Playing for Keeps

Enhancing sustainability in Australia's interactive entertainment industry

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Alternator **character**
Courtesy:
 Alternator Pty Ltd

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Executive summary

The challenges facing the interactive entertainment industry are intrinsically linked to those of the broader screen sector. With this in mind, the film, television and interactive industries must work together to ensure that the right supporting frameworks are in place to address the threats and opportunities that come from greater convergence around fast broadband.

Screen Australia believes that targeted support will stimulate production activity to achieve future growth, both economic and cultural, maximising the industry's strong export potential as well as the distinctive creative expression that can only be achieved through interactivity.

This discussion paper draws together insights to assist the evidence-based development of public policy and provides additional context to the options for government contained in Screen Australia's submissions to the Australian Government's *Convergence Review* and *National Cultural Policy* in October 2011.

INTERACTIVE ENTERTAINMENT IS A MAINSTREAM ACTIVITY IN AUSTRALIA

In 2011, 92 per cent of households have a device for playing computer games. With greater accessibility through mobile and tablet devices and the rise of family-friendly casual gaming options, the average age of people who play games is now 32 years and women are increasingly represented.

Ninety per cent of people who play games believe that games contribute to culture. Importantly, this sentiment is echoed by people who don't play games, with 80 per cent agreeing.

In terms of consumer spending, the global interactive entertainment industry is forecast to be the fastest-growing entertainment and media sector, expanding from $64.8 billion in revenues in 2010 to $90.1 billion in 2015. In Australia the market is expected to grow during this time at a compound annual rate of 9.5 per cent to reach $2.5 billion.

INDUSTRY PRESSURE POINTS

Despite growing participation, the sustainability of our local interactive entertainment industry is under threat. These threats fall broadly into two areas:

- **Falling foreign investment:**
  Due to the current hardware cycle and a difficult economic climate, many international publishers have focused their development strategies on blockbuster franchises, trimming medium-budget games and licensed titles from their portfolios. Coupled with tax incentives in other territories and an unfavourable exchange rate, this has limited growth among Australian companies.
  Like other forms of screen content, games produced for the Australian market tend to be riskier investments for publishers given the population size. Because of this, most local developers are primarily export-focused and the contraction in foreign investment means there are now even less opportunities to raise funds.

Melbourne-based start-up **The Voxel Agents** have found success with their self-published *Train Conductor* titles for iOS devices. The *Train Conductor* series has achieved over four million free downloads and over half a million paid downloads.
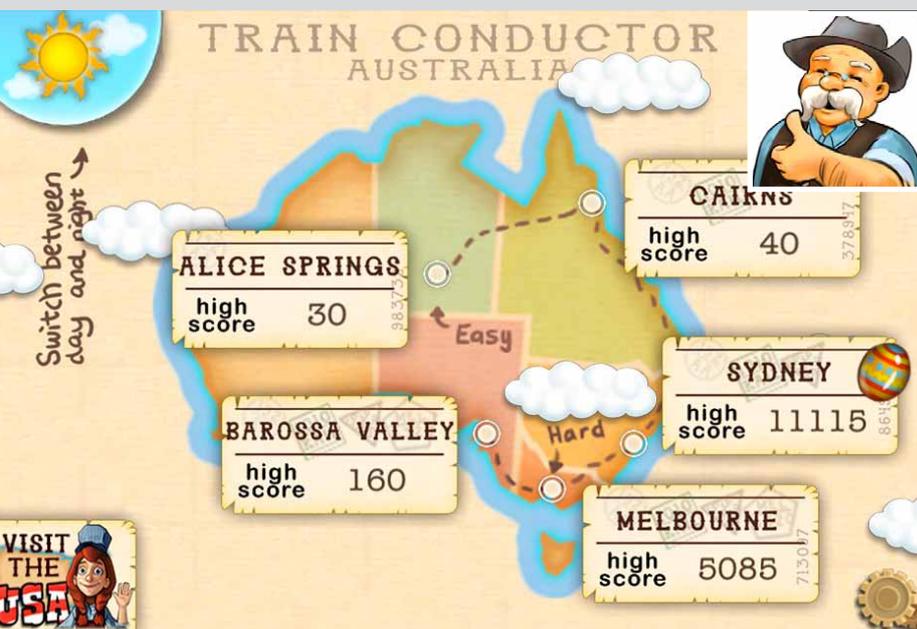
- **Talent being driven offshore:** The influx of foreign investment into the local industry in the 2000s resulted in the industry acquiring a talent pool of highly skilled and experienced workers. However, the local talent pool has been severely diminished as a consequence of recent studio closures, which resulted in the loss of hundreds of jobs.

OPTIONS TO SUPPORT SUSTAINABILITY

Achieving a healthy balance of fee-for-service work and the creation of original content is critical to a more sustainable industry. Australian interactive entertainment developers have the talent, skills and desire to create original content, including for the local market, but there has been some reluctance to invest in such content because of the relatively high financial risk involved. Enhanced government support would mitigate this risk and assist developers to retain intellectual property at the same time as attracting private investment.

Screen Australia believes the continuation of current support measures as well as the introduction of new targeted incentives would provide the foundation for growth. Two new incentives are proposed:

- An **Interactive Entertainment (Games) Offset** may assist in meeting the challenges of sustainability in the screen sector. The proposal has two components:
— Introduction of a new tax offset to assist with the production of stand-alone interactive entertainment titles.
— Expansion of the existing Producer Offset to allow for expenditure on interactive entertainment components of drama and documentary screen content.

  Economic modelling of this proposed offset indicates that over a five-year period there would be an additional investment of $146 million, of which $100 million would come from foreign sources. In the medium- to high-budget section of the industry analysed for this research, this would result in an additional contribution of $76 million to Australia's Gross Domestic Product and a 50 per cent increase in the number of jobs.

- An additional option for government would be direct funding through an **Online Production Fund** as a complementary initiative to the Interactive Entertainment (Games) Offset. This Fund would support the production of premium original content, including interactive entertainment projects, for online delivery.

Sydney-based studio **Nnooo**'s highly acclaimed arcade game *escapeVektor* was released via digital distribution for Wii consoles.
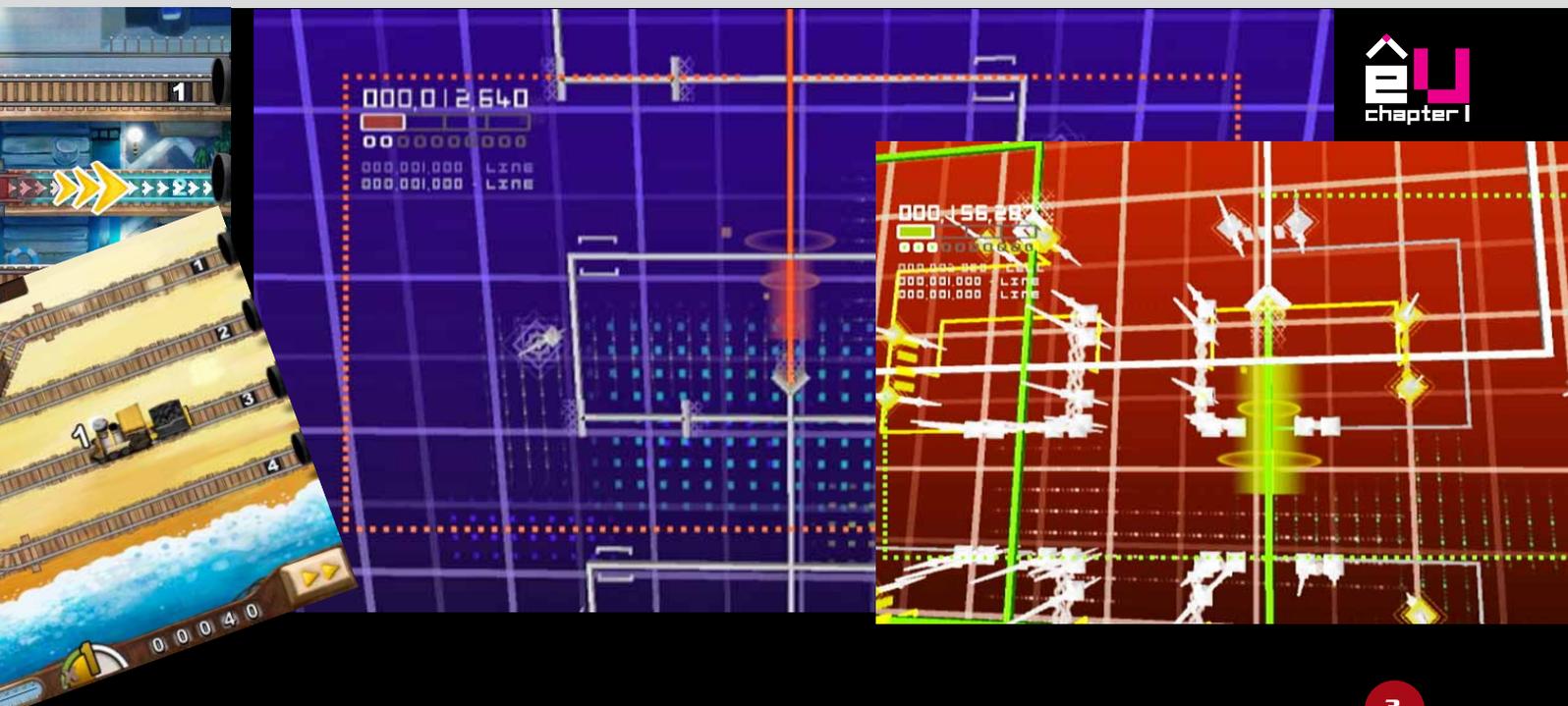
Building a knowledge base

Screen Australia is the national funding agency for screen production, charged with the development, support and promotion of a highly creative, innovative and commercially sustainable Australian screen sector.

As part of its leadership objectives, Screen Australia plays an important role in providing authoritative research and strategic analysis. This includes examining factors that influence the production and consumption of Australian screen content and the role of the screen production sector in delivering the government's cultural objectives.

The challenges facing the interactive entertainment industry are intrinsically linked to those of the broader screen sector. Most notable among these are the evolving ways that Australians are engaging with audiovisual content and how this is being affected by the convergence of media and communications devices around fast broadband.

A whole-of-sector approach is needed to ensure that the right supporting frameworks are in place to address the threats and opportunities that come from greater convergence. With this in mind, this discussion paper draws together themes raised in several Screen Australia reports from the last two years and provides new insights to help inform the ongoing discussion.

The linkages between interactive entertainment and film and television production have long been acknowledged, and supported through programs such as the content partnerships between the ABC and the Australian Film Commission – the *Broadband Production Initiative* and *Broadband Cross-media Production Initiative* – a decade ago. Screen Australia has funded interactive storytelling from its inception through the *Innovation Program* and its successor the *All Media Program*, as well as other initiatives such as Serious Games. Beyond this, Screen Australia has also advocated on behalf of the industry for greater recognition of its economic and cultural contribution.

As part of the *Review of the Independent Screen Production Sector* in early 2010, Screen Australia raised two challenges facing local developers. First, was a need to sustain Australia's position as a preferred off-shore provider of production services in light of incentives in competing territories, and the second, was a lack of retention of intellectual property in original ideas.

These challenges were further explored within the context of audience participation as part of Screen Australia's reports *Beyond the Box Office: Understanding Audiences in a Multi-screen World* in April of this

Screen Australia funded the prototype of *Warco*, a video game in which players take on the role of a war correspondent to shoot reportage in hazardous territory. The player then edits together footage for news broadcast.
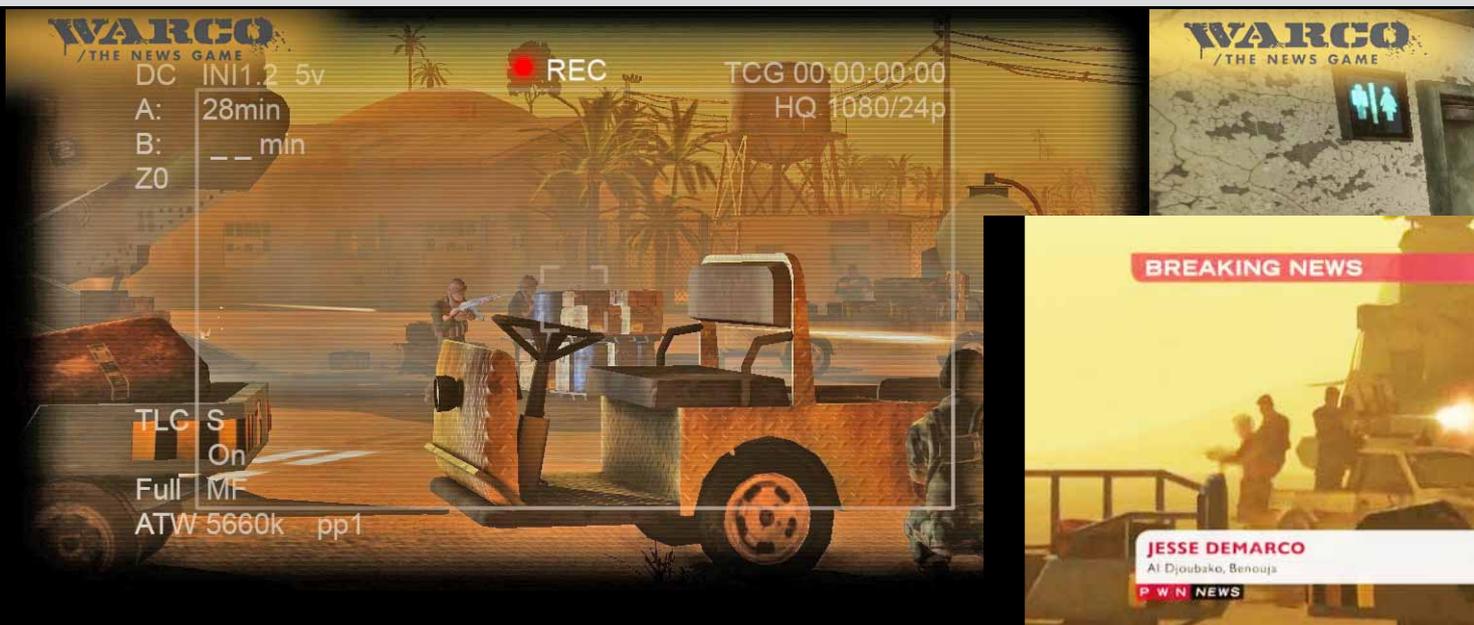
year and *Convergence 2011: Australian Content State of Play* in August. Together they mapped screen content including games across all media distribution points.

While organisations such as the Interactive Games and Entertainment Association (iGEA) and the Game Developers' Association of Australia (GDAA) are generating important analysis about the industry, there remains a lack of ongoing data to benchmark the sources of finance, levels of production activity and employment within Australia's interactive entertainment industry.

To date the most comprehensive source of this information has been the one-off *Digital Game Development Services* survey, undertaken by the Australian Bureau of Statistics (ABS) in 2006/07. Data such as this is fundamental to informing structural change as it not only illustrates areas that require greater assistance but also means the effectiveness of any such assistance can be measured once implemented.

Screen Australia has consistently articulated the importance of continuing this work. As a result, the Australian Government earmarked specific funds as part of Screen Australia's allocation in the May 2011 budget. With this additional money, the agency can now work with the ABS to rerun and improve the survey design,

rolling in components of both the *Digital Game Development Services* and *Television, Film and Video Production and Post-production Services* publications.

When released in 2013, this survey will close a five-year gap in knowledge and for the first time report on the entire audiovisual production sector, with greater clarity about the intersections that occur across the film, television and interactive entertainment industries.

However, the screen sector cannot just sit back and wait. In the meantime, to get a sense of the environment in which the sector is operating, Screen Australia undertook 22 interviews across the screen sector in mid-2011 with six overseas publishers, 10 local developers and six local film and television production companies (see page 29).

These interviews have helped us articulate the challenges identified in this document and formed the basis of economic modelling compiled by PricewaterhouseCoopers on behalf of Screen Australia. They have also informed the thinking behind the options for government support proposed in section 4, as well as in submissions to the Australian Government's *Convergence Review* and *National Cultural Policy* in October 2011.

A whole-of-sector approach is needed to ensure that the right supporting frameworks are in place to address the threats and opportunities that come from greater convergence.

The original idea for *Warco* came from veteran journalist and news producer Tony Maniaty, who collaborated with filmmaker Robert Connolly (*Balibo*) and game developer Morgan Jaffit from **Defiant Development** to produce the playable proof of concept.

Ecology of the sector

The screen sector is in transition as distribution mechanisms converge and access points increasingly fragment. This change is bringing with it a wealth of opportunities, be it new approaches to the distribution of content or the ability of interactive elements to transform the way we engage with information and entertainment. These technological changes are forcing many broadcasters, aggregators, distributors, publishers and creators to rethink their business models.

Australia currently has a small but diverse interactive entertainment development industry, with independent and publisher-owned studios producing various types of games for a variety of platforms. With the local industry at a cross-roads, it is vital to take stock of its achievements and develop a strategy to best realise the industry's cultural and economic potential.

Data from the ABS shows that as at June 2007 there were 45 digital game development businesses in the interactive entertainment industry, employing 1,431 workers. Total income in 2006/07 was $136.9 million, with $116.9 million coming from the provision of services to other businesses. Of this service income, 93 per cent came from overseas sources and 71 per cent related to console games.[1]

By comparison, the film and television industry tends to rely less on fee-for-service work, with 38 per cent out of a total income of $2.03 billion coming from the provision of services to others in 2006/07, and the remainder from 'completed works' (feature films, TV drama, TV commercials, etc). In total, 13,844 people were employed in the film and television industry at the end of June 2007, 10,873 in production businesses and 2,971 in post-production businesses.[2] Compared to the interactive entertainment industry, the greater diversity of income sources for these businesses has been made possible in part through sustained government support.

1. Australian Bureau of Statistics, *Digital Game Development Services Australia 2006/07* (cat. no. 8515.0).

2. Australian Bureau of Statistics, *Television, Film and Video Production and Post-production Services 2006/07* (cat. no. 8679.0).

SCREEN SECTOR INCOME BY TYPE, 2006/07

● Income from provision of services to other businesses
● Other income

Film and TV industry

38%	62%

Interactive entertainment industry

85%	15%

Source: ABS, *Television, Film and Video Production and Post-production Services, 2006/07; Digital Game Development Services Australia 2006/07*

For reasons explored in more detail in section 3, the ecology of the interactive entertainment industry has changed significantly since 2006/07, with the closure of several development studios focused on console games and the emergence of many independent developers specialising in online games and those for mobile and tablet devices. Digital distribution has also meant that self-publishing has emerged as a viable business model, allowing developers to bypass the traditional publishers in making their product available.

These days, based on Screen Australia's interviews with companies across the sector, activity can be broadly categorised as follows:

- **High-end console games**: activity primarily focused on games for console hardware. Studios are generally independently owned, although some are subsidiaries of foreign publishers.
- **Games for digital distribution**: developers are also mostly independently owned with some subsidiaries of foreign publishers.
- **Publishing and distribution**: bringing interactive entertainment to market.
- **Creative digital services**: provided by a wide range of companies across all industries to introduce interactive elements into company activities, such as advertising and promotion.
- **Middleware and related services**: primarily focused on creating game engine and animation technology.

Developers rely on a pool of artistic talent coming from specialist education and training institutions.

In addition to private colleges such as Qantm College and the Academy of Interactive Entertainment, many universities now offer game development courses and degrees. This is coupled with a growing number of research labs, such as Deakin University's Motion Capture Lab and RMIT's Game and Experimental Entertainment Lab (GEELab) launched in 2011. These labs aim to research new creative visions, products and business models.

HIGH-END CONSOLE GAMES

The budgets for blockbuster or 'triple A' console titles are typically upwards of $15 million and time in development is on average approximately two years.

Titles of this scale employ hundreds of people and incorporate many artistic and technical disciplines including: programmers, game designers, writers, voice actors or actors for motion capture, composers, animators and sound designers.

Around 15 large publishers headquartered in the US, Japan and Europe dominate the industry and provide most of the finance for console game development. Publishers generally have multiple in-house studios located in various territories as well as outsourcing work to independent studios.

There are two publisher-owned console studios remaining in Australia: 2K Marin Canberra, whose parent company is Take-Two Interactive; and Sega Studios Australia. 2K Marin and Sega Studios Australia are fully funded by their parent companies. In the past Electronic Arts, THQ, Midway Games and Atari have had local subsidiaries.

Both of the publisher-owned studios develop large-budget titles. 2K Marin Canberra has developed narrative-driven, first-person-shooter games such as XCOM in collaboration with other 2K studios, and Sega Studios Australia is developing the *London Olympics 2012 Official Video Game*. Sega Studios Australia has the largest motion capture studio in the southern hemisphere.

Independent console development studios operating in Australia include Torus Games, Tantalus, Trickstar Games and Big Ant Studios. The output of these studios includes fee-for-service work and work on licensed titles as well as original IP projects. These studios develop titles for Wii, Xbox 360, PlayStation 3, handheld consoles such as Nintendo DS and PlayStation Portable, amongst other platforms.

Independent development studios with an original project can approach publishers for funding at prototype or later stages of development. The further along the development of the game, the better position the developer is in to negotiate a favourable royalty share. Console developers are reliant on publishers to bring their titles to market, due to the large marketing and physical production costs.

Fee-for-service work can involve 'porting' games from one platform to another or developing whole games, such as movie or television tie-in games, from scratch.

Melbourne-based console developer **Tantalus** develops licensed titles on a fee-for-service basis as well as developing original IP. *Pony Friends*, a pet and horse-riding simulation game is their most successful original IP title, selling over one million copies. The success of *Pony Friends* has contributed to Tantalus' lasting business sustainability.

GAMES FOR DIGITAL DISTRIBUTION

Budgets for digitally distributed games vary widely. An indicative range for social network games and downloadable console and PC titles is $200,000 to $2 million, while commercially orientated games for mobile and tablet devices are typically cheaper, between $20,000 and $500,000.

There are three publisher-owned development studios focused on the creation of games for digital distribution: EA Firemint, EA IronMonkey and RockYou's 3 Blokes Studios. All three were acquired the past two years and are fully funded by their parent companies.

EA IronMonkey primarily develops mobile titles based on intellectual property owned by Electronic Arts, such as *The Sims*. By contrast, EA Firemint develops games in which they retain intellectual property rights, such as their recent mobile title, *Spy Mouse*. RockYou's 3 Blokes Studios develops original IP social games for Facebook such as *Galactic Allies*.

As noted earlier, digital distribution has further opened up the interactive entertainment market to independent developers, who are able to sell their titles to audiences without the need for intermediaries such as publishers and retail outlets. Australian developers have been quick to take advantage of the opportunities offered by digital distribution platforms and have had a number of successes in this space.

Halfbrick is a stand out independent studio developing games for digital distribution, with several hit titles across various mobile and console platforms. Halfbrick has over 45 employees at its Brisbane studio, has recently opened a satellite studio in Sydney and has partially acquired local animation production company, The People's Republic of Animation. Halfbrick primarily develop original games in which they retain their intellectual property and which they self-fund and self-publish. Notable titles include *Fruit Ninja* and *Jetpack Joyride*.

Numerous small, independent mobile and online studios have emerged in recent years, many founded by former members of defunct local console studios. Some examples include: The Voxel Agents, Bubble Gum Interactive, Brawsome, Tin Man Games, Defiant Development, Blowfish Studios, Uppercut Games and Fiasco Studios.

Independent studios are self-funding development as well as attracting some private investment and accessing government funding programs.

Uppercut Games, which was established by former **2K Marin** Canberra members Andrew James and Ed Orman, will release its first title, *Epoch*, late 2011. *Epoch* features a science fiction narrative and first-person-shooter and strategy gameplay.

EP0CH

EP0CH

PUBLISHING AND DISTRIBUTION

Many of these studios are also self-publishing their projects. Self-publishing via online digital distribution platforms enables developers to remain in control of intellectual property and generate revenue through a variety of business models. These platforms generally take a 30 per cent revenue share and offer flexible business models such as: download-to-own, in-app purchases for paid or free to play games, subscription, advertising-supported and 'freemium' (offering a free 'lite' version with the option to upgrade to a 'premium' version).

The lower barriers to entry and large market also mean that developing games for niche audiences is less risky, encouraging innovation and diversity.

As noted earlier, publishers are involved in the acquisition of titles during the development stage, often investing in the completion of the project.

The two leading Australian publishers, Tru Blu Entertainment and N3VRF41L Publishing, are limited in scale and not capable of providing finance for the full range of gaming titles being developed locally.

Tru Blu Entertainment is the publishing arm of Home Entertainment Suppliers, a distributor of retail video game titles. It primarily publishes sport console games such as *AFL Live* and *Rugby Challenge* developed by Australian and New Zealand studios. In contrast, N3VRF41L Publishing is both a developer and publisher. It typically publishes its own titles, such as the long-running *Trainz* series, but does handle some titles from external developers.

New kinds of services are also appearing in the digital distribution environment. For example, Surprise Attack, established in 2011, provides marketing support to independent game developers self-publishing their titles.

Developed by **Team Bondi** in conjunction with **Rockstar Games**, *L.A. Noire* has elements of simulation and role-playing, first-person shooter, racing, action and adventure, as well as a strong narrative component.

Adelaide-based animation studio **The People's Republic of Animation** was established in 2003 and has been providing animation services to game developers since 2006. In addition to providing fee-for-service work for various clients, PRA have produced original animated shorts including *The Cat Piano*, which was shortlisted for an Academy Award® in 2010. Game developer **Halfbrick Studios** partially acquired PRA in 2011. Halfbrick chief executive Shaniel Deo stated, "We see their narrative focus as an incredible resource for creating new and truly compelling IP. Between PRA and Halfbrick, there is barely a screen we can't reach."

CREATIVE DIGITAL SERVICES

With the introduction of elements of game-thinking into other forms of interactive entertainment, game developers have become embedded in creative digital agencies.

Digital agencies work with a wide variety of clients including advertisers, not-for-profit organisations, film and television production companies and government agencies, as well as developing original interactive entertainment projects. Examples of these companies include The Project Factory, Chocolate Liberation Front, Enabled, Revolutionary Concepts and Soap Creative.

Soap Creative was established in 2002 by Ashley Ringrose and Rob Dennis as a game development studio creating online games and has since expanded into website production, digital strategy and online marketing. Their clients include entertainment companies such as Activision, 20th Century Fox and National Geographic Kids. Expanding into a full service digital agency has enabled Soap Creative to grow from two staff to over 40 and to establish an office in Los Angeles in 2008. The company still earns 20 per cent of its revenue from online games with the rest derived from producing digital campaigns and brand strategies.

AFL Live console game – developed by Melbourne-based **Big Ant Studios** and published by **Tru Blu Entertainment**.
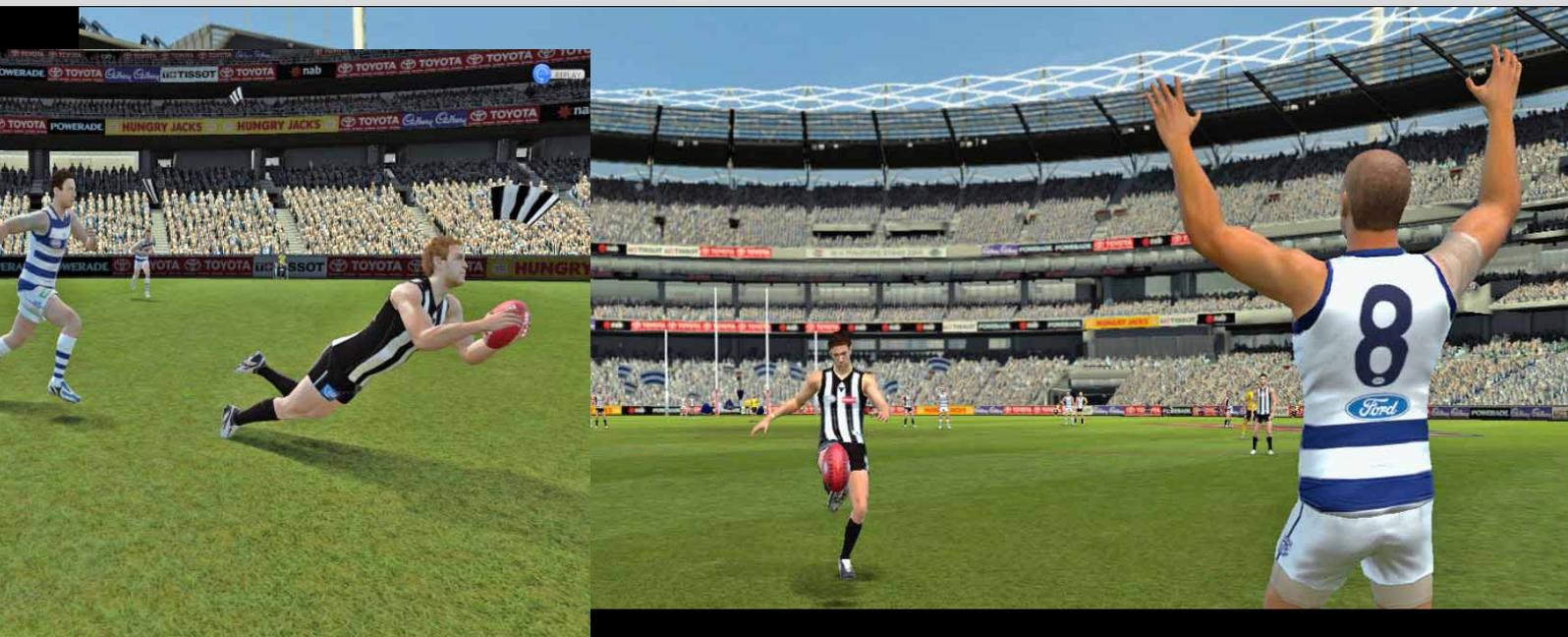
MIDDLEWARE AND RELATED SERVICES

Middleware, or game engine, technology is an integral part of game development. Many studios develop middleware in-house as well as producing whole games. Australia has a small group of companies that principally develop middleware and license the technology to game developers.

BigWorld Technology and Epiphany Games are examples of two companies heavily involved in producing game engines for Massively Multiplayer Online Games (MMOGs), while Firelight Technologies is a company that focuses on interactive audio technology.

There are also a number of companies and individual contractors that provide related services to the interactive entertainment industry, including character animation, sound design and companies that provide technical tools, such as 3D modelling, visualisation and motion capture software systems. Examples of such companies include The People's Republic of Animation, Act3 Animation, Depth Analysis and Impact Audio Services.

Some of these companies and contractors work solely in the game development industry while others service other creative industries such as advertising and film and television production.

Canberra-based **BigWorld Technology** is one of the world's leading developers of MMOG middleware. The BigWorld middleware was originally created by game developer **Micro Forté** with the support of Federal Government R&D grants. BigWorld Technology was established as a separate company in 2002. BigWorld Technology licenses its middleware to game developers internationally and has had particular success in China where MMOGs are the dominant form of gaming.
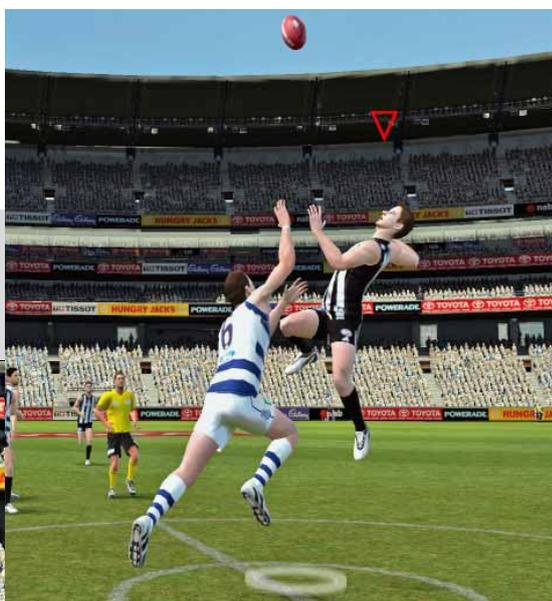
AFL Live

Tie-ins to film and television projects

The practice of adapting games from film and television content is not new. Such games can deepen audience engagement with the setting and narrative of the original property, as well as generate additional revenue streams. They are often made for high-end consoles but are increasingly produced for digital distribution to mobile and tablet devices. The project may be undertaken by either interactive entertainment publishers or developers and/or digital agencies linked to the original audiovisual production company or broadcaster.

Local examples include KMM Games, the game development arm of film production company Kennedy Miller Mitchell. KMM Games develop tie-in games to KMM feature films. The KMM Games Brisbane studio recently closed following the completion of *Happy Feet Two: The Video Game*, although a smaller KMM Games studio remains in Sydney.

Of the local broadcasters, the ABC is the most heavily involved in interactive entertainment, commissioning external developers as well as producing interactive projects in-house through its Innovation division. The ABC has commissioned and developed interactive extensions of ABC television properties, such as *The Gradual Demise of Phillipa Finch* and *Spicks and Specks*, as well as producing stand-alone interactive projects. One of ABC Innovation's most ambitious projects is *Bluebird AR*, an interactive online drama exploring the issues of geo-engineering, whistleblowing and philanthro-capitalism through the story of a young scientist working for the Bluebird Corporation.

In addition, other production companies such as Flying Bark and Animal Logic have also actively explored interactive entertainment options in the past.

Kennedy Miller Mitchell established **KMM Games** to develop console tie-in games to their feature film properties, such as *Happy Feet Two*. The tie-in game to the original *Happy Feet* game was developed by a Canadian studio. KMM decided to develop the *Happy Feet Two* tie-in game in-house to ensure greater quality and creative control. KMM has benefited from the strong local talent pool for game development, hiring many former members of Krome Studios. KMM also purchased assets and IP from local studio Team Bondi when it closed.

Factors impacting sustainability

Over the last 30 years the Australian interactive entertainment industry has consistently produced games of considerable technological and artistic merit. Many of these titles have achieved critical and commercial success both here and abroad.

However, local developers have had to remain dynamic to adapt to shifting market conditions. They have done this through the leadership of pioneering companies and a vibrant skills base that has embraced new business models, ensuring that Australia remains at the forefront of this global industry.

The first wave of local studios appeared in the early 1980s, developing games for personal computers (PCs) and home entertainment consoles. The first was Beam Software, established in 1980, followed by Strategic Studies Group in 1983 and Micro Forté in 1985.

Beam Software released over 150 titles, including text adventure game *The Hobbit*, which became the first Australian game to sell over a million copies.[3] Micro Forté went on to break new ground in MMOG middleware technology.

During the 1990s the industry grew steadily, with the likes of Torus Games, Tantalus Interactive, Krome Studios, Blue Tongue, Rat Bag Games and IR Gurus among the notable start-ups. This was coupled with broader industry initiatives and increasing infrastructure that saw the launch of training institutes and the founding of the GDAA.

The founder of Micro Forté, John De Margheriti, was an instrumental figure in this activity, founding the Academy of Interactive Entertainment in 1996 and the GDAA in 1999. In addition, support was earmarked through the Australian Government's cultural policy of the time, which recognised the artistic contribution of the interactive entertainment industry through the seed funding of Qantm College in 1996.[4]

However, following this period of early growth changes occurred in the early 2000s that put pressure on the independence of local developers and their ability to finance new original ideas. In particular, budgets for console games became larger, fuelled by increasing hardware capabilities. During this time, international publishers and developers began setting up or acquiring studios in Australia, attracted by the local talent pool and low costs thanks to a favourable exchange rate.

Although this led to a growing focus on foreign fee-for-service work,[5] projects based on original ideas were still being created. However, unless the developer was affiliated with an international publisher, these games faced a difficult route to market due to limited local investment opportunities. As a result many independent companies turned to the foreign market, selling their rights to secure money from publishers, thus losing the ability to retain intellectual property.

5. Game Developers' Association of Australia, 2003, *Inquiry into the Future Opportunities for Australia's Film, Animation, Special Effects and Electronic Game Industries.*

"Luckily enough we've had choices. We made choices to get into Australian product, which is a risky move but has paid off because the Australian dollar is so high compared to the US." Ross Symons, CEO of Big Ant Studios, on how his studio has been able to achieve sustainability in a difficult environment.*

3. Knight, S & Brand, J, 2007, *History of Game Development in Australia*, ACMI.
4. Higgs, PL & Kennedy, TA, 2003, *From Cottages to Corporations: Building a Global Industry from Australian Creativity – Report on Access to Overseas Markets for Australia's Creative Digital Industry*, Department of Communications, Information Technology and the Arts.

* Hill, J, 2011, '*Hands on with AFL 2011*', *Sydney Morning Herald*: Screen Play Blog, (http://www.smh.com.au/digital-life/games/blogs/screenplay/hands-on-with-afl-2011-20110202-1acoh.html).

By the late 2000s, the value of the Australian dollar, had increased, reducing the margins of foreign investors. At the same time the console market contracted with the current generation of hardware reaching maturity and publishers responded strategically by focusing on franchise titles with a proven sales record.

This led to the closure of many foreign-owned developers in Australia while other independent studios struggled to compete with more cost-competitive territories in the fee-for-service console market. In 2011 alone, Team Bondi, THQ Studio Australia, THQ Blue Tongue and EA Visceral Studio Australia all closed and many talented people left the country. This worrying exodus has threatened the very thing that the industry was built on three decades earlier – its creative skills base.

However, technological change is providing opportunities as well as challenges. At the same time as developers working on medium- to large-budget console games have fought to remain viable, studios developing smaller-scale games for digital distribution have been experiencing significant growth and acquisition. Taking advantage of new services such as Steam, iTunes and Facebook and the console distribution services of Xbox Live Arcade (XBLA), PlayStation Network (PSN) and WiiWare, some companies have been able to diversify their operations and reduce their previous reliance on fee-for-service work.

To ensure that the industry is best placed both to tackle its acute threats and take advantage of the great opportunities offered by the evolving media landscape, a supporting framework is needed that strengthens the bonds across the entire screen sector as well as acknowledges the distinctive creative expression that can only be achieved through interactivity.

SHIFTING DEMOGRAPHICS

Participation in interactive entertainment is a mainstream activity in Australia. This is due to cultural and technological shifts in the industry which have made a wider variety of games more accessible to more people.

A recent study commissioned by the iGEA, *Digital Australia 2012*,[6] found that 92 per cent of Australian households have a device for playing computer games, up from 88 per cent in late 2008.

The report shows that the demographic profile of people playing interactive games is moving closer to that of the general population, with 75 per cent aged 18 years and over. In fact, the average age has risen from 30 to 32 years old since 2008. Furthermore, women now make up 47 per cent of the total gaming population, up from 46 per cent over

6. Interactive Game and Entertainment Association, 2011, *Digital Australia 2012.*

Developed by Melbourne-based studio **Brawsome**, *Jolly Rover* was originally self-published via PC digital distribution platforms, selling 60,000 copies on Steam alone, before being picked up for international retail distribution by publisher **Lace Mamba Global**. *Jolly Rover* is a narrative-driven point-and-click adventure game.

the same period. It goes on to state that the average adult who plays games has now been playing them for 12 years, with 26 per cent having played for more than 20 years.

The study also found that 90 per cent of people who played games believed that games contribute to culture. Importantly, this sentiment was echoed by people who didn't play games, with 80 per cent agreeing.

The hardware used by people playing games can be grouped into five categories:

- Computers (PCs)
- Television-based consoles, eg Microsoft's Xbox 360, Sony's PlayStation 3 and Nintendo's Wii
- Handheld consoles, eg Nintendo 3DS, Sony's PSP
- Mobile devices, eg Apple's iPhone and iPods
- Tablet devices, eg Apple's iPads and Amazon's Kindle Fire

Sixty-three per cent of games households use a console for gaming and 62 per cent use their PC. Mobile devices such as smartphones are used in 43 per cent of games households, followed by handheld consoles and tablet devices at 13 per cent each. One in five people who play games said they would either be 'motivated' or 'very motivated' to sign up to a faster broadband service for game downloads and online play.

Games households are also generally more likely than non-games households to use newer media such as portable music systems, surround sound, Blu-ray etc.

DEVICES USED FOR PLAYING GAMES IN GAME HOUSEHOLDS, 2011
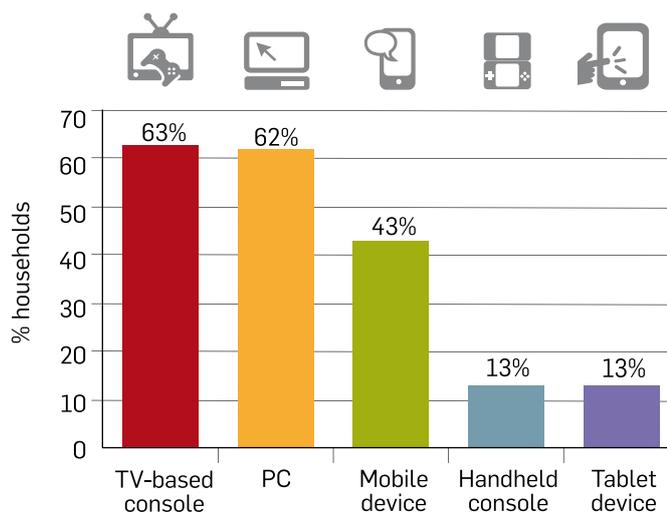
Source: iGEA, *Digital Australia 2012*.

Developed by **Revolutionary Concepts** and published by **Konami** through iTunes, *Gesundheit!* is an action-puzzle game with storybook visuals.

Game genres

The iGEA breaks the genre of games into 16 categories, although many interactive titles combine several of these elements. For example, *L.A. Noire* has elements of simulation and role-playing, first-person shooter, racing, action and adventure, as well as a strong narrative component. The following table includes definitions prepared by Screen Australia for these categories, along with selected examples.

GENRE	DEFINITION	EXAMPLES
Action	Games that require quick thinking and reflexes to overcome obstacles or opponents.	God of War series, Assassin's Creed, Batman Arkham Asylum
Adventure	Story-driven games involving exploration and puzzle solving.	Myst, Heavy Rain
Board/Card	Often adaptations of physical board or card games such as chess, scrabble or bridge. Can also include original games or card trading games.	Solitaire, Pokemon Trading Card Game, Monopoly, Scrabble
Classic (Retro)	Games original released in the 1980s and 1990s.	Pac Man, Space Invaders, Frogger
Educational	Games designed to teach players about a particular subject or assist in learning skills.	Where in the World is Carmen San Diego?, Brain Fitness, My Word Coach
Family/Party	Collections of simple mini games designed for multiple players.	Mario Party, Wii Party
Fighting/Combat	Players engage in close combat with an opponent.	Street Fighter, Mortal Kombat
First Person Shooter	Involves shooting at a series of opponents. Player sees the action through the eyes of the protagonist. Usually requires quick reflexes.	Call of Duty, Resident Evil, Dead Space
Massively Multiplayer Online Role-playing Game	A role-playing game in which a large number of players interact within a virtual world.	World of Warcraft, Star Trek Online
Platformer	Games in which the primary objective requires movement through a series of levels, by way of running, climbing, jumping.	Donkey Kong, Mario Bros., Sonic the Hedgehog
Puzzle	Games which require problem solving skills such as logic or spatial reasoning to solve a problem or puzzle.	Tetris, Lemmings, Puzzle Quest, Angry Birds
Racing	Games based primarily on driving skills. Games can be based on real racing events or imaginary settings.	
Role-playing Game	Games in which a player creates or takes on a character. Typically rely on a detailed and expansive setting and story with an emphasis on character interactions.	The Elder Scrolls series, Fallout series, Final Fantasy series
Simulation	Games which simulate real world situations.	The Sims
Sports	Adaptations of existing sports.	AFL Live, FIFA World Cup
Strategy/Real Time Strategy	Games which require strategic thinking and planning skills rather than quick reflexes to defeat opponents. Can involve strategic deployment of armies or resource management.	Starcraft, Total War series, Civilisation series

Source: iGEA, *Digital Australia* 2012 and Screen Australia.

MEDIA USED IN GAME VS NON-GAME HOUSEHOLDS, 2011
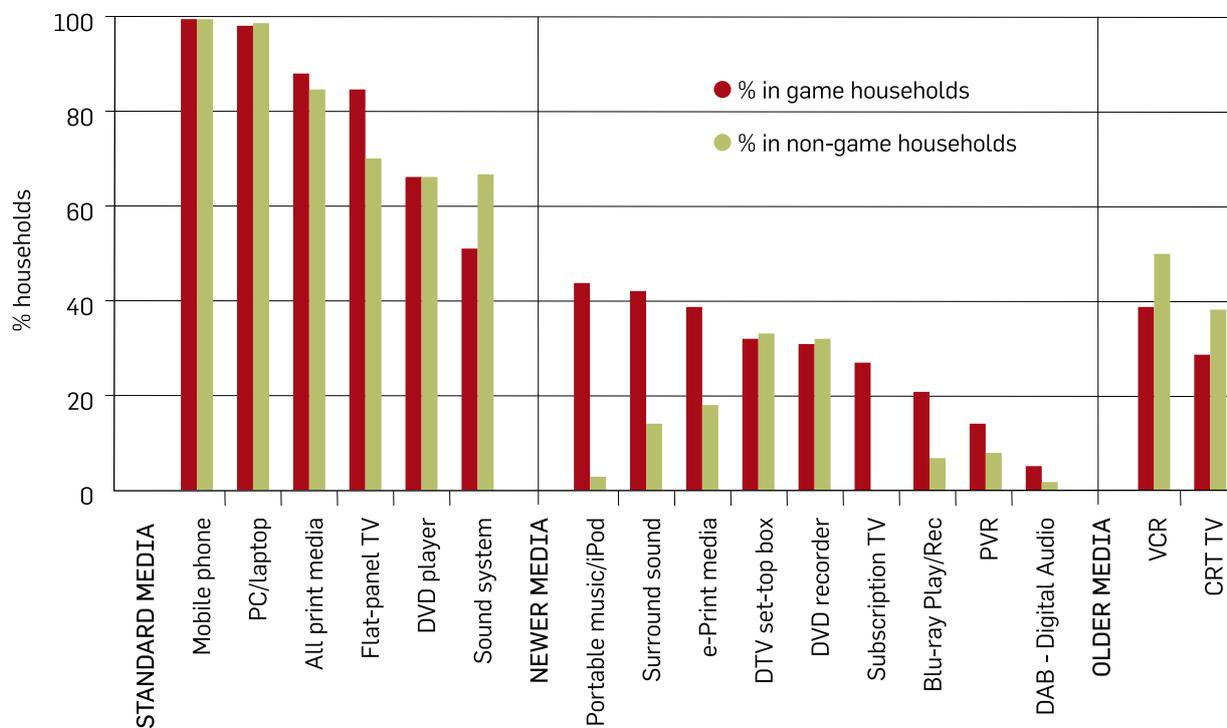
MEDIA USED IN HOUSEHOLDS, 2011

MEDIA	% IN GAME HOMES	% IN NON-GAME HOMES
STANDARD MEDIA (DEVICE OR SERVICE)		
Mobile phone	100	100
PC/Laptop	98	99
All print media	88	85
Flat-panel TV	85	70
DVD player	66	66
Sound/Music system	51	67
NEWER MEDIA		
Portable music/iPod	44	3
Surround sound	42	14
e-Print media	39	18
DTV set-top box	32	33
DVD recorder	31	32
Subscription TV	27	
Blu-ray play/rec	21	7
PVR	14	8
DAB - Digital Audio	5	2
OLDER MEDIA		
VCR	39	50
CRT TV	29	38

Source: iGEA, *Digital Australia 2012*.

GROWTH FACTORS

Although the majority of retail value continues to come from the sale of physical media, especially for high-end console titles, games for all hardware types are increasingly available online. This includes everything from browser-based titles played online either by multiple players or a single player to content downloaded to gaming devices including consoles, handheld consoles, PCs, smartphones and tablet devices.

For example, Microsoft, Sony and Nintendo all provide a wide range of games via digital distribution that can be downloaded on their respective consoles. Downloadable console titles are less expensive and tend to be smaller-scale games than those purchased on physical media. PC games ranging from blockbusters released by major publishers to small games from independent developers can all be downloaded via services such as Steam.

The introduction of motion-based controllers such as the Nintendo Wii and Microsoft's Kinect has been instrumental in broadening the gaming demographic to include older family members. Motion-based controllers are simple to use and facilitate a greater range of family, lifestyle and party games. Family games are now the most popular type of game sold at retail in Australia; according to NDP Group Australia point of sale data, this category accounted for 19 per cent of all retail game sales in 2010.[7]

Similarly, mobile and tablet devices, with their intuitive touch screen controls and a straightforward marketplace from the likes of iTunes as well as the availability of inexpensive and free titles, have added to the broader appeal of games.

Many of the most popular titles for these devices employ relatively simple graphics and gameplay that features puzzles, physics and strategic elements. There is, however, a market for more visually sophisticated, narrative-driven interactive entertainment for mobile devices, especially for tablets. Examples include interactive electronic books as well as console titles adapted for mobile use.

The penetration of smartphones in the Australian market is forecast to increase from 46 per cent in 2011 to 82 per cent in 2015 and tablet penetration will increase from 8.5 per cent to 33 per cent over the same period.[8]

The introduction of games to popular social networks such as Facebook has created another area of growth. These 'social games' feature asynchronous interactivity across multiple players. Popular genres include role-playing titles such as *The Sims* and property management games such as *Farmville*.

The wide variety of browser-based games played online includes virtual worlds for children such as Disney's *Club Penguin*, MMOGs such as the role-playing and combat fantasy *World of Warcraft,* and single-player browser-based games.

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7. Interactive Game and Entertainment Association, 2011, *Digital Australia 2012.*

8. PricewaterhouseCoopers, 2011, *Australian Entertainment and Media Outlook 2011–2015.*

Developed by **Tin Man Games**, *Gamebook Adventures* is a series of interactive electronic books which feature text-based narratives as well as gameplay elements. The series was cited by *The Guardian* as an outstanding example of the interactive fiction genre for its elegant illustrations and well-written narrative.
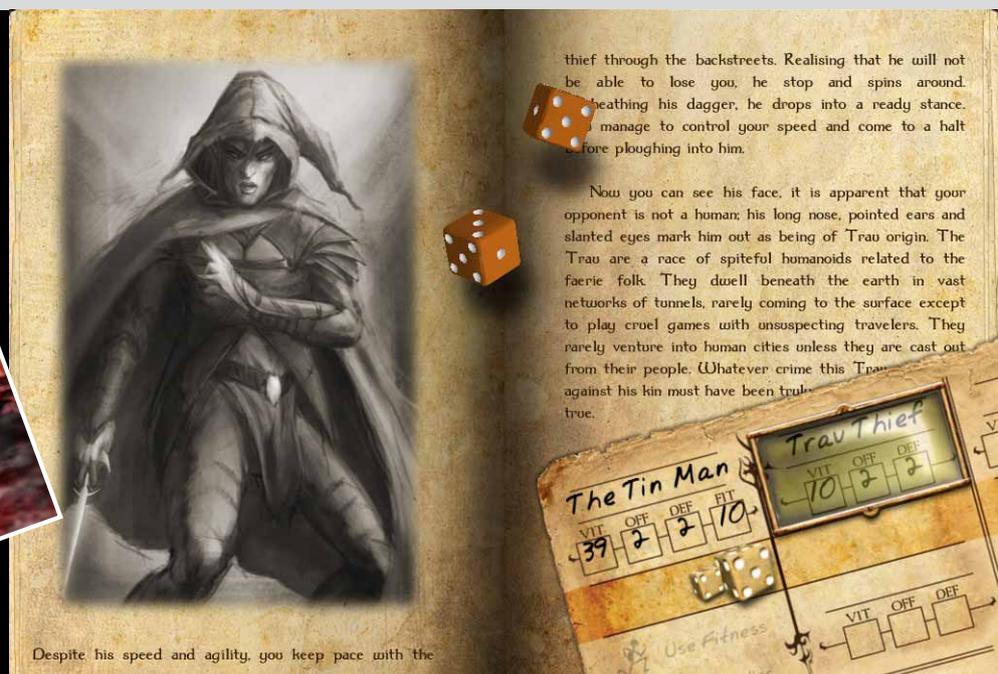
Online games cater to a wide variety of audiences; however, children in particular have a high propensity for playing them. Information about children's use of information technology compiled by the ABS reveals that playing online games was the second most popular use of the internet, increasing from 51 per cent of all children who accessed the internet at home in 2006, to more than 69 per cent of children in 2009.[9]

The emergence of connected televisions and connected living room devices will further propel participation in interactive entertainment. Connected televisions and living room devices have created new methods of distribution with Smart TV and Apple TV allowing direct access to digitally distributed content without the need for a PC or gaming console.

These technological developments, along with improved bandwidth from the introduction of high-speed broadband infrastructure, will facilitate further growth in digitally distributed games, and allow a penetration of cloud gaming services into the Australian market. Cloud services differ from traditional browser-based services as the games are generally more complex with larger environments and can be played on a wide range of hardware types.

In terms of consumer spending, the global interactive entertainment industry is forecast to be the fastest growing entertainment and media sector, expanding from $64.8 billion in revenues in 2010 to $90.1 billion in 2015.[10]

In Australia the market is expected to grow at a compound annual growth rate of 9.5 per cent to reach $2.5 billion in 2015. This is in large part due to the exponential growth of online distribution of games.[11] The physical retail console and PC market is expected to pick up over the next five years after falling in 2009 and 2010, expanding globally at a growth rate of 3.7 per cent. The growth will be driven by the release of the next generation of console hardware.

Technological developments, along with improved bandwidth from the introduction of high-speed broadband infrastructure, will facilitate further growth in digitally distributed games, as well as allowing the penetration of cloud gaming services.

9. Australian Bureau of Statistics, June 2011, *Australian Social Trends: Children of the Digital Revolution* (cat no. 4102.0).
10. PricewaterhouseCoopers, 2011, *Australian Entertainment and Media Outlook 2011–2015.*
11. The online segment includes revenue from downloadable console and PC games.

Little Space Heroes, developed by Sydney-based **Bubble Gum Interactive**, is an upcoming virtual world for children. It features an overarching narrative as well as mini-games, missions and opportunities for social interaction between players. *Little Space Heroes* aims to compete with the likes of *Club Penguin*, which has over 150 million registered users worldwide.

INDUSTRY PRESSURE POINTS

The threats confronting the Australian industry fall broadly into two interrelated areas: falling foreign investment and talent being driven offshore.

FALLING FOREIGN INVESTMENT

The fall in publisher investment in local console development over the past three years is a direct impact of the contracting retail market for physical console games.

Publishers have been commissioning fewer console titles and focusing their resources on blockbuster titles of their established intellectual property, trimming medium-budget games and licensed titles from their portfolios. This has had an impact on local developers as work on licensed console titles like movie tie-in games has historically been one of the Australian industry's strengths.

Exacerbating this trend is fact that the current generation of consoles are in a maturing phase. The console market is cyclical with development and retail activity stimulated by the release of new 'generations' of hardware. This has resulted in a contraction in sales in the last few years, in part due to a large second hand market. The current generation of consoles, which commenced with the launch of Xbox 360 in 2005, is predicted to be replaced in 2012–2014.

Furthermore, the impact of the global financial crisis on consumer spending in the US and Europe has meant that consumers are not buying as many physical console and PC titles, preferring to purchase fewer high-quality titles.

The contraction of the retail market for physical console games, combined with rising development costs, has forced console development to low-cost territories in order to improve profit margins. In order to reduce development costs, publishers are relocating studios to territories that offer tax incentives or territories with low labour costs such as China, India and Russia.

As a fee-for-service location, Australia is no longer considered cost competitive due to the strong Australian dollar, which has risen steadily against the US dollar from the late 1990s to 2011, with severe impacts on the local industry. Between 1999 and 2002 the average value of the AUD was 57 US cents, this has risen to an average value of 97 US cents between 2010 and October 2011.[12]

Nor are there tax incentives in place to offset this rise. Quebec, British Columbia and Ontario are notable examples of territories that offer competitive tax incentives – refundable tax credits ranging from 17.5 to 37.5 per cent on labour expenditure.

As a result of the tax incentives and the subsequent presence of publisher-owned subsidiaries, Canada is now home to the third-largest game industry in terms of employment,

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12. Reserve Bank of Australia, *Exchange Rate Data, Daily Data 1999–2002, Daily Data 2010–2011*, (http://www.rba.gov.au/statistics/hist-exchange-rates/index.html).

Siegecraft was developed by Sydney-based developer **Blowfish Studios** and released by independent publisher **Crescent Moon Games**. It reached the top of the Strategy game charts for iPad and iPhone in 39 countries.

overtaking the UK in 2010.[13] Louisiana, which has recently enhanced its tax incentive structure to a 35 per cent tax credit on labour expenditure and a 25 per cent tax credit on other development expenditure, is also experiencing an increase in publisher investment in the state. [14]

KEY TAX INCENTIVES IN SELECTED TERRITORIES	
Quebec	30% refundable tax credit of qualifying labour expenditure Additional 7.5% for inclusion of French language versioning A maximum 26.25% refundable tax credit of labour expenditure for projects developed under a fee-for-service arrangement.
British Columbia	17.5% refundable tax credit of qualifying labour expenditure
Ontario	40% refundable tax credit of qualifying labour expenditure and eligible marketing and distribution expenses 35% refundable tax credit of labour expenditure for projects developed under a fee-for-service arrangement
France	20% refundable tax credit on production expenditure subject to passing a cultural significance test
Louisiana	35% refundable tax credit on labour expenditure 25% tax credit on all direct support costs
Texas	15% refundable tax incentive on production expenditure Additional 2.5% offered for projects that complete 25% of their production in an underutilised area of Texas
Florida	20% refundable tax credit on production expenditure Additional 5% for 'family friendly' titles Additional 5% for production expenditure in an underutilised region

Alternator character
Courtesy:
Alternator Pty Ltd

13. Entertainment Software Association of Canada, 2011, *Canada's Entertainment Software Industry in 2011*.
14. Baxter, CL, 2011, *Fiscal and Economic Impact Analysis of Louisiana's Entertainment Incentives* (http://www.louisianaentertainment.gov/images/louisiana_entertainment_2011_economic_impact_analysis.pdf).

Siegecraft

"The major hurdle facing the industry is the move from work-for-hire on noted franchises to the creation of original IP and self-publishing. This is a major shift in the design process and one that is a lot harder than often credited."
— *Mark Fludder, Information Industries Bureau (Queensland)*

Like other forms of screen content, games produced for the Australian market tend to be riskier investments for publishers given the population size, a notable exception being console games based on local football codes. Because of this, most local developers are primarily export focussed and with the contraction in foreign investment there are now even less opportunities to raise funds for original projects.

TALENT BEING DRIVEN OFFSHORE

The influx of foreign investment into the local industry in the 2000s resulted in the industry acquiring a talent pool of highly skilled and experienced workers. Console development requires a combination of high-level creative, technical and management skills, which are transferable to other types of interactive digital media.

However, the local talent pool has been severely diminished as a consequence of recent studio closures, which resulted in the loss of hundreds of jobs. As the local industry is too small to absorb the employees from

defunct studios, many of them of are moving overseas.

Jason Stark, the artistic director of KMM Games' Brisbane studio, which ceased operation in October this year, estimates that 90 per cent of local developers move overseas when a studio closes. [15] This phenomenon has been confirmed by other published commentary on the local industry and anecdotal reports.[16] The industry is also struggling to retain talent emerging from tertiary education.

Without a critical mass of talent and experience, the industry will not be able to rebuild in the future, even with the return of favourable conditions such as a weaker Australian dollar and the forecast upturn in physical retail sales over the next five years.[17]

15. Jason Stark interviewed by Daniel Miller, 2011, *Australian Game Studios Face Obliteration*, ABC News (www.abc.net.au/news/2011-10-17/australian-game-dev-studios-shutting-down/3575196).
16. Serrels, M, 2011, *The Prodigal Son: One Developer's Journey from THQ Studio Australia to Montreal*, Kotaku Australia, (http://www.kotaku.com.au/2011/10/the-prodigal-son-one-developers-journey-from-thq-studio-australia-to-montreal).
17. PricewaterhouseCoopers, 2011, *Australian Media and Entertainment Outlook 2011–2015*.

The loss of the skills and experience initially expanded through console game development will have a detrimental impact on other sectors of the interactive entertainment development industry which have benefited from these skills. The local industry has been well positioned to take advantage of digital distribution platforms because of the skills development and training facilitated by local console development activity in the 2000s. For example, Halfbrick developed licensed handheld console titles for international publishers for eight years before releasing their breakthrough hit *Fruit Ninja.*

Brisbane-based games company, **Halfbrick Studios**, has moved from developing licensed games for medium-budget console games, into creating original IP for mobile and digital distribution. Halfbrick is best known for *Fruit Ninja*, which was created for iPhone and iPad but has recently been released as *Fruit Ninja Kinect* via Xbox Live Arcade and *Fruit Ninja Frenzy* on Facebook.
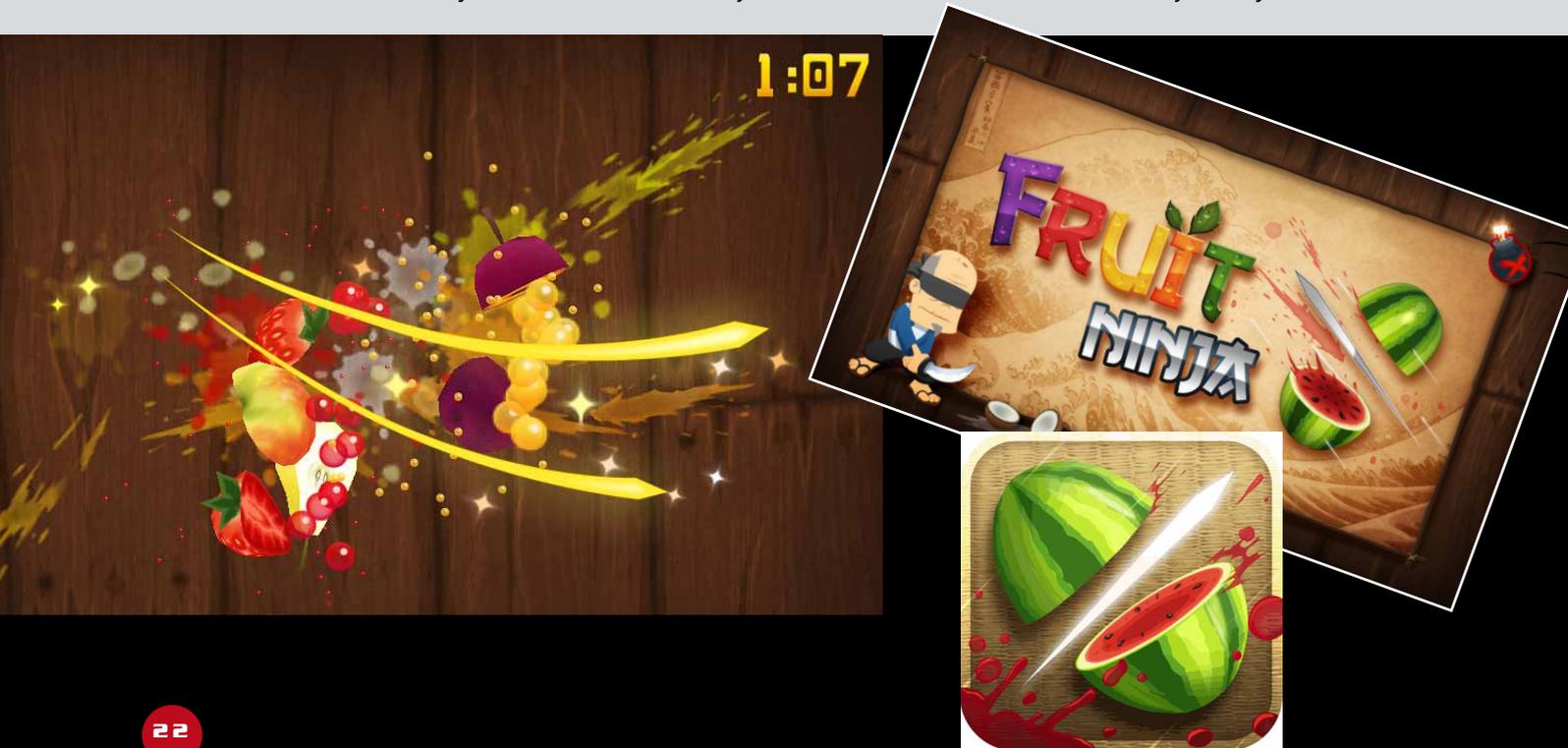
Options to support sustainability

Achieving a healthy balance of fee-for-service work and the creation of original content is critical to a more sustainable industry. Australian interactive entertainment developers have the talent, skills and desire to create original content, including for the local market, but there has been some reluctance to invest in such content because of the relatively high financial risk involved. Enhanced government support would mitigate this risk and assist developers to retain intellectual property at the same time as attracting private investment.

Building on current initiatives, two new options are proposed: an **Interactive Entertainment (Games) Offset** providing indirect support through the taxation system, and direct support through an **Online Production Fund**.

Support which helps developers retain intellectual property would lead to a greater volume of interactive entertainment based on Australian artistic expression and development under local creative control. This in turn would augment the interactive entertainment industry's contribution to the broader cultural objectives of the screen sector.

In such a scenario, companies involved in console game development would still be able to attract fee-for-service work as well as ready their skills base in preparation for an upturn in the console market when new hardware is released in the next few years. Furthermore, these companies, plus an array of specialist developers, would have an incentive to explore new digital distribution alternatives with games of a smaller scale.

Australia is already a leader in the development of interactive content for mobile and tablet devices, with the likes of *Fruit Ninja*, *Flight Control* and *Spy Mouse* each achieving millions of downloads. Leadership at a national level, supported by initiatives from state and territory governments, has the ability to assist game developers to build upon this success.

CURRENT GOVERNMENT SUPPORT

Federal and state governments provide a range of specialised support services currently utilised by the interactive entertainment industry. These services, which will continue to be vitally important in the future, are currently available through:

- Department of Innovation, Industry, Science and Research
- Austrade
- state governments and state screen agencies
- Screen Australia

ABS data shows that government funding contributed $1.7 million, or 1.2 per cent of the total income of digital games development businesses in 2006/07.[18]

DEPARTMENT OF INNOVATION, INDUSTRY, SCIENCE AND RESEARCH (DIISR)

Interactive entertainment development businesses can access a number of the key programs and services offered by the Department of Innovation, Industry, Science and Research. These programs and services aim to support businesses to commercialise new ideas and technologies and embrace innovation as the pathway to greater competitiveness.

18. Australian Bureau of Statistics, *Digital Game Development Services Australia 2006/07* (cat. no. 8515.0).

R&D incentives

The leading incentive for the interactive entertainment industry is the R&D Tax Incentive. Game developers stand to benefit from the recently introduced Research and Development (R&D) Tax Credit. R&D is a fundamental aspect of game development, especially for companies that develop engine-level technology. The R&D tax incentive program consists of two tiers:

- For companies with a turnover of less than $20 million, the program offers a 45 per cent refundable R&D tax offset. This is equivalent to a 15 cents in the dollar benefit, with a refund of up to 45 cents in the dollar if the company has a tax loss.
- For companies with a turnover of more than $20 million, the program offers a 40 per cent non-refundable R&D tax offset. This is equivalent to a 10 cents in the dollar benefit.[19]

The proportion of a game development budget spent on R&D might range from 10 per cent to over 50 per cent.[20]

While the R&D Tax Incentive is beneficial to local developers, its appeal to international publishers is limited due to uncertainty surrounding what proportion of expenditure will qualify as R&D for the purpose of the incentive.[21]

Other grants and services

Commercialisation Australia:

- **Skills and Knowledge** grants of up to $50,000 to access specialist advice and services
- **Experienced Executives** funding of up to $200,000 to engage a CEO or other senior executive
- **Proof of Concept** grants between $50,000 and $250,000 to prove the commercial viability of new IP
- **Early Stage Commercialisation** repayable grants from $250,000 to $2 million to take a new product, service or process to market.

19. PricewaterhouseCoopers, 2011, *New R&D Tax Incentive Program* (http://www.pwc.com.au/tax/assets/R&D-Alert-24Aug11.pdf).
20. Screen Australia interviews with international publishers and local developers.
21. Screen Australia interviews with international publishers.

Enterprise Connect – Creative Industries Innovation Centre:

- **Business Review**: Comprehensive Business Review for companies which meet the eligibility criteria and turnover at least $1 million per annum
- **Tailored Advisory Service**: Matching funding of up to $20 000 to implement changes identified through the Business Review
- **Researchers in Business**: Matching funding initiative providing up to $50 000 for small- and medium-sized firms to engage a researcher to help develop new ideas with commercial potential.

Cooperative Research Centres Program – Australasian Centre for Interaction Design 2003–2010:

- Collaboration between start-ups, small- and medium-sized enterprises (SMEs), industry partners and university researchers including game developer Auran and Qantm College
- Commercial outcomes from intellectual property generated within research projects were shared with core and supporting participants, kick-starting opportunities for more rapid commercialisation and technology transfer.

AUSTRADE

Developers can access Export Market Development Grants from Austrade. This scheme assists small and medium exporters to seek out and develop export markets by partially reimbursing their expenditure on export promotion, such as travel and sample costs.

STATE GOVERNMENT AND STATE SCREEN AGENCIES

There are a variety of initiatives that support interactive entertainment companies with state governments and local screen agency programs. These include a wide range of enterprise assistance as well as some specially targeted funds.

The Queensland Government supports the local industry through Queensland Games, a promotional collaboration between various game industry stakeholders, and Brisbane Marketing's Investment Attraction Division.

The Victorian Government supports the industry through Film Victoria and Multimedia Victoria. Film Victoria provides direct project funding while Multimedia Victoria initiatives include funding the Game Developers' Association of Australia, funding Deakin University's motion capture studio and assisting game development companies to attend key overseas game shows.

The NSW Government provides direct project funding and enterprise funding through the Interactive Media Initiative, which was launched in 2011.

SCREEN AUSTRALIA

Since its formation in 2008, Screen Australia has provided direct project funding to interactive entertainment projects through the *Innovation Program* and its successor the *All Media Fund*.

The *All Media Fund* has a $3–5 million allocation for 2011/12. Projects can receive up to $200,000 in production funding through the program. The program supports narrative content in both linear and non-linear forms, including games, that pushes the envelope of creative storytelling.

Screen Australia has also provided development funding for five projects and production funding for one project through a one-off collaboration with the ABC, *Serious Games Initiative.*

FUTURE SUPPORT

Tax incentives have worked well for the film and television industry. As at 30 June 2011, there have been 326 final Producer Offset certificates issued for drama and documentary projects with total budgets of $1.46 billion.

The policy intent behind the Producer Offset was to 'help the film and television industry to become more competitive and responsive to audiences, and will be a major incentive for projects with significant commercial potential… The [Offset] provides a substantial opportunity for

Broader impacts of the interactive entertainment industry

Interactive entertainment skills and technology have had an impact on other key industries such as defence, mining and health. Ensuring that the game development industry grows, diversifies and drives technological innovations is vital to transferring game development skills to these industries.

An example of game development skills driving innovation in another industry is Neuroscience Research Australia's research into using Kinect, iPad and Wii games for health outcomes such as stroke rehabilitation and strengthening postural stability in older people. Neuroscience Research Australia's Stuart Smith and Penelope McNulty worked with local developer Halfbrick to create a modified version of their game *Fruit Ninja* to use with stroke rehabilitation patients.[*]

Another example is Newcastle-based Bohemia Interactive Simulations, who use video game technology to create virtual environments for use in simulated defence training used by the Australian Defence Force.

Local company Immersive Technologies is a world leader in using gaming technology to simulate heavy equipment in a virtual world, which is used by the mining industry to train its operators.

Furthermore, technologies driven by the development of interactive entertainment, such as 3D modelling, artificial intelligence, and the natural user interface, are all utilised in health and military fields among others.

These indirect benefits derived from the screen sector must be taken into account when considering the public cost of supporting cultural products and services.

[*] Gambotto-Burke, A, 2011. *Hi-Tech Stimuli Help to Dull the Pain, The Australian*, August 13 (www.theaustralian.com.au/news/health-science/hi-tech-stimuli-help-to-dull-the-pain/story-e6frg8y6-1226113730661).

Alternator is an online racing game funded through Screen Australia and ABC's Serious Games Initiative. Set in a world experiencing harsh climate change, players invent new clean energy technologies to modify their cars and race to prove their prowess.

producers to retain significant equity in their productions and build stable and sustainable production companies, both important for the long term growth of the film industry.'[22]

The key aims for the Producer Offset were:

• dramatically increased production
• increased equity for filmmakers
• creation of sustainable businesses
• increased private investment.

These aims equally apply to the interactive entertainment industry where a lack of local sources of finance has meant many studios, particularly those focused on console software, have been unable to develop original intellectual property. They have instead had to rely on fee-for-service work or relinquish their intellectual property to publishers in return for project funding. This leaves the industry vulnerable to external factors such as the strength of the Australian dollar, and also inhibits the creative potential of the industry.

Unlike the film and television industry where most productions are typically financed by multiple partners, interactive entertainment projects are financed primarily through publishers. Due to the high level of risk, large budgets and long development timeframes, local console game developers have generally been unable to access private finance.

Government support does, however, make the industry a more attractive proposition to private investors. While there are direct funding programs currently available to the interactive entertainment industry, these are generally directed at titles for digital distribution, which are less expensive to produce, and do not benefit large-budget interactive entertainment.

Enhanced support from government would be a catalyst for foreign investment, as well as provide an opportunity to better foster the creation of interactive entertainment that is culturally relevant to Australian audiences. It would assist in building sustainable businesses, bringing back

Australian talent and bolstering not just the creative industries but also other industries that seek to take advantage of interactive entertainment skills and technology.

This support would see greater levels of interactive entertainment developed under Australian creative control at the same time as the market for interactive entertainment is burgeoning both domestically and internationally.

As *Digital Australia 2012* and Screen Australia's *Beyond the Box Office* show, a large number of Australians already participate in a wide variety of interactive entertainment. The roll out of high-speed broadband infrastructure combined with the uptake of new gaming hardware platforms will further establish interactive entertainment as a significant part of Australians' engagement with screen content.

22. Sen the Hon Helen Coonan and Sen the Hon George Brandis SC, *New producer incentive for Australian film and television productions*, joint media release, 8 May 2007. The Producer Offset was referred to as the 'Producer Rebate' at announcement.

Asylum: Exit Australia is an online simulation game exploring the issues raised in the SBS series *Go Back to Where You Came From* in an immersive and interactive way. The player takes the role of a member of a persecuted minority attempting to flee a hypothetical Australia riven with internal conflict.

INTERACTIVE ENTERTAINMENT (GAMES) OFFSET:

The **Interactive Entertainment (Games) Offset** would capitalise on the benefits of fast broadband and changing business models. Not only would it enable stand-alone games to benefit from new revenue streams such as micro-transactions, but it would also facilitate a greater intersection with the film and television industry, which would similarly benefit from this socialisation of content.

Supporting new interactive experiences

One component of this initiative could be the introduction of a new offset for stand-alone interactive entertainment projects that are unrelated to linear drama and documentary content. This initiative could support high-cost projects such as traditional console games and massively multiplayer online environments, as well as lower-cost downloadable titles that are emerging across consoles, smartphones, tablets and personal computers.

Levels could be scaled in the following manner:

- 30 per cent tax credit on eligible expenditure with a minimum expenditure threshold of $500,000
- 20 per cent tax credit on eligible expenditure with a minimum expenditure threshold of $200,000.

The 30 per cent tax offset would be aimed at attracting foreign investment in console games and larger-scale digitally distributed games. The rebate would make Australia cost competitive with development locations in Europe, the US and Canada, encouraging publishers to establish or expand existing subsidiaries in Australia.

The 30 per cent offset would also assist independent developers working on console and high-end mobile and social games to retain intellectual property by negotiating a favourable royalty share when approaching publishers for project funding. Furthermore, local developers performing fee-for-service work have the opportunity to reinvest the tax credit in the creation of original intellectual property.

The 20 per cent offset is aimed at smaller businesses working on high-quality games for digital distribution, boosting the local industry's ability to take advantage of opportunities that have come from greater convergence.

Projects accessing this component of the offset would be required to meet an eligibility test. However, unlike the existing Producer Offset for the film and television industry, this test would not place an emphasis on story or setting, but rather consider issues of Australian creative control.

Asylum: Exit Australia has been awarded a Special Commendation for Promoting Multi-cultural Issues by the United Nations Association of Australia, in recognition of its achievement in informing participants about asylum seeker issues.
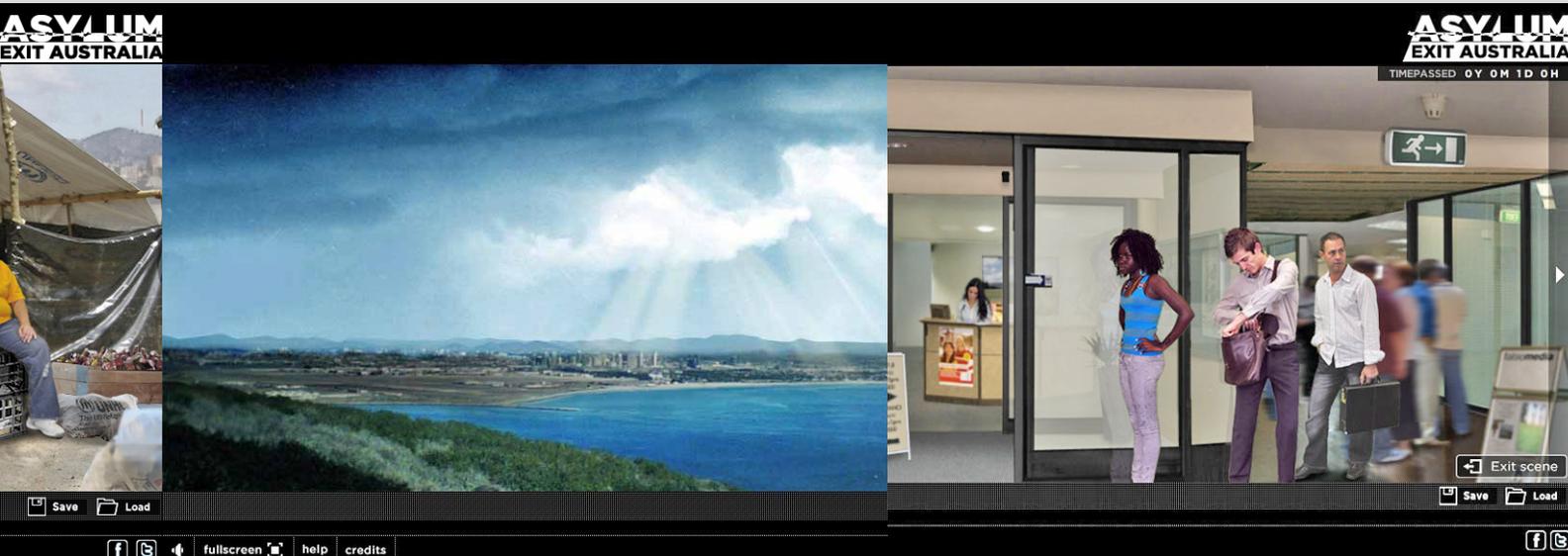
Extending film and television properties

The other component of the Interactive Entertainment (Games) Offset could see the scope of the current Producer Offset broadened to allow for expenditure on interactive entertainment components of otherwise eligible projects to qualify under the rebate.

In this scenario, a film and television production company partnering with an interactive entertainment developer would not need to submit an additional application for a game that extended either the brand or narrative of their drama or documentary project, and therefore would not have to meet any additional eligibility tests.

For eligible projects, the value of the Producer Offset is calculated based on the project's qualifying Australian production expenditure (QAPE). It's worth:

- 40 per cent of QAPE incurred on feature films
- 20 per cent of QAPE incurred on narrative programs other than feature films (television series, mini-series or telemovies, short-form animations, non-theatrical documentary, or direct-to-DVD or web-distributed programming).

For more information about eligibility requirements including minimum levels of QAPE and the Significant Australian Content test, see the Producer Offset section of Screen Australia's website: www.screenaustralia.gov.au/producer_offset/

Local film and television producers have indicated through Screen Australia's interviews that they are enthusiastic about the potential of interactive entertainment, in particular digitally distributed games, to deepen audience engagement with the story universe of their narrative properties and generate new revenue streams. However, local producers cite the difficulty in attracting finance for interactive entertainment extensions as a barrier to engaging in this space.

Many local developers were also enthusiastic about the idea of collaborating with local film and television producers. While they identified only a small proportion of Australian films – animated children's films and large-budget action films in particular – as lending themselves to a console game tie-in for the physical retail market, they saw creative and commercial potential in digitally distributed and online extensions for a variety of films.

Examples of digitally distributed and online interactive extensions of film and television properties include an interactive e-book to accompany the long-running documentary series *Mythbusters*, an online simulation game *Asylum: Exit Australia* to accompany the documentary series *Go Back to Where You Came From* and an iPhone game to accompany the animated series *The Gradual Demise of Phillipa Finch*. Funding for these has come from production companies, developers, Screen Australia and state screen agencies and the public broadcasters.

Supporting the local production of tie-in games as proposed will ultimately offer a way to expand linear storytelling into more dynamic environments, leveraging these drama and documentary stories further by increasing their appeal among new audiences. Interactive entertainment may offer totally new experiences built within the narrative setting of the drama or documentary, or move towards greater transmedia storytelling.

ONLINE PRODUCTION FUND

In its *National Cultural Policy* and *Convergence Review* submissions, Screen Australia proposed the creation of an **Online Production Fund**, which would provide a launching pad for the screen sector to fully embrace the opportunities that fast broadband makes available. It would build on a growing array of projects that have moved into this space, including:

- feature film and television content using a digital distribution strategy
- immersive narrative projects such as interactive documentaries
- browser-based interactive entertainment
- mobile and tablet applications.

The Fund would be targeted to projects that have a story component in which the production company or developer (and any associated first-release broadcaster or distributor) agrees to an exclusive online release window, prior to other distribution points. The Fund would have the capacity to assist a wide range of content, from small-scale projects with limited marketplace attachment that may only ever be distributed online to others that follow traditional financing structures that will ultimately be released in cinema and on television or video.

Ultimately, the objective is that each project needs to explore potential business models, advancing the development of new distribution arrangements for content that are more in keeping with changes in audience expectation and demand. This will lead to a more sustainable screen production industry, delivering an increase in production activity, gross domestic product and employment.

Importantly, it will heighten the cultural impact of screen content through greater audience access and engagement with innovative and original content on emerging platforms. The Fund permits the creation of socialised content – screen stories that people can actively discuss and interact with in ways they are increasingly seeking and demanding. This is of particular significance for younger generations, who will take the accessibility of such content for granted.

For businesses, the Fund would provide an opportunity to test and develop new content and distribution models that harness the unique interactive components offered by the internet.

Economic impacts of the Interactive Entertainment (Games) Offset

Screen Australia has worked with PricewaterhouseCoopers (PwC) to model the economic outcomes of the **Interactive Entertainment (Games) Offset**.

PwC assisted Screen Australia in gathering data from local film and television production companies as well as local and international interactive entertainment developers and publishers. Overseas publishers were interviewed to understand their attitudes to Australian developers and whether their investment behaviour would change in the presence of incentives. Local film producers were interviewed to understand their willingness to extend locally developed film and television properties into interactive entertainment projects.

This modelling indicates that over a five-year period from the introduction of the Offset there would be an additional investment in the interactive entertainment industry of $146 million, of which $100 million would come from foreign sources. This would result in an additional contribution of $76 million to Australia's Gross Domestic Product. Furthermore, 383 new jobs would be created and sustained, which is an increase of around 50 per cent on those currently working on projects with budgets in excess of $200,000.

The total additional investment of $146 million over the five years anticipates a gradual take-up of the Offset. On an annual basis, the additional investment is expected to reach $44.3 million per year, of which $30.3 million would come from foreign sources and $13.9 million from domestic sources.

This analysis of the economic impact associated with interactive entertainment production expenditure employs the Monash Multi-Regional Forecasting (MMRF) model. MMRF is a general equilibrium model, developed by the Centre of Policy Studies (CoPS) at Monash University, to quantify the economy-wide impact of projects or policy changes. In this case, MMRF is used to assess the economy-wide impact of removing the industry from the Australian economy (ie a deprival methodology).

It is important to remember that consumer spending is also on the rise, with double-digit growth forecast for online, mobile and tablet gaming over the next five years.[*]

[*]   PricewaterhouseCoopers, 2011, *Australian Media and Entertainment Outlook: 2011–15.*

Companies interviewed by Screen Australia for this report

Local developers

2K Marin Canberra
3 Blokes Studios
Big Ant Studios
Epiphany Games
Halfbrick
Tantalus Media
Torus Games
Trickstar Games
Sega Studios Australia
Wicked Witch Software

International publishers

Activision
Electronic Arts
Microsoft
Sega
THQ
Ubisoft

Local film and television production companies

Animal Logic
Beyond Entertainment
Flying Bark
Mushroom Pictures
Mystery Clock
Omnilab