Chapter 12

Video games

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The video game market consists of consumer spending on new console games (including handheld games), personal computer (PC) games, online games and mobile or wireless games, as well as video game advertising. The category excludes spending on the hardware and accessories used to play the games. Retail purchases of games are included in either the PC games or console games category. The online games category includes micro-transactions, which are players' purchases of accessories and additional game content that enhance the gaming experience. Online games are often first purchased at retail and then played online. When these games are played online for a subscription fee, the subscription fee is counted in the online games category.

Outlook

… at a glance

Vidoe games total spending (R millions)

2011
1 299

2016
1 771

2012-16 CAGR(%)
6.4

	2011	2016	2011-2016 CAGR (%)
Console/handheld games	777	988	4.9
PC Games	139	102	-6.0
Online games	98	277	23.1
Mobile games	262	366	6.9
Total end-user spending	1 276	1 733	6.3
Advertising	23	38	10.6
Total	**1 299**	**1 771**	**6.4**

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

…in brief

- Smartphones and tablets, aided by an intuitive touch interface and improved graphic capabilities are fast becoming the device of choice for casual game players.
- Increased broadband penetration and the growing digital distribution of content will drive growth in the online game market.
- The growth of microtransactions, together with an increase in social gaming, is providing a boom for the industry and is challenging traditional subscription revenue models.
- The PC games market continues to be challenged as consumers turn their attention to newer technologies.
- Piracy of PC games, which is prevalent in the industry in South Africa, continues to hamper the growth in this segment.
- Online gaming and advertising on social network sites like Facebook is growing rapidly and attracting users who were not traditionally interested in gaming.
- Total spending on video games is projected to grow at a 6.4% compound annual growth rate from R1.3 billion in 2011 to R1.8 billion in 2016.

Overview

The video games market in South Africa grew by a modest 3.8% in 2011 to R1.3 billion, mainly due to lower growth than expected in average prices in the console/handheld games market.

The largest category of video games spending is console/handheld games, representing 60% of the market in 2011. After declining by an estimated 1.5% in 2012, we expect the market to turn around in 2013 and growth to strengthen in the latter part of the forecast period. We expect a jump in 2015 as we anticipate all three next-generation consoles to have entered into the market by that stage.

The mobile market is the second-largest category, representing 20% of the total spending in 2011. Growth has been fuelled by the introduction of new smartphones and tablets that facilitate the playing of games. The mobile market is expected to show the second-strongest growth amongst end-user categories, as more people download games on their phones. This is due to the popularity of these games, the increased penetration of smartphones and tablets into the market and the relatively low cost of these games.

The PC games market declined 12.6% in 2011 as more attention has been focused on other market segments. This market is expected to continue to decline and the decrease would be even larger were it not for the growth of the very popular massively multiplayer online games (MMOGs), which are providing some buoyancy.

Video game market (R millions)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2012-16 CAGR (%)
Console/ handheld games	520	688	791	765	777	765	784	825	918	988	
% change	*207.7*	*32.3*	*15.0*	*-3.3*	*1.6*	*-1.5*	*2.5*	*5.2*	*11.3*	*7.6*	*4.9*
PC games	207	171	171	159	139	131	123	115	108	102	
% change	*115.6*	*-17.4*	*0.0*	*-7.0*	*-12.6*	*-5.8*	*-6.1*	*-6.5*	*-6.1*	*-5.6*	*-6.0*
Online games	25	43	61	78	98	130	168	204	241	277	
% change	*66.7*	*72.0*	*41.9*	*27.9*	*25.6*	*32.7*	*29.2*	*21.4*	*18.1*	*14.9*	*23.1*
Wireless games	126	161	194	229	262	285	312	332	349	366	
% change	*51.8*	*27.8*	*20.5*	*18.0*	*14.4*	*8.8*	*9.5*	*6.4*	*5.1*	*4.9*	*6.9*
Total end-user spending	878	1 063	1 217	1 231	1 276	1 311	1 387	1 476	1 616	1 733	
% change	*141.9*	*21.1*	*14.5*	*1.2*	*3.7*	*2.7*	*5.8*	*6.4*	*9.5*	*7.2*	*6.3*
Advertising	10	15	17	20	23	26	29	32	35	38	
% change	*233.3*	*50.0*	*13.3*	*17.6*	*15.0*	*13.0*	*11.5*	*10.3*	*9.4*	*8.6*	*10.6*
Total video games	**888**	**1 078**	**1 234**	**1 251**	**1 299**	**1 337**	**1 416**	**1 508**	**1 651**	**1 771**	
% change	*142.6*	*21.4*	*14.5*	*1.4*	*3.8*	*2.9*	*5.9*	*6.5*	*9.5*	*7.3*	*6.4*

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

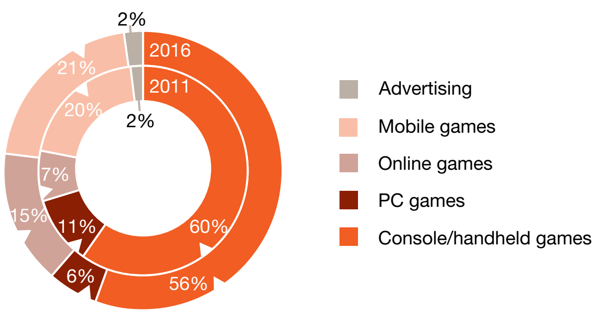
The online games market in South Africa is still relatively small mainly due to low broadband penetration. However, casual games and games on social networks are increasing in importance. MMOGs, which allow thousands of people worldwide to play the same game simultaneously, are also proving to be increasingly popular. The online segment is therefore expected to grow the fastest of any category as broadband penetration continues to increase.

Total end-user spending on video games is projected to grow to R1.7 billion in 2016, a 6.3% compound annual increase from 2011.

The video game advertising market is in its infancy in South Africa, but is growing at a significant rate. The advertising market will continue to grow with the increase in online gaming, which provides additional opportunities for advertising.

The overall video games market is expected to increase to R1.8 billion in 2016, a 6.4% compound annual increase from 2011.

Figure 12.1: Video games – spending and advertising 2011 vs 2016



Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Console games market

Consoles

The current generation of consoles – consisting of the Microsoft Xbox 360, the Nintendo Wii and the Sony Playstation 3 – were introduced in South Africa over the last six years.

A recent trend in the market has been a shift toward integrated entertainment devices, as opposed to gaming-only consoles. Various hardware providers have launched online gaming environments and have explored integrating social media and other entertainment such as access to social networks, film content and other online applications, to create a comprehensive online environment.

The next generation of all major consoles are expected to be released towards the end of the forecast period.

The Xbox 360 was the first of the current generation of consoles to be introduced and sold over 66 million units worldwide by the end of 2011, compared to approximately 50 million units by the end of 2010.

Microsoft Xbox 360

In November 2010, Microsoft introduced Kinect, which uses a specially-designed camera to enable games to detect a player's motions and replicate them on screen, eliminating the need for a controller. Eighteen million Kinects were shipped worldwide in 2011, compared with 8 million a year earlier. In December 2011, X-box released voice-activated search powered by Kinect and Bing.

One of Microsoft's strengths is Xbox Live, an online multiplayer gaming network, social network and media suite. The Xbox Live dashboard was redesigned at the end of 2011, providing more prominent positioning to entertainment options to encourage the perception that the Xbox 360 is an entertainment device that also plays games. The Xbox Live online network is available via a paid subscription (Xbox Live Gold) and a free subscription (Xbox Live Free). The Xbox Live Free online service, which has limited capabilities such as voice chat and some downloadable content, is available at no cost. A paid subscription to the Xbox Live Gold service is required for multiplayer gaming, accessing social networks such as Facebook and Twitter and accessing premium content.

Kinect for Windows was introduced worldwide in February 2012, enabling the device to be used with PCs, thereby integrating the console and PC gaming experience for users. The Windows version works with a variety of applications, enabling other companies to integrate it into their programmes. Microsoft is currently working with many companies such as Toyota, American Express and Mattel on new applications that use the device. Kinect for Windows became available in South Africa in May 2012.

Rumours abound about the next generation Xbox console that many have called the Xbox 720. The device, which has not been announced officially, is expected to include a much faster processor and possibly Blu-ray technology. The device is not likely to be released before the end of 2013. In the interim, there are expectations that Microsoft may introduce an economy version of the Xbox 360, although this is still unconfirmed.

Sony PlayStation 3

Sony has introduced several versions of its PS3 since its initial launch. In 2012, Sony announced that the PlayStation Network is to be rebranded as the Sony Entertainment Network, along with competitive online media options in line with similar offerings from Microsoft. This is a strong indication of a move towards a more integrated entertainment environment.

The PS3 is being marketed as the most technologically advanced home entertainment centre, as well as an outstanding gaming console and includes both a Blu-ray player and DVR capabilities. The PS3 online environment is free to users and allows game developers to control their own environments.

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In addition, other online content such as movies can be downloaded. Sony also offers the PlayStation Network Plus, introduced in 2010, which is an optional paid upgrade to its free online environment that provides free games, discounts and other content.

Sony introduced the Move motion controller in October 2010. It is similar to the Wii controller in that it is waved and can be used in lieu of a gaming instrument such as a sword. Unlike the Wii Remote, however, the Move makes additional use of the PlayStation Eye camera to track the gaming device's position with greater fidelity and enables added game play features such as augmented reality. Augmented reality is a type of virtual reality that combines real and imagined images in real-time.

While there has been a lot of speculation about the next Sony game console, company officials have stated that there will be no new PS4 in 2012 and that they will continue to support the PS3 for several years. It remains to be seen how soon and to what extent the new generation console enhancements will improve the relative gaming experience for Sony.

Nintendo Wii

The Nintendo Wii is marketed mainly as a game machine as opposed to the Sony and Microsoft machines, which are being promoted as media centres for home entertainment. Nintendo has expanded the universe of game players to include younger children, older adults and women, making the Wii the most popular console in the world. This is mainly due to the simplicity of its games and the uniqueness of its controller.

Since its launch, all of Nintendo's major competitors have introduced motion sensitive systems and the Wii has not kept pace technologically. Currently, the Wii is the only major console that does not display in high-definition format. As a result, Nintendo was the first of the major manufacturers to announce the introduction of its next console generation, the Wii U, at the Electronic Entertainment Expo in Los Angeles in June 2011.

The Wii U, which is expected to be released by the end of 2012, will display 1080p high-definition (HD) graphics and will feature a 6.2-inch touchscreen controller that interacts with the television sets but also functions as a monitor for continuous use when the television set is turned off. The device is rumoured to include the ability to act as an e-reader capable of displaying books, magazines, and strategy guides for the company's games.

The device is expected to work with multiple stick-like controllers to enable multiplayer gaming and the company is also developing an applications store. Games for the new device will be available both in physical form at retail stores and as digital downloads. The Wii U is expected to be only slightly technologically superior to its current competitors.

Handheld devices

Combined with interest in the current generation of consoles, the market for portable game consoles continues to show strength. The Nintendo DS is the most popular portable device in South Africa and across the world because of its simplicity, which has broadened its appeal beyond hardcore gamers.

The DS has two screens, providing players with two views of the action, touchscreen capabilities, wireless connectivity and a built-in microphone, which are innovative features in a handheld game console.

The DS has broadened the market, attracting women and older players with its *Touch! Generations* brand of games, which includes a number of games in the *Pokémon* and *Brain Training* franchises, both of which are exclusive to the Nintendo DS.

In March 2011, Nintendo introduced the 3DS, a device that enables users to play games in stereoscopic 3D without the need for special glasses. In addition to playing new games that take advantage of its 3D capabilities, the 3DS is backwardly compatible, enabling all previous DS games to work. In addition, studios are working to bring 3D movies to the device.

Initial sales of the 3DS were disappointing as a result of the limited number of titles, an incomplete online environment at the time of its launch and poor battery life. However, in August 2011, the Core Group, the official distributor of Nintendo products in South Africa, reduced the recommended retail price of the 3DS to almost R1 000 less than its initial launch price.

The worldwide price reduction, combined with the launch of several new titles including *Mario Kart 7* and *Super Mario 3D Land,* catapulted the 3DS to being the top-selling gaming device in the world in 2011. Sales are expected to remain strong in 2012 with the release of several major titles, including *Kid Icarus: Uprising*, *Luigi's Mansion 2* and *Metal Gear Solid: Snake Eater 3D*.

The other major device in the sophisticated portable game market is Sony's PSP (PlayStation Portable). Since its launch in South Africa in 2005, a number of different models have been introduced, including a budget-model called the PSP-E1000, which was introduced in 2011.

Sony introduced the PS Vita, the newest in its line of handheld devices, in South Africa in February 2012. The Vita is a touch-interface motion-sensitive handheld device that is a successor to the PSP and sports HD capabilities and improved graphics, providing a gaming experience approaching that of a PS3. It has a five-inch OLED (organic light-emitting diode) screen running at four times the resolution of the PSP. Some of its titles include Sony's *Uncharted: Golden Abyss* and EA Sports' *FIFA Soccer*. The Vita has a memory card for physical software, as well as the ability to download games and applications from the PlayStation Network (PSN).

Sony Ericsson introduced the Xperia PLAY in South Africa in September 2011. This device is an Android-based smartphone that is the first PlayStation Certified device that is able to support PlayStation games.

Developers are facing the challenge of providing users with a comprehensive gaming experience across various entertainment mediums and devices.

The market for dedicated handheld devices is facing increased competition from the rapidly increasing capabilities of smartphones and tablets. Despite the fact that, on aggregate, the dedicated handheld devices have advantages over smartphones and tablets such as superior game quality and a more controller-like feel, a shrinking number of people are willing to pay the relatively higher price for the games when they are able to purchase much cheaper games for their smartphones.

In general, the overall gaming experience is being enhanced by the linking of different gaming platforms. For example, Xbox Live allows PC gamers to interact with Xbox gamers. Additionally, technology advances are enabling smartphones to act as controllers for some of the consoles, which allows for greater interactivity and gaming versatility. Developers are facing the challenge of providing users with a comprehensive gaming experience across various entertainment mediums and devices.

Software

Activision Blizzard's *Call of Duty: Modern Warfare 3,* which was released for the Xbox 360, PS3, Wii and PC, was the most popular title in South Africa and worldwide in 2011. It was the biggest entertainment launch worldwide in history, surpassing the previous instalment in the franchise, *Call of Duty: Black Ops*, which was the top selling game of 2010. *Call of Duty: Modern Warfare 3* grossed one billion dollars worldwide in its first 16 days, one day sooner than *Avatar,* which was the highest grossing film of all time.

Although it has not been officially announced, Activision Blizzard is expected to continue its pattern of launching major titles at the end of the year to take advantage of holiday sales, with the introduction of the next instalment of the hugely popular *Call of Duty* series. The *Call of Duty* franchise includes five of the top-selling games of all time and the next instalment will likely be one of the biggest games of the year if it follows the pattern of the last few years.

Some popular games such as *Call of Duty: Modern Warfare 3* and *FIFA World Cup 2010* are available for multiple platforms, while others are exclusive to individual consoles. For example, the *Halo* and *Gears of War* series are exclusive to the Xbox 360, whereas the *Mario Bros*. and the *Legend of Zelda* series are exclusive to the Wii.

In general, when a game developer owns the console, its games will be exclusive to that particular console, promoting sales of the console, whereas third-party developers normally make games for multiple platforms to enhance sales of the games. A similar trend has been noted in other markets, such as the publishing market, and it remains to be seen which approach will be more successful in a world moving progressively faster towards an integrated multi-platform media environment.

A number of highly-anticipated games are scheduled to launch in 2012, including *BioShock Infinite*, the follow up to the 2007 first-person shooter *BioShock*; *Grand Theft Auto V*, the latest in the series; and *Mass Effect 3*, the third of the sci-fi trilogy that started in 2007. All of these games will be available on the PS3 and the Xbox 360. *The Last Guardian* is one of the exclusive PS3 titles expected to debut in 2012, while *Halo 4* will likely be a major exclusive title for the Xbox 360.

With the expected introduction of the Wii U at the end of 2012, it is unlikely that there will be many major exclusive titles developed for the Wii this year. One new exclusive Wii game, *Rhythm Heaven Fever,* is the first console title in the music game series, with previous versions available on the Game Boy Advance and DS.

Since the Wii U will have graphics capabilities comparable to those of its competitors, there will be more multi-platform titles available for it than for the Wii, as some publishers were reluctant to port games to a system that did not have the graphic capabilities to display their games to their full potential.

The launch of the Sony PS Vita in February 2012 resulted in the launch of a number of new games, including *Uncharted: Golden Abyss*. Other highly-anticipated games for the Vita scheduled to debut in 2012 include *Call of Duty Vita*, *LittleBigPlanet* and *Street Fighter X Tekken*.

Nintendo has already launched a number of top-rated games for the 3DS in 2012. These include *Resident Evil: Revelations*, which plays just like the console game, allowing fans of *Resident Evil 4* to have an equivalent experience on a console device, and *Kid Icarus: Uprising*. Other 3DS titles to look forward to in 2012 include *Luigi Mansion 2* and *Professor Layton and the Mask of Miracle*.

Games that utilise the features of the new controllers developed by Sony and Microsoft will continue to be introduced and will help buoy the market until the next generation of consoles is introduced toward the end of the forecast period. Until then, we expect only modest increases in game sales. The next generation of consoles with their expanded features will be accompanied by many new games designed to take advantage of those capabilities.

A total of 2.9 million console/handheld games were sold in South Africa in 2011, a 16.0% increase from 2010.

We expect the growth rate to moderate over the next two years as the current generation of consoles continues to age. We then expect the growth rate to pick up in 2014 as we anticipate the introduction of the next generation of consoles. In 2016, an estimated 3.8 million games will be sold, up 5.6% compounded annually from 2011.

Although the average price fell 12.4% in 2011, this was not enough to offset the increase in the number of units sold, resulting in a modest 1.6% increase in spending. This fall in the average price is expected to continue until the launch of the new generation of consoles, which is forecast to boost the average prices of consoles toward the end of the forecast period.

Spending is expected to be relatively flat in 2012 and 2013, but is expected to increase in the latter part of the forecast period as we anticipate that all of the next generation of consoles will have been released into the market by that time.

For the forecast period as a whole, spending will increase from R777 million in 2011 to R988 million in 2016, a 4.9% compound annual increase. However, we do not expect the high growth rates that occurred when the current generation of consoles was introduced because of the increased competition from other gaming platforms.

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Console/handheld game market

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2012-16 CAGR (%)
Unit sales (millions)	1.7	2.0	2.3	2.5	2.9	3.0	3.1	3.3	3.6	3.8	
% change	*240.0*	*17.6*	*15.0*	*8.7*	*16.0*	*3.4*	*3.3*	*6.5*	*9.1*	*5.6*	*5.6*
Average price (R)	306	344	344	306	268	255	253	250	255	260	
% change	*-9.5*	*12.4*	*0.0*	*-11.0*	*-12.4*	*-4.9*	*-0.8*	*-1.2*	*2.0*	*2.0*	*-0.6*
Aggregate spending (R millions)	520	688	791	765	777	765	784	825	918	988	
% change	*207.7*	*32.3*	*15.0*	*-3.3*	*1.6*	*-1.5*	*2.5*	*5.2*	*11.3*	*7.6*	*4.9*

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Top 10 Wii games sold in South Africa (2011)

Rank	Title	Publisher	Units	Value (R)
1	Wii Sports	Nintendo	24 658	3 849 074
2	Wii Sports Resort	Nintendo	10 467	1 837 804
3	2009 Super Mario Bros	Nintendo	6 727	3 362 470
4	Wii Party	Nintendo	5 093	899 709
5	Super Mario Galaxy 2	Nintendo	4 566	1 990 560
6	Wii Fit + Board	Nintendo	4 162	4 644 096
7	Mario Kart + Wheel	Nintendo	3 571	2 037 143
8	Mario Kart	Nintendo	3 172	615 968
9	Wii Fit Plus	Nintendo	2 982	1 832 924
10	Super Mario Galaxy 2 + Console	Nintendo	2 793	555 377

Source: GfK Retail and Technology

Top 10 PS2 games sold in South Africa (2011)

Rank	Title	Publisher	Units	Value (R)
1	FIFA 2009	Electronic Arts	23 498	2 327 155
2	Need for Speed: Undercover	Electronic Arts	23 414	2 483 480
3	FIFA 2011	Electronic Arts	20 865	4 702 542
4	FIFA 2012	Electronic Arts	19 722	5 632 878
5	MX vs. ATV Untamed	THQ	18 582	1 877 172
6	Grand Theft Auto: San Andreas	Take 2	16 387	2 291 098
7	Black Platinum	Electronic Arts	14 310	1 590 693
8	Grand Theft Auto: Vice City	Take 2	14 125	1 631 483
9	God of War 2	Sony	13 801	1 598 872
10	The Sims 2 – Castaway	Electronic Arts	11 888	1 235 379

Source: GfK Retail and Technology

Top 10 PS3 games sold in South Africa (2011)

Rank	Title	Publisher	Units	Value (R)
1	FIFA 2012	Electronic Arts	26 569	14 856 572
2	Gran Turismo 5	Sony	14 409	5 626 506
3	God of War 1 and 2 Collection	Sony	14 092	4 528 656
4	Rugby World Cup 2011	505 Game Street	12 286	6 963 105
5	Call of Duty - Modern Warfare 3	Actiblizz	12 113	7 884 074
6	FIFA 2011	Electronic Arts	11 356	4 302 473
7	Uncharted 2 Among Thieves	Sony	10 901	3 873 204
8	Gran Turismo 5	Sony	10 611	5 921 120
9	Grand Theft Auto 4	Take 2	10 471	2 464 616
10	Call of Duty 4 - Modern Warfare 2	Actiblizz	9 563	2 838 157

Source: GfK Retail and Technology

Top 10 Xbox 360 games sold in South Africa (2011)

Rank	Title	Publisher	Units	Value (R)
1	FIFA 2012	Electronic Arts	10 570	5 959 106
2	Call of Duty - Modern Warfare 3	Actiblizz	8 372	5 495 718
3	Rugby World Cup 2011	505 Game Street	6 716	3 780 669
4	Gears of War 3 + Beta Key/Code	Microsoft	6 659	3 784 610
5	Halo 3	Microsoft	6 198	854 309
6	Call of Duty 4 - Modern Warfare 2	Actiblizz	5 925	1 707 654
7	Need for Speed: Most Wanted	Electronic Arts	5 901	594 423
8	Call of Duty - Black Ops	Actiblizz	5 822	3 111 381
9	FIFA 2011	Electronic Arts	5 150	1 913 136
10	FIFA 2010	Electronic Arts	4 980	1 091 312

Source: GfK Retail and Technology

Top 10 handheld games sold in South Africa (2011)

Rank	Title	Publisher	Units	Value (R)
1	MX vs. ATV Untamed	THQ	16 472	2 222 670
2	Gran Turismo 5 Roadster	Sony	14 960	2 434 739
3	G-Force	Disney Interactive Studios	9 102	1 116 490
4	Cars	Disney Interactive Studios	8 515	860 007
5	Grand Theft Auto: Liberty City	Take 2	8 357	1 108 125
6	TRON: Evolution	Disney Interactive Studios	8 114	1 659 186
7	Toy Story 3	Disney Interactive Studios	7 888	1 526 504
8	FIFA 2012	Electronic Arts	7 730	1 162 746
9	Split Second	Disney Interactive Studios	7 483	824 774
10	Secret Agent Clank	Sony	7 409	764 002

Source: GfK Retail and Technology

PC games

The PC games category comprises only the retail sales of PC games and does not include digital distribution of games, subscriptions to play them online, or microtransactions that take place in those games, all of which are included in the online game category.

The PC games market has been in decline for a number of years since the rise of consoles has shifted the market away from the PC. As a result, there are fewer games being developed for the PC, which is also partially due to piracy issues that plague the PC games market.

Retailers do not make the same effort marketing PC games, providing them less shelf space and often relegating the games to the back of their stores. In addition, the growth of digital distribution by companies like Valve's Steam and Electronic Arts' Origin has made downloading the games directly to the PC an easier alternative to purchasing them through retail.

Although the number of PC gamers is declining, they will not disappear entirely as there are distinct groups of players that are loyal to the platform. For those players who do not want to spend money on expensive consoles, games played on a PC provide an enjoyable alternative.

PC games are generally less expensive than console games due to the fact that they are cheaper to produce. However, at the opposite end of the spectrum, hardcore gamers prefer the advantages provided by the most advanced PCs, with these PCs outperforming all of the current generation of consoles. PCs also offer better graphics than the aging consoles. PCs can be upgraded constantly as opposed to the consoles, whose technology is relatively stable until the next generation is introduced. The high-end graphics processing unit (GPU) from Nvidia is selling well as hardcore gamers upgrade their computers to play games like *Battlefield 3* and *Elder Scrolls: Skyrim*.

PCs provide gamers with a superior method of playing certain game genres such as strategy games and MMOGs, as a keyboard and mouse provide a better means of interacting with the games than a console controller. The growth of MMOGs is aiding the retail PC games market as most MMOGs require a retail purchase of the game, after which the gamer often pays a monthly subscription fee to play the game online. *World of Warcraft* has buoyed the PC game market. The two recent expansion packs – *World of Warcraft: Cataclysm* and *World of Warcraft: Wrath of the Lich King* – have been among the most popular PC games sold in South Africa. The next expansion pack, *World of Warcraft: Mists of Pandaria,* is expected to debut this year.

In addition to *World of Warcraft*, the other major franchise that continues to support PC game sales are the various *Sims* games. *Sims 3,* launched in 2009, is still a major-selling PC game and Electronic Arts keeps the game fresh by releasing expansion packs.

Star Wars: The Old Republic, a major new MMOG, launched in the USA and Europe in December 2011 and quickly became the best selling PC game in those regions. We are still awaiting the launch date in South Africa, where it is also expected to sell very well.

Some games are multi-platform, meaning they are developed for both consoles and PCs to broaden their penetration. A major series in this segment is the various *Call of Duty* games, including the latest one*, Call of Duty 3: Modern Warfare*, which is a major seller in both the PC and console market.

By contrast, there are certain games that are made exclusively for the PC to take advantage of the platform's superior processing power and mouse and keyboard interface. Some major PC exclusives expected to debut in 2012 include *Guild Wars 2* and *Starcraft II: Heart of the Swarm.*

Unit sales in South Africa decreased by 8.8% in 2011 to 930 000. We expect unit sales to continue to decline modestly as digital distribution continues to grow. Unit sales are projected to decline 3.2% on a compound annual basis to 790 000 units in 2016 as consumers continue to migrate to console games. The decline would be greater if it were not for the strength of the MMOG market, which is expected to continue aiding PC game sales.

The average price of a PC game in 2011 was R149, much lower than the R268 price for console games. Prices have decreased during the past five years and we expect modest price decreases to continue through the forecast period, with declines by 2.8% on a compound annual basis to R129 in 2016. Spending will total an estimated R102 million in 2016, a 6.0% compound annual decrease from 2011.

There are certain game types that are better on computers than consoles, like real-time strategy games. You're just able to move things around quicker with a keyboard and mouse … the way controllers are these days, they just haven't caught up yet. And overall, if you have a really nice computer, the graphics are still better than pretty much any other format.

– Consumer, aged 35-59

Source: 'The evolution of video gaming and content consumption', Consumer intelligence series (PwC, 2012)

PC game market

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2012-16 CAGR (%)
Unit sales (millions)	1.14	0.96	0.99	1.02	0.93	0.90	0.87	0.84	0.81	0.79	
% change	*153.3*	*-15.8*	*3.1*	*3.0*	*-8.8*	*-3.2*	*-3.3*	*-3.4*	*-3.6*	*-2.5*	*-3.2*
Average price (R)	182	178	173	156	149	145	141	137	133	129	
% change	*-14.6*	*-2.2*	*-2.8*	*-9.8*	*-4.5*	*-2.7*	*-2.8*	*-2.8*	*-2.9*	*-3.0*	*-2.8*
Aggregate spending (R millions)	207	171	171	159	139	131	123	115	108	102	
% change	*115.6*	*-17.4*	*0.0*	*-7.0*	*-12.6*	*-5.8*	*-6.1*	*-6.5*	*-6.1*	*-5.6*	*-6.0*

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Top 10 PC games sold in South Africa (2011)

Rank	Title	Publisher	Units	Value (R)
1	Call of Duty – Modern Warfare 3	Actiblizz	12 809	5 441 054
2	Battlefield 3	Electronic Arts	11 871	4 441 219
3	The Sims 3	Electronic Arts	11 211	3 209 024
4	Grand Theft Auto: San Andreas	Take 2	9 814	884 537
5	Elder Scrolls 5: Skyrim	Bethesda	8 608	3 189 555
6	Call of Duty: Deluxe Edition	Actiblizz	8 548	490 129
7	The Sims: Generations	Electronic Arts	8 426	2 059 250
8	The Sims 3: Late Night	Electronic Arts	8 203	2 041 600
9	The Sims 3: Pets	Electronic Arts	7 914	1 963 272
10	CSI 3: Dimensions of Murder	Ubisoft	7 897	447 772

Source: GfK Retail and Technology

Online games

The online games platform enables players to download games and game content to compete against other players across the Internet and to play simple games on game websites. The PC platform was historically the only means to play games online and is still the dominant platform for online games, far surpassing the Xbox 360, which is in second place.

Consoles are becoming more important platforms because each of the current generation of consoles supports an online environment. The major console manufacturers – Sony, Microsoft, and Nintendo – have each introduced online marketplaces (PlayStation Network, Xbox Live, and Nintendo Wii Shop, respectively) enabling gamers to purchase games and other content and facilitating competition against other players anywhere in the world via the Internet.

Sony's PlayStation Network is a free environment that provides online gaming, as well as a means to download video and game content. Sony's PlayStation Plus subscription service for the PS3 was introduced in June 2010. With this service, gamers, who pay an annual fee of R489, obtain access to game demos before other players, free game downloads and other perks such as discounts at the PlayStation Store. The original PlayStation Network remains free and continues to add new content.

Build personalised data sets by segment and component.

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Similarly, Microsoft offers two online services: First, the Xbox Silver, recently renamed Xbox Live Free, which provides users free access to download a limited number of game demos and movie trailers. Second, is a Gold membership, which is required for online gaming and access to other services like Facebook.

Although the Xbox 360 was released in South Africa in September 2006, the country was not on the list of supported regions for the Xbox Live platform until November 2010, when Microsoft began offering the localised version of Xbox Live in South Africa. The full price of an annual Gold membership is R599.

Valve Software's Steam service is the dominant company in the market for legally downloading games to the PC. In late 2011, the company achieved a record 5 million concurrent users. Steam has over 1 800 games available to download to its 40 million registered users worldwide.

In June 2011, Steam introduced free-to-play games, including Sega's *Spiral Knights* and Perfect World's *Forsaken Worlds* and has expanded its free library around 20 games, with more to be added in 2012.

In June 2011, Electronic Arts launched Origin, formerly the EA Store, as a competitor to Steam. Origin is similar to Steam in that it is a digital distribution system that enables users to purchase games on the Internet and download them to their PCs or mobile devices. Additionally, Origin has a number of other features, including the saving of games in a cloud, enabling them to be played on different devices and social features such as networking with friends. However, Origin's portfolio of games is much smaller than that of Steam.

Roughly 57% of PC player-dominant respondents play multi-player games online. Multi-player online gamers spend an average of four days per week gaming or three hours per day in this mode.

Source: 'The evolution of video gaming and content consumption', Consumer intelligence series (PwC, 2012)

The Mac App Store, which launched in 2011, has made software (including games) available in a familiar marketplace for Apple iOS users (iPhone, iPod Touch and iPad), although this is currently still only available in limited format for users in South Africa. There are thousands of applications in the store with games representing the largest category. This should help grow the market for Mac games because retail game stores rarely stock them, placing more marketing effort behind games for consoles and PCs.

Digital distribution of content is emerging as an important segment of the online market. In addition to full games, players can also download additional game content to enhance their playing experience. Many game developers are adding downloadable digital content for their games to enhance the gaming experience and as an additional source of revenues. However, in South Africa, relatively low broadband penetration compared to major global markets continues to be a challenge.

Massive multiplayer online games (MMOGs), played by thousands of people simultaneously around the world, are usually role-playing games that take place in medieval or fantasy worlds that continue to evolve and can be played over long periods of time.

Most MMOGs are played on PCs with additional content being delivered over broadband connections. After buying the game at retail stores, subscribers often pay a monthly fee to continue playing the game online. Players also often purchase additional equipment and accessories online to enhance their gaming experience.

World of Warcraft, which was launched in November 2004, is by far the most popular MMOG in the world. The game, which once had 12 million subscribers, has seen its subscriber base decline to approximately 10 million. *World of Warcraft: Mists of Pandaria*, the latest expansion pack for *WoW,* is scheduled to launch in 2012 and is expected to buoy demand for the game.

A major new MMOG with a similar business model, *Star Wars: The Old Republic,* developed by Electronic Arts' Bioware, launched at the end of 2011 and reached one million subscribers in its first month. The game has not yet launched in South Africa and it remains to be seen how successful the game will be as a competitor to *WoW* and if the subscription model still has staying power.

By contrast, a number of other MMOGs, such as *Everquest II, Age of Conan* and *DC Universe Online*, have switched from the traditional business model to a free-to-play model, with microtransactions generating revenues for the publishers. After the switch, the number of players for these games increased dramatically, as did the number of microtransactions. However, not all MMOGs that switch from the subscription model are successful as free games as evidenced by the demise of *Lego Universe* in January 2012, which failed to achieve sufficient revenue after switching.

A number of new MMOGs are being developed, including ArenaNet's *Guild Wars 2,* Sony's *Planetside 2*, and BioWare's *Warhammer Online: Wrath of Heroes*. None of these will use the traditional subscription model and will be free-to-play, with microtransactions providing the revenue stream. Electronic Arts introduced a line of free-to-play online games, including *Battlefield Heroes* and *Need for Speed World,* which have reached 25 million players worldwide.

Words with Friends was described as a way to stay in touch or connect with friends they don't see often or don't talk to often by consumers; many said the game makes them feel like they are still maintaining a relationship with their friend. One consumer said: "The social and media games that I play are only with my Facebook friends and I don't ever see them. So it's my way of keeping connected with them, even though I may never see them all year. I like that." (Consumer, aged 35-59)

Source: 'The evolution of video gaming and content consumption', Consumer intelligence series (PwC, 2012)

Microtransactions are becoming an important source of online revenues. Approximately half of online gamers buy virtual items for online games. Microtransactions allow gamers to buy items that provide them with an advantage in the game or enhance the gaming experience.

The free-to-play business model, with microtransactions providing the revenues, is emerging in South Africa, as in other countries. Combined with the free-to-play business model, microtransactions allow gamers to control the amount they spend on games rather than paying a monthly subscription fee. Subscription models work well with the most popular games, while the free-to-play business model works for smaller games to help them build interest. It remains to be seen which business model will prevail as the most successful in the long term.

Social gaming on sites like Facebook, Myspace and Google+ is growing exponentially. Social games are free, widely available, load in a few seconds and require only a few minutes at a time to play. They use a business model called freemium, whereby the games are provided free, with the developers gaining revenues through microtransactions as well as advertising.

The games grow virally because users can invite their contacts to join them in playing the game. These games are also played by women and by people in older age-groups, thereby opening up opportunities for advertisers and other commercial partners to reach customers not traditionally associated with gaming.

Zynga, the major game developer on Facebook, is credited with introducing the first social game, *Zynga Poker*, in July 2007. Its *CityVille* game became the biggest Facebook game of all time, reaching 100 million users and surpassing the record held by *FarmVille*, another Zynga game.

The majority of social games are played on PCs and, to a lesser extent, on smartphones and tablets. *Words With Friends*, originally developed by Newtoy Inc, which is now part of Zynga, has proved very popular on mobile devices. Zynga continues to develop new games in the series, including *Scramble With Friends.*

Although MMOGs get the most publicity, it is actually the casual gaming segment that attracts more players. This segment is comprised of gamers who go to a website to play simple board or strategy games, often at no charge, with banner advertising surrounding the games providing the requisite revenues.

These casual games, which are simple to learn and do not require extended periods of time to play, have expanded the demographic audience of the gaming industry to include more women and older adults. Games.co.za is the biggest free online gaming website in South Africa, joining well-known sites such as Yahoo Games and MSN's Zone, which also provide an online environment to play free games.

SkillPod Media is a leading South African provider of casual online games, as well as games played on social networks. The company has also developed a platform that enables other developers to deploy casual games quickly onto its game portals.

The relatively slow broadband speeds and low broadband penetration in households has resulted in many gamers frequenting Internet cafés to play games. Additionally, many people attend LAN (local area network) gatherings that attract upwards of a thousand people in one location to participate in multi-player games.

LAN gatherings can extend to several days and afford participants the time to network with each other in addition to playing the latest MMOGs. For example, the *Coca-Cola Dome* in Johannesburg hosts an annual gaming expo *rAge*, which attracts more than 20 000 visitors over three days.

Since most games require a broadband connection to play effectively, the growth of broadband penetration is a major driver of the online game market. The broadband universe in South Africa has almost doubled over the last two years, but penetration remains low at only 870 000 households.

Over the same period, the number of online video game subscribers grew by two-thirds from 65 000 in 2009 to 110 000 in 2011. Spending in 2011 rose 25.6% to R98 million.

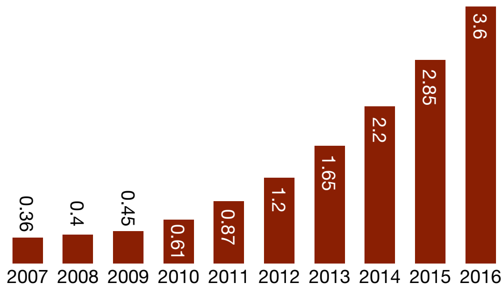
We expect the number of broadband subscribers to quadruple during the next five years to 3.6 million by 2016, a 32.8% compound annual increase from 2011. Line speeds are increasing and uncapped ADSL service is emerging, spurring the demand for broadband.

Online game market

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2012-16 CAGR (%)
Broadband subscribers (millions)	0.36	0.40	0.45	0.61	0.87	1.20	1.65	2.20	2.85	3.60	
% change	*44.0*	*11.1*	*12.5*	*35.6*	*42.6*	*37.9*	*37.5*	*33.3*	*29.5*	*26.3*	*32.8*
Online video game subscribers (millions)	0.025	0.045	0.065	0.085	0.110	0.150	0.200	0.250	0.300	0.350	
% change	*66.7*	*80.0*	*44.4*	*30.8*	*29.4*	*36.4*	*33.3*	*25.0*	*20.0*	*16.7*	*26.0*
Online video game penetration of broadband households (%)	6.9	11.3	14.4	13.9	12.6	12.5	12.1	11.4	10.5	9.7	
Average monthly spending (R)	82	80	78	76	74	72	70	68	67	66	
% change	*-2.4*	*-2.4*	*-2.5*	*-2.6*	*-2.6*	*-2.7*	*-2.8*	*-2.9*	*-1.5*	*-1.5*	*-2.3*
Annual spending (R millions)	25	43	61	78	98	130	168	204	241	277	
% change	*66.7*	*72.0*	*41.9*	*27.9*	*25.6*	*32.7*	*29.2*	*21.4*	*18.1*	*14.9*	*23.1*

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Figure 12.2: Broadband subscribers (millions)



Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

We expect the penetration of online players to decrease from 12.6% in 2011 to 9.7% in 2016 due to the significant projected increase in broadband households. Despite the decrease in penetration levels, we expect the number of online players to more than triple from 110 000 in 2011 to 350 000 in 2016, representing a 26.0% compound annual growth rate.

Aggregate spending on online games is expected to grow from R98 million in 2011 to an estimated R277 million in 2016, a 23.1% compound annual increase.

Mobile games

Mobile games are games played on mobile phones or other mobile devices. Almost all new mobile phones are Internet-enabled and can download games. The increasing sophistication of the new handsets will make for a more enjoyable gaming experience. As people upgrade their existing handsets for newer models, the number of game-capable handsets will increase dramatically.

Historically, mobile games were rather simplistic due to the graphic limitation of the handsets. As a result, the most popular games were single-player board games, word games and puzzles. This trend is changing as AAA titles are being released for these devices. These casual games help widen the demographics of mobile game players. In fact, more than half of mobile gamers in South Africa are women who enjoy playing casual games such as *Tetris* and *Bejeweled*, two of the most commonly downloaded mobile games.

Originally, many handsets came with embedded games, which served as a differentiator to drive sales of individual phones. These games provided enjoyment for users, but did not provide any additional revenues for the operators. With the expansion of Internet-connected phones, operators have seen the potential for additional revenues from downloading games at a modest fee. However, the carriers' download platforms were often not consumer friendly. A number of third-party websites, such as Gameloft, have been established to facilitate the downloading of games.

The introduction of smartphones, including the iPhone and various Android phones, has revolutionised the mobile games market. There are thousands of games on the various application stores that can be downloaded to the handsets. These application stores improve the buying experience dramatically over carriers' decks, with better descriptions and by offering free trials. The application stores also make it easier for game developers to reach a mass audience quickly.

The sophistication of games for the iPhone and iPod Touch has caused many gamers to substitute these devices for their DS and PSP handheld devices.

In 2010, Apple introduced the iPad, a tablet computer that runs all of the iPhone applications, including games. With its enhanced graphic capabilities and its large touchscreen, the iPad is becoming the platform of choice for many gamers.

The introduction of the iPad 2, with an advanced A5 processor chip, which renders graphics much faster than the previous model, further establishes the iPad 2 as a device on which to play games like *Infinity Blade 2* and *Real Racing 2*, which have graphics that rival those of console games.

The latest version, the new iPad with its high-resolution Retina display, was introduced in South Africa in April 2012 and has brought a whole new user experience to gamers.

Although casual games continue to dominate the market, more advanced games that take advantage of the sophistication of the newer smartphones are also being developed. There are even mobile versions of MMOGs being developed for gamers on the go. These games are expected to become more popular as the number of technically-advanced handsets increases.

There are a growing number of mobile gamers, both because of the rising penetration of smartphones and also because the games are significantly cheaper than console games. For many people in South Africa, the cost of a game console or a PC makes them unaffordable, while almost everyone has a mobile phone, making mobile devices the most popular platform on which to play games.

The decline in handset prices and data access fees is also helping to drive the market for mobile gaming.

The business model for mobile games is changing. Originally, the model consisted of one-time payments for the downloading of games. A growing number of games are being offered free with microtransactions and advertising providing the requisite revenues for publishers. *Angry Birds* was a hugely successful game as a paid download, but has now garnered more fans as a free advertiser-supported game. Rovio announced that in March 2012 its coven of *Angry Birds* apps had amassed one billion downloads. By providing games free, publishers are able to expose more people to the mobile gaming experience and it is likely that some of these people will also pay to download games.

With Angry Birds, I find myself starting the game at one time, and I look up and four hours have passed and I'm still playing because I'm trying to accomplish the three stars that you need to get to the next level to complete.

– Consumer, aged 35-59)

Source: 'The evolution of video gaming and content consumption', Consumer intelligence series (PwC, 2012)

With the expected increase in demand for mobile games, new games and access platforms are being released. In 2011, Games.co.za, the largest free online gaming website in South Africa, launched a new mobile games site, m.games.co.za, where players can download their favourite online games free to a smartphone. Also in 2011, Luma Arcade, a major video game developer in South Africa, launched its latest game, *Racer*, for Android devices.

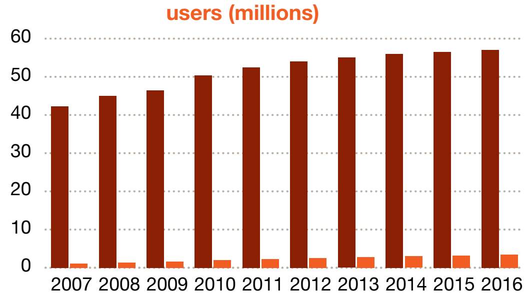
South African mobile service provider, Vodacom, has also created an online gaming application store, where access to online games such as *The Sims, Bejeweled, FIFA* and *Pac-Man*, amongst various others, are available for prices ranging between R20 to R40. This particular type of local service is expected to grow in South Africa due to limited product offerings being available from international stores such as the Apple applications stores.

Zynga, the online game developer famous for its games on Facebook such as *CityVille,* is developing a series of games for mobile devices to expand its user base. It recently introduced its *Scramble with Friends* word game to join *Words with Friends* and *Hanging with Friends* in the mobile segment.

Use of mobile websites is on the rise in South Africa, with more users accessing the Internet from their mobile devices than from computers. Although the majority of cellphone users have played games on their phones, the vast majority did not pay to download games, playing only free games.

In contrast with broadband, mobile penetration in South Africa has reached saturation point, with penetration above 100% in 2011. As a result, the number of subscribers is expected to grow at a modest 1.7% on a compound annual basis through to 2016, reaching 57.0 million from 52.5 million in 2011.

Figure 12.3: Mobile telephone subscribers and mobile gaming users (millions)



Mobile gaming users ■ Mobile telephone subscribers

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Growth of the mobile game market will thus depend more on increased penetration of smartphones and tablets. In 2011, an estimated 4.3% of mobile telephone subscribers paid to download mobile games. We project this share to increase to 6.0% by 2016. We expect the number of people who pay to download games to increase from 2.3 million in 2011 to 3.4 million in 2016, an 8.1% compound annual growth rate.

The average number of paid games downloaded annually will continue to decline as the number of players increases. This is typical with new technologies as the novelty factor decreases. Additionally, the early adopters are more likely to download games as they are the innovators, while those who become subscribers later on are more mainstream and thus likely to download fewer games.

In 2011, the average user downloaded 3.0 games compared with 3.4 in 2007. We expect this figure to continue to trend down as penetration increases. By 2016, the average mobile game user will download 2.5 paid games annually. In general the average number of downloads per user in South Africa is lower than in Western Europe because of the cost, which is relatively high for the average South African.

We expect the average price of mobile games to increase as the games become more sophisticated, with the average price rising from R38 in 2011 to R43 in 2016, a 2.5% increase compounded annually. Spending on mobile games will increase to R366 million by 2016, growing 6.9% compounded annually from the R262 registered in 2011.

Mobile games market

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2012-16 CAGR (%)
Mobile telephone subscribers (millions)	42.3	45	46.44	50.37	52.5	54	55	56	56.5	57	
% change	*6.7*	*6.4*	*3.2*	*8.5*	*4.2*	*2.9*	*1.9*	*1.8*	*0.9*	*0.9*	*1.7*
Percent paying for wireless games (%)	2.5	3	3.5	4	4.3	4.7	5	5.4	5.7	6	
Number of users (millions)	1.1	1.4	1.6	2	2.3	2.5	2.8	3	3.2	3.4	
% change	*57.1*	*27.3*	*14.3*	*25*	*15*	*8.7*	*12*	*7.1*	*6.7*	*6.3*	*8.1*
Annual downloads per user	3.4	3.3	3.2	3.1	3	2.9	2.8	2.7	2.6	2.5	
% change	*-2.9*	*-2.9*	*-3.0*	*-3.1*	*-3.2*	*-3.3*	*-3.4*	*-3.6*	*-3.7*	*-3.8*	*-3.6*
Aggregate number of downloads (millions)	3.7	4.6	5.4	6.2	6.9	7.3	7.8	8.1	8.3	8.5	
% change	*48*	*24.3*	*17.4*	*14.8*	*11.3*	*5.8*	*6.8*	*3.8*	*2.5*	*2.4*	*4.3*
Average price (R)	34	35	36	37	38	39	40	41	42	43	
% change	*3*	*2.9*	*2.9*	*2.8*	*2.7*	*2.6*	*2.6*	*2.5*	*2.4*	*2.4*	*2.5*
Aggregate annual spending (R millions)	126	161	194	229	262	285	312	332	349	366	
% change	*51.8*	*27.8*	*20.5*	*18*	*14.4*	*8.8*	*9.5*	*6.4*	*5.1*	*4.9*	*6.9*

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Top 10 mobile games downloaded in South Africa (2011)

Rank	Title	Genre	Release Year
1	The Sims 3: Ambitions	Simulation	2010
2	FIFA 11	Sport	2010
3	NFS Hot Pursuit	Racer	2010
4	FIFA 10 World Cup South Africa	Sport	2010
5	Pac Man	Action/Adventure	2008
6	Green Farm	Simulation	2011
7	FIFA 12	Sport	2011
8	ICC Cricket World Cup 2011	Sport	2011
9	Fast & Furious 5	Racer	2011
10	Tetris	Puzzle	2006

Source: Aquidneck Consulting

Advertising

Video game advertising provides advertisers with an opportunity to reach a demographic audience that has become increasingly elusive through traditional media. Young adults are spending relatively more time playing games than watching television.

Video games provide a unique level of engagement that is missing in other advertising media and as a result, gamers are generally more focused on what they are doing during gaming sessions than when exposed to other media forms.

A very high percentage of players therefore recall advertisements that they are exposed to during gaming sessions, which would ideally improve the success of such advertising campaigns.

Most mobile gamers (56%) spend 5-15 minutes per gaming session on their mobile device. This is the least amount of time spent gaming on any device – unsurprising, since this device is basically used when consumers are in transit or on the way to doing something else – so they pick up quick intervals of play time.

Source: 'The evolution of video gaming and content consumption', Consumer intelligence series (PwC, 2012)

The video games advertising market is composed of several segments, including static advertising, dynamic advertising, advertising on game portals and advergames.

Static advertising, which is hard-coded into a game when it is developed and cannot be changed later, was the first type of advertising to be implemented in the gaming environment. These advertisements were placed in games to give them a more realistic feeling and included items such as banners at the finish line in an auto racing game; billboards that appeared in the background of sporting events, or product placements in which a character is shown with a branded product. These advertisements have a long life span, essentially, as long as the game is played, and everyone who plays the game will effectively be exposed to the respective advertisement. However, these advertisements have a few shortcomings in that they need to be planned well in advance during the development of the game; once inserted they cannot be changed and the advertiser has no measure of how often the advertisements are seen.

The emergence of online games has enabled dynamic in-game advertising, which allows advertisements to be changed online to reflect changes in the market. For example, a billboard promoting a movie can be updated as new films hit the box office. This effectively provides games with a current feel and allows advertisements to be targeted geographically and to specific demographic groups who identify themselves when they register.

Messages can also be programmed for delivery at specific times of day. Since online games are attached to the Internet, it is possible to track the number of times a gamer is exposed to the advertisement and the amount of time that an advertisement appears on the screen. If a player does not spend enough time with an advertisement, it can be programmed to reappear later in the game.

Advergames are games that are developed specifically to promote brands, products, or organisations and can often be played free on corporate websites. These games are usually simple games that promote products in fun ways. Many different advertisers are experimenting with games to communicate their message.

Some of the most popular advergames in South Africa include *Ace Assault II,* promoting Lego toys, *Kart Fighter,* promoting Red Bull beverages and *Dance Star Party Time,* sponsored by Sony. These games are popular in South Africa and around the world.

Skillpodmedia, a South African company, introduced its Advergame Creator, which helps advertisers create their own custom games to promote their products and includes reports that provide feedback on the success of the campaigns, such as the number of times that a logo is clicked.

A major growth area is advertising that appears around games on social networks. For example, Facebook often places advertisements in the borders around social games.

Advertisers can reward gamers for looking at advertisements by providing them with additional game content free. In this way, the advertisements do not interfere with the game, but rather are a means for the gamer to receive additional content that they would normally pay for. This approach is used for games in which advertising would not be appropriate such as those set in medieval fantasy worlds.

The migration of many MMOGs from a subscription model to a free-to- play model has encouraged the gaming community to embrace advertising as an additional revenue stream. Additionally, the growth of mobile gaming has introduced another platform for advertisers.

Greystripe, the world's leading independent mobile advertising network, is bringing advertising-funded games to the iOS and Android platforms. Many mobile applications have two versions: a paid download and a free advertiser-supported one. *Angry Birds,* which was a hugely popular game as a paid download, gained even more fans when a free version was made available.

In April 2012, Microsoft announced that it was introducing television-style 15-30 second advertisements to a wide range of Xbox Live applications. Microsoft will thus be offering the impact of television advertisements with the interactivity of a digital environment to reach the gaming audience.

Studies have shown that gamers actually appreciate in-game advertising if it does not interfere with game play and provides a more realistic game environment. Gamers develop a positive attitude toward the advertised products and buy more of them. Conversely, if the advertised products are obtrusive and interfere with the gaming experience, the gamers adopt negative attitudes toward those products.

It is therefore very important to place the advertisements in a manner that does not interfere with game play. The effectiveness of the advertisements can be improved by integrating them into the playing of the game. For example, a character may drink a certain brand of soft drink, drive a certain model car, or talk on a specific mobile phone.

Display advertisements, advergames and advertising on web-based game portals are the major segments of the video game advertising market. Dynamic in-game advertising has, however, not grown as quickly as many had anticipated, as indicated by the closing of Massive Inc in 2010, a pioneer in the industry that had been acquired by Microsoft in 2006.

Advertising is still a very small segment of the video games market, comprising only R23 million in 2011. However, we expect advertising revenues to grow by almost two-thirds by 2016, reaching R38 million, a 10.6% compound annual increase.

Video game advertising market

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2012-16 CAGR (%)
Annual spending (R millions)	10	15	17	20	23	26	29	32	35	38	
% change	*233.3*	*50.0*	*13.3*	*17.6*	*15.0*	*13.0*	*11.5*	*10.3*	*9.4*	*8.6*	*10.6*

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

Cloud computing

Cloud computing is a new service, which instead of offering games for purchase and download online, provides an on-demand service that maintains the processing of the games on its servers and enables users to play the games via cloud computing. This levels the playing field for all players regardless of the computer they're playing on, and as a result, gamers using computers with low-end processing capabilities can experience the games in the same way as those using high-end machines, since the actual game processing is taking place on the service providers servers and not on the gamers' hardware.

Games are treated as a service, with the business model being either a subscription or a rental that targets non-traditional demographics, a growing trend in the market. The service is not expected to replace a high-end PC or console for hardcore gamers, but it will add more casual gamers to the market.

Other advantages of the service are that it cuts down on piracy because the games are never actually downloaded and it enables the game developers to update their games more easily. By contrast, game download services provide digital distribution of a game, but require gamers to have powerful computers and significant hard drive capacity to save the games as well as the time to download them.

Once it is fully fledged in the market, cloud computing is expected to have an impact on many segments of the market, including having a negative effect on the retail sales of console games and PC games, while having a positive effect on the subscription-based online game segment.

Since cloud users save game data and history in the cloud, this will make the service stickier. Cloud services will also have a positive impact on advertising because ads can be easily updated.

In South Africa, cloud gaming does face significant challenges such as the fact that cloud gaming services require a server to be placed relatively close to where the gaming activity happens, and as there are not a sufficient number of gamers in South Africa at the moment, we do not expect service providers to install cloud computing servers in South Africa yet.

In spite of increased broadband penetration, South Africa also still has relatively slow Internet connection speeds, which are not conducive to cloud gaming as it requires a high-speed, reliable Internet connection.

Critical legal issues for the video gaming market

Digital gaming businesses deal with the challenges of intellectual property, licensing, user-generated content, free speech and online ownership, both in the virtual and real worlds.

Legal issues include:

- **Censorship:** The Films and Publications Act protects children from exposure to 'disturbing and harmful materials and premature exposure to adult experiences'.

- **Constitutional protection of freedom of expression:** This right protects the media, artistic creativity and the freedom to impart and receive ideas. Restrictions on game developers' freedom of expression must be seen in the light of the limitations provided in Section 16. Speech that constitutes 'incitement of imminent violence; or advocacy of hatred and incitement to cause harm' is not protected.

- **Consumer rights:** Developers and marketers must take note of the provisions of the Consumer Protection Act (CPA) and the Electronic Communications and Transactions Act, particularly regarding consumer rights in respect of marketing to children, subscriptions, giveaways, competitions, and online marketing. The CPA provides redress mechanisms for consumers. Consumer rights include the right to disclosure, equality, privacy, choice, fair and responsible marketing, fair value, quality and safety, and to reasonable terms and conditions.

  In-game advertisers will need to heed the provisions of the CPA, particularly with respect to fair and responsible marketing, promotional competitions and the supply of unsolicited goods and services.

  Developers should be aware that upgrades to products must not interfere with the initial functionality of the purchased product and the consumer's rights to access the product.

- **Copyright infringement:** Both country-specific copyright and patent law and international copyright law under the Berne Convention protect copying and reproducing of subject matter that is protected. Copyright infringements and piracy have long provided challenges to the video gaming industry. Plagiarism in the video gaming industry often goes beyond the taking of ideas to include source code, artwork, narratives, characters, game modifications, sounds and foundational elements.

  Personal copying of a game for which the consumer owns a licence is not allowed. Games are considered as 'cinematograhic films', not software, under South African law. This makes copying for personal use, even under the fair dealing exceptions, an unauthorised act.

- **Electronic communications and transactions:** Any activity that involves unauthorised access and/or modification will be deemed illegal.

- **Parody:** Games that parody celebrities (pop stars, sports stars, politicians) rely on the right to freedom of speech and the use of the celebrity for derivative purposes. Parody arguments will need to be defended against the publicity rights of those depicted.

- **Privacy:** Applications must disclose how they handle personal data. Information gathered from applications downloaded by children is particularly sensitive. Companies must have privacy policies in place that ensure personal information is secure.

- **Terms of use agreements:** Comprehensive terms of use and licensing agreements must provide for multiple distribution channels for games.

- **Trademarks:** Developers are advised to create strong trademarks that can effectively protect their brands. These rights in the virtual world are challenging brand owners to extend their rights to protect 'authentic' digital replicas and to stop unauthorised digital replicas. Physical brands are advertised in the virtual world of Second Life. The rights to virtual products created virtually within Second Life also require protection.

- **Virtual currency:** Game developers increasingly need to consider the financial and legal implications of creating a system of virtual currency that can be redeemed for real currency.

- **Virtual identities:** Players can be held liable for harmful activities conducted by their virtual identities.

Denise Fouché - Technology Legal Advisory Services, PwC

Gaming consumer behaviour

PwC in the United States has an ongoing consumer research programme, through which we gain directional insights on consumer attitudes and behaviours in the rapidly changing media landscape. Recent research focussed on exploring the habits of gamers across several gaming devices and consumers' interest in consuming traditional video content over video game consoles and other gaming distribution methods. The key findings are set out below.

Today's consumers enjoy having an exciting world of interactive entertainment at their fingertips. From playing games online, to becoming heavy users of social games on their tablets and smartphones, gamers now spend more time playing games than streaming movies or television shows to their computer, phone, and game consoles.

Survey and focus group respondents indicated that they spend a relatively even percentage of their gaming time on their computers, smartphones and consoles. They have, however, provided a clear overview of the inherent benefits of playing games on specific devices.

It appears that what consumers want in a gaming experience varies depending on the device:

- **Consoles** are best for when they're playing games at home or online with friends. Consumers treat this as more of a social event and described the experience as 'more theatrical'. More than 70% of console-dominant survey respondents use their console for non-gaming activities 1-7 hours or more per week. This includes streaming movies and TV shows to their game console for an average of about 2 hours per week. Most console-dominant gamers indicated that they spend 60-90 minutes per gaming session.

- **Computers** are best for playing games when consumers want a longer game session, as they are considered to offer more flexibility, better gaming options and better graphics – and for some, yield a better experience. PC player-dominant respondents indicated that they play video games on social sites most often. Most PC-dominant gamers spend 30-60 minutes per gaming session. Roughly 57% of PC player-dominant respondents play multi-player games online, where they typically spend an average of four days per week gaming or three hours per day in this mode.

- **Smartphones** are a convenient way to game, especially when consumers are on the go and want to kill time. They are suitable for anytime and anywhere because consumers always have their phone with them. But gaming on phones is not seen as the best way to enhance 'gamification' and consumers indicated that they are not as willing to spend on mobile gaming as they would be to spend on console or computer gaming. Focus group respondents reiterated the popularity of social games, citing them as the games they play most often on their mobile devices. Roughly 56% of mobile gamers spend 5-15 minutes per gaming session on their mobile device.

- **Tablets** are also good for gaming on the go. They are also considered a better mobile gaming device than a mobile phone – especially when playing longer games, due to the better screen size and aesthetics.

In addition to providing insight into their current behaviours, consumers they have also indicated what they are hoping for in the future:

- Gamers are looking for new experiences with old games. Among both younger and older age groups, there is an interest in experiencing a sense of the 'old-school' games on today's devices.

- Gamers want to play multi-screen games where the experience stays consistent no matter which device is used. Another benefit would be the ability to stop and start a game without consequences (for time-based/asynchronous-play games).

- Gamers are looking for more immersive tablet screens to enhance their gaming experience.

- The idea of streaming video games to their television sets has intrigued most gamers, as they indicated the benefit of increased social game interaction, as well as increased portability and flexibility that would allow gamers to play the coolest, best console-type games on any device, as well as the ability to 'pick up where you left off'.

Impact on businesses in the gaming industry:

- It's all about delivering a consistent experience across platforms for video and video games content. As gaming migrates rapidly from a 'product' to a 'service', offering a superior in-game and across device consumer experience is becoming the primary differentiator.

- Because many consumers use their console for more than just gaming, marketing the diversity of console use may help offset the cost of the investment for the consumer. Consumers are interested in using their consoles to consume video content and using the console as a media hub is therefore an attractive proposition. Additionally, companies can leverage heavy console users to help monetise other forms of content (e.g. video). By extending gaming experiences across multiple platforms, consumers can become engaged in ways that better integrate into their daily lifestyles and workstyles. Doing so provides businesses with more opportunities to monetise their services and enhance brand intimacy.

- Companies may be able to connect with consumers and drive sales by marketing the benefits of accessing and saving games across devices. Games need to be immersive and engaging to keep players' attention. The more immersed they are, the more valuable the experience is – and the more they are willing to pay to continue playing.

- Consumers are interested in and willing to pay for access to a subscription service or gaming library. Marketing should focus on the benefits of extending the optimal console game experience to consumers' televisions, as well as the convenience of not being attached to the console. This provides opportunities for game publishers with large catalogues as well other digital provisioning services that can effectively aggregate compelling game content.

- Because mobile games are perceived to be less valuable compared to other gaming modes, it may be challenging for companies to persuade mobile gamers to spend more than they currently do unless the experience and involvement is elevated.

- Appealing to nostalgia may persuade some consumers to play and spend more. Because many older games are still popular and enjoyed, businesses have an opportunity to drive sales by reformatting those games for today's more technologically advanced devices.

Source: 'The evolution of video gaming and content consumption', Consumer intelligence series (PwC, 2012)

I would like to see where I can play a game on my PC or console and that same experience stays consistent throughout, whichever device I'm on. Now mobile isn't going to have all the games out there that you can do, but there's always these little side adjectives and things that you can do on your phone and that experience would convert over to your game console or on your PC… all that experience or content that you gathered would pour over.

– Consumer, 18-34

Source: 'The evolution of video gaming and content consumption', Consumer intelligence series (PwC, 2012) Gamers are hoping to see more virtual reality capabilities to make the experience more sensory and experiential (such as motion sensors).

Global trends in the video games market

Outlook

- Total global spending on video games will expand from $58.7 billion in 2011 to $83.0 billion in 2016, growing at a 7.2% compound annual rate.

- Global console games, the largest category at $27.5 billion in 2011, will expand at a 2.1% compound annual rate to $30.5 billion in 2016.

- PC games will continue to decline, decreasing at a 1.9% rate compounded annually to $3.1 billion from $3.5 billion in 2011.

- Online games and wireless games will be the fastest-growing end-user categories, with compound annual increases of 13.3% and 10.1%, respectively. Online games will total $31.4 billion in 2016, and wireless games, $14.2 billion.

- Online games will replace console games as the largest gaming category in 2016.

- Video game advertising will increase from $2.2 billion in 2011 to $3.7 billion in 2016, growing by 11.2% compounded annually.

Key drivers

- The shift to online and wireless games will hurt the console game market in the near term. However, new games being marketed for the current generation of consoles – the Wii, Xbox 360 and PlayStation 3 – with improved motion-sensory technology, which changes the game-play experience and brings in a wider range of players, will limit declines.

- The Wii U is the only next-generation console that has been officially announced, but next-generation consoles from other manufacturers are likely to be introduced over the forecast period. These launches will spur sales of games that take advantage of the new technologies, although a dip in sales is to be expected during the generational transition period for static consoles. The latest handheld devices – the Nintendo 3DS and PlayStation Vita, which are primarily gaming consoles – will also continue supporting the market for console/handheld games.

- Deteriorating retail sales of games are hurting retail stores. If this pattern causes some retailers to close, it will further exacerbate the decline in the market for console and PC games.

- Increased broadband penetration, and with it the growing digital distribution of content, will drive the growth of the online market. The migration of many massively multiplayer online games from their subscription models to a free-to-play business model is increasing the number of players worldwide.

- At the same time, the growth of microtransactions is providing a boom for the industry. Casual games and social network games are important components of the online market, helping expand the demographic base and stimulate spending. Some developers are shifting their attention from console games to concentrate more on online games.

- The rising take-up of smartphones and tablets, such as the iPad, with improved graphic capabilities, is enabling developers to produce more-advanced wireless games and will drive demand for those games. Smartphones and tablets, aided by an intuitive-touch interface, are fast becoming the devices of choice for casual game players.

- At the same time, new application stores that make the purchase of games more user-friendly will increase the number of gamers willing to purchase games. The growth of advanced wireless networks, with their faster speeds, will enable wireless games to approach the quality of console games.

- The market for PC games will continue to deteriorate as consumers turn their attention to newer technologies. Piracy of PC games, which is prevalent in certain markets, has also hampered the growth of the segment. The growth of MMOGs, which usually require retail purchase of a PC game, continues to support the retail PC game market.

- Video game advertising is emerging as an additional revenue stream. The growth of social network games and free games is driving an increase in video game advertising.

Global video game market by component (US$ millions)

	2007	2008	2009	2010	2011p	2012	2013	2014	2015	2016	2012-16 CAGR (%)
Console games	26 964	32 006	30 106	28 946	27 493	27 106	26 861	27 703	28 899	30 477	
% change	*28.4*	*18.7*	*-5.9*	*-3.9*	*-5.0*	*-1.4*	*-0.9*	*3.1*	*4.3*	*5.5*	*2.1*
Online games	7 897	10 829	12 921	15 019	16 796	19 475	22 225	25 071	28 176	31 394	
% change	*37.4*	*37.1*	*19.3*	*16.2*	*11.8*	*16.0*	*14.1*	*12.8*	*12.4*	*11.4*	*13.3*
Wireless games	4 176	5 729	6 748	7 815	8 789	9 901	11 008	12 114	13 194	14 249	
% change	*25.1*	*37.2*	*17.8*	*15.8*	*12.5*	*12.7*	*11.2*	*10.0*	*8.9*	*8.0*	*10.1*
PC games	4 346	4 055	3 798	3 777	3 462	3 375	3 312	3 252	3 195	3 141	
% change	*-3.1*	*-6.7*	*-6.3*	*-0.6*	*-8.3*	*-2.5*	*-1.9*	*-1.8*	*-1.8*	*-1.7*	*-1.9*
Total end-user spending	43 383	52 619	53 573	55 557	56 540	59 857	63 406	68 140	73 464	79 261	
% change	*25.5*	*21.3*	*1.8*	*3.7*	*1.8*	*5.9*	*5.9*	*7.5*	*7.8*	*7.9*	*7.0*
Advertising	1 066	1 403	1 628	1 902	2 183	2 492	2 800	3 103	3 414	3 715	
% change	*55.2*	*31.6*	*16.0*	*16.8*	*14.8*	*14.2*	*12.4*	*10.8*	*10.0*	*8.8*	*11.2*
Total	**44 449**	**54 022**	**55 201**	**57 459**	**58 723**	**62 349**	**66 206**	**71 243**	**76 878**	**82 976**	
% change	***26.1***	***21.5***	***2.2***	***4.1***	***2.2***	***6.2***	***6.2***	***7.6***	***7.9***	***7.9***	***7.2***

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates, Global entertainment and media outlook 2012-2016 (PwC, 2012)