analysis

This section thus examines the key characteristics and the main challenges faced by players in the UK games industry:

- Development
- Publishing
- Middleware and tools
- Outsourcing and services companies
- Format holders / console manufacturers
- Distributors
- Retailers

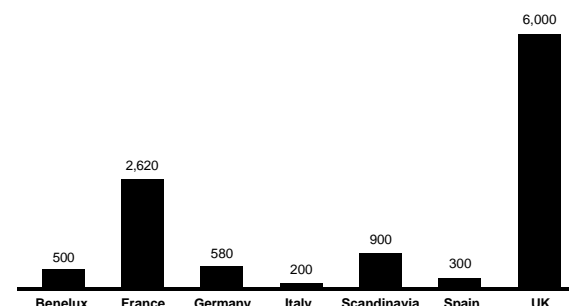
4.1 Development

The UK development sector was effectively born out of the Sinclair Spectrum phenomenon of the 1980s. This low-cost programmable computer quickly gathered a large following of programming enthusiasts - a hobbyist bedroom development culture was created that encouraged the development of new programming skills, combining technical savvy with creative ideas.

4.1.1 Sector structure and employment

The UK development sector employs over 6,000 people³³, more than twice as many as any other European country and is now the largest, and arguably the most successful, European development community.

Exhibit 41: Number of people employed in computer games development in European territories (2000)



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

The development sector comprises over 270 studios, is divided between the independent studios and those owned and operated by the publishers. There is also a natural division between the smaller developers and those with substantial scale. The majority of the development community is employed in small to medium sized independent studios with an average of 22 employees³⁴. These studios often only have the resources to work on one project at a time and may supplement revenues with conversion work (re-writing a game originally released on one platform for another, e.g. from Playstation 2 to PC). There are, however, approximately eleven large, more experienced independent developers that employ over 100 people³⁵. This greater scale enables them to run a number of development projects simultaneously, increasing the likelihood that they will obtain royalties from at least one of the projects and mitigate the risks of a project being cancelled. They also benefit from economies of scale from sharing development tools, technologies, and organisational systems and processes. These developers have established reputations and have typically produced successful titles with a volume of sales sufficient to support future development investment and enabling them to obtain better terms on successive deals. This success has enabled some of these larger developers to gain access to external sources of finance to fund growth plans (e.g. Argonaut and Warthog).

³³ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

³⁴ Source: Spectrum analysis based on Screen digest data

³⁵ Source: Spectrum analysis based on Screen digest data

Some larger publishers have pursued a strategy of vertical integration and have acquired development teams (e.g. Electronic Arts' acquisitions of Bullfrog, Westwood and Maxis), driven by the publisher's desire to secure access to IP such as successful game brands. These acquisitions allow publishers to capture more value by allowing them to retain revenue that would otherwise be paid to third party developers as royalties. This trend towards vertical integration by publishers has abated recently, partly due to less buoyant capital markets to finance these acquisitions and the need to keep operating costs under control. There have, however, been past cycles of acquisition and disposal of development capabilities so the trend might reverse again.

Once again, it is also important to note the distinction between brand, title and character-based IP and technology-based IP which is used to build games around them and that it is typically the former that publishers seek to secure.

The following table lists the largest independent and in-house development studios by employment.

Exhibit 42: Independent and in-house developers

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

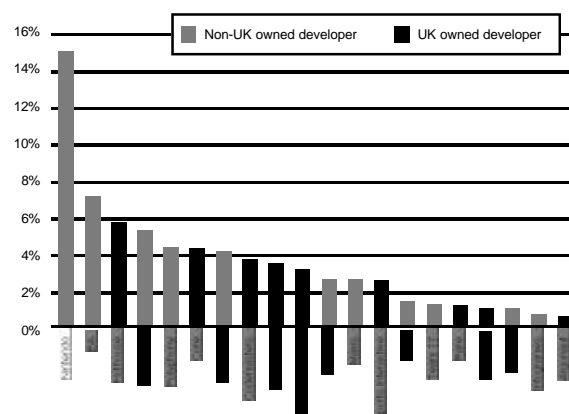
Note: Eurocom quotes total staff of 150, development staff approximately 80. Criterion total only includes staff directly related to games development, excludes middleware platform development staff

The success of these developers can vary widely from year to year depending on whether they have a hit title. Popular titles also vary dramatically between

regions. In the UK in 2000, the most successful UK studio in terms of volume of sales was Hothouse (Who Wants to be a Millionaire). Other major sellers were Core (the Tomb Raider series), Codemasters (the Colin McRae series and TOCA), Reflections (Driver2) and Travellers' Tales (Toy Story 2)³⁶. This can be seen in the exhibit below.

It should be noted that Nintendo's market share has risen very sharply in the last 2-3 years due to the Pokemon phenomenon.

Exhibit 43: Developer share of UK top 100 all-formats chart, 2000



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

However, the value generated for the developer from high sales depends entirely on the terms negotiated with the publisher. A less experienced studio can have a hit title and see very little return from it due to a poorly negotiated contract. More established studios manage to negotiate better terms with publishers and therefore derive greater value from average selling titles, thereby reducing their dependence on achieving smash-hits.

4.1.2 Sector size and profitability

In 2001, £1.75bn was generated by the US, Japanese and European sales of games created by UK developers³⁷. This represents 15.6% of the total market sales. Of this, £457m was retained within the UK development sector (i.e. the amount UK developers received in terms of both development costs paid by publishers and profits or royalties from their titles). £219m came from independent development and the rest came from in-house development for UK publishers (£83m) and for non-UK publishers (£155m).

³⁶ Source: Spectrum analysis, Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

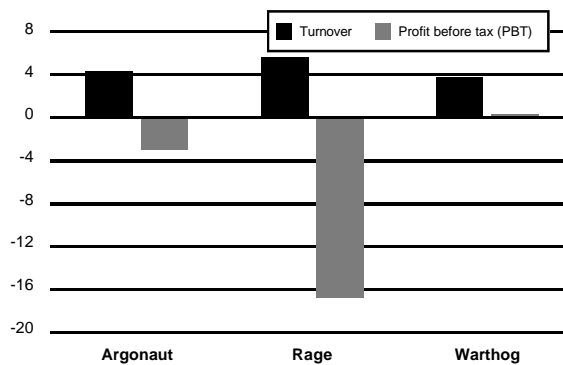
³⁷ Source: Spectrum games industry forecasts

Few independent development studios have recently shown a profit. Growth in the software market has largely stalled over the past two years as the transition to the new generation of consoles completed - most of the developers have yet to see returns on the time and resources they have invested over this period. The profitability of a development house is often dependent upon generating hit titles. It is also dependent on the terms negotiated with the publisher - less-established companies are less likely to show profits on titles as they rarely receive royalties.

This is chiefly due to the rising cost of development and hence the size of advance required from publishers meaning that a title must achieve many more sales before the publisher's advances are repaid. Other reasons are that, as the market becomes ever more hits-driven, fewer titles are selling in large enough volumes to generate royalties to developers and, in some contracts, significant publisher expenses are deducted before the developer's share of the royalties is calculated.

The exhibit below shows turnover and profit for listed studios.

Exhibit 44: Listed UK developers' turnover and profit before tax 2000-2001, (£m)



Source: Argonaut - Year end figures July 2001 - Company report; Rage - Year end figures 30 June 2001 - Company report; Warthog - Year end figures March 2001 - Beeson Gregory published research

Note: Rage - £7.5m of losses are accounted for by a goodwill charge. Also, the company has altered their accounting principles in the past year to write off all direct labour and overhead costs as they occur and record turnover as and when product is shipped - this reflects their transition from a pure developer to a developer/publisher. These changes resulted in a prior year adjustment of £8.4m

However, Argonaut³⁸ has recently announced royalties worth £5.3m for the last quarter of 2001. These have been significantly boosted by the release

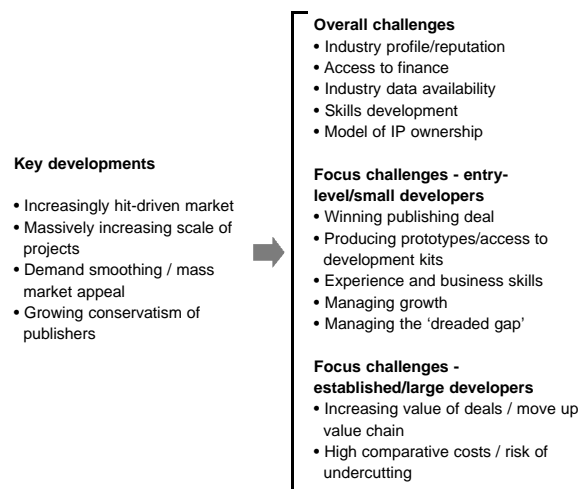
of the Playstation/PSOne title 'Harry Potter and the Philosopher's Stone', which was released in November 2001 by Electronic Arts. This was an amount substantially in excess of Argonaut's internal full year budget to 31st July 2002 of approximately £1.5m and highlights the effect a hit title can have on a developer's fortunes.

Some of these more established developers, such as Argonaut and Warthog, have gone to the financial markets over the past two years to fund growth plans and the part-financing of development projects. These developers are now shifting the proportion of their revenues dependent on the publisher advance model to revenues being driven by royalty payments. Whilst this allows them to gain a greater upside from their projects it also increases the level of risk they are exposed to. However, as developers have largely spent the past two years developing product which is only now being released onto the market, there is not currently enough data available to draw any firm conclusions about how dramatic the effect this shift from the advance model to a higher margin royalty-driven business will be on the overall profitability of developers.

4.1.3 Development sector challenges

The independent development community is becoming increasingly split between the established (large) and entry-level (small) developers. These developers have different priorities - as seen in the exhibit below.

Exhibit 45: Development - specific challenges



Source: Spectrum analysis; Spectrum games industry interviews

³⁸ Source: Company press release - Royalties of £5.3m for the calendar quarter ended 31st December 2001

Established developers typically have enough staff to run a number of projects in parallel. They have established reputations and often have some ability to self-fund projects. As a result, the larger developer has some negotiating strength with publishers. Many are gradually moving to a model where they create the product themselves, then use a publisher to manufacture, sell and market it. These companies are also putting in place support structures (HR, legal) and have strong management teams. The main concern for these companies is access to funding to enable their move up the value chain. They are also concerned that prices are being driven up by the overheads involved in having a secure management structure and that they risk being undercut by smaller developers as a result. However, it can be argued that this should be balanced by the company's greater ability to market product and negotiate more favourable contract terms with publishers and that overheads, R&D and technology can be split over multiple projects

Startup developers often spend a lot of their time doing conversion or other smaller-scale work whilst trying to establish their reputation to do larger projects. These small developers are highly reliant on getting publishing deals, and are often in a weak negotiating position with publishers when (and if) it comes to agreeing terms. For most of these companies, getting a publisher is the major focus. This means overcoming challenges such as obtaining and paying for development kits (the proprietary development tools for a console platform) and funding the creation of prototypes to demonstrate concepts. Many have expertise in programming or art, but limited business or project management experience - this can often cause the greatest problems for these developers

In-house development teams face fewer of the key issues independent studios do as their funding is more secure (but in-house teams can and have been closed down by publishers) and their direction is governed by their publisher-owner. They do, however, face many similar issues such as the low profile of the industry, and attracting staff. They also face other challenges such as nurturing creativity within the confines of formal organisational structures and, for the most part, existing franchises. The in-house development environment does not appeal to some UK developers:

"...formal and controlled with poor internal communications and lots of bottlenecks" [Developer]

³⁹ Source: Spectrum analysis based on Screen digest data
⁴⁰ Source: Screen Digest

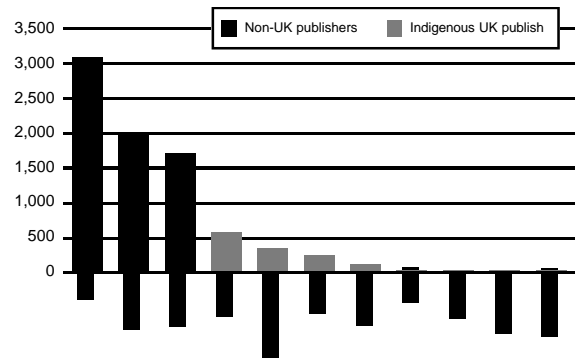
4.2 Publishing

After a spate of consolidation in the 1990's, publishing is fast becoming a global business, with a handful of key players in a similar vein to the major film studios or music companies³⁹.

4.2.1 Sector structure and employment

The UK publishing sector consists of eight UK-owned companies employing over 1500 staff, many of whom work in development. These companies are competing in an increasingly global, consolidated market, and few of them have the scale to match their global competitors.

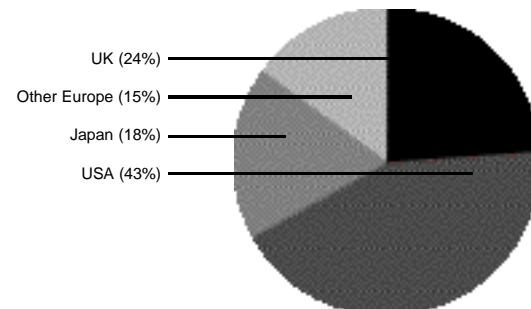
Exhibit 46: Total number of employees worldwide of indigenous UK and other publishers, 2000



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

However, the UK has long been the European site of choice for international games publishing companies, with over 25 international publishers having offices in the UK. Of the 2350 people employed in UK publishing, nearly 40% are employed by non-indigenous companies. The US has a particularly strong publishing presence in the UK - with 15 companies based here⁴⁰.

Exhibit 47: Ownership split of publishing companies based in the UK 2000



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

Like the development sector, the UK publishing sector began as a cottage industry, but the environment has become increasingly competitive and risk-laden as the major consoles become dominant.

The first and second generation of consoles significantly increased commercial risk for publishers as they were cartridge-based. These cartridges were very expensive compared with the floppy disks and cassette tapes used by home computers (\$15-20 per unit, non-refundable) with a long 90-day lead time for manufacture, which was controlled by console manufacturers. Misjudging the quantity of cartridges required for a title could therefore be extremely costly for a publisher.

This risk was significantly reduced in the late 1990s with the introduction of CD-ROM-based consoles such as the Sega Saturn and Sony Playstation as the media costs were lower (although manufacturer license charges negated most of this benefit) and lead times for manufacture shorter (of the order of weeks). Publishers therefore no longer needed to commit as much money as far ahead as previously and had the ability to quickly manufacture additional quantities of titles if demand proved stronger than expected.

The lower cost of CD-ROM media has also made budget console software possible. Previously, cartridge media costs accounted for a very high proportion of the games final price, leaving publishers little scope for price reduction for older software. By contrast, the cost of CD-ROM and now DVD-ROM media accounts for a much smaller proportion of a game's cost and, along with variable console manufacturer licence fees, allows publishers to set lower price points and still make a profit.

Higher development costs have increased the pressure on publishers to consolidate in order to acquire sufficient scale and resources to fund a portfolio of projects (maximising the likelihood of creating a hit title) and attain global presence (accessing global markets in an attempt to recoup the escalating development costs). The market has also been subject to a degree of horizontal and vertical consolidation with publishers acquiring development and distribution arms, increasing both turnover and margins and their level of diversification. The following table outlines some of the key acquisitions by publishers.

Exhibit 48: Selected acquisitions by major publishers

	Publisher acquired	Developer acquired	Other acquired
EA		Bullfrog Westwood Maxis	gamecave.com (retailer)
Infogrames	Gremlin Accolade GT Interactive Hasbro Interactive Ocean Philips Media	Reflections Paradigm	
Ubi Soft	Red Storm Blue Byte	Sinister	Grolier UK (edutainment) TLC games (edutainment)
Take2	GOD (developer / publisher collective)	DMA Pixel Broadband	CD Verte (distributor)
Eidos	US Gold	Core Ion Storm Crystal Dynamics	Centresoft (distributor, sold to management)
Rage		DID Wayward Design RGB Caffeine	
Vivendi		Uproar	
Nintendo		Silicon Knights (stake) Rare (stake) Left Field (stake)	
THQ		Game FX Rushware Volition	
Titus	Virgin Interactive Interplay		
Empire		Rowan	E-Jay (digital music products)

Source: Spectrum analysis based on company data and Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

Consolidation in the global publishing sector has been led by US and French publishers who have received strong backing from their financial markets to fund their aggressive growth strategies. The French financial markets in particular are more willing to back French culturally-based companies while the US ones are generally less risk-averse than the UK's⁴¹. The UK publishing sector has not received similar levels of financial support and has, as such, largely missed out on this phase of consolidation. However, one UK financial services expert interviewed attributed the lack of support from the UK financial markets to previous disappointing performances from listed publishers in the 80s.

Nonetheless, this lack of support has affected the ability of UK publishers to compete within the increasingly global market.

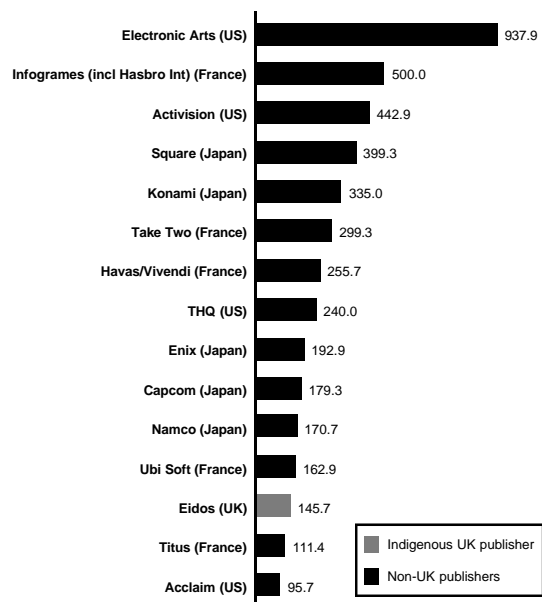
The Japanese publishing presence has been strengthened in the world market by the first party publishing arms⁴² of the console manufacturers and also companies such as Square and Konami who have benefited from strong local demand for domestically-produced product and the close proximity of the console manufacturers.

⁴¹ Source: Spectrum industry interviews

⁴² Note: First party publishing refers to publishing undertaken by the console manufacturers

The following exhibit illustrates the key players in the global publishing market.

Exhibit 49: Top publishers by sales value, 2000 (£m)



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

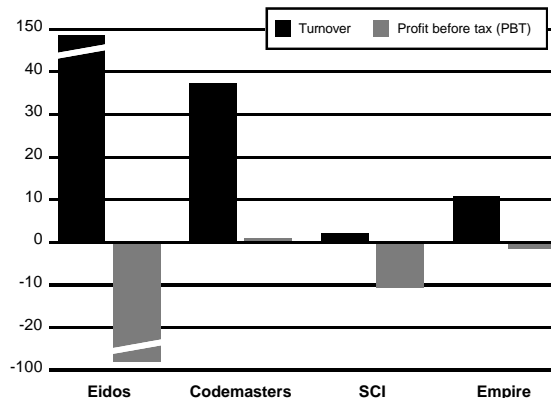
Whilst not shown on the table above Merrill Lynch estimated that in 2000 the software divisions of Sony and Nintendo generated £1.36bn and £1.6bn respectively. These figures include both first party publishing and per-unit license fees from all games manufactured and sold on their platforms⁴³.

4.2.2 Sector size and profitability

We estimate that only £0.65bn of sales in the US, Japan and Europe (5.72% of the total market sales) in 2001 were due to products created by UK publishers⁴⁴. Of this, £257m was retained within the UK publishing sector; (the margin that UK publishers retain from the retail sales of their titles). An additional £86m is due to in-house development in UK publishers and has already been included in the development figures above⁴⁵. (See Appendix C, Market Forecasts)

Publishing is a risky business with large investment commitment required up to two years in advance of the release of a title and returns on this investment in no way guaranteed. The profitability of a publisher is therefore very much dependent on having a portfolio of hit titles and having the geographical reach to profit from these titles in international markets. The exhibit below shows turnover and profit for some of the more established UK publishers.

Exhibit 50: Selected UK publisher's turnover and profit before tax (PBT), 2000-2001 (£m)

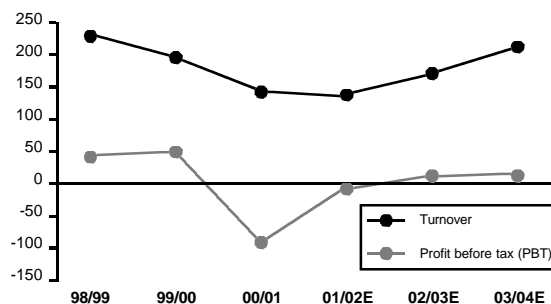


Source: Eidos - Year end 31 March 2001(post exceptionals) - Company report; Codemasters - Year end June 2000 - Company report.; SCI - Year end September 2001 - Company report; Empire - Year end December 2000 - Company report

The profitability of publishers over the past two years has been adversely affected by the console technology transition; publishers have made large investments in the development of titles for new consoles that only recently come to market. Publishers are expecting to gain from these investments over the next two years as the installed base of new generation consoles expands and the games software market enters a new period of growth. Profitability has also been affected by downward pressure on wholesale prices for titles, as well as by the effects of discounting and more taxing retail-imposed sale or return policies (if titles fail to sell as many units as expected).

The profitability of a typical games publisher can therefore peak and trough incredibly quickly as illustrated by the past performance of Eidos. However, these figures do also include a number of exceptional items, including one large disposal and a write-down.

Exhibit 51: Eidos turnover and profit before tax, 1998-2004 (£m)



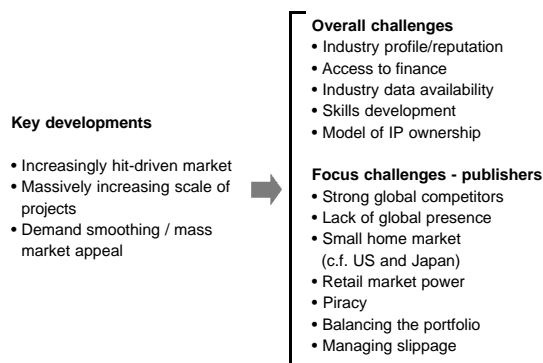
Source: Deutsche Bank estimates 11/01/02

⁴³ Source: Merrill Lynch - European Games Software, 8th October 2001
⁴⁴ Source: Spectrum games industry forecasts
⁴⁵ Source: Spectrum games industry forecasts

4.2.3 Publishing sector challenges

UK publishing can be split between indigenous UK companies and the UK offices of international publishers. The exhibit below lists some of the major issues facing indigenous UK publishers. Although our focus in this section is on these companies, many of the key issues facing publishing also face international companies.

Exhibit 52: Publishing - specific challenges



Source: Spectrum analysis; Spectrum games industry interviews

Most UK publishers operate on a smaller scale than the major US, Japanese and French publishers. Apart from Eidos, most publishers' focus remains on the UK (and Europe), with affiliate deals in the US market and little headway into Asia. The UK is a strong home market, but does not compare with the size of the US and Japanese markets which the more global publishers can exploit.

The key concern of most publishers is the strength of large retailers in key markets. Particularly in the UK and US, one or two key players control a large share of the market and dictate terms that only the more powerful publishers can negotiate. Piracy is another ongoing concern for publishers and is very difficult to combat effectively outside the home territory. Efforts to combat piracy through technical means such as copy-protected CD-ROMs have only slowed down but not reduced or prevented commercial-scale piracy.

Finally, with ballooning project budgets, managing the portfolio and managing individual product development are both becoming increasingly important. For most publishers, larger production budgets mean a smaller number of projects are possible, and with increased concentration of sales among a smaller number of titles, this increases publishing risk. Targeting the portfolio and managing risk is therefore essential.

4.3 Middleware and tools

4.3.1 Sector overview

As games and hardware increase in complexity, developers are making increasing use of third party software components to provide basic functionality, reduce development time and risk and avoid re-inventing the wheel, leaving developers free to focus on the more creative aspects of development. These tools are wide-ranging and include: games-optimised high-speed code compilers, software libraries to simplify control of hardware and entire game engines and platforms e.g. 3D graphic engines are among the most commonly licensed.

There are a number of levels of complexity of middleware. Most sophisticated are comprehensive platforms such as Criterion's Renderware, or products from NDL, Intrinsic or Havoc. These platforms create a fairly complete and flexible environment for designers. Other middleware companies have a narrower focus and produce specific components such as physics engines. These can be used separately or plugged into one of the platforms mentioned above.

Recently, a number of partnerships have been announced between component and platform developers which will ensure compatibility of components with certain platforms. Eventually, we would expect most components to be compatible with most platforms. One other category of middleware is 3D engines such as ID's Quake engines or LithTech's Jupiter or Cobalt engines. These are specialised, complete core components which perform some of the functions of a full platform. Typically they result from development for a specific product, further highlighting the need for developers to safeguard their IPR. 3D engines are less comprehensive than the middleware platforms and are usually specially suited to certain genres e.g. first person shooters.

Middleware offers developers and publishers a number of advantages including the reduction of development time and implementation or slippage risks. Developers can benefit from economies of scale experience from the product's use over multiple developers and projects. Middleware can also be used as a prototyping tool - helping to develop game concepts more quickly when seeking publisher deals.

However, developers do have some reservations regarding the use of middleware. These include the extent of the flexibility of the middleware technology, its ability to achieve the desired effects and control over the future direction of the platform, particularly the prioritisation of bugs to be fixed or features to be developed.

Criterion estimates that up to one third of a development budget is used developing technology whose tasks could be performed by middleware⁴⁶.

UK company Criterion's Renderware Platform product dominates the market - it estimates that it has an 85% market share of games using middleware⁴⁷. It faces competition from Havok (Ireland), Intrinsic (US) and NDL (US). However, use of middleware platforms is still limited, with only 45 titles⁴⁸ out of an estimated 3000 titles released in 2000 doing so. Middleware components manufacturers include Math Engine in the UK, whilst American developers appear to be more active in exploiting 3D engines.

Another category of related products are games development tools such as Codeplay's VectorC high performance C compiler (Codeplay has received investment from Argonaut founder Jez San) or Autodesk's 3D Studio Max 3D modelling, animation and rendering application which are optimised or heavily-used for games production. However, the size of the market for such tools is hard to estimate as many products also extensively used outside the games field.

4.3.2 Key challenges

The middleware sector faces some important challenges to improve its position in the local and global marketplace. These are described below.

Recognition / perception

The middleware market suffers from the overall lack of profile of the UK games industry. In addition, being a new category, the UK's specific middleware capabilities have yet to become widely appreciated - although the popularity of Criterion's Renderware is helping to raise awareness, particularly its use in Grand Theft Auto 3, widely seen as 2001's game of the year.

Understanding of the size of the market

Middleware can be used in the development of all games. Important to understand in sizing the market is different countries', publishers' and developers' appetite for using middleware - some may have their own technology, some may already be committed to using certain providers. Better awareness of where the decision is made, and what users want from their technology would help middleware companies target their expansion plans.

Stability and reliability

As using middleware requires developers to surrender a certain degree of control over the development process, they require confidence in the stability of the middleware product and the vendor's willingness and ability to fix bugs rapidly. During a product's early phases especially, strong customer support and fast response is essential to ensure that developer confidence.

Most of these problems will already have been ironed out in established products and as a result, more companies are beginning to trust using them. It is likely that the games community will continue to remain sceptical about new middleware until it has been thoroughly proven.

Acceptance by developers and publishers

There have been mixed reactions towards middleware from developers. Some are enthusiastic about a ready-made technology that allows them to concentrate their efforts on the high level design and gameplay. It is particularly useful for small companies or those with a high bias of art skills. Others are used to creating their own code and are sceptical about being able to achieve desired effects with it or on 'taking a risk' on third party developed material:

"If I base my game on middleware and then find a problem in testing my hands are tied - I have to wait for somebody else to fix it" [Developer]

Publishers are more accepting of middleware as using established code promises to reduce risks and shorten the development process.

⁴⁶ Source: Criterion

⁴⁷ Source: Criterion

⁴⁸ Source: Beeson Gregory - The Next Generation: The Games Sector Strikes Back

Finding an effective cost model - not tied into development success

One of the major benefits of the middleware business is that it offers a more consistent revenue stream than the hits-driven revenues of publishing and development - Middleware companies licence their software on a per-project basis. A steady stream of development work suggests a more steady revenue pattern.

Middleware costs are a small fraction of the development budget. For example, a Math Engine licence costs in the order of £50k per platform per product. However, in order to encourage use, middleware providers have been flexible with prices and payment structure. Companies are being more flexible about the structuring of deals, even tying them into royalties or advances in certain cases. This ties in the fates of the middleware companies more closely with that of the projects for which it is used.

Developers being able to afford it - particularly for demo stage

Since a prototype is becoming more important to win a publishing deal, access to middleware is needed before a publisher is on board and the development funding attained. This presents a problem to middleware companies - in order to get products funded using the technology they first have to make it available to developers to produce their demos. Both Math Engine and Criterion have decided to support developers by making their software available on good terms for limited periods. Criterion has also gone one step further by matchmaking unsigned developers with its publisher clients.

Middleware companies are also looking at doing supply deals with publishers - this would provide a steadier revenue stream.

Creating and filling demand worldwide - no need for localisation, universal tool

Middleware is a generic tool, applicable in any country due to the standardisation of the platforms on which it runs. This means that it has significant potential for sales in all countries.

"Half of our business is UK, and the majority the rest is US. We would do more overseas work, but we are do not have enough spare staff to go out and sell it"
[Middleware vendor]

There is thus a large potential market for these products.

Remaining cutting edge

The technology has to evolve to remain desirable and useful to developers. This means continuously refining and testing the product.

4.4 Outsourcing and service companies**4.4.1 Sector overview**

Developers and publishers have often outsourced certain skills including music, scripting and localisation. As the industry matures, there may be a move by some companies to outsource more activities. For example, QA and localisation for the publisher and script writing, music and conversion for the developer. There are some specialist companies, such a Babel Media, that already exist to provide some of these services. Other companies are likely to emerge from the smaller developers who are likely to become suppliers to the larger, more experienced companies. The key issue that these companies face is that this is not yet an accepted model for the industry and that a change in mindset is needed in order to move this model forward.

4.4.2 Key challenges

The move from outsourcing accepted services to outsourcing more work requires a change in mindset by both developers and publishers.

Publisher risk averse approach

To date, publishers have taken on all the risk of the development process. This means that they have been very cautious about project staffing, strongly preferring that developers use fulltime staff rather than contractors. This approach will have to change to enable developers to outsource non-core work.

Developers very wary about quality of contract staff

Developers, too, are reluctant to use contractors. They are concerned about the quality, experience and dedication of all resources and would be particularly wary of contract staff. In addition, some may feel that outsourcing more development work leads to a loss of control of the project and possibly a loss of creativity.

Lack of a strong contract labour market

As a result of both developer and publisher conservatism, there is a lack of a vibrant market for contract labour and services in the UK games industry.

4.5 Format holders / console manufacturers

There are no indigenous console manufacturers in the UK or Europe, and the likelihood of another major player emerging in the console race is very low considering the extremely high costs of entry.

However the existing console manufacturers are so powerful within the value chain that it is worthwhile considering some of the key issues they face and how they may affect the rest of the value chain.

The effect of intense competition

Console hardware prices fall over time as costs reduce and manufacturers seek to broaden and grow their user bases but intense competition between console manufacturers is already eroding hardware prices. If this continues, this will change the way in which a console is viewed, making it a piece of basic home electronics alongside the DVD player and television.

Competition may also lead to manufacturers shortening cycles before the introduction of next generation consoles. This may mean that the large investment that the manufacturers have made in the hardware may not be recouped before new consoles are launched.

Intense marketing expenditure will also help raise the profile of games as an acceptable entertainment medium for the mass market.

Territories and demographics

The new generation consoles will take some time to become established and for any winners or losers to emerge. In the past, there have been casualties in the battle between console manufacturers (e.g. Sega and Atari). In the current round of consoles it is possible that all three will survive by settling on different target demographics and possibly even different key geographical territories. Also, two of the companies are diversified and not purely focused on computer games - this has not happened before.

Betting on the next steps in technology

Both Sony and Microsoft have online strategies and see it as the next step in gaming but it is too early to tell what consumers will accept. Major developments in online gaming are likely to occur outside the UK first due to the UK's poor broadband infrastructure. Having said this, Sony's relationship with Telewest may mean UK cable is used as a testbed for new concepts.

Threat of regulatory intervention

Regulatory intervention is a genuine threat for the console manufacturers. They act as gatekeepers for all console products, demanding licence fees for every piece of games software and holding the rights of approval over games concepts and sign-off for manufacturing. This means that three companies control access to a software market that is worth £12bn globally⁴⁹. In addition, they further grow in strength in a broadband age when they will also become the gatekeepers for online delivery of software and content to their platforms, possibly taking on the retail role in the value chain.

This position of power makes console manufacturer vulnerable to investigation according to competition regulations. This is only likely to happen, however, with extensive agitation from the bulk of the industry.

Competition for the living room

The console manufacturers face competition for the living room from set top boxes and other home media devices. If manufacturers do have plans to make their platform more than a dedicated device for games, they will have to take on the challenges offered by these other players.

4.6 Distributors

4.6.1 Sector overview

Independent wholesalers/distributors emerged to serve the network of independent specialist outlets that originally comprised the UK games retail sector. However, as the retail market has become dominated by a small number of large retail chains and as publishing has consolidated, the distribution sector has come under pressure from the ever-diminishing number of publishing and retail clients.

⁴⁹ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

The distribution sector employed over 900 people in 2000, having shrunk by 100 people since 1999. Some of the key players in distribution are listed in the exhibit below⁵⁰.

Exhibit 53: Selected distribution companies

	Details
Centresoft	<ul style="list-style-type: none"> • Considered the UK's largest games distributor • Previously owned by Eidos, but sold to management in 1996 • Sold to Activision in 1998 • Had sole contract from Sony to distribute Playstation software • Supplies strong independent customer base
Pinnacle	<ul style="list-style-type: none"> • Exclusive supplier to Microprose in 1995 • Major accounts with EA, BBC and Ubisoft • £70m turnover in 1999
Gem	<ul style="list-style-type: none"> • 16 year old veteran, owned by DCC
Koch	<ul style="list-style-type: none"> • Part of Austrian-based Koch International group • £12m annual turnover

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

The market now supports only a handful of large distributors, with small niche players serving segments of the market. Many publishers themselves now undertake the sales and management function for key accounts (large retail players), with distributors only providing a fulfilment operation. This reduction in the scope of their services affects distributors' margins, which have been dependent on the level of service provided.

UK retail generated leisure software sales of £1bn in 2001⁵¹. Of this, £99.1m⁵² was retained within the UK distribution sector (the margin that UK distributors retain from UK retail sales). (See Appendix C, Market Forecasts)

4.6.2 Distribution key challenges

Distributors have progressively come under more pressure with the emergence of exclusive contracts between publishers and some key distributors, most notably one between Pinnacle and Electronic Arts, giving exclusive distribution rights to the former in 1995. However, some publishers still operate open distribution i.e. they will sell to anyone but may apply restrictions such as single delivery address only or minimum volume thresholds. The distribution sector has also been subject to a degree of vertical consolidation with publishers diversifying and expanding their role along the value chain.

Activision now controls Centresoft, which is considered to be the largest distribution network in the UK and holds a number of exclusive distribution contracts e.g. Playstation hardware, Eidos, Infogrames.

E-commerce may be a threat to distributors, since online retailers will either mail physical product from a central warehouse or allow downloads. Both of these options reduce the need for business-to-business distribution.

4.7 Retailers

4.7.1 Sector overview

The UK games retail sector has developed from being a large number of specialist independent outlets to a market now dominated by large retail chains and supermarkets. Of the 6000 computer games retail outlets within the UK only 10% still remain independent⁵³. Electronics Boutique, a games speciality chain which rebranded as the GAME Group in April 2002, has remained the leader, commanding 24% of the total retail sales market. Its closest rival is Dixons Group with a 19% market share. Independent stores only command 13% of the UK market⁵⁴.

The US is not as strongly polarised, although Wal-Mart, Best Buy and Toys R Us control 41% of the market between them. Specialist retailer Electronics Boutique is also strong in the US with a 9% market share.

It is important to note that, despite sharing the same name, the Electronics Boutiques in the US and UK are completely separate companies. Although the US retailer at one time held a stake in the UK one, the sole remaining link is a service agreement allowing the UK retailer to use the Electronics Boutique name.

⁵⁰ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

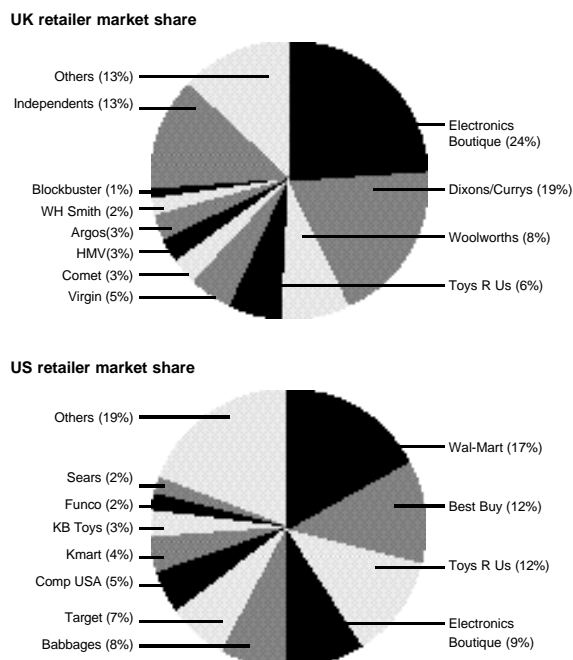
⁵¹ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

⁵² Source: Spectrum games industry forecasts

⁵³ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

⁵⁴ Source: Deutsche bank, IDG. Figures for 9 months of 2001

Exhibit 54: Market share of main video game retailers in UK and US, 2001 (9months)



Source: IDC (International Development Group); Deutsche Bank

Retail margins vary, from 28-40% on premium titles and new releases⁵⁵ to 10-15% on console hardware, for an overall margin of around 30%. This means that retailers retain a very large proportion of the value created within the market

The dominance of a limited number of retail chains within a market e.g. EB/GAME and Dixons in the UK and Wal-Mart in the US, has given the retailers a great deal of power over other sectors of the value chain. They are in a position to negotiate very favourable terms with publishers including large bulk discounts, sale or return policies or "co-op advertising" where publishers contribute to retailer's in-store advertising and promotional brochures. However, Electronics Boutique in particular is credited with having played a major part in building the UK into one of the most developed games markets in Europe.

UK retail generated leisure software sales of £1bn in 2001⁵⁶. Of this, £357m⁵⁷ was retained within the UK retail sector (the margin that UK retailers retain from UK retail sales). (See Appendix C - Market forecasts)

4.7.2 Retail key challenges

E-commerce may be a threat

The major retailers are already gearing up for e-commerce. In fact, it is very likely that most e-commerce will be done via retailers' online sites, as these are brands that consumers already know and trust. However, there is the risk that publishers will begin to sell direct to consumers, particularly hardcore gamers. These more devoted consumers could easily be directed to publishers' sites via magazine ads, they are more aware of publishers' and developers' brands and make more informed purchasing decisions (less browsing and advice necessary). This could erode the business of a staple group of consumers away from traditional retail, particularly from specialist retailers such as EB who are more dependent on the hardcore gamer market.

New retail outlets eroding market share

Supermarkets and other FMCG stores such as petrol stations are beginning to actively stock games alongside their music and video selections. These new entrants are already having a major impact on the way the sector is structured, with major publishers such as Infogrames choosing to focus on these stores as part of their core distribution strategy.

They are also liable to drive down prices by offering both discounted and budget games. Supermarkets in particular are also very strict about what they will choose to stock which is likely to further drive the concentration of the bulk of sales into a ever-smaller number of titles.

The supermarkets will truly become a major threat when the industry becomes mass-market as they target the widest range of consumers, with far larger footprint than the specialist stores. The threat to the specialist retailer EB is somewhat cushioned by its established, quality, specialist reputation. Dixons and other music stores may suffer, and the local independents will have to rely heavily on the loyalty of their devoted hardcore clientele. The music industry underwent a similar process in recent years and supermarkets now control almost 12% of music retail sales⁵⁸.

⁵⁵ Source: Interview with leading analyst

⁵⁶ Source: Screen Digest - Interactive leisure software, market assessment and forecasts to 2005

⁵⁷ Source: Spectrum games industry forecasts

⁵⁸ Source: BPI Yearbook 2001, Taylor Nelson Sofres Audio Visual Survey

Insufficient competition

The retail sector is so heavily dominated by the top players that independent retailers are heavily marginalised. Publishers focus their attention on EB and other key retailers, who are able to negotiate better terms than the independent retailers and who continue to prosper through economies of scale. This lack of ability to compete on the same level as the dominant players has been a significant problem for independent retailers in many FMCG industries.

Specialist stores highly exposed to the console cycle

Specialist stores, such as EB and the independents are very vulnerable to the up- and downturns in the console cycle, far more so than more generalist shops such as Dixons or HMV whose stock involves a variety of other products. For these companies, any smoothing in the console cycle would be a significant advantage.

Threat of regulatory intervention

At some point, if retailers continue to squeeze publishers' margins to the point where they cannot be competitive, there is a distinct possibility of publishers and developers banding together and calling for investigation by the competition authorities. However, this would mean publishers effectively 'biting the hand that feeds them', meaning that the situation would have to get far worse before publishers were forced to act.

5. Conclusions and proposed action plan

5.1 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.

5.2 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 55: 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 56: 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

5.2.1 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 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

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*

5.2.2 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

5.2.3 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

5.2.4 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*

5.2.5 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*

Members of the project

Department of Trade and Industry

Chris Matthews, Director,
Publishing & New Media
Lynne Kilpatrick, Joint Head,
Computer Games Sector Relations Management
John Kroeger, Joint Head,
Computer Games Sector Relations Management
Carolyn Potts, Lead Analyst,
Competitiveness Analysis Report
Nick Rudoie, Statistical Advisor,
Industry Economics and Statistics Directorate
Rishi Mohur, Relations Manager,
Computer Games Sector

Spectrum Strategy Consultants

Ben McOwen Wilson, Senior Manager
Kin-Ming Looi, Associate
Aileen Jackson, Business Analyst
John Cook, Independent Consultant

Key contributors

European Leisure Software Publishers Association (ELSPA)

Roger Bennett, Director General
Michael Rawlinson, Deputy Director General

The Independent Games Developers Association (TIGA)

Fred Hasson, Chief Executive Officer
Nigel Davies

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.

From exuberant youth to sustainable maturity
Competitiveness analysis of the UK games software sector
Main report



Department of Trade and Industry

Department of Trade & Industry
151 Buckingham Palace Road
London SW1H 9SS, UK
T +44 (02) 7215 5000
W www.dti.gov.uk



Spectrum Strategy Consultants
Greencoat House
Francis Street
London SW1P 1DH, UK
T +44 (02) 7630 1400
W www.spectrumstrategy.com