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MORE THAN SHOOTING ALIENS

MIDAS Initiative Report into the
Games Industry in Ireland

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1.0 Introduction

The global games market is an area of significant potential. With a truly global market spanning the US, Europe and Japan, forecasts show total annual games software sales reaching £86 billion by 2007. Most of this growth will be driven by console games, delivering annual growth of 15%, whilst personal computer (PC) games will grow more slowly in value over time. Returns on investment are very high for successful games developers, despite the high risk involved in producing games due to high failure rates.

The scale and cost of games development is already huge and rising. A typical development project now lasts around 18 to 24 months and requires a team of around 20 with a budget of £1 to £2 million. This compares to a budget of a few hundred thousand pounds for a team of a dozen for 6 to 12 months in 1992. This increased cost of development has been largely driven by higher production values and is expected to increase at least five-fold with the release of the latest generation of consoles including Sony's PlayStation 3, Microsoft's X-Box 360 and Nintendo's Revolution.

In 2002, Forfás, the public policy advisory body, published a report 'A Strategy for the Digital Content Industry in Ireland' identifying games as a 'high potential growth sector,' which would be targeted by both the indigenous and overseas development agencies. The report noted that "Ireland's existing strengths lie in the development, design and conversion/packaging of games together with research strengths in both games design and enablers."

There is no evidence, however, that there is any significant market participation by Irish companies and little or no activity at all in Northern Ireland. In September 2003, Ireland's Minister for Communications, Dermot Ahern, said that as many as 3,500 jobs could be created in the video games industry, although this was while on a visit to Sony's headquarters in Tokyo to promote the attractiveness of Ireland as an investment centre.

Quite where the games industry in Ireland is placed and how well it is equipped to compete in these markets is the subject for this report, which will examine in greater depth the technological, economic and geographical issues affecting this sector of the digital content industries.

2.0 Markets

2.1 The Global Market

In general, data in the Electronic Games Industry (Source: EGI) is largely unavailable or only available at a very high level. While more data is available for the UK-based industry, the lack of comparable data on the industry in other countries (in particular Japan) has made the task of comparing the different countries' competitive positions difficult.

(Source: DTI, 2002)

In particular there is a notable lack of:

- publications and reports;
- detailed data;
- industry metrics; and
- surveys of consumer behaviour.

However, based on what we do know, during the period 1997-2003 the value of the interactive leisure software markets worldwide has grown by over 100% to \$18.2 billion, far outstripping cinema (30%) video rentals (14%) and music, which has contracted by 4.5%.

(Source: ELSPA/Screen Digest)

The UK is the largest market in Europe and the third largest in the world with a total value of £1.2 billion, employing 20,000 people and contributing to exports worth over £500 million. (Source: ELSPA/Screen Digest) The UK market is concentrated on development talent, at the expense of a solid publishing base, leaving the sector vulnerable in the face of the rapid globalisation of the industry. (Source: TIGA) UK-developed games have a 35% share of the total number of sales in the UK domestic market, falling to 10% of the US market and virtually none of the Japanese market. This success is, however, fragile, with a relatively small number of titles accounting for overall market success.

(Source: Spectrum)

Elsewhere in Europe, German and French developers each account for approximately 5% of the European market with the remaining market share dominated by US companies (45%) and Japan (10%). Taken as a whole, the European market is considerably bigger than that of Japan and roughly equal to the

US. The European market, however, suffers from a lack of homogeneity, requiring localisation to serve the diverse cultures, and is more complex to serve than either Japan or the US.

Games are on the verge of becoming truly mass market due to falling sales prices, and are attracting new types of customers leading to greater levels of product sophistication and complexity. This results in higher development costs. The average development budget for a successful console game is now approximately £2 million requiring a team of 10 to 20 people working for a period of 24 months.

(Source: Spectrum)

The market is essentially hits driven, where the top 100 titles will account for over 55% of the total of all games sales. As this trend continues the power of ever increasing marketing budgets and title and brand recognition is strengthened, making it increasingly difficult for new developers or titles to gain a sustainable market share.

(Source: Spectrum)

The games industry is currently being driven by three technologies; consoles, online gaming and wireless gaming. As these newer areas are growing, they do so at the expense of the PC games market. New platforms such as interactive television (iTV), mobile and the Internet are emerging but are unlikely to compete directly with consoles, which are expected to remain the dominant platform for most consumers.

Business models are uncertain but it is expected that the global market values of these new platforms in 2005 are likely to reach the following:

- iTV: £1.75 billion
- mobile: £1.4 billion
- online: £0.89 billion

Mobile games have perhaps the greatest prospect of success in the future as network operators need to develop new applications for usage, beyond voice, and as the capability of the handset increases to include larger colour screens, memory, processing power and operating system harmonisation. (Spectrum)

2.0 Markets cont.

The core participants in the industry value chain can be described as follows:

Developers: Those participants responsible for the process of creating a game. Currently this aspect has evolved into a highly complex, intensive one to two year process requiring teams of specialised designers, games developers, programmers, artists, musicians, scriptwriters, project managers, project managers and, occasionally, actors.

Development companies tend to fall into one of five categories:

- super developers (platform agnostic/own IP)
- original IP developers (own IP/possibly self-published)
- work-for-hire (contract only/no own IP)
- service providers (no title development)
- specialist/niche developers

Publishers: Responsible for selecting games titles, either from independent or in-house developers, publishers are concerned with the funding, overseeing, testing, localising, marketing and manufacturing of games. Increasingly the publisher will have an involvement in the distribution of games to retailers.

According to SEEDA, in the current phase of the market it is the publishers who govern the value chain. As has already been stated, the industry is becoming increasingly hits driven resulting in only a tiny proportion of all available games titles, most of which have been funded and marketed by the larger publishers, selling in numbers likely to produce a profit.

Game Developer magazine's top 20 publishers for 2004 were:

1. Electronic Arts
2. Microsoft Game Studios
3. Sony Computer Entertainment
4. THQ
5. Ubisoft
6. Eidos

7. Activision
8. Take-Two
9. Atari
10. Nintendo
11. Vivendi
12. Codemasters
13. Acclaim
14. SEGA
15. Konami
16. Square Enix
17. Midway Games
18. Koei
19. Empire Interactive
20. Namco

Distributors: These are intermediaries between publishers and retailers. Recent consolidation in the publishing and retail areas have led to a shrinking of the distributors' role to more of a simple fulfilment and delivery function.

Retailers: Far and away the most common sales channel for games, retail is increasingly concentrated on larger chains. While online delivery and sales of games is almost certainly going to increase the industry believes that physical media sold through stores is likely to remain the dominant channel for the foreseeable future.

Key to the potential for commercial success of any medium or content form are the methods by which the customer accesses, purchases and enjoys it. The current trends in the digital content industries towards individual rather than family viewing, Internet download delivery, electronic payment - and indeed new models of short-term, subscription-based rental instead of ownership of content - are clearly going to affect the ways in which the games industry will operate in the future.

The continual development of technology results in new formats that in turn expand the entertainment and media markets. Indeed it is these next-generation technologies that are needed to spur economic growth. The games industry, perhaps

2.0 Markets cont.

more than any other, relies on the development of hardware capabilities to push the boundaries of the form and to provide opportunities for developers to improve their craft and shape the market.

Although the Internet and mobile telephony markets are developing in their own way, and each is contributing to the games industry overall, the most important sector for the development of gaming is the consoles. The consoles are opening a new chapter in the history of video games, offering high-definition cinematic images in real time and the computing power to deliver sophisticated and complex gameplay.

Crucial to their success will be the ability of game makers to tap into the power of these new digital workhorses to produce original and compelling gameplay. Developers are aiming to combine processing power and realistic graphics to better convey emotions and create what one game maker described as a truly immersive, living, breathing world.

The battle for supremacy in the games console arena is more than just about shooting aliens, these machines are also a key part of a campaign to dominate how people watch films or listen to music at home.

Also hugely important to the success of the games industry will be the methods by which the audience is able to access, pay for and enjoy the content. In response to, or perhaps a key driver of, the surge in domestic uptake of broadband Internet connectivity, new distribution channels for games content are beginning to appear via the Internet and mobile telephony. However, as with both the music and film industries, these digital production and distribution technologies are enabling increased piracy and bootlegging of games content. The protection of the vital intellectual property (IP) remains fundamental to the sustainability of the games industry and yet the very technologies that enable independent distribution threaten the existence of the traditional business models that provided economic sustainability.

Currently, one of the most vibrant markets is that of mobile telephony which is at last beginning to see real consumer interest in 3G broadband

capability. Whether as the medium for a piece of art, entertainment or commercial advertising, games has the potential to capitalise on this new distribution channel in much the same way as music has already begun to.

How the market will evolve and how revenues will be shared between producers and distributors is as yet unclear but it is likely that an opportunity will exist for greater numbers of producers to access a greater number of smaller micro payments from a more fragmented (but larger overall) global audience. However, it is certain that the current industry cartels will continue to try to maintain and protect their existing market dominance by acquiring and perhaps merging with the new technology providers as required.

Another massive technological development in the near future will be the roll-out of high definition (HD) television and with it the simultaneous release of the latest digital entertainment hardware (including consoles such as the PlayStation3, Xbox 360 etc.) that have been designed to fully utilise the technology. These content players will also be equipped for the forthcoming next-generation DVD technologies being developed by a consortium led by Toshiba and a rival in the Sony-designed 'Blu-Ray' format. It is likely however that playback solutions will be compatible with both formats as roll-out commences in 2006.

Already, games production software is equipped to allow development to meet the new standards. As the market uptake becomes ubiquitous, so too will the requirement for development skills, and budgets in the games industry will have to increase accordingly.

Where it is possible to measure particular reasons for company success, and in the UK market especially where industry data seems to be more readily available, a number of factors appear to be particularly pertinent. Development talent is increasingly highly valued throughout the industry, especially technical, art and gameplay skills. There are distinct skills shortages within the industry, notably in coding.

Training and education to maintain and reinforce the local skills base and talent pool are crucial to

2.0 Markets cont.

long term sustainability. However, unlike the film, television and music industries - which rely on cost-effective contract employment for development - the games industry continues to rely on more expensive, full-time employees.

Consequently, the industry is increasingly being dominated by more established and already high-profile developers. The trend is that fewer titles are doing most of the business and that profit from royalty sales for the industry in general are decreasing. (Source: SEEDA) Entry-level companies are facing difficult challenges, particularly growing barriers to entry and growth. Games companies tend to be grown out of collaborations between developers and are therefore unlikely to possess the necessary business and company management skills required to succeed ultimately. As a result of these difficulties, many of the more proficient and ambitious developers are increasingly moving from their home markets to employment in the US, lured by higher salaries.

(Source: SEEDA)

2.1.1 Financing Games Production

Access to finance is perhaps the greatest barrier to entry into and development of a sustainable games industry. Government and venture capital sources of finance for games are still relatively scarce compared to other industries that are perhaps seen as higher in the pecking order of economic importance and social value. Dependence on the console market for global profitability, and the development of new technologies for these consoles, creates increasing complexity and cost issues for developers. Indeed, the virtual doubling of development costs in recent years has been accompanied by a rise in company contract and even failures.

(Source: Games Investor Consulting)

The recent Playstation culture has led to an over-supply of development companies, each vying for a decreasing number of publishing opportunities as costs rise and publishers become more cautious, preferring to invest in near-certain franchise-based hit titles.

(Source: Games Investor Consulting)

Opportunities for developers to avoid direct competition from cheap labour markets, for example by moving into publishing or developing and maintaining valuable (IP), are becoming increasingly and prohibitively expensive. Without IP ownership, developers are constrained to a work-for-hire revenue model. However, the emergence of less expensive development talent in eastern Europe, India and the Far East will undoubtedly impact upon the abilities of western European and US developers to provide a successful quality and cost proposition. Indeed Electronic Arts, the world's largest games company, announced in October 2004 that it is to establish a new development studio in China, employing over 500 staff, to capitalise on that country's lower development costs.

(Source: BBC)

2.1.2 Distribution

Distribution is a major barrier to economically sustainable games production. Without distribution to the markets there can be no possibility of financial success and, increasingly, without prior confirmation of distribution there is little chance of obtaining the necessary production finance. Distribution is the exciting, dynamic, competitive business of launching and sustaining music, software, films etc. The digital content industries may be product-driven but the distributors' task is to connect the product with the public, to draw the widest possible audience to each individual title and to realise the full potential of the developers' work.

The publishing market is fast becoming a global business with only a handful of key players dominating access to markets, similar in vein to the film and music industries. With the increasing costs of development, especially for console games, a publishing deal is seen as crucial in being able to access the necessary funding for games development.

The games industry worldwide is clearly being affected by an overall reluctance on the part of distributors and publishers to commission new work, as well as by general economic factors including the recent significant decline in marketing and advertising revenues. Clearly there

2.0 Markets cont.

are too few distributors, publishers or aggregators to be able to satisfy all the actual or potential developers who need to competitively bring their works to market - a market that is already saturated with too much product and where only a tiny proportion can ever be sustainable. The local digital content production industries appear to have to either compete for this insufficient and diminishing resource or hope that a new form of commercial publishing and distribution support mechanism can be created to serve their particular interests in the market, in competition with the established giants of the industry.

Self-marketing and publishing for games content is not really an option either. The cost of advertising on UK or Irish television, which may run into many hundreds of thousands of pounds or more for a package of spots in all regions, is usually prohibitive for most products, given their potential returns. Few campaigns use only TV, but rather a range of integrated media solutions, as distributors strive to get their message to as much of the target audience as possible, as many times as possible. Meaningful competition on this scale is simply not viable.

2.2 The Market in Ireland

2.2.1 Market Overview

Ireland is, perhaps surprisingly, a nation of gamers! There are more Sony PlayStation consoles per capita (38% penetration) in Ireland than in any other country except for Japan. (Source: *Electric News*) But while the value of all games hardware and software sales in Ireland is staggering, the value of software that is actually produced by indigenous developers is negligible.

There is, however, a huge potential for Ireland to develop its own successful games development industry through the nurturing and cultivation of our local talent. According to Dr Jim Terkeurst (University of Abertay), Ireland has all the elements already in place to develop a top games sector and, if the talent is successfully cultivated, the industry could thrive.

Software in general - where over 90% of production, mostly for foreign companies, is for export (Source: *Delaney, Kerr & Gallagher*) - has been one of Ireland's economic success stories and perhaps the leading driver of the Celtic Tiger phenomenon of the 1990s. Games-related business is now said to be appearing among the software export figures, although exact figures and analysis in support of this are not available.

Games users are consumers rather than corporations and their employees, as is typical of the traditional software market. Sold as an entertainment product, games require a different and more costly marketing process but have benefited from having a relatively faster development and production process.

Of relevance to the potential success of the games companies in Ireland is the €130 million development of the Digital Hub in Dublin. Already the base for Media Lab Europe, this centre for digital media business has attracted companies such as Havoc, TKO Software, Mistaril and Eirplay.

In March 2003 the networking and information forum gamedevelopers.ie was launched, funded jointly by STeM, DCU, Nokia and 02.

In January 2004 the International Game Developers Association (IGDA) launched its Irish chapter at the Digital Hub in Dublin. The IGDA provides a range of services to the games development sector including:

- community building and representation;
- promotion of education and training;
- promotion and recognition of artistic and creative excellence; and
- provision of business services to the sector.

Education is crucial to the development of a successful games industry and courses have recently been established at Ballyfermot College of Further Education, Dublin City University and the North West Institute of Further and Higher Education in Derry. These courses are designed to nurture and develop existing production talent, expose the students to industry-standard tools (including Ireland's own Havoc physics engine) and to provide incubation assistance for the next generation of developers.

2.0 Markets cont.

Until recently most Irish games developers tended to have to seek career opportunities outside the country. Increasingly, however, the opportunities within Ireland are improving. (Source: Enterprise Ireland) There are around 20 companies operating in Ireland currently employing around 300 people. Approximately half of these are, however, employed by only two companies, Microsoft and Vivendi, both externally owned companies that have localisation services operations here.

(Source: Electric News)

Leading companies in the new games sector include Havoc, Demonware and Torc Interactive - all of whom provide a range of games component software products (middleware) to games developers worldwide. The roots of these companies lie in previous research projects at Trinity College, Dublin. However, Ireland also has a number of successful companies in the core business sector of games development including Eirplay Games, Kapooki Games, and Mistaril. Compared to the tools and middleware businesses, games development is considered to have higher risks but far greater potential rewards.

A feature of Ireland's games industry at present (according to David O'Meara, CEO, Havoc) is that companies seem to be reluctant to share and distribute tasks, services and technologies. He predicts that "as the industry matures and standardisation is adopted, companies will increasingly begin to co-operate, if only as a method of reducing costs."

The major issue for the local games industry is the same as in any other territory, the spiralling costs of production linked to the relentless advances of new technology - in particular associated with the dominant console market. This issue is particularly pertinent for Ireland, however, as these costs are generally met by the publishing company for whom the developer is creating the title for onward sale to the market. In a global market, dominated by only a very few publishers (already oversupplied by a glut of development companies), Ireland does not have its own indigenous publishing capability with which to specifically represent and support the local development community.

The consolidation of the global publishing sector has chiefly been led by US and French companies who have, importantly, received strong backing from their own financial markets. Assistance of this kind has up to now, been largely absent in Ireland but it is generally felt that the following need to be developed in order to help fund the fledgling businesses:

- tax credits for research and development
- business incubation services
- venture capital (including business angels)
- single project funds (completion bonding)
- lottery-style grants

Enterprise Ireland, in 2002, visited Australia to investigate the measures and effects of that country's support of its games industry. In particular, the purchase of \$25,000 software development kits for the use of local games companies was seen as an interesting possibility. (Source: gamesdevelopers.ie) At present, the only confirmed sources of financial assistance may come in the shape of a feasibility grant from Enterprise Ireland and a range of incubation-style supports from the various County Enterprise Boards. In Northern Ireland, Invest Northern Ireland has a range of support available to new companies wishing to locate in Northern Ireland.

There is currently no indigenous publishing facility in Ireland although some of the local development companies are said to be developing relationships with the global publishers in an attempt to access development funding and sales channels. Following a lengthy and painful learning process some of the Irish developers are slowly getting to know the publishers and their intermediaries but it is still the case that they must look overseas for the 'deal' that will allow them to work at all.

The 2002 Forfas report 'A Strategy for the Digital Content Industry in Ireland' confirmed that there was "a critical lack of funding to support the development of the industry" and, although there are no specific supports for games industries yet, both Enterprise Ireland and the Industrial Development Authority are said to have been actively looking at games as part of their digital

2.0 Markets cont.

media brief. (Source: Dr Aphra Kerr) It is unlikely, given the cost of console game development, that independent games can be created of the current market-acceptable standard, unless alternative funding mechanisms can be found.

Mobile gaming, however, with its currently low (but rising) development costs does offer an opportunity for independent production and, given that these games tend to be delivered online, there is an opportunity for local companies to approach mobile games aggregators and distributors for market access.

Ireland does have existing success in this sector with current aggregators including Eirplay, Upstart, Seletra and Trust 5 and greater awareness of these companies and their services could be brought to the local development community.

2.2.2 Capability Analysis

Skills

It is unclear from the limited international successes of the past whether or not the games production workforce in Ireland is skilled in the development of content to an acceptable, market-ready standard.

There are already a number of specialised university courses and basic games skills are being taught widely throughout the whole of Ireland at a further and higher education level. Market entry is relatively inexpensive and the basic interests and early activities within the medium are being widely developed at an individual level.

However, with the exception of a couple of internationally successful software development companies, there is little evidence of actual content production activity resulting in sustainable economic success. The skills required for many areas of games production, e.g. animation production, programming and music production are readily available in Ireland at a professional level.

Additionally, our own market research has indicated that there is a relative lack of commercial and work-based experience and it is uncertain how this might be improved, except as an obvious consequence of greater, long-term business exposure. Specific business-related skills too, e.g.

project management, finance management and procurement, sales and marketing, are said to be in short supply throughout the creative industries as a whole. The recent Enterprise Strategy Group report, 'Ahead of the Curve', has recommended that the sector needs to recruit over 1,000 additional sales and marketing employees with which to stimulate the required competitive market advantages.

Production

Again, as with the current skills levels, there does not seem to be a particular problem with the availability of industry-class production capacity. Now almost entirely computer-based, the hardware and software required for the production of animated content is freely available and readily affordable.

In particular sectors of the games industry, for instance, console games, the production values are generally much higher than those required for web and mobile targeted projects and may require additional and more expensive equipment. Companies and institutions providing these facilities, e.g. Windmill Lane, Ardmore Studios and the Bright Room, are, however, starting to emerge in addition to the specialist companies located in and around the Digital Hub in Dublin.

Finance

As has been said earlier, finance - for both the initial production process including tooling, training and recruitment, and commercial exploitation, e.g. production, distribution, promotion and marketing, is in very short supply.

Companies in Ireland traditionally make do with relatively low levels of start-up capital, using their own personal money and informal investment from friends and family. Bank lending is seen as essential but difficult to obtain as the traditional institutions shy away from the high risks attached to the industry. The venture capital and business angels sectors, while much more established in the Republic of Ireland than in the North, are still relatively immature compared to other competing markets and are not, in general, being fully utilised.

(Source: InterTrade Ireland)

2.0 Markets cont.

Ireland has enjoyed significant investment in the past from Europe, providing an ongoing commitment to a competitive tax regime to assist the promotion of enterprise and to drive business growth. But imminent changes in EU member state limits will place new restrictions on state aid from enterprise from 2006 onwards making such intervention more difficult and much less certain.

Clearly a new integrated system of access to both the public purse and, more importantly, private investment markets will be needed with which to prime the development of a sustainable, competitive economic environment.

Distribution and Promotion

The distribution of digital content increasingly rests in the hands of a very select group of large global corporations. Whether in respect of the delivery of international content to the Irish market at the expense of indigenous product, or the promotion of Irish-originated content to the international markets, the amount of content available to the world's consumers far outweighs the current market capacity for consumption.

Common to most international, non-US suppliers, is the question of how to improve competitive potential. Should Ireland try to develop an alternative distribution and promotional infrastructure with which to try to win back an appropriate market share or should we just try harder to compete for the attentions of the current dominating distributors and publishers? Difficult as the

second option might be, the first option is more likely to prove prohibitively expensive, a touch naïve and, almost certainly, doomed to failure.

New tastes for digital delivery via broadband Internet, 3G telephony and so on might provide an interesting potential for market growth in this area. However, these technologies are still relatively immature and the accompanying business models uncertain.

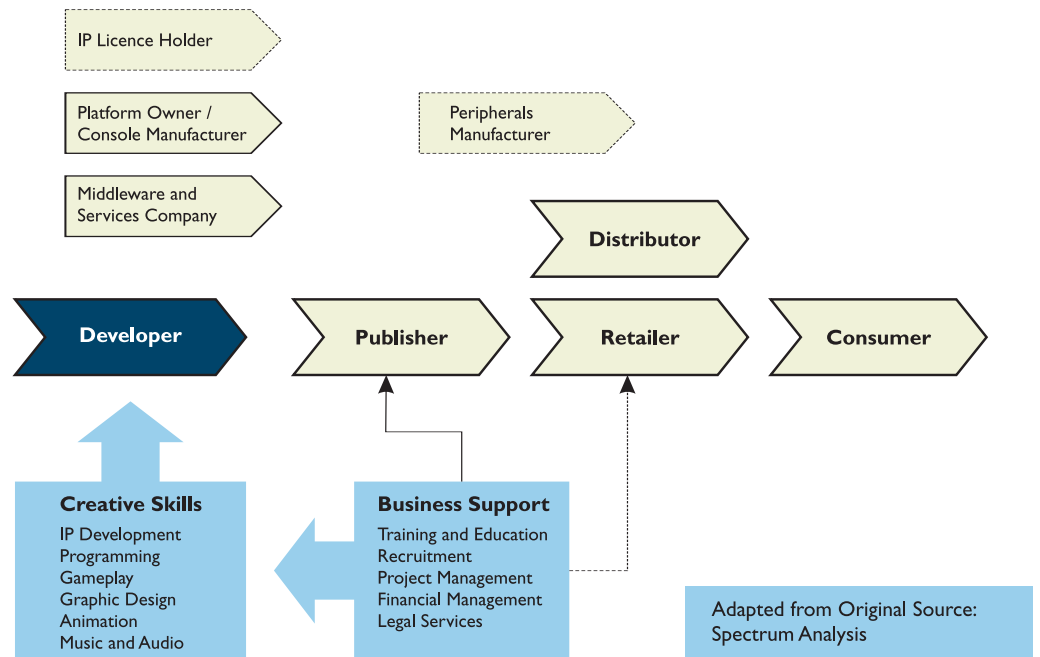
Intellectual Property Rights

The importance of IP development as a sustainable source of income and wealth cannot be overstated and almost all of the residual value of the Irish games industry is currently created from new activity in the development of middleware software tools.

In common with all sectors of the digital content industries in Ireland, there is currently not nearly enough development of original or owned IP within games. Ireland is historically considered to be a land of poets and storytellers but we do not appear to be channelling enough of this natural national talent into the creation of sustainably exploitable content development.

While it is very definitely more difficult to attract the levels of finance required to develop an entirely new story, gameplay idea or product this is the one area that, if tackled, could provide potential for long-term market growth and economic wealth for the industry.

3.0 Convergence: Horizontal and Vertical Integration



4.0 Market Analysis

The games industry is widely held to be one of the most exciting growth markets around the world. The cost of production methods and tools are decreasing annually due to technological innovation and market competition between manufacturers. Moreover games-based products can be easily and inexpensively transported and distributed to potential markets around the world.

However, the domestic and international markets for games content are already experiencing extreme competition from oversupply. Domestically, saturated markets, higher quality thresholds and the entrance of new suppliers are reducing the opportunities for our indigenous producers. Traditional markets are fragmenting into smaller, lower value niches that must react to the needs of changing trends, fashions, methods of distribution and business models.

Internationally, competition from larger, more powerful companies overseas benefiting from economies of scale as well as the new, emerging low-cost suppliers are reducing opportunities for new product development and work-for-hire contracts alike. Ireland's labour costs are now significantly higher than those of eastern Europe, Asia and the Pacific Rim countries and, in the absence of cheap labour, there do not seem to be many specific value benefits with which to win new production business. Without the economic growth from increased market share and profitability it will be increasingly difficult to retain our best talent when faced with competition from those overseas employers.

Games companies in Ireland do, however, demonstrate some excellent production skills. Education and training is of an excellent standard and access to production tools and facilities is readily available. The industry mostly consists of relatively small, compact, specialised businesses and individuals, reactive to changing market

conditions and hungry for success. Ireland still enjoys relatively low human resources costs compared to some countries, including the US.

However, our games production companies are often too small, young, inexperienced and financially naïve, with insufficient financial resources to be able to compete internationally. The distribution, publishing and promotional infrastructures for indigenous games content are undeveloped and ineffective and there is insufficient development of original IP from within the industry with which to demonstrate any unique and attractive creativity.

Ireland's location, on the edge of Europe, means it is often removed somewhat from the cultural activities of the continent and the rest of the world and there can be a difficulty developing and maintaining service-based relationships with international customers. There may be a culture of historic over-reliance on state sponsored financial aid and private and commercial mechanisms for financial investment in the industry are immature, largely misunderstood and inactive.

Games companies in Ireland do not, in general, have adequate business management, finance or sales and marketing skills, neither is there currently sufficient training and accreditation in business skills as specifically relevant to the games industry. There does not seem to be sufficient awareness of the value of strategic planning backed by market intelligence.

Other industry sectors and businesses in Ireland have been extremely successful in overcoming these barriers in the past, both domestically and internationally, and could provide a ready supply of experience and knowledge. There is ample availability of market intelligence information with which to inform development strategies and excellent administrative and strategic assistance countrywide that can be made available to the games industry.

5.0 Opportunities for Growth

5.1 Target Markets

Clearly one of the most obvious methods of increasing commercial opportunity is to identify the range of skills, services or products currently in demand and to become valuable to those markets. It is almost impossible to do this successfully, however, unless the games industry becomes sufficiently aware of the issues affecting the market. This is essential to informing a successful strategic plan.

Both internationally and domestically, supply exceeds demand - even in this high-growth sector - and sustainable advantages will need to be identified and implemented to provide any chance of profitable competition. The games industry in Ireland is simply too expensive to win traditional work-for-hire contracts and there is insufficient development of new IP-based projects with which to replace any service-based activity.

Games production is a labour intensive industry and good people are always in demand. Skills training and experience are valuable assets and any opportunity to improve either should be firmly grasped. We know that our human resources are generally competitive in terms of production skills and that our educational systems are extremely good but we know also that there is a lack of the accompanying business management disciplines needed to win and manage the business for our production specialists.

An urgent requirement therefore will have to be the recruitment and training of specialist business management, project management and sales professionals to undertake the necessary marketing research activity and the resultant strategic planning needed to identify future market opportunities and shape the production activities accordingly.

5.1.1 New Markets, New Opportunities

As the market develops mass appeal, developers should become aware of and begin to cater for the different needs of the newer, perhaps less experienced consumers. New technologies may introduce new customer types, e.g. female mobile

users, and conventional engineering wisdom may have to be overlooked in light of these new users' less demanding needs.

(Source: SEEDA)

While the games industry is already successful in the UK, particularly in the European market, the reasons for this are not particularly understood. It is important therefore that these lessons are learned and applied to the industry in Ireland allowing it to enhance its competitive position in Europe and develop into the US. Given that there is virtually no prospect of success for overseas developers to succeed in the almost closed Japanese market, this market may be best left to others.

5.1.2 Ireland-specific Titles

Following the success of the Australian Rules-based title in Australia, the developer IR Gurus have announced that they are to develop a version of the game, remade for the similar Gaelic game, to be sold exclusively in Ireland.

(Source: Gamers Europe)

Obviously this has generated a great deal of market interest and is almost certain to be a hit but the idea of developing niche, territory-specific titles is one that should be considered by all Irish developers as a way of tapping into a very hungry home market.

5.1.3 Middleware

It is estimated that up to one third of all games development time is used on project-specific programming and technology. (Source: Criterion) As games and hardware increases in complexity, many developers are now turning towards the use of third party software components to provide the basic functionality of the game in development. The use of this middleware reduces development time, costs and, therefore, risks and leaves the developers freer to focus on the creative elements of the process.

In Havoc and Torc, Ireland already possesses two of the industry's most successful middleware companies and it may be possible to develop a specific agreement with them to allow indigenous Irish developers to be able to access these tools

5.0 Opportunities for Growth cont.

as part of a special, low-cost arrangement. In doing so, Ireland's games industry may be able to counter, to some degree, the twin threats of prohibitive costs and competition from other, lower-wage countries.

5.2 New Product Development

It is entirely likely that a formal market research project will reveal that the current activities of most of the games industry in Ireland do not quite match the needs of the market and so the industry is unlikely to be able to take advantage of the opportunities that are available.

It is likely therefore that opportunities will arise from the development of new solutions to address new, or previously uncatered for, market needs. In this case the industry in Ireland will have to become more adept in a formal research and development culture, ideally in partnership with our established academic and industrial institutions. This culture already exists and is demonstrably successful but little collaboration with the indigenous creative industries has occurred to date.

The research and development process provides clear project methodologies and there are some readily available sources of financial assistance. It is surely one of the most important methods by which the games industry can begin to create new products and services that offer potential for sustainable advantage.

In existing markets however, the games industry in Ireland will have to devote more energy and attention to the development of original intellectual property. IP allows people to own their creativity and innovation in the same way that they can own physical property. The owner of IP can control and be rewarded for its use, encouraging further innovation and creativity in the long term.

As discussed previously, IP is the only realistic long-term asset that is available to a content producer and is an area that has been traditionally overlooked. It is therefore imperative that any games company wishing to develop into a stable, long-term business must be aware of the potential of their own, plus other's IP rights and assets. In fact, a games company is perhaps worth little or nothing long term without the development and control of its IP.

In the face of the threat from globalisation to the local work-for-hire markets there is a necessity to capture the dynamism of the complete value chain. The most obvious, and almost certainly most difficult, route to achieving this will be the creation, registration, reuse and sale of new IP. (Source: SEEDA) In the words of Nick Gibson (founder, Games Investor Consulting Ltd) "Well managed and high-quality developers will always attract funds for games development and original and innovative IP is still sought after."

Financing the development of new IP is, of course, currently difficult but not impossible. Support from a large, but currently dormant, investment and venture capital sector is readily available but will require an element of education from both sides as to each other's needs. Investors will need to feel secure in their participation and the involvement of formal research and development, marketing planning analysis, realistic business projections and proven business acumen are all essential to this. However, all of these seem to be, currently, complete strangers to the games industry!

New technologies too will obviously provide opportunities for new products and solutions. Developments in distribution and playback mechanisms, e.g. broadband Internet, 3G mobile telephony, high definition broadcasting and next-generation DVD, will all require new or repackaged content development. The downside is, of course, that everybody already knows this and any opportunities arising from initial reaction to new technologies are likely to be vigorously fought over and probably only valuable in the short term.

What will be more sustainable however will be solutions that deal with new social trends that develop in the wake of mass uptake of new technologies and it is here that the more valuable opportunities will become apparent. Examples of this in the recent past include the now ubiquitous use of SMS text by mobile phone, devised in 1992 and now - with over 200 billion messages exchanged each month - accountable for between 60 and 80% of all data communications worldwide.

(Source: The Netsize Guide 2005)

More recent technological developments include Internet-based commerce, e.g. eBay, digital

5.0 Opportunities for Growth cont.

personal video recorders such as Sky+, mobile multimedia content delivery, e.g. 3G and especially NTT DoCoMo in Japan and the latest handheld gaming consoles, especially Sony's PSP. All of these are changing or set to change not only the way customers access content but, more crucially, how they arrange their lives as a consequence of the new ways in which they can access content.

Many of these consequences occur naturally and are fully explored by the technology developers themselves but provide genuine opportunities for business development nonetheless.

5.3 Value

As gaming in the west becomes more sophisticated, the value chain for production is changing. Larger production companies in the UK, for instance, appear to be keener to specialise in the higher value aspects of the production process (IP creation, gameplay, design etc.) and more willing to outsource more of the other processes, such as games and coding. The simple fact, however, is that wage levels and associated labour costs in Ireland are now too high to allow the industry to successfully compete for work-for-hire business from international markets. Costs in eastern Europe, Asia, and the Pacific Rim are much lower, and increasingly the industry has witnessed mass off-shoring of the production processes of the US and Europe to these other markets.

Even if over time wage levels in these new producer countries start to creep upwards there seems to be no end of younger, hungrier economies prepared to grab a slice of the action by reducing costs still further. This current globalisation of world commerce seems unlikely to be voluntarily halted by the largest international corporations. They will continue to try to minimise the costs of production for as long as there are low-cost labour markets to exploit, in order to maximise their profitability, and for as long as their customers keep buying the product.

For as long as this model continues to dominate it will be impossible for Ireland to compete on a basis of price and the domestic industry should look therefore at other potential sources of

competitive advantage. The most likely method will be to identify areas of added value that, in addition to the raw animated product, become an attractive ancillary product feature with which to develop a sustainable competitive advantage.

Once again the best possible and most obvious way to achieve this might be to simply ask the customers what they want that they're not getting, and simply try to supply the solution at a price that's acceptable yet sustainably profitable. In other words add unique value propositions to the overall offering to provide customer satisfaction. It may be possible, however, to look at a number of our industry strengths and, by identifying those that are unique to Ireland, highlight areas that are more likely to succeed. This might include:

- Past business success in Ireland - it may sound too obvious but surely games can learn from other industry sectors (software development, pharmaceuticals etc.) how they have been able to remain competitive in the face of low-cost competition. Those lessons should be readily transferable.
- The small, compact, specialised nature of our indigenous games companies, able to be more reactive to changing market conditions, puts them in a position to target short-term solutions research and development work where normal economies of scale do not apply.
- Ireland's standard of living and work/life balance, as stated in the Economist Intelligence Unit 'International Quality of Life' index, 2005, is an enormous opportunity for the creative industries and for the country as a whole. The index compares Ireland's status as the best country in the world to live and work with that of our most important potential customer markets; the US (13th place), Japan (17th place) and the UK (29th place).

The most influential companies and structures are already established and their market domination is assured but there is an undoubted opportunity to attract at least some of the operational bases to Ireland by highlighting a quality of life that money simply can't buy elsewhere.

5.0 Opportunities for Growth cont.

Two of the criteria that are said to make the UK games industry successful, are that it is an English-speaking nation, and the country's proximity to the European market. Obviously, these are both applicable to Ireland - a fact that has already contributed to the current and ongoing success of the software development market in general. It is clear that these two factors can be exploited further to make Ireland an attractive option for the global publishers, especially if development costs are lower than those in the UK.

Finally, there are opportunities to attract overseas developers to relocate to Ireland as an attractive and cost-effective place to work. This was a central ingredient in the success of the business software industry and one which government will be keen to replicate. Certainly the return of the many Irish-born developers now working overseas would provide a massive injection of experienced talent to the local industry along with mature industry contacts and a crucial training resource.

Additionally there may be opportunities for local developers to specialise in niche areas, such as music and sound design, provided these can be provided to client developers and publishers at an attractive cost.

Another reason that the industry in Ireland has not been more successful is that our companies have not yet been able to create, develop and foster strong long-term relationships with the most influential customers. When seeking a value-added basis for sustainable competition, increasingly companies are accepting that relationships, trust, co-operation and loyalty are far more attractive and mutually valuable than simple price-based transactions.

We have earlier established that historically the games industry in Ireland has not had the same opportunity to develop these relationships and that our geographical position has perhaps not helped. There is, however, a natural and traditional warmth towards Ireland internationally and more effort should be made to understand the essential importance of sustainable customer relationships and to try to develop these.

5.4 Distribution and New Business Models

As with the other digital content sectors (games, film and music) there is a distinct lack of a successful publishing and distribution infrastructure for the games industry in Ireland. The issue is that, without publishing, distribution, promotion and so on, the content produced by the games industry cannot be offered to customers for possible purchase. Without any possibility of purchase there can be no hope of profitability and without profitability there can be no sustainability.

Because of the overseas ownership of the existing publishing sector, there will continue to be the prospect of only limited success for Ireland's local games companies, across the value chain. This is similar in effect to the film industry, where US-dominated distribution worldwide is said to limit the commercial potential of other countries' own national capabilities.

(Source: SEEDA)

While exports are desirable (and ultimately necessary to continued and sustainable growth) home markets are essential to local developers. There needs to be a new and specific initiative to develop an indigenous publishing capability, if only to bring locally-produced titles to the home market, where otherwise they would almost certainly be overlooked.

(Source: SEEDA)

5.4.1 Online Delivery, Mobile Technologies and Micro Payments

In recent years the Internet has provided opportunities for short games to reach potentially huge audiences. While the exact timing may not be known, it is generally accepted that online delivery of games will become a major competitor to the established publisher/distributor/retailer cartels. As this channel matures it will become more possible for independent developers to sell their titles directly to customers without having to wait for an elusive deal.

This may be particularly so for mobile games, where development costs are significantly lower

5.0 Opportunities for Growth cont.

anyway and so offer a more accessible market entry point. In Ireland, as elsewhere in the world, mobile and wireless gaming is increasingly seen as a potential opportunity. The global mobile games market is forecast to grow to a value of \$17 billion by 2006 (*Source: Digital Hub*) and despite relatively uncertain revenue models (including pay-for-play and advertising or sponsorship-based) offers relatively low development costs that should be attractive to new market entrants.

The cost of purchasing a mobile game ranges from an average of €5 in Ireland to £4.50 in the UK and access to the market is increasingly controlled by small number of games aggregators competing for sales with massively inflating marketing budgets. (*Source: NOP World*) The mobile market is, however, getting tougher as it matures with brand recognition becoming ever more important to the consumers' purchase decision.

Mobile games do still perhaps offer the new games companies their best chance of market access and, in the face of seemingly impossible entry to the console sector, should possibly be the focus of new start-up companies. In Ireland we already have successful aggregators and distributors in companies including Selettra, Eirplay and Trust5. Greater awareness of and access to their services should be made available to local developers.

One of the factors that might help to define the commercial future of online distribution may be the link between delivery of content to the handset and payment via the telephone billing process. Certainly, as the market for ringtones, music, video clips and games starts to take off, customers are becoming used to seeing relatively small payments for the content delivery appearing on their phone bills in addition to the normal line rental and call charges.

These micro payments, while in themselves tiny compared to the costs of buying traditional media forms are more available to more of the international market. They provide an opportunity to derive profitability through sheer volume - the amounts charged appearing to be relatively insignificant to consumers' normal budgeting decisions.

This process of telephone-based payment is proving to be so attractive to the markets that examples of ticket sales, grocery shopping and other functional applications are starting to appear in addition to the simple payment for delivery of media content. Although still very much in its infancy, the system is widely expected to become ubiquitous in the near future and will, no doubt, attract the interest of the established financial institutions as well as the traditional mobile network operators.

Mobile and Internet delivery of content does seem to provide an alternative, relatively low-cost channel for distribution and financial reward for digital games content in the future although, as always, the competition for the customers' attention will develop and become more intense. Currently, the existing brand leaders (Nokia etc.) are able to largely dictate which products are best promoted while companies such as Virgin and Sony, who have interests in both the telephony and content development industries would seem to be ideally placed to exploit the opportunities.

Independent competition for the customer will prove to be as difficult and as expensive as ever and will rely, as always, on the integrated application of traditional advertising media (television, press etc.) to drive customers towards the otherwise easily and inexpensively distributable content. It's easy to build it but, if they don't know about it, they still won't come!

5.4.2 Games Industry Cluster

In examining the current strengths, weaknesses, threats and opportunities facing the Irish games industry - and accepting that the actual product quality is good enough for international success - it appears that many of the issues relate to the small-scale nature of the sector, its present lack of influential relationships with the major international markets and current financial powerlessness to bring about the desired changes. The obvious solution to this state of affairs might be to develop a greater sense of partnership within the industry and an appreciation that collaboration within a games sector cluster could enable the attainment of common goals.

5.0 Opportunities for Growth cont.

Clusters can be defined as concentrations of competing, collaborating and interdependent companies and institutions which are connected by a system of market and non-market links. Clustering can bring a wide range of benefits to both business and the wider economy including the following:

- Companies can increase the expertise available to them if they locate amongst a cluster of other firms.
- They can also draw upon others with complementary skills to bid for large pieces of work which each of the individual firms would have been unable to complete.
- Advantage can be taken of economies of scale by further specialising production within each firm, by joint purchasing of common raw materials to attract bulk discounts or by joint marketing.
- Social and other informal links are important and can lead to the creation of new ideas and new businesses.
- Reputations spread quickly within the cluster, enabling finance providers to judge who the good entrepreneurs are and business people to find who provides good support services.
- The cluster enables an infrastructure of professional, legal, financial and other specialist services to develop.

(Source: UK DTI)

Current research suggests that clusters of firms and skilled workers may be one of the key drivers of economic growth in localities, cities and regions, increasing knowledge and spreading best practice, thus improving competitiveness and creating growth. Firms are finding that they can better utilise their knowledge capital, and increase the expertise available to them, if they locate amongst a cluster of other firms.

Firms in clusters can gain advantages from increased economies of scale - for example drawing upon companies with complementary skills to bid for large pieces of work which each of the individual firms would have been unable to complete. Collaboration also allows advantages by further specialising production within each firm, by cost reduction from more efficient resource

development (e.g. skills training) ,and - especially important to the digital creative industries in Ireland - a more powerful and effective joint marketing process.

Clusters facilitate other forms of collaboration or networking between firms. In part, this is because co-location and repeated contact helps build up a relationship of trust. Many of these networking arrangements are ways of spreading best practice and the results of research and development. It is a key requirement for facilitating the growth of a cluster that firms are encouraged to take advantage of collaboration and to demonstrate that by working together their performance and financial sustainability will improve.

Developing an industry model that allows Ireland's games developers to build a sustainable base for serving all of the existing global publishers - whilst also playing a larger role in the ownership and exploitation of their own intellectual property - surely offers the most promising route for future competitiveness.

5.5 Opportunities at a Glance

The main issue surrounding the potential of the games industry in Ireland is the current immaturity of the sector and the prohibitive costs of developing it. It is difficult to understand how this might be resolved in the short to medium term. The games industry globally, however, is enormously lucrative and many opportunities for Irish games developers can still be found in GB, Japan and the US.

5.5.1 Idea Generation

The development of new, unique and valuable intellectual property is critical to the future of the industry. The industry's reliance in licensed IP from film, comics etc. is a major component in the high, and increasing, cost of games production and new, innovative characterisation and gameplay are highly sought after.

One area of potential interest may be with the development of Ireland-centric content (e.g. GAA) but a formal R&D process will be essential to the development of new, market-ready ideas.

5.0 Opportunities for Growth cont.

5.5.2 Project Development Skills

The development of visual treatments and gameplay concepts from initial IP towards production requires a variety of traditional business skills, very much in demand across the creative industries. These include:

- project management
- production management
- health and safety management
- sales and marketing

5.5.3 Finance Management Skills

The games industry, like film producers and television broadcasters, is reporting a scarcity of industry-specific financial management and accounting personnel, particularly in respect of complex production funding arrangements.

5.5.4 Production Skills

Production opportunities still exist within creative, technical and craft disciplines. Particular opportunities exist in:

- programming
- animation
- gameplay
- graphic design
- music and audio

5.5.5 Distribution Technologies

New digital distribution technologies are creating demand for skilled engineering personnel in the following areas:

- high definition DVD
- iTV
- IPTV
- 3G+ mobile telephony

5.5.6 New Markets

Developing markets based on opportunities from new technologies are appearing and maturing. As bandwidth and consumer uptake increases, the Internet and mobile telephony markets will become important customers for new content production although, as yet, there are few examples of successful business models.

Games-focussed web sites are continuing to prove valuable resources for talent showcasing and, as mobile networks and downloading matures financially there should be opportunities for commercial publishing.

Additionally, it might be possible to take the principle of gaming into new, non-entertainment markets such as education and corporate marketing, where the strengths of learning through interactive gameplay might find new applications.

6.0 Conclusion

This report has discussed the issues currently affecting the games industry in Ireland. It has examined the issues affecting the potential for long-term economic sustainability and has offered suggestions for the development of sustainable advantage in an increasingly competitive global market.

Regardless of the artistic ambitions that may have led to individual market entry and the quality of the work currently available, the single greatest truth is that it is simply too expensive to win economically viable third-party games production work for traditional markets in the face of unrelenting competition from low-cost, high quality labour markets overseas.

Traditional distribution outlets are fragmenting, consumer preferences and willingness to pay for content are changing and Ireland does not have the capability to challenge head-on the domination of the corporate giants that essentially control the market opportunities.

Individually, companies do not have the financial resources to be able to seek out collaborative relationships with the main customer groups to develop preferred supplier status or long-term loyalty that might ignite confidence and provide stability.

And, although the most reliable way to break away from work-for-hire service provision towards actual long-term wealth creation - and despite a national history of unique creative flair - there is insufficient development and exploitation of original intellectual property. Even if there were a desire to attempt to produce original content however, the existing financial structures that might provide the necessary investment in new product development are not sufficiently developed or utilised by the industry.

Finally, our ability to compete for new business opportunities or market share is severely restricted by the lack of a specialised and focussed distribution, publishing and sales mechanism and a lack of suitably qualified personnel within the industry itself.

However, what we have also seen is that by engaging in a formal marketing research exercise we can identify genuine new market need; by mobilising the existing R&D culture we can begin to develop new products and services to take advantage of the opportunities arising from new customers, technologies and social preferences. By collaborating and operating more collectively, the games industry in Ireland can combine to achieve the strength and scale to be an attractive long-term partner and supplier to the global interactive leisure software markets.

7.0 Appendix

Statistical information and analysis used in the compilation of this report was accessed from the following sources:

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