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Game on! A Report on the Interactive Leisure Software Subsector in London

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Housed in the School of Creative Enterprise at London College of Communication (University of the Arts), the Creative Industries Observatory (CIO) is a leading contributor to academic research and analysis within the creative industries and a source of information for the increasingly influential group of sectors that characterise the modern knowledge economy. The CIO was set up in conjunction with 'Creative Capital World City' (CCWC) – a HEIF-funded project aimed at supporting the creative industries in key world markets, including the UK, India and China.

The CIO is an international and multi-disciplinary team with a range of expertise and experience across academic disciplines and industry sectors. We focus on strategic, structural and definitional issues relevant to the creative industries.

This report is one in a series designed to give policy makers, business leaders, practitioners and researchers a comprehensive overview and in-depth analysis of the core activities and key characteristics across thirteen creative sub-sectors in developed and emerging global cities. The report is designed to allow you to identify information that is relevant to your needs, quickly and effectively, as well as cross-reference between topics and creative sectors.

CIO reports are designed to provide a snapshot of each sub-sector in each city. **This report focuses on the interactive leisure software subsector in London, United Kingdom.**

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Foreword

**Dr Richard Wilson,
CEO of Tiga**

There is a paucity of good quality data on the UK video games industry. Information such as value-added, investment on R&D, average annual expenditure on training and the value of video games in terms of exports, for example, is thin or incomplete. This is a serious problem. If we are to improve the competitiveness of the UK games development sector then we must have better quality information. Games developers will then be able to benchmark their business activities against industry averages. Overseas investors will also then be better informed about the benefits of investing in the UK leisure software sector.



I am delighted, therefore, that the Creative Industries Observatory has produced *Game On! A Report on the Interactive Leisure Software Subsector in London*. This Report confirms the lacunae in our knowledge that exists about the video games industry. For example, the Office of National Statistics still does not have a specific code to identify interactive leisure software businesses. Yet the Report also shines a light on the video games industry in the UK in general and in London in particular.

It provides a comprehensive summary of the history of the interactive leisure software industry; valuable financial and economic data about the sector; and information concerning the industry's relationship with the UK national government. The Report also surmounts formidable methodological obstacles to reveal that businesses in the sector within London are typically young in age, small in size and UK owned.

Significantly, the Report notes that although London is an important hub of games industry activity it is by no means preponderant. There are also clusters in Brighton, Cambridge, Dundee, Edinburgh, Guildford, Liverpool, Manchester, Oxford and Newcastle. The games industry is fleet of foot, capable of locating and investing wherever there is access to a skilled workforce, universities and favourable fiscal conditions.

Given the footloose nature of the industry, it is crucially important that public policy actively serves to retain and attract games businesses to London and the UK. Tiga is working to achieve this goal by representing the games industry in political circles, raising the profile of the industry in the media and by developing services that enhance the competitiveness of our members. Our aim is nothing less than to make the UK the best place in the world to do games business.

This Report provides a good assessment of the industry's current strengths and weaknesses.
I congratulate the authors on their thorough research and commend it to policy makers.

Dr Richard Wilson, CEO of Tiga
Representing the interests of games developers
September 2008

1

Introduction

To 'play' is 'to engage in games or other activities for enjoyment', while 'games' are leisure activities structured into rules¹. Interactive

Leisure Software products are

generally known as video games. The same as traditional games, they are created with the purpose of entertainment or both education and entertainment² (edutainment).

video game

- noun a game played by electronically manipulating images produced by a computer program.¹

A piece of software qualifies as a video game when it has been designed for an electronic platform³ (e.g. a console, arcade machine or handheld device), is visually displayed in a screen⁴, and also produces a visual feedback as a result of the player's manual interaction.⁵

The progress of the industry is basically determined by audiovisual developments, which are conditioned by the evolution of technical capabilities. Thus, the term 'video game' has progressively come to cover more typologies, including console games, PC offline games, online games, and wireless games.⁶

The UK's Department of Culture, Media and Sport (DCMS) has defined the activities of the sector as '*games development, publishing, distribution and retail*'. However as the Office of National Statistics (ONS) national industry survey data does not have a specific category to identify Interactive Leisure Software organizations, DCMS does not publish any estimates of the breakdown for this industry. The relative youth of the sub-sector (compared to other creative industry sub-sectors) exacerbates this. However, some data (e.g. the Greater London Authority report on London's creative industries⁷) has been analyzed within the software and electronic publishing businesses sub-sectors, recognizing the significant differences and variations within the sub-sector.

¹ Soanes, C. & Stevenson, A. (2005) *Oxford Dictionary of English*. Definition available at <http://www.askoxford.com>

² Futurelab (2006) Teaching with games. Available at www.isfe-eu.org

³ BSAC (2000) *A primer on the interactive leisure software business*. Briefing paper available at <http://www.bsac.uk.com>

⁴ *Cambridge Advanced Learner's Dictionary* (2003). Definition available at <http://dictionary.cambridge.org>

⁵ Soanes, C. & Stevenson, A. (2005) *Oxford Dictionary of English*. Definition available at <http://www.askoxford.com>

⁶ OECD (2005) *Digital broadband content: The online computer and video game industry*. Report available at <http://www.oecd.org>

⁷ Freeman A. (2007) *London's Creative Sector: 2007 update*. GLA, London.

The overall aim of the Creative Industries Observatory report is to provide a strategic, structural and definitional analysis specific to the Interactive Leisure Software industry – with a focus on London.

Definitions

- For this report we are using the EU definition⁸ for company size which is:

Company Size	Staff	Turnover
Micro	<10	< £1.5 m
Small	<50	< £8 m
Medium	<250	< £40 m
Large	250+	£40m +

Table 1.1: EU definitions of company size

- The term freelancer is also used to denote a single economic operative.
- London's geographical boundary is limited to the inner boroughs, and where applicable, the areas with London postcodes.

⁸ EU Enterprise and Industry (2008) SME definition. Available at http://ec.europa.eu/enterprise/enterprise_policy/sme_definition/index_en.htm. Currency has been converted approximately as €1 = £0.8 (correct as of 15th May, 2008).

2

History of Interactive Leisure Software

The Interactive Leisure Software is the youngest of all the creative industries sub-sectors yet has a number of large multinational companies that dominate the global marketplace, although, London is overwhelmingly important as a city for this industry which is located nationally and reliant on global networks.

Origins of the industry

The history of the Interactive Leisure Software sector can be traced back to 1950s. It should be noted though, that the first electronic games were technological experiments not developed for either leisure or commercial purposes. For instance, *Tennis for Two* (1958), which is believed to be the first interactive electronic game, was designed by a physicist to be displayed in an oscilloscope 'in an effort to keep visitors to the Brookhaven National Laboratories in New York from being bored'.⁹ On the other hand, *SpaceWars!* (1962) was developed by a group of MIT students, enthusiasts of interstellar novels and the special effects of Toho Studios movies.¹⁰

The American company Atari commercialized the first games (for both arcades and consoles) which become popular worldwide, contributing to the growth of 'hardcore'¹¹ players as well as casual consumers.¹² The bat-and-ball arcade game *Pong*, released by Atari in 1972, become symbolic of the origins of video gaming. But it was the Japanese companies who shaped the 1970s interactive leisure software products. For example, Taito games incorporated a high score table where the best players could record their initials alongside their score.¹³ The company Namco addressed the family leisure market for the first time and designed the first iconic character for an arcade machine (Pac-Man), based on non-violent themes, and incorporated the option of a high-speed game play for the adult players.¹⁴ As a result competitiveness, emotional attachment to the characters and audience variety became basic elements to be considered by all game developers attempting to succeed in the 1980s games market.

⁹ Herman, L. et al. (2002) 'The history of video games'. Available from <http://gamespot.com>

¹⁰ Graetz, J.M. (1981) 'The origin of Spacewar' in *Creative Computing*, 7(8): 56-67.

¹¹ 'Hardcore' players refers to those individuals who spend a vast majority of their leisure time playing video games.

¹² Mäyrä, F. (2008) *An introduction to game studies: Games in culture*. Sage, London.

¹³ McCarthy, D., Curran, S. and Byron, S. (2005) *The art of producing games*. Thomson Course Technology, Boston.

¹⁴ Mäyrä, F. (2008) *An introduction to game studies: Games in culture*. Sage, London.

The first electronic games arrived in European shops as imports after being released in Japan and the US,¹⁵ as coin-operated arcade machines. After the release of the first cartridge-based game console in the mid-1970s, home electronic platforms increased in complexity and sophistication.¹⁶

However, it was the decreasing price, popularity and subsequent spread of home computers from 1982 onwards, initially in the US and the UK, which determined the course of the interactive leisure software industry over the following decade. Personal Computers (PC's) allowed amateur developers to start experimenting on their own, first by copying popular arcade games and second by designing their own games. *Tetris*, designed by Alexei Pajitnov, from the Moscow's Academy of Sciences is an example of the very simple game developed in a research lab at the time with enormous commercial potential that would, after a fierce legal battle between competitors, would be rolled out globally by Nintendo and become one of the most successful games of all time.¹⁷

The widespread use of home computers and range of application they provided, initially slowed the development of the console games market in the UK (in the US although it remained stable¹⁸) by 1984. In addition poor quality products were released into the market which contributed to the loss of enthusiasm by players, particularly the hardcore gamers. The Western business world interpreted the situation as the end of the prosperous electronic games industry.¹⁹

However, as the fledgling games industry flagged in the US and UK, it emerged bigger and stronger in Asia led by Japanese companies such as Nintendo and Sega. Not only did they contribute to the resurgence of the sector, but also to the consolidation of the game culture and the global expansion of the industry.²⁰ Nintendo and Sega started the battle for the most popular console worldwide, which defined the cyclical dynamics of the interactive leisure hardware industry.²¹ The *Super Mario Brothers* games (directed at families) were successfully exported by Nintendo to Europe from 1986²², while Sega's racing games (targeted at the adult audiences) and the iconic *Sonic the Hedgehog* stimulated the resurgence of electronic

¹⁵ Lange, A. (2002) "Report from the PAL zone: Europeans games culture" in Lucien King (ed.) *Game On: The history and culture of videogames*. Laurence King Publishing, London.

¹⁶ McCarthy, D., Curran, S. and Byron, S. (2005) *The art of producing games*. Thomson Course Technology, Boston.

¹⁷ McCarthy, D., Curran, S. and Byron, S. (2005) *The art of producing games*. Thomson Course Technology, Boston.

¹⁸ Lange, A. (2002) "Report from the PAL zone: Europeans games culture" in Lucien King (ed.) *Game On: The history and culture of videogames*. Laurence King Publishing, London.

¹⁹ Newman, J. (2004) *Videogames*. Routledge, London.

²⁰ Mäyrä, F. (2008) *An introduction to game studies: Games in culture*. Sage, London.

²¹ McCarthy, D., Curran, S. and Byron, S. (2005) *The art of producing games*. Thomson Course Technology, Boston.

²² Nintendo (n.d.) *About Nintendo worldwide*. Available at <http://www.nintendo.co.uk>

games sales in the US and UK.²³ This new generation of interactive leisure software enriched earlier game play by adding the illusion of virtual space to the interactive experience and characters with which the audience could identify and interact with to emotionally.²⁴

The interactive leisure market of 1990s was dominated by the popularization of home consoles and the multiplication of casual gamers. In parallel, the investment in interactive leisure software grew, and as a result games started to be developed by teams of professionals in specially dedicated studios rather than individuals.²⁵ According to the DCMS, Britain had 400 studios working on small-scale games by 1998.²⁶ Despite comparatively low budgets (relative to the US and Japan), the quality of the Britsoft²⁷ products was remarkably high and the talent and skills of UK developers was recognized worldwide.²⁸ It is estimated that 3 of the 10 top selling games had been created by British developers²⁹, despite competing with efficiently marketed and globally rolled-out foreign games.³⁰

The Industry and London

Top London companies such as Eidos Interactive Ltd and Sci Entertainment Group Plc (see also section 4 of this report) started publishing interactive leisure software in 1980s³¹, the same decade in which the Entertainment & Leisure Software Publishers Association (ELSPA) was founded to support the growing industry in the UK.³² From 1988, London also held the European Computer Trade Show (ECTS), which was the first game fair in Europe.³³

One of the most productive companies founded during 1990s was the Central London based company, Sports Interactive, who consider themselves '*the world's leading developer of sports management simulations*'.³⁴, suggesting that by exploiting a niche market, they have been successful. In addition, apart from British companies, top international companies such as Take Two Interactive and Sony Computer Entertainment Europe opened headquarters in

²³ McCarthy, D., Curran, S. and Byron, S. (2005) *The art of producing games*. Thomson Course Technology, Boston.

²⁴ Mäyrä, F. (2008) *An introduction to game studies: Games in culture*. Sage, London.

²⁵ McCarthy, D., Curran, S. and Byron, S. (2005) *The art of producing games*. Thomson Course Technology, Boston.

²⁶ DCMS (1998) *Creative Industries Mapping Document*. Available at <http://www.culture.gov.uk>

²⁷ UK game development industry is sometimes referred as Britsoft.

See BSAC (2000) *A primer on the interactive leisure software business*. Briefing paper available at <http://www.bsac.uk.com>

²⁸ Emily Aitken (2007) *The UK games industry: inward investment proposition*. UKTI, London.

²⁹ DCMS (1998) *Creative Industries Mapping Document*. Available at <http://www.culture.gov.uk>

³⁰ McCarthy, D., Curran, S. and Byron, S. (2005) *The art of producing games*. Thomson Course Technology, Boston.

³¹ Sci Entertainment Group (n.d.) *About us*. Available at <http://corporate.sci.co.uk>

³² ELSPA (n.d.) *An introduction to ELSPA*. Available at <http://www.elspa.com>

³³ Lange, A. (2002) "Report from the PAL zone: Europeans games culture" in Lucien King (ed.) *Game On: The history and culture of videogames*. Laurence King Publishing, London.

³⁴ Sports Interactive (n.d.) *About us*. Available at <http://www.sigames.com>

London throughout the decade.³⁵ However a number of major publishers of games, such as Electronic Arts (EA) and Nintendo, have not established themselves in London.

Larger studios emerged in the 2000s competing with small-scale teams of developers and interacting with other globally dispersed companies.³⁶ As a result there are now less than half the number of studios there were in UK ten years ago, although at least eleven of them have over 100 staff. The rising cost of development is threatening the independence of the studios, and as a consequence publishers have been acquiring teams of game designers to control both the development process, costs and the final products.³⁷ For instance, Lionhead Studios (registered in 2001) is a London leading company and was recently acquired by Microsoft Corp. to develop products exclusively for the Xbox platform.³⁸

In addition to the development companies, there are more than 90 independent outsourcing companies in Britain and at least 70 publishers, most of whom are foreign investors.³⁹ Given the international nature of this industry, the International Game Developers Association (IGDA) was founded in 2000 to support and promote the global community of professionals dedicated to the creation of electronic games.⁴⁰ The following year, the UK national trade association, Tiga, was founded to represent games developers and publishers in Europe. Together with ELSPA, Tiga contributes to the support of the network of game industry participants in UK.⁴¹

Convergence with other creative industries subsectors

Most of the top games developed throughout this decade exploit all possibilities of three-dimensionality and photo quality in their search for hyperrealist experiences.⁴² As a result of this process the games industry has increasingly engaged with other creative industries subsectors. At present numerous talented participants of the art, design, film and music industries are employed by top game companies alongside technical staff.⁴³ As such it is a truly multi-disciplinary and multi-skill creative sector. The development of games based on existing films or sports competitions is also contributing to the growth of the industry.⁴⁴ A very

³⁵ CIO database of creative business in London (2007)

³⁶ DCMS (2001) *Creative Industries Mapping Document*. Available at <http://www.culture.gov.uk>

³⁷ Emily Aitken (2007) *The UK games industry: inward investment proposition*. UKTI, London.

³⁸ Lionhead Studios (n.d.) *The history of Lionhead studios*. Available at <http://www.lionhead.com>

³⁹ Emily Aitken (2007) *The UK games industry: inward investment proposition*. UKTI, London.

⁴⁰ IGDA (n.d.) About IGDA. Available at <http://www.igda.org>

⁴¹ Tiga (n.d.) About us. Available at <http://www.tiga.org>

⁴² Mäyrä, F. (2008) *An introduction to game studies: Games in culture*. Sage, London.

⁴³ BSAC (2000) *A primer on the interactive leisure software business*. Briefing paper available at <http://www.bsac.uk.com>

⁴⁴ DCMS (1998) *Creative Industries Mapping Document*. Available at <http://www.culture.gov.uk>

recent example of this is the commercialization of games linked to traditional forms of physical play and sport, which resulted in Nintendo Wii as the current platform leader.⁴⁵

Spheres of gaming

Online and wireless gaming

As network communications become a part of everyday life, the owners of devices with online and wireless connectivity are starting to demand applications for entertainment purposes.⁴⁶ Publishers have recognised this and increasingly operate across gaming platforms, making the same game available for consoles, personal computers and mobile devices. However, although the off-line market is still the market leader, the online (via PC or console) and mobile markets are growing fast.

As broadband and wireless network technology player demographics become increasingly varied, the content of the games developed for these platforms has also started to diversify. New typologies include Massively Multiplayer Online Games (MMOGs); PC CD-Based Online Games; PC Web-Based Games; Console-Based games; Wireless platform games; and Interactive Television games.⁴⁷ In addition, the mobile properties of wireless devices has transformed the gaming experience from location-based into the non-location specific.⁴⁸

In parallel to the development of new types of games, business models are evolving too -- with development, production and distribution moving to online processes mainly controlled by Internet portals. These act as audience-maker intermediaries, matching groups of buyers and sellers.⁴⁹ Customer options are also multiplying so that players can select between retail purchase, subscription fees or pay-per-play.⁵⁰

Socialising

Recent reports confirm that for European gamers socialising within online communication and with other people online is a very important reason to play these games, even more than interacting with other gamers in person. Furthermore, the dominance of multiplayer online gamers amongst teens suggests that MMOGs are likely to increase in importance.⁵¹ Apart

⁴⁵ Vgchartz.com (2007) "Nintendo Wii is market leader in home console business". Press release available at <http://news.vgchartz.com>

⁴⁶ Bell, M. et al. (2006) 'Interweaving Mobile Games With Everyday Life'. Available at <http://doi.acm.org>

⁴⁷ IGDA (2003) *Online games white paper*. Available at <http://www.igda.org>

⁴⁸ Bjork, S. et al (2002) 'Special Issue on Ubiquitous Games' in *Personal and Ubiquitous Computing*, 6:358-361

⁴⁹ Evans, D.S. et al (2004) 'The economics of software platforms: an application of theory of two-sided markets'. Available at <http://www.cesifo-group.de>

⁵⁰ OECD (2005) *Digital broadband content: The online computer and video game industry*. Report available at <http://www.oecd.org>

⁵¹ ISFE (2008) *Video gamers in Europe*. Consumer research available at <http://www.isfe-eu.org>

from the social and psychological aspects, there is a remarkable economic dimension linked to these games as the exchange of virtual property has started to expand online.⁵² Virtual property is defined as '*persistent computer code stored on a remote source system, where one or more persons are granted certain powers to control the computer code, to the exclusion of all other people*'. Furthermore, this new type of property is 'often traded in secondary markets' and users 'often add value to the property just by using it'.⁵³

Mobile Gaming

With regard to mobile gaming, Screen Digest predicted that Europe would lead this market by 2008, considering the rapid growth in the number of mobile devices since the start of the century. With traditional games publishers now operating in the mobile market as well, availability has greatly increased. However as the wireless device capability grows (more power, faster communication and higher resolution), more sophisticated games can be produced resulting in an increased number of gamers attracted to play on mobile platforms.⁵⁴

Educational games

According to recent consumer research by the Interactive Software Federation of Europe (ISFE) learning new things is one of the reasons why gamers play and it appears that the capacity of a game to stimulate imagination and intelligence may be the most important element in encouraging non-gamers to start playing in the first place.⁵⁵ Leisure activities that can actively contribute to education have become known as 'edutainment', and games that create engaging learning experiences are called 'educational games' or 'serious games'.⁵⁶

Furthermore, active and participatory learning with the help of advanced specially designed technology is an increasingly popular experience for learners that have difficulties with conventional teaching techniques and methods. As a result, interactive software and games have begun to offer an alternative educational process to traditional systems of education.⁵⁷ Educational software tools such as virtual worlds (developed as learning environments), simulations, remote instrumentation, augmented reality, mapping mash-ups and data visualizations have been turned into effective means of engagement and motivation for learners.⁵⁸

⁵² Mäyrä, F. (2008) *An introduction to game studies: Games in culture*. Sage, London.

⁵³ Blazer, C. (2007) 'The five indicia of virtual property' in *Pierce Law Review*, 5(1):137-161

⁵⁴ IGDA (2005) *Mobile games white paper*. Available at <http://www.igda.org>

⁵⁵ ISFE (2008) *Video gamers in Europe*. Report available at <http://www.isfe-eu.org>

⁵⁶ Becta (2008) *Emerging technologies for learning*. Report available at <http://publications.becta.org.uk>

⁵⁷ Kerr, A. (2006) *The business and culture of digital games: gamework/gameplay*. Sage, London.

⁵⁸ Becta (2008) *Emerging technologies for learning*. Report available at <http://publications.becta.org.uk>

3

Methodology

The CIO database of creative industries organizations in London was constructed using three sources: (1) data from the DASH database (sourced from Bureau Van Dijk), which compiles the business accounts details of UK companies as recorded by the Companies House; (2) sub-sector specific datasets purchased or provided by industry participants and professional bodies of creative industries; and (3) data from sub-sector specific directories and manuals which also includes freelancers and many smaller organizations. These sources were searched, cleaned and matched, with all duplicated records removed (4). The final CIO database, completed in November 2007, included more than 63,000 records of individual creative industries organizations in London, of which **just 571** belong to the video games industry (broken down by source in Figure 3.1⁵⁹).

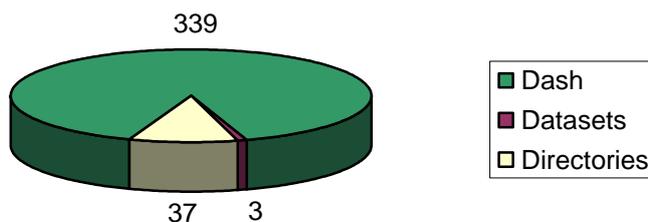


Figure 3.1: Percentage share of sources for population of video games companies

The most detailed set of records were extracted from a database of UK listed and non-listed companies collected from the Companies House (DASH)⁶⁰. The initial search criteria used to obtain the comprehensive population of creative industries organizations in London (by sub-sector) were as follows:

(a) Keywords: A list of 'key words' specific to each sub-sector of the creative industries was used to search the field 'line of business' and 'company name'. The DCMS Mapping Documents' specification of 'core' activities was used as an initial guide for the selection of these sub-sector specific keywords. However, because of some inconsistencies found in the DCMS documents⁶¹, the final selection of key words was also informed by expert judgment of individuals with operational knowledge of the sub-sector.

⁵⁹ Datasets received included TIGA database of businesses. Directories used included *miSoftware and The Knowledge 2007*.

⁶⁰ DASH is a comprehensive database of companies, directors and shareholders. Reports are included for 3.6 million companies (1.3 million of which are primary records), 7 million directors (3 million of which are primary records) and 3.3 million shareholders. <http://www.bvdep.com/en/DASH.html>

⁶¹ E.g. the DCMS Mapping Documents do not acknowledge creative activities in the Arts sub-sector.

(b) SIC codes: Where a distinct and readily identifiable SIC code existed for the sub-sector,⁶² it was used in the field 'SIC code' of the advanced search function. The CIO Definitional Framework was used as a starting point for the selection of relevant SIC codes for each creative industries sub-sector.

(c) Location: "Inner" London⁶³ was specified as the search criteria in the 'geographical area' field of the advanced search.⁶⁴

The population obtained as a result of the criteria above was still deficient for the following reasons: (a) a number of unrelated companies were captured because of their registration under a generic or incorrect SIC code; (b) businesses not related to the creative industries were captured due to the use of keywords with multiple meanings; and (c) a number of captured organizations were not relevant to the creative industries as a consequence of inconsistencies in the DASH advanced search engine.⁶⁵

Because of these deficiencies, the content of the creative business database was then thoroughly checked and cleaned manually by a team of six researchers over a period of 4 months using the criteria described above. Additionally, a record was retained in the final content of the database if (a) the organization's 'line of business' matched with the definition of Creative Industries given by the DCMS Mapping Documents,⁶⁶ (b) the organization's 'line of business' specified activities listed as 'core' in the DCMS Mapping Documents; (c) the organization's 'line of business' included activities present in the CIO Definitional Framework⁶⁷; or (d) the organization's 'line of business' was 'not ascertained' or 'unknown'⁶⁸. However a record was removed if (a) the organization's 'line of business' did not match any of the four retention criteria just specified; or (b) the organization's 'line of business' specified that a company was 'dormant' or had 'ceased trading'.

⁶² E.g. the sector Advertising has a clearly defined sub-sector specific code (SIC2003 7440) described as 'advertising' activities. However as a sub-sector of the creative industries it is nearly unique in such a direct match.

⁶³ According to the Office for National Statistics (ONS) the following boroughs constitute the area of Inner London: Candel, City of London, City of Westminster, Greenwich, Hackney, Hammersmith & Fulham, Haringey, Islington, Kensington & Chelsea, Lambeth, Lewisham, Southwark, Tower Hamlets, Wandsworth. See the map available at www.statistics.gov.uk/geography/downloads/london_boro.pdf

⁶⁴ This decision was the result of a number of unsuccessful data exports from DASH. The use of the criteria 'outer London' resulted in a population formed by numerous business not located in the outskirts of the city of London, but in other counties such as Cambridgeshire, Essex, etc.

⁶⁵ This issue was discussed with the DASH provider Bureau Van Dijk, but the technical errors were not resolved in time for completion of this research.

⁶⁶ The definition of the creative industries provided by the DCMS in the Creative Industries Mapping Document 1998 stated that they are "those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property".

⁶⁷ E.g. organizations dedicated to manufacturing activities, to retail activities and to the refinement or finishing of inputs/outputs.

⁶⁸ These records automatically exported from DASH were retained for the purpose of inclusivity.

For the interactive leisure software subsector, the small number of London-based companies meant our analysis was restricted to the top companies (the reasoning for the lack of companies in London is explained in subsequent chapters of this report). The CIO database only included 68 companies with an entry in the turnover field. For that reason, unlike the other CIO subsector reports that focus on the top 100, we will focus on the **top 50** in the financial and organisational sections, and the **top 100** for the geographical analysis.

Unlike many of the smaller firms which are often organised as temporary or project orientated entities, the information regarding the largest firms in any one sector is comparatively reliable and stable over time – providing the opportunity for analysis and comparison over time as well as across firms and with other creative industry sectors.

Defining the Sub sector

The DCMS’ definition of the creative industries are “*those activities which have their origin in individual creativity, skill and talent, and which have a potential for wealth and job creation through the generation and exploitation of intellectual property*”⁶⁹. The DCMS Mapping Documents of 1998 and 2001 provide a useful starting point when considering relevant SIC codes for the creative industries. The DCMS’ documents provide a list of key core and related activities for the ILS sector which is summarised in **Table 3.1** below.

Core Activities	Related Activities
Games Development	Video sequences (using actors, directors, crew)
Publishing	Music soundtracks
Distribution	Digital TV gaming
Retail	Gaming for mobile phones
	Computer manufacture, distribution and retail
	Games console manufacture, distribution and retail

Table 3.1: DCMS definitions of core and related activities in the Interactive Leisure Software industry

Although a useful starting point, the DCMS documents do not specify exactly how ‘core’ and ‘related’ activities are defined in spite of the fact that a lot of emphasis is placed on these in early and subsequent research. The Creative Industries Observatory therefore interpreted ‘core’ activities as those that represented critical creative activities within the sector – that is,

⁶⁹ DCMS (1998) Creative Industries Mapping Document. Available at www.culture.gov.uk.

those without which subsequent activities could not exist, and are therefore *necessary* to the sector. On the other hand, 'related' activities are interpreted as those which constitute secondary sources of revenue, are derived from the core activities and are neither necessary nor sufficient in themselves to constitute the sector. These conditions of necessity and sufficiency are common techniques for distinguishing between aspects of interlinked factors and are therefore used here.

As well as refining the definitions of 'core' and 'related', the main contribution to developing a coherent definitional framework for Interactive Leisure Software was in matching the UK SIC codes to the 'core activities' and 'related activities' as identified by the DCMS Mapping Documents (in 1998 and 2001) and the original DCMS definition of the creative industries.

Following the criteria outlined above, 'core' and 'related' activities listed by DCMS for the interactive leisure software were matched with a corresponding UK SIC 2007 codes using the guidance of the Office of National Statistics explanatory notes for SIC codes⁷⁰. All further SIC codes were checked and any which corresponded to a core or related activity were also included. Across the creative industries, cases where an activity existed, but there was no corresponding SIC code, were carefully noted.

In the case of the ILS sector, each activity (specific by the DCMS) did ultimately match a corresponding SIC code, even though as pointed out in the forward by Richard Wilson, to date the Office of National Statistics does not have a specific code to identify interactive leisure software businesses itself.

The results of the first phase of CIO's matching exercise is summarised in **Table 3.2**. The second phase consisted of an extensive consultation with e-Skills UK, a government sponsored industry-led body in entertainment and web-based software industries⁷¹ which resulted in the final CIO Definitional Framework for interactive leisure software shown **Table 3.3**. The four CIO *core* activities with the corresponding SIC codes are described in the notes provided by the Office for National Statistics⁷² as follows:

62.01/1 Ready-made interactive leisure and entertainment software development

This subclass includes the development, production, supply and documentation of ready-made interactive leisure and entertainment software, such as games software, designed for publication by a different enterprise. A key component part of the software is audiovisual

⁷⁰ ONS (2007) http://www.statistics.gov.uk/methods_quality/sic/operation2007.asp

⁷¹ E-skills UK is a non-for-profit organisation which is responsible for maintaining the UK's skill levels in entertainment and web-based software industries.

⁷² ONS (2007) http://www.statistics.gov.uk/methods_quality/sic/operation2007.asp

content with which the user interacts. The software can be published across any format, such as games consoles, the Internet and mobile phones.

58.21 Publishing of computer games

This class includes publishing of computer games for all platforms.

47.41 Retail sale of computers, peripheral units and software in specialised stores

This class includes: retail sale of computers retail sale of computer peripheral equipment retail sale of video game consoles retail sale of non-customised software, including video games.

This class excludes: retail sale of blank tapes and disks.

The inclusion of retail in the core activity mirrors the 5 stages of production, discussed in the next chapter (see **Figure 4.3**).⁷³ Consequently, the final CIO framework has taken into account all these factors is described in **Table 3.3**.

CIO DEFINITIONAL FRAMEWORK FOR INTERACTIVE LEISURE SOFTWARE		
	Core and Related Activities (DCMS Mapping Document 1998;2001)	SIC Codes Identified by the CIO (UKSIC 2007)
Core Activities	Games development	62.01/1 Ready-made interactive leisure and entertainment software development;
	Publishing	58.21 Publishing of computer games
	Distribution	47.41 Retail sale of computers, peripheral units and software in specialised stores
	Retail	47.41 Retail sale of computers, peripheral units and software in specialised stores
Related activities	Video sequences (using actors, directors, crew)	59.11/2 Video production activities
	Music soundtracks	18.20/1 Reproduction of sound recording
	Digital TV gaming	No clear SIC code correspondence
	Gaming for mobile phones	No clear SIC code correspondence
	Computer manufacture, distribution and retail	26.20 Manufacture of computers and peripheral equipment; 47.41 Retail sale of computers, peripheral units and software in specialised stores
	Games console manufacture, distribution and retail	26.20 Manufacture of computers and peripheral equipment; 47.41 Retail sale of computers, peripheral units and software in specialised stores
	Merchandise, e.g. clothes	No clear SIC code correspondence

Table 3.2. Summary of core and related activities versus UK SIC 2007

⁷³ Williams D. (2002) Structure and Competition in the U.S. Home Video Game Industry. The International Journal on Media Management. 4(1): 41 – 54.

CIO DEFINITIONAL FRAMEWORK FOR INTERACTIVE LEISURE SOFTWARE

	Core and Related Activities (DCMS Mapping Document 1998;2001)	SIC Codes Identified by the CIO (UKSIC 2007)
Core Activities	Games development	62.01/1 Ready-made interactive leisure and entertainment software development;
	Publishing	58.21 Publishing of computer games
	Distribution	47.41 Retail sale of computers, peripheral units and software in specialised stores
	Retail	
Related activities	Video sequences (using actors, directors, crew)	59.11/2 Video production activities
	Music soundtracks	18.20/1 Reproduction of sound recording
	Digital TV gaming	62.01/1 Ready-made interactive leisure and entertainment software development;
	Gaming for mobile phones	
	Computer manufacture, distribution and retail	26.20 Manufacture of computers and peripheral equipment; 47.41 Retail sale of computers, peripheral units and software in specialised stores
	Games console manufacture, distribution and retail	26.40 Manufacture of consumer electronics; 47.41 Retail sale of computers, peripheral units and software in specialised stores

	DCMS Mapping Document 1998; 2001 approved by e-Skills UK
	UK SIC 2007 codes chosen by CIO and approved by e-Skills UK
Box	Addition by the e-Skill UK

Table 3.3. CIO definitional framework for Interactive Leisure Software

4

Organisational Structure

It is helpful to contextualise the interactive leisure software subsector and be able to compare it to the other 13 creative industries subsectors as defined in this report.

Figure 4.1 outlines the average turnover of the **top 20** companies in London including the interactive leisure software subsector.

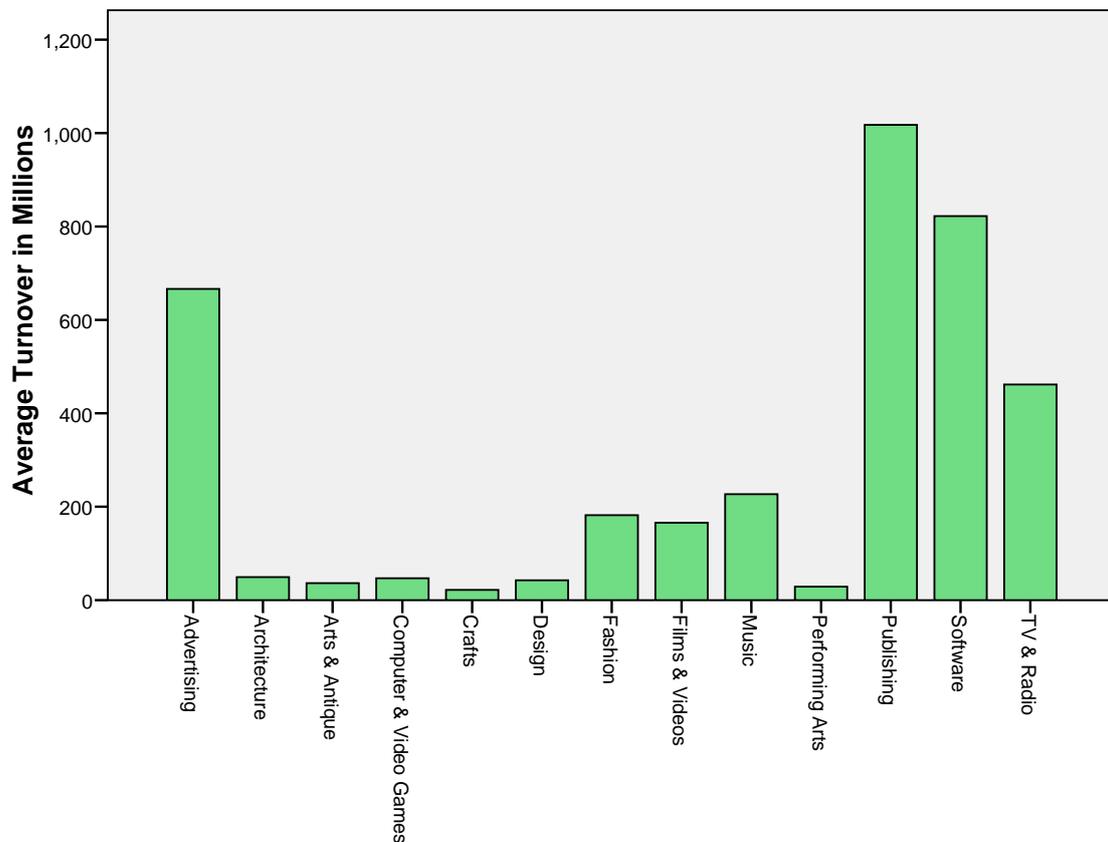


Figure 4.1 Average Turnover of Top 20 Companies in 13 Sub-sectors

As can be seen, the average turnover of the computer and video games sub sector⁷⁴ is relatively low, compared to the 'big 4' of publishing, software, advertising, TV and Radio, however, it is comparable with the architecture and design subsectors.

⁷⁴ The top 20 companies in the interactive leisure software sub-sector deal in computer and video games hence the inter-changeable terminology here.

Gender

Gender equality is an important and dominant theme in discussion of the workforce in creative industries and beyond. Comparably low female representation in top jobs is widely reported by many industrial sectors. In the case of the creative industries, the evidence presented in **Figure 4.2**, confirms the broader trends with female directors only accounting for around 20% of the total number of directors.

Figure 4.2 illustrates the composition of board membership of male and female directors for the **top 20 companies** by creative industry sub-sector. It demonstrates that the boardrooms of the top Interactive Leisure Software firms are dominated by male directors. Although this is a trend across many of the creative industries, two of the technology driven and engineering intensive sectors of **software** and **architecture**, have the lowest female proportion on their boards with, **3%** and **6%** respectively. In contrast, creative industry sectors such as the **performing arts** and **arts & antiques** have **20%** and **19%** female board membership respectively. Interestingly, **Computer Games** (a high-tech sector) has a relative high proportion of female directors with **19%** as does, **Television and Radio** at **3%**.

Diversity in the boardroom is a hotly debated issue because white, male directors overwhelmingly dominate this most senior level of corporate management; this is not representative of the proportion of males to females in the general population. The small proportion of female directors is the case across many fields, and shows no sign of increasing. The FTSE 250 companies projected a decline in the number of head of function jobs between 2002 and 2006.⁷⁵ In order to rectify the low proportion of female representation on company boards, some governments, have brought in legislation that enforces a certain proportion of female board membership. In Norway, for example, legislation requires that at least 40% of public limited companies are female in composition.⁷⁶

In spite of the numbers presented here it is difficult to establish how many women have initially entered into each sub-sector – and the numbers of female employees entering into a sub-sector may consequently affect the talent pool and the number potential female directors available. Clearly attracting the best of British and international talent, male or female, will play a significant role in the sectors ability to remain globally competitive going forward and so these gender divides at junior as well as senior levels need to be carefully considered and addressed.

⁷⁵ Greater London Authority (2008), *Women in London's Economy*, GLA

⁷⁶ Greater London Authority (2008), *Women in London's Economy*, GLA

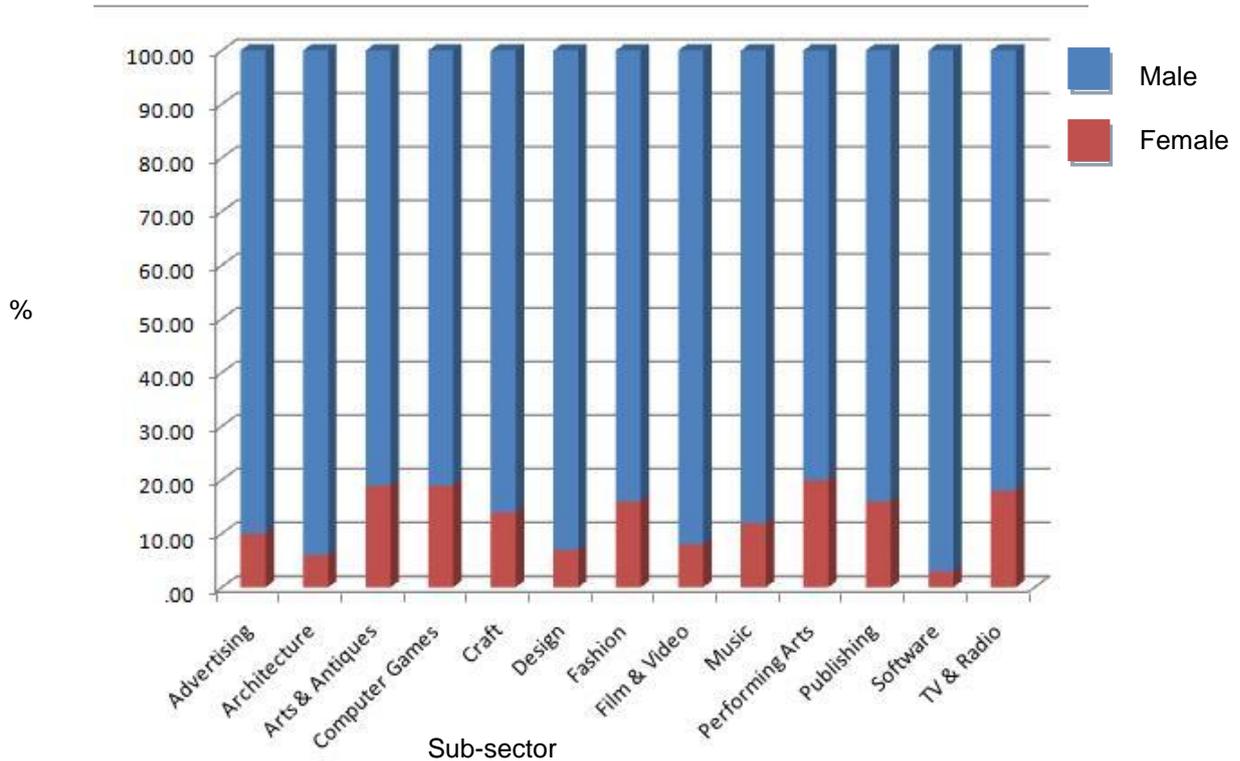


Figure 4.2: Composition of leadership of male and female directors (by sector)

averaged for the top 20 in that sub-sector. For example, no advertising companies appeared in other sub-sector databases, indicating that the companies involved in the 'top end' of advertising are considered to be insular, in that they do not operate in other sub-sectors of the creative industries.

Given the multi-disciplinary nature of the interactive leisure software sub-sector, the interaction between the companies in different subsectors is important. In **Table 4.1**, the 'crossover scale' ranges from 1 to 13. If all the **top 20** companies operate only in one sub-sector, the average score would be 1. If all 20 companies operate in all the 13 sub-sectors, the average would be 13. This scale basically gives a simple indicator of the extent of sectoral crossover in each sub-sector.

Sub-sectors	Average Crossover Scale (1-13)			
Advertising	1	N/A	N/A	N/A
Arts & Antiques	1.05	Craft	N/A	N/A
Music	1.2	TV & Radio	Publishing	N/A
Software	1.2	Computer & Video Games	Design	N/A
Performing Arts	1.35	Music	Film & Video	TV & Radio
Publishing	1.4	Design	Advertising	Software
TV & Video	1.55	Film & Video	Music	N/A
Crafts	1.8	Fashion	Arts & Antiques	N/A
Design	1.9	Fashion	Architecture	Publishing
Architecture	2	Design	N/A	N/A
Interactive Leisure Software	2.05	Software	Design	Music
Film & Video	2.05	TV & Radio	Music	Performing Arts
Fashion	2.35	Design	Crafts	Arts & Antiques

Table 4.1: The Scale of Sectoral Crossover in the 13 Sub-sectors

It is important to note that this is for the top 20 companies in each sub-sector. Advertising companies do produce videos, design, publishing, and music, as well as engage on a whole range of creative activities primarily through contracting, but the main activity of the company is considered to reside in the Advertising sub-sector. Also, Software is closely related to the Interactive Leisure Software sub-sector, as is Film & Video to the TV & Radio sub-sector. Finally, the Fashion sub-sector has the highest crossover scale of all the sub-sectors, as many of the large fashion companies are players in the entire value chain. Overall there is a noticeable interaction of large companies across sub-sectors, which suggests that there are individual companies with considerable 'influence' in the creative industries field.

Organisational Relationships

Moving onto organisational nature of the interactive leisure software subsector, which although it includes the production of the console or platform, the majority of the activity is in the production of video games, in terms of SIC definitions (see **Table 3.3**). The production of these games goes through many stages, from the initial idea to selling the finished product in retail outlets. However, computer game design and production, while being a substantial part of the interactive leisure software subsector and reflective of it as a whole, does not tell the whole story. Many software companies that specialise in computer and IT services feature in this subsector due to the nature of the related activities (see **Figure 3.3**). However, it would

be difficult to disaggregate these types of companies from computer game developers and publishers, as there is a great deal of overlap in practices and the type of skills and techniques they require from their staff. Much like the production of a film or television programme, there is an initial pre-production phase that sees developers' work with designers and the direction team to create the narrative and layout of the game (which is not displayed in the following model). From this stage, it has been suggested that the majority of game production undergoes five vertical stages (see **Figure 4.3** for details).

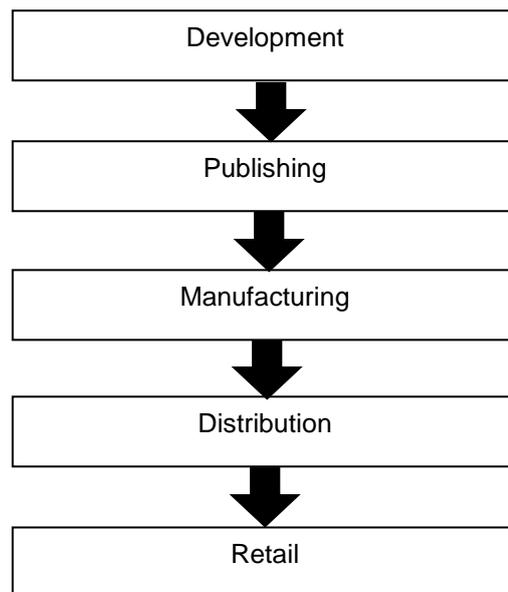


Figure 4.3: Five vertical stages of the Video Games Industry adapted from Williams (2002)⁷⁷

The development and publishing stage involve the most number of firms, as this is when the majority of the 'creative' activity takes place. The manufacturing consists of simply making the discs or cartridges on which the games are loaded.⁷⁸ As with the film industry, many of the larger companies (often called simply 'video game publishers') will operate in all of these stages (except retail) in an attempt to reduce risk and increase profits – in effect therefore they can be considered 'vertically integrated'. They exist along side companies that are solely focused on development but these tend to be smaller studios and often have a particular specialism⁷⁹ (e.g. Criterion Software developing the RenderWare graphics engine). These companies may be bought out and subsumed into a larger company (Electronic Arts bought

⁷⁷ Williams D. (2002) Structure and Competition in the U.S. Home Video Game Industry. *The International Journal on Media Management* 4(1): 41 – 54.

⁷⁸ Williams D. (2002) Structure and Competition in the U.S. Home Video Game Industry. *The International Journal on Media Management* 4(1): 41 – 54.

⁷⁹ Williams D. (2002) Structure and Competition in the U.S. Home Video Game Industry. *The International Journal on Media Management* 4(1): 41 – 54.

Criterion Software in August of 2004⁸⁰) or licensed to develop a particular game or part of a game for them. In London, the computer game industry is structured around the existence of these developers rather than the larger international companies, which are mainly located in the US and Japan. Eidos is the only publishing company in the city, and it is far from central, being based in Wimbledon.⁸¹

In May 2005, Eidos was acquired by **SCi Entertainment**,⁸² another company in the top 50, making it the largest UK-based publisher of computer games, with their website⁸³ claiming that they **employ 897 people**, with a turnover of **£73 million** in 2007. However, they also register a pre-tax profit margin of **minus £81.4 million**, which contrasts with the 2006 figures from the CIO database on the **top 50** (see Chapter 5 for further details). SCi Entertainment have offices in Paris, Hamburg, Madrid and San Francisco; three of those inherited from Eidos through the takeover. The lack of a presence in Japan suggests that companies from Japan are their main competitors. Also, recent developments have prompted the company to predict **a loss of £100 million in 2008**, continuing the decline from previous years, forcing it to cut up to 25% of its workforce,⁸⁴ and move some of its development to Montreal, Canada, where tax breaks from the Canadian government are attracting the creative talent, with no UK equivalent tax breaks for developers,⁸⁵ which, according to the companies themselves, is seriously damaging the UK industry. In response, industry representatives have launched the 'Games Up?' campaign in an attempt to lobby government to introduce these tax breaks to maintain the world competitiveness of the UK industry. Another characteristic of this sub-sector is that the top 50 are relatively young, i.e. they have been recently established. **The average age is 18 (established in 1990)**. One of the other key characteristics of this sub-sector, discussed in Chapter 2, are the large number of development studios that exist which have strong brand identities, yet owned by larger multinational publishing corporations. For example, the London Studio, responsible for the *Singstar* line of games, is owned by Sony Computer Entertainment, which incidentally is the top London company by turnover in the CIO database. In 2005, Rockstar, one of the most well-known developers (primarily because of its controversial titles, *Manhunt 2* and the *Grand Theft Auto* series) opened up a London studio, based in the same offices as its European publishing headquarters, which is in turn

⁸⁰ http://en.wikipedia.org/wiki/Criterion_Software, accessed 24th June, 2008.

⁸¹ Sheridans (2008) Develop100: The World's most successful game studios: 2008 Edition. http://issuu.com/develop/docs/develop_100_2008, accessed, June 23rd, 2008.

⁸² SCi Entertainment (2007) History. Available at http://corporate.sci.co.uk/who_we_are/history.aspx.

⁸³ SCi Entertainment (2007) Summary Details. http://corporate.sci.co.uk/Investor_Relations/SummaryDetails.aspx

⁸⁴ Stiff P. (2008) SCi Entertainment set to make £100 million loss. Available at http://business.timesonline.co.uk/tol/business/industry_sectors/technology/article4377195.ece, accessed, 24th July, 2008.

⁸⁵ Sabbagh D and Mostrous A. (2008) UK game developers call for industry tax breaks. Available at http://business.timesonline.co.uk/tol/business/industry_sectors/technology/article4183333.ece, accessed, 24th July, 2008.

owned by Take Two Interactive another one of the top 50 in London. These relationships are commonplace in this subsector that makes analysis problematic.

Regulation

The Department for Culture, Media and Sport (DCMS) and the Department for Business, Enterprise & Regulatory Reform (BERR) share responsibility for the computer and video games industry. DCMS leads the activities on classification issues for media and is involved with BERR's initiatives where it can add value from the creative, cultural and social perspective.⁸⁶ The Communications and Content Industries Unit in BERR manages the Government's relationships with major computer and video games companies and their representative bodies with the aim of ensuring the competitiveness of the UK games sector in the global economy.⁸⁷

Given how relatively young this industry is, it is not surprising that the regulatory framework has yet to be fully developed. The recent publication of the report *Safer Children in a Digital World* by Tanya Byron (supported by DCMS and DSCF) has led to a cross-Government Action Plan, published in June 2008, that aims to establish a better regulatory framework by (a) building on best practice, (b) promoting transparency and (3) ensuring that families can use the internet and video games safely. Given the report implications for the industry, retailers and regulators will be involved in the process of taking forward 'codes of practice or agreed minimum standards that make the playing of video games safer for children'.⁸⁸ Early reactions to the Action Plan from dominant industry players has been rather negative. For instance, the Microsoft's senior regional director for EDD in the UK, Neil Thomson, considers that the implementation of the action plan may increase the price of the games in the UK.⁸⁹ Also Keith Ramsdale, VP and general manager of Electronic Arts in the UK, has stated that the plan will cause delays to UK release dates.⁹⁰

⁸⁶ DCMS (n.d.) *Computer and video games*. Available at <http://www.culture.gov.uk>

⁸⁷ BERR (n.d.) *Computer games sector*. Available at <http://www.berr.gov.uk>

⁸⁸ DFES (2008) *The Byron review action plan*. Available at <http://www.dfes.gov.uk>

⁸⁹ Phill Elliot (2008) "Ratings could make UK games more expensive, says Microsoft". Available at <http://www.gamesindustry.biz>

⁹⁰ Phill Elliot (2008) "EA: Ratings plan will cause delays to UK release dates". Available at <http://www.gamesindustry.biz>

5

Financial and Economic Data

The interactive leisure software market is characterised “*by periods of exceptional growth coupled with phases of consolidation, all brought about by product lifecycles and intermittent hardware launches*”.⁹¹ The world market is estimated to have more than tripled in value in the last decade. **Global revenues increased 7% per annum** in the first half of the present decade (up to nearly £15bn), and **forecast to grow 11%** over the following five years (up to over £25bn).⁹² In spite of the economic downturn in global markets and the possibility that many creative sectors will suffer as consumers cut back on luxury goods and entertainment products and services, the games industry is forecasted to continue its astonishing growth rates buoyed by the new found wealth and number of consumers in emerging markets such as China⁹³.

Information on London itself is difficult to obtain, with the majority of the literature focused nationally. The UK has the largest consumer market of interactive leisure software and hardware in Europe (accounting for 30% of the revenues⁹⁴), it is ranked third in the games global market (although forecasts to be superseded by South Korea by 2010⁹⁵) and it is considered the fourth largest producer of interactive leisure software (behind the US, Japan and Canada).⁹⁶ Furthermore, the British games industry records a positive balance of trade, contrary to the film and TV industries⁹⁷, and it is still expected to grow by an estimated 13% between 2006-10.⁹⁸ Britain is also the leading European country in games development companies and publishers.⁹⁹ In 2006 21,000 people were employed in games development, publishing and retail.¹⁰⁰ Although there is currently half the number of development studios than there used to be in 2002 (150¹⁰¹ compared with 270), the number of employees has not

⁹¹ Mintel (2006) *Video and computer games - UK - September 2006*. Available at <http://oxygen.mintel.com>

⁹² ELSPA (2005) *Computer and video games: important facts at your fingertips*. Available at <http://www.elspa.com>

⁹³ <http://www.gamesindustry.biz/articles/more-than-59-million-online-gamers-in-china-by-2008>

⁹⁴ Frontier Economics (2007) *A framework for understanding international demand for the creative industries*. A report prepared for DCMS

⁹⁵ Frontier Economics (2007) *A framework for understanding international demand for the creative industries*. A report prepared for DCMS

⁹⁶ BERR (n.d.) *Computer Games Sector*. Available at <http://www.berr.gov.uk>

⁹⁷ ELSPA (2005) *Computer and video games: important facts at your fingertips*. Available at <http://www.elspa.com>

⁹⁸ Frontier Economics (2007) *A framework for understanding international demand for the creative industries*. A report prepared for DCMS

⁹⁹ UKTI (2007) *Creative industries UK*. Available at <http://www.ukinvest.gov.uk>

¹⁰⁰ BERR (n.d.) *Computer games sector*. Available at <http://www.berr.gov.uk>

¹⁰¹ DCMS (n.d.) *Computer and video games*. Available at <http://www.culture.gov.uk>

significantly decreased.¹⁰² In fact, a shortage of professionals has been reported in the UK with an interest in enlarging the existing development studios. The Sector Skills Council for the Audio Visual sector (eskills) Industries has instituted a series of proposals to meet this shortage.¹⁰³ A world-class technical and creative workforce and the concentration of studios in Britain are the main strategic reasons why multinational game companies are attracted to locate their European headquarters in UK. As a result small to medium size enterprises 'compete against a few large vertically integrated firms, resulting in asymmetric competition'.¹⁰⁴ A breakdown of the expenditure in leisure activities revealed that in 2005 British consumers spent on interactive leisure hardware and software more than double the expenditure on cinema or nightclubs, and nearly five times more the expenditure in theatre.¹⁰⁵ The retail sales of interactive leisure software in 2006 **generated £1.6 billion in UK** (a 1% increase on 2005).¹⁰⁶ The top retail store of interactive leisure software was GAME, which started trading in UK in 1991 (GAME is however, not a London-based company, its headquarters are in Basingstoke). At present it is a multinational with more than one thousand stores, operating in nine countries and supported by eCommerce websites.¹⁰⁷ On the other hand, Amazon (which has operated in UK since 1998¹⁰⁸) and Play.com (founded in Britain in 1998 and re-branded in 2000¹⁰⁹) are the top online stores,¹¹⁰ but again, neither are based in London.

Legal Forms	48 Private Limited (Ltd) 2 Public Limited (Plc)
Average total turnover (£m)	19.1 million (Min: 0.05m, Max: 334.31m, Std: 58.06)
Average Profit margin	-45.57%
Average number of employees	83.5 (Min: 2, Max: 900, Std: 172.79)
Average number of subsidiaries	1.84 (Min:0, Max: 37, Std: 5.593)
Immediate Parent Country	United Kingdom: 41 USA: 4 Republic of Ireland, Sweden, Israel, Australia: 1
Average number of directors	3.1 (Min: 1, Max: 7, Std: 1.693)

Table 5.1: Economic data on the top 50 interactive and leisure software companies

¹⁰² UKTI (2007) *Creative industries UK*. Available at <http://www.ukinvest.gov.uk>

¹⁰³ Emily Aitken (2007) *The UK games industry: inward investment proposition*. UKTI, London.

¹⁰⁴ UNCTAD (2008) *Creative economy report 2008: The challenge of assessing the creative economy towards informed policy-making*. Available at <http://www.unctad.org>

¹⁰⁵ Mintel (2006) *Video and computer games - UK - September 2006*. Available at <http://oxygen.mintel.com>

¹⁰⁶ DCMS (n.d.) *Computer and video games*. Available at <http://www.culture.gov.uk>

¹⁰⁷ Game Group (n.d.) *The Game Group Plc*. Available at <http://www.gamegroup.plc.uk>

¹⁰⁸ Amazon.co.uk (n.d.) *Company information*. Available at <http://www.amazon.co.uk>

¹⁰⁹ Microsoft Case Studies (2008) *Play.com*. Available at <http://www.microsoft.com/casestudies>

¹¹⁰ Mintel (2006) *Video and computer games - UK - September 2006*. Available at <http://oxygen.mintel.com>

As can be seen from **Table 5.1**, the average total turnover for the subsector is £19.1 million, however there is a significant range. The profit margin is low; however this seems to be due to two particular companies having a significantly large negative values (-2,360% and -246%) that distorts the results. Without these two companies, **the average is still only 7.9%**. Again, the average number of employees shows a large range (of 898) with an average of 84 people. We can also see that the companies are predominantly UK based, with 41 out of the 50 companies having immediate UK parents.

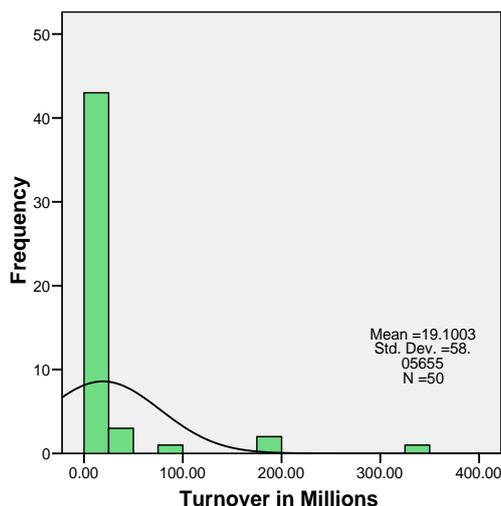


Figure 5.1a: Turnover of the top 50 interactive leisure software companies

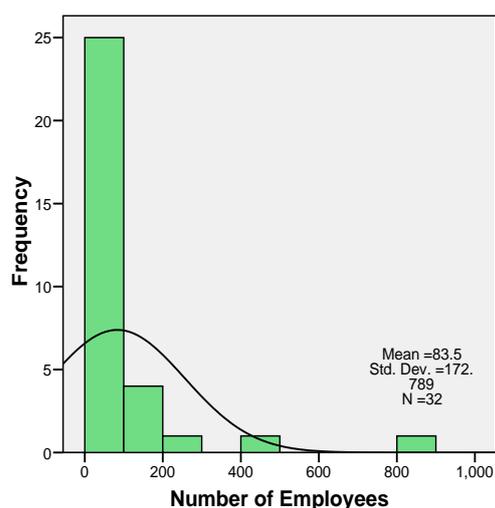


Figure 5.1b: Number of employees of the top 50 interactive leisure software companies

The graphs in **Figure 5.1** illustrate how the top 50 companies in the interactive leisure software sub-sector are populated by small and medium firms (as per the EU definition). The existence of one dominant large company suggests a classic monopoly industry in London, although further research into the relationship between this company and others would be needed to confirm such an industrial structure. This dominant company could also be attracting smaller providers and work as a magnet within a London cluster. Again more detailed and case-based research would be needed to establish the nature such relationships. The company in question is Sony Computer Entertainment, which is part of a larger conglomerate (the Sony Corporation). Further investigation suggests that its London location is 'The London Studio', with other UK-based studios in Liverpool and Cambridge.¹¹¹ Hence the largest company (in terms of turnover) is a studio owned by Sony Computer Entertainment, which has its headquarters in Tokyo, Japan.

The other 49 companies in the sub-sector are also development studios of various sizes (as well as other IT service companies such as online gambling companies) and so 'The London

¹¹¹ http://www.development.scee.net/profile_london.html, accessed 15th July, 2008.

Studio' although owned by a large conglomerate (which is responsible for titles such as *The Getaway* and the *Singstar* series) is engaged in similar activities to the rest of the top 50. Therefore, whilst a large international computer games company owns one of the studios, there is no 'official' presence such as a regional headquarters. Also, many of the other large game publishing companies (Nintendo, EA, Ubisoft) do not have a presence in the capital. All this suggests that London is not an important location for the global industry despite the consumer market.

So, if London is not that crucial, then how does this change the game producing landscape nationally? Some of the large publishers own development studios outside London, which the next chapter focuses on including London's geography of interactive leisure software.

6

Geographical Analysis

Given the relative youth of the interactive leisure software industry (the average age of the top 50 is 18 years), the effects on agglomeration and clustering are not as prominent compared with other creative industry subsectors (such as the film and video subsector for example).¹¹² Companies with a long history established themselves early in the centre of London (such as the Hollywood majors) but as rental and land value prices have increased, newly established interactive leisure software companies look beyond London to set up. It is not simply cost reasons alone – accessing knowledge sources by linking with science parks (in Cambridge and Guildford for example) is also an important location advantage, for example Frontier Games located in Cambridge Science Park.¹¹³ Therefore, out of all the 13 subsectors of the creative industries, this subsector has the least number of companies in London – with the CIO database including only 571 companies in total (as compared to 10,175 in film and video for example). As a result, the industry is fairly well dispersed, with slight clustering tendencies in the West End area and the City of London (see **Map 6.1**). Very few studies on the geography of the interactive leisure software industry exist, instead preferring investigations into the organisational structure of the computer games industry¹¹⁴ and its relationship with design and/or software usually drawn from the USA. Within London and the UK, the industry is developing with continued sales growth of the games. The creative industries as a whole have a tendency to agglomerate in London¹¹⁵ yet, for the interactive leisure software subsector, the primacy of London is not as pronounced – with many of the largest and most productive companies in the UK located in Dundee, Cambridge and Brighton.¹¹⁶ Hence, to restrict the geographical analysis to London does not adequately reflect the ‘top end’ of the interactive leisure software sub-sector as it would for the other sub-sectors of the creative industries, a fact noted by Skillset who suggest that “*despite the fact that just over 50% of the workforce in the games sector is based in London and the South East, the computer games sector is unlike most other sectors in the creative media industries, as significant areas of activity are spread across the UK, often manifesting as ‘hubs’ or ‘clusters’*”.¹¹⁷

¹¹² CIO (2008) *A Report on the Top Film and Video Businesses in London*, CIO, London.

¹¹³ <http://www.cambridgesciencepark.co.uk>, accessed 19th June, 2008.

<http://www.frontier.co.uk/>, accessed, 19th June, 2008.

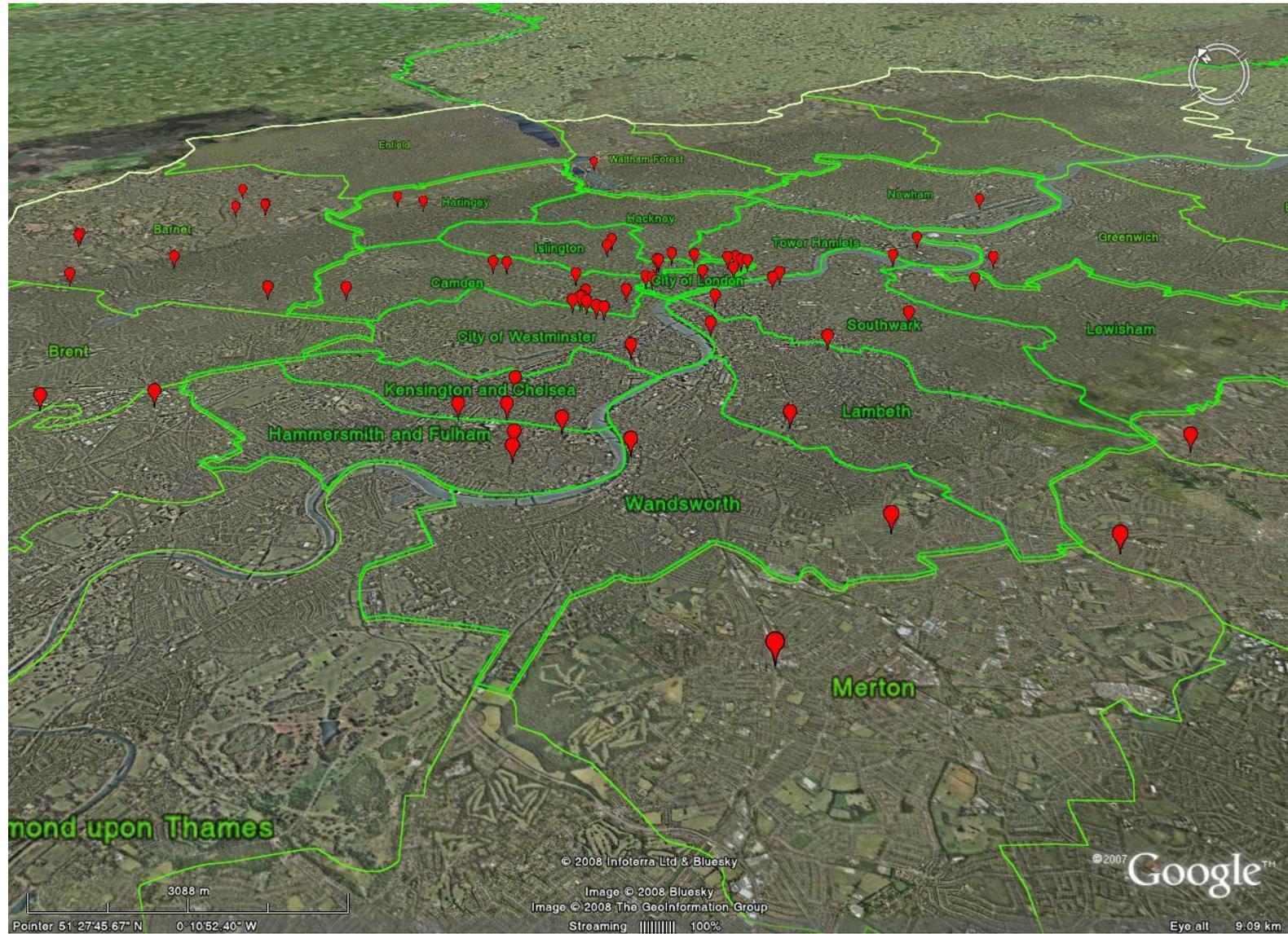
¹¹⁴ Williams D. (2002) Structure and Competition in the U.S. Home Video Game Industry. *The International Journal on Media Management* 4(1): 41 – 54.

¹¹⁵ Freeman A. (2007) *London’s Creative Sector: 2007 update*. GLA, London.

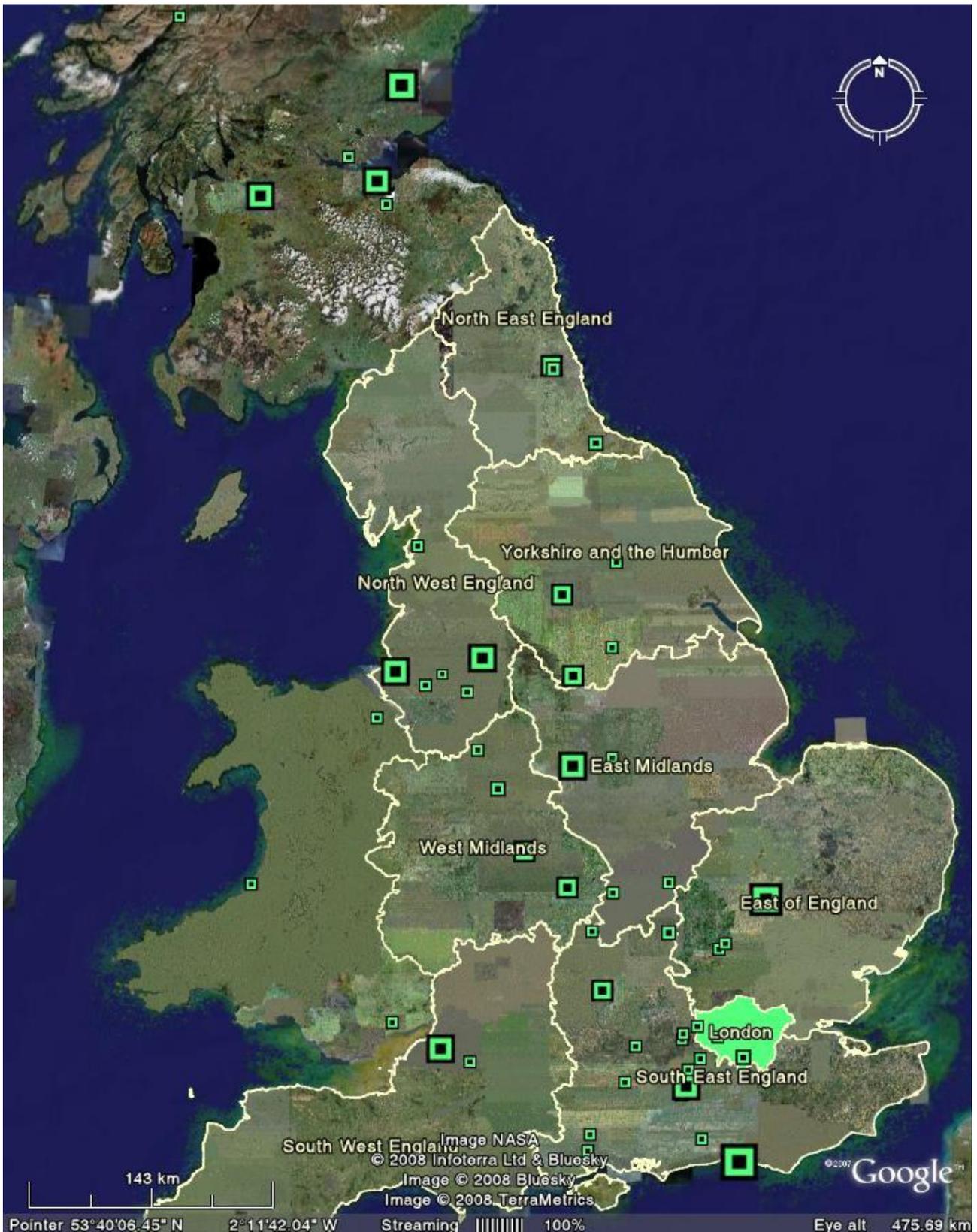
¹¹⁶ UKTI (2006) *Games in the UK*. http://www.skillset.org/uploads/pdf/asset_8880.pdf?1. Accessed, 20th June, 2008.

¹¹⁷ Skillset (n.d). *Where is the Computer Games sector based?*

http://www.skillset.org/games/overview/article_2196_1.asp, accessed 20th June, 2008.



Map 6.1: Computer game companies by London Borough



Map 6.2: Location of 'major' UK Computer Games companies¹¹⁸

¹¹⁸ Source: Adapted from DTI (2006) *Games in the UK*. http://www.skillset.org/uploads/pdf/asset_8880.pdf?1. Accessed, 20th June, 2008.

So while London still houses the most computer game companies (see **Map 6.2** and **Table 6.1** – sourced from the Department for Trade and Industry’s statistics), there is significant activity in other towns and cities, including ‘sub-regional’ cities such as Cambridge, Brighton and Dundee. In **Map 6.2**, each square represents a city or town (apart from London which is block coloured), and is sized depending on the number of companies that are located there – data which is tabulated in **Table 6.1**.

No. of Companies	Towns/Cities
23	London
6	Dundee
5	Cambridge, Brighton.
4	Bristol, Manchester, Edinburgh, Guildford.
3	Birmingham, Leamington Spa, Leeds, Sheffield, Liverpool, Glasgow, Oxford, Newcastle
2	Twycross, Stafford, Middlesbrough, Gateshead, Croydon , Milton Keynes.
1	Daventry, Nottingham, Wellingborough, Keele, Ceredigion, Mold, Bath, Doncaster, Ossett, York, Knutsford, Lancaster, Runcorn, Bishop's Stanford, Hitchin, Letchworth, Dunfermline, Fort William, Midlothian, Brentford, Uxbridge , Banbury, Basingstoke, Burford, Eastleigh, Godalming, Hook, Newport, Reading, Slough, Southampton, Warrington, West Sussex, Weybridge, Windsor, Woking.

Table 6.1: List of towns/cities and number of computer game companies located within the UK.¹¹⁹

The towns in bold represent those within the outer London boundaries, if included **increases London’s tally to 27**. It is important to note however that the information given in the UKTI report does not include the headquarter locations of these companies, the criteria for inclusion is not given, and in some cases, multiple offices exist. Electronic Arts (EA) for example has its 3 UK offices listed in Warrington, Chertsey and Guildford, but since 2006, the Warrington and Chertsey studios closed in late 2006.¹²⁰ Also, the headquarters of EA is in Redwood City, just south of San Francisco, California and the Guildford studio exclusively houses Criterion Games and BrightLight, two companies wholly owned by EA. In addition Ubisoft, one of the

¹¹⁹ Source: Adapted from DTI (2006) *Games in the UK*. http://www.skillset.org/uploads/pdf/asset_8880.pdf?1. Accessed, 20th June, 2008.

¹²⁰ Martin M. (2006) *EA Warrington Studio closure a "creative decision"*. <http://www.gamesindustry.biz/articles/ea-warrington-studio-closure-a-creative-decision>, accessed 23rd June, 2008.

French M. (2007) *EA Chertsey facility to close*. <http://www.mcvuk.com/news/28752/EA-Chertsey-facility-to-close>, accessed 23rd June, 2008.

EA (n.d) *Corporate Information*. http://www.info.ea.com/company/company_background.php, accessed 23rd June.

largest developers in the world¹²¹ is headquartered in Paris with their business offices in Chertsey and a development studio (Reflections) in Newcastle.¹²² These modifications have been made to the data in **Map 6.2** and **Table 6.1**.

These are just a few examples of the dynamic nature of the interactive leisure software sub-sector, with successful independent developers being bought up by larger multinational game companies. London finds that it does not have the monopoly in this subsector as it does in the other 12. Indeed, of the top 100 game developers (based on revenue), 25 are based in the UK, of which only 1 (Sports Interactive) is in London.¹²³ This poses questions regarding the attractiveness of London to the interactive leisure software sub-sector and the environment in which these companies choose to locate.

¹²¹ Sheridans (2008) *Develop100: The World's most successful game studios: 2008 Edition*. http://issuu.com/develop/docs/develop_100_2008, accessed, June 23rd, 2008.

¹²² Ubisoft (n.d) *World Presence*. http://ubisoftgroup.com/index.php?p=62&cart_id=41, accessed 23rd June, 2008.

¹²³ Sheridans (2008) *Develop100: The World's most successful game studios: 2008 Edition*. http://issuu.com/develop/docs/develop_100_2008, accessed, June 23rd, 2008.

7

Conclusions and Observations

This is a young and rapidly changing technologically driven subsector of the creative industries with significant interactions with the design and software subsectors. As a result, regulatory frameworks are finding it difficult to keep pace with the rate of change in this sector particularly as the consumer base broadens to include more families and children using a wider spectrum of delivery platforms such as home computers, and mobile phones.

What makes the subsector of particular interest is the combination of delivery platforms which originated in arcades and consoles with games development, software incorporating powerful characters such as *Pacman* which in turn have created new worlds and social interactions including alternative forms of learning.

It is noticeable that the UK is a particularly important world consumer market with globalised retail companies and a recognized centre for the development of games software by the brand leading Japanese and American publishers. However like all young industries rationalisation occurs and in the UK this has been manifested in a progressive reduction in the number of games and software development studios (although employment levels have remained roughly the same) as these are acquired by the larger publishers and merged with others although often the studio brand-name is kept firmly in the public domain. There seems to be a tendency for a relatively few large companies which are vertically integrated controlling costs and the market by taking direct control of development, publishing, manufacturing, distribution, and sometimes retail. In addition, the lines are increasingly blurred between companies engaged in designing and manufacturing of hardware with the interactive leisure software games publishing companies. It seems to be a volatile and risky business sector with profits to be made, in an expanding world market requiring substantial investment.

Given the preponderance of development studios in the United Kingdom, and London, there is recognition that the creative and technical skill levels of the workforce are particularly important and valuable to the brand leaders. The relationship with universities, and technology/science parks is important in this respect and the London area represents 50% on this workforce. However, London is not the centre for the brand leading publishing companies, as is the case with the majority of other creative industry subsectors. It is therefore an important centre for the development of interactive leisure software, but not the focal point for headquartering operations. This could explain the relatively small number of

large businesses, with a preponderance of small to medium sized firms which incidentally have little preference for clustering.

What is equally interesting in the context of the United Kingdom is the general lack of clustering and the chosen location for this activity, ranging from towns and cities such as Derby and Brighton to Leamington Spa. These are in effect 'footloose' companies that can locate wherever they wish. Quality of life, access to good communication, a skilled workforce as well as new technical knowledge are probably more important than other factors.

As with all the creative industries sub-sectors, there is increasing world competition with other countries subsidising the activity as a form of market intervention. In the case of the UK this subsector does not receive dedicated public sector funding intervention as for example the film industry has since the 1930s. And there is an argument for such possible support in order to help the development of creative product of world-class quality and competitive in the global marketplace.

For London, the interactive leisure software subsector compared with the other creative industries subsectors is does not play a particularly dominant role in the Cities economy. Given the nature of the industry in London, that is small to medium-size studios with comparatively few large businesses and a very limited number on headquartered leading publishers, consideration may be given to a London inward investment programme linked to companies with a high level of interest in platform delivery.

Report Observations

London's interactive leisure software industry is by no means as prominent in London as other creative industry sub-sectors. Key reasons for this have been discussed in this report, however some observations can be made about the sub-sector more generally and what can be done to give London the impetus in order to encourage growth in the interactive leisure software industry. The city and country should create opportunities to profit socially and economically from any knowledge spill-overs, technological know-how and innovations developed across the country in this thriving and extremely valuable creative industry. Because the interactive leisure software sector is truly interdisciplinary and multi-skilled, employing creatives from art, design, film and music alongside a range of technical staff, a global world city such as London could have location advantages in terms of providing a diverse talent pool.

Classification and Economic Contribution

The relative youth of the industry means that the official government statistics and definitional frameworks (i.e. SIC coding) are insufficient. Even the most recent round of updates (2007 – which this report uses) are sadly lacking when it comes to the precise identification of business activity.

Observation 1: To better quantify and support the industry, there needs to be a greater understanding of the industry's business activities and a more detailed classification system which will improve visibility in government. This will in turn enable analysts to better assess the sectors economic contribution and employment figures and policy makers to respond to this information.

Footloose

Game development is footloose for two reasons. First, the nature of the work means that there is very little need for fixed capital and location. Agglomeration economics tend not to be applicable to this sub-sector of the creative industries. Second, the social 'buzz' and milieu that seems to be synonymous with other creative industry sub-sectors is not as pronounced, suggesting that the city (the archetypal place where this social networking takes place) is not as an important location as it is in other sectors of the economy.

Observation 2: London's comparative advantage of a critical mass of creative personnel and companies as well as an innovative milieu is not an attraction to interactive leisure software business. London will need to provide better amenities and better infrastructures and more affordable accommodation if it is to attract these businesses.

UK development

The UK is a productive place for game development. Some of the world's most successful games (or the software used to make them) have been produced by UK-based development companies. Global companies such as EA and Nintendo often realise the potential of this and buy-out these companies or incorporate them as a fully licensed provider, but nevertheless, the UK has a great deal of talent which is dispersed across the country from Brighton to Dundee.

Observation 3: The lack of geographical proximity between these companies can reduce a 'collectivising' effect which could empower the industry. Industrial bodies such as Tiga and ELSPA provide critical guidance and support that stitch together these seemingly disparate businesses but more could be done at the level of central government.

Tax or not to Tax?

The voices from the industry and businesses themselves are calling for the government to act on a tax break scheme for UK-based developers. With the Canadian federal government operating just such a scheme, many of the UK's most talented individuals are leaving for Canada, and it is suggested that the UK industry is suffering as a result. An exemplary model is London's film industry which has had a government support structure (through tax break scheme and national bodies), and has flourished as a result.¹²⁴ If it can work for the film industry, then there is little doubt that a similar structure can work for the computer games industry.

Observation 4: The UK government needs to consider a tax relief scheme which will encourage the best of the UK's development talent to stay, and in turn reverse the downward trajectory of the industry today.

As has been shown in other reports by the CIO on London's creative industry sub-sectors, there is a plethora of creative talent in the city. Given the human and creative capital already generated, it seems that London could become home to a thriving computer games industry if given the right support by government and the relevant resources are made available. As has been mentioned, voices from within the industry suggest that such support is needed (see the discussion in Chapter 4) and it seems that, given its creative critical mass, the development of London as a focal point would need to go hand in hand with any future initiatives by government to support this fledgling, but increasingly important and truly global industry.

¹²⁴ See the CIO's report of London's film industry for further details (available at <http://tinyurl.com/6deha2>)

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