

<http://www.gowerpublishing.com/isbn/9780566091674>

Innovation and Marketing in the Video Game Industry

Avoiding the Performance Trap

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Game Development and the Rise of Casual Games

In recent years there has been a transformation in the way people think about games. In the past, gaming was the domain of young males, and game studios devoted considerable resources to titles that appealed almost exclusively to this demographic. Today, as development costs skyrocket and video game companies compete for the same customers, more studios are finding success in markets that traditionally have not been well served by the video game industry. Today's gamers include women, parents, and even senior citizens who enjoy playing puzzle games, arcade games, and sports games. Among 25–34 year olds, women gamers now outnumber men by a considerable margin.

Casual gaming comes in different forms. Some companies are reviving classic arcade games from the 1970s and 1980s that have nostalgic appeal for audiences that grew up during the era of Atari and the NES. Other companies specialize in puzzle games like *Tetris* and *Bejeweled* that are distributed on handheld devices, on Internet websites, or on low-cost CD-ROM packages. And as we saw in an earlier chapter, Nintendo created a new genre of fitness titles by combining simple sports games with its Wiimote controller.

In this chapter we will look at how game development has changed and why the traditional approach to video game marketing is no longer working. Under the new paradigm, large game companies have had to rethink the way they do business. The most successful ones are partnering with small innovative studios, creating tools that help facilitate community-based development, and focusing big-budget resources on their most successful franchises.

As we consider each of these approaches, we will show that development practices need to match the strategic objectives of each company. In the future, there will still be a market for big budget games that appeal mainly to young

men, but as costs skyrocket, companies in that segment need to use their intellectual and financial resources in smarter, more focused, ways.

The Challenge of Complexity

By definition, something that is complex is difficult to understand. The complexity of the advanced graphics engines and processors utilized in the Xbox 360 and PS3 significantly increased the burden on software developers who sought to take advantage of these features. Development cycles stretched from 12 months for the previous generation consoles to up to 36 months for Xbox 360 and PS3 titles. As a result, fewer game developers were willing to stake their future on a single platform, preferring instead to spread their development costs over several platforms. For some developers, there was no other option. "When companies try to create these vast games that consumers really want," explained Shigeru Miyamoto, director and general manager of Nintendo Entertainment Analysis and Development, "they try and use every last bit of technology to create really incredible games" (Jones 2007). Miyamoto, an industry veteran who famously developed the original *Donkey Kong*, *Mario Brothers* and *Zelda* games, believed that "the development cost is going to be so high that they'll never be able to recoup it from sales." Cross-platform licensing was one way to reduce that risk.

Microsoft tried to facilitate development by creating a core set of developer tools, known as XNA, which allowed code to be shared across different Microsoft platforms. As a result, games developed for personal computers, such as *Final Fantasy XI* by Square Enix, could be more easily ported to the Xbox 360. Whereas *Final Fantasy* took about six months to port to the Xbox 360, Square Enix estimated that it could take up to three years and cost several million dollars to completely rewrite the code for the PS3.

In Table 10.1, the average unit game costs have been broken into several categories. Art, design and programming accounted for nearly half of the total retail cost of a next generation video game, while the remainder went to marketing, distribution and retail markup. Increasingly detailed computer-generated graphics and animation, much of which mirrored the special effects work normally associated with Hollywood studios, had the most impact on development costs. Programming costs, which included basic game play, artificial intelligence and online services, also increased.

Table 10.1 Video Game per Unit Cost: Next Generation Console Estimates

Item	Cost (\$)	% of Total Cost
Art and design	15	25
Programming and engineering	12	20
Retail markup	12	20
Console license fee	7	12
Marketing	4	7
Market development fund	3	5
Manufacturing and packaging	3	5
Third-party licensing	3	5
Publisher profit	1	2
Total retail cost	60	100

Source: Forbes 2006.

Retail markup on a \$60 title was about \$12. Of this, *Forbes* estimated a net earnings contribution of only one dollar per title sold by large retailers, such as Best Buy and Wal-Mart (Rosmarin 2006).

The Nintendo Wii, on the other hand, was a much simpler system, which in turn helped reduce development costs. Brian Farrell, CEO of THQ Inc., one of the world's leading game developers, noted:

One of the things we like about the Wii is that development costs are nowhere near what they are on the PS3 and Xbox 360. It wasn't a whole new programming environment. So we had a lot of tools and tech that work in that environment. Costs could be as little as a third of the high-end next-generation titles. Maybe the range is a quarter to a half. (Sinclair 2006)

As a result, Nintendo was able to boast a number of exclusive titles for the launch of the Wii, including highly rated games, such as *Zelda: Twilight Princess* and *WarioWare: Smooth Moves*. It also allowed Nintendo to include its popular *Wii Sports* title free with each console.

The Wii also had its drawbacks. For one, its relatively anemic processors limited the ability of developers to push the limits the way they could with leading edge hardware. Also, the lack of a hard drive made the Wii ill-suited for Internet-based game distribution. Both Microsoft's Xbox Live and Sony's PlayStation Network were significant distribution conduits for add-ons and new games that provided valuable ongoing revenue streams for game publishers.

Build or Buy

Video game development did not always require the creation of completely new software. Frequently, developers built upon existing software systems known as game engines. Game engines provided platforms that developers could reuse for different titles. They included systems for graphics, physics, artificial intelligence, and other functions. Engines provided developers with the tools needed to speed up development and reduce costs. Some studios created their own engines that could be used across multiple titles, while others purchased them from third party studios that specialized in these programs.

Game engines provided a way to limit costs by supplying a software system that provides the core functionality, around which developers build the storyline, artwork, and other frontend features. A well-known example was the Unreal Engine developed by Epic Games in the late 1990s. Unreal provides the game mechanics behind hundreds of first person shooters (FPS) on every major game platform, including best-sellers such as *Gears of War*, *Splinter Cell*, and *Unreal Tournament*. Since game engines could cost as much as \$100 million to develop, it made sense to spread those costs over as many titles as possible. Using a proven engine also limited the risk of unforeseen software problems that could increase development and support costs.

Although the benefits of off-the-shelf game engines are clear, their increased use made it more difficult to distinguish one product from another. Nevertheless, big budget games have failed because of poorly developed engines. When UK developer Free Radical Design created its own artificial intelligence engine for the game *Haze*, it fell so short of expectations that the company was forced into administration (a form of bankruptcy protection). It wasn't that *Haze* was a bad game. It simply didn't measure up to the hundreds of other first-person shooters on the market. "I don't think we'd be in a big rush to build engine technology from the ground up again," noted *Haze* designer David Doak. "It's just a massive expense" (Boyes 2009).

With examples like Free Radical, it is not surprising that developers are shifting resources away from unproven concepts to focus on proven formulas. Four genres—sports, first-person shooters, racing, and crime-based action—already make up approximately three-quarters of all game sales, and their market share continues to grow.

Back to Basics: The Rise of Casual Games

The first games ever to appear on home consoles were casual games. Titles like *Pong*, *Frogger*, and *Pac-Man* could be played for a few minutes or a few hours. They did not require significant time commitments to learn how to play, they did not revolve around complex storylines and plot development, and in most cases they did not require strategic thinking. However, these games were simple for a reason; the hardware they were played on was not powerful enough to support more complex software.

Such simple products are the mainstay of the introductory phase of a product's life cycle, particularly for radical types of innovations. Because such innovations involve emerging technologies aimed at new markets, the introductory form of the product tends to be crude and simple relative to later generations of the product and appeals primarily to innovators and early adopters.

As the technology developed and consoles became more powerful, developers learned to tap into that power to offer more challenging titles. Nintendo was the first company to introduce story-based console games that had to be played through multiple stages. Most of these games followed a similar pattern. A hero sets out on a quest and encounters various enemies along the way. At the end of each level, the player must defeat a much stronger enemy, known as a boss. Each level becomes successively harder until the player reaches a climactic final boss and defeats the game.

This progression is typical of the growth stage of technology products. As more is learned about the technology and how to apply it, more features are added to the product making it more complex, but also providing more benefits. These attributes help to attract more customers who are usually referred to in marketing literature as the "early majority" of the adopter categories.

Over the years, the tried and true formula of multistage story-based games became the mainstay of the video game industry and casual games were relegated to the dustbin. Only on the PC did casual gaming still find an audience with titles like *solitaire* and *minesweeper*, which came included with every copy of the Microsoft Windows operating system. *Solitaire* was a particular favorite of executives who needed to kill time on long flights.

With the rise of the Internet in the late 1990s, more people began to play casual games online. However, it wasn't until the release of the Nintendo DS and Nintendo Wii that the casual gaming segment began to be taken seriously by large game publishers. Today, more companies are shifting resources away from hyper realism and focusing on alternative interfaces (like the Wiimote and Rock Band drum set), simple puzzle games, classic arcade games, and experimental games.

The lower cost of these games means that developers can afford to take greater risks. As a result, many of the most innovative titles are no longer coming from big budget studios, but from small developers who are producing inexpensive casual and party games. "Large developers have a tendency, in order to try to support future development, to make more conservative games and try to essentially find a way to make those games profitable," observed Shigeru Miyamoto. Whereas, independent developers "are able to let their own personality and their own kind of unique interests really flourish in the games that they are creating" (Kohler 2008).

This phenomenon was not unique to the video game industry. Once an industry has matured, major players commonly develop what Dorothy Leonard-Barton (1998) described as "core rigidities".

That is, a firm's strengths are also—simultaneously—its weaknesses. The dimensions that distinguish a company competitively have grown up over time as an accumulation of activities and decisions that focus on one kind of knowledge at the expense of others. Companies, like people, cannot be skillful at everything.

In this case, video game companies have developed competencies in particular genres and styles of gameplay that have become so ingrained that it is difficult to develop new competencies. As a result, new firms, sometimes from outside the industry, become the innovators as they strive to enter new markets. Many of these companies are behind the renaissance in casual gaming. Some revived older gaming styles, while others have introduced radically new ways of playing games.

Casual games appealed to demographic segments not normally viewed as "gamers." According to the Casual Gaming Association, women made up 75 percent of the audience for casual games and more than 72 percent of casual gamers were over the age of 35. However, even core gamers turned to casual

games for respite from the intensity of first-person shooters and time demands of adventure games. In fact, a significant part of their appeal came from the fact that players did not need to invest considerable time and effort to play them. Thus, they were ideal for situations when time was short, such as at train stops, on lunch breaks or between business meetings. And because most casual games did not require significant computing power, they were popular on handheld devices ranging from portable consoles to cell phones and mp3 players. Finally, the wide appeal of casual games made them popular at parties and family gatherings.

Retrogaming: Selling Nostalgia

There were two general categories of casual games: arcade-style games, and experimental games that explored new concepts, interfaces, and stories. The terms “retrogaming” and “old school gaming” usually referred to classic arcade games, such as *Pac-Man*, *Mario Brothers*, and *Tetris*, but could also include older role-playing games (RPG), strategy games, and first-person shooters. Some retrogamers collected obsolete hardware that allowed them to play classic games on the original platforms they were designed for. However, most titles were recompiled to run on modern systems or relied on emulation software.

Retrogamers had various motivations for playing classic games. Parents and older gamers felt nostalgia for the games that they played as children. They wanted to recreate that experience or share it with their children. Marketers of a wide range of goods recognized the importance nostalgia played in consumer purchasing behavior. Companies like Coca-Cola, General Mills, McDonald’s, MillerCoors, Target and Unilever recently revived classic brands or used classic advertisements to appeal to an aging population. Classic products and brands provide consumers with a sense of comfort and security, according to Ric Hendee, marketing VP for Cotton Incorporated. “In a time of anxiety, people are seeking out brands they’re comfortable with and they can trust.”

In *The Past as Future: Nostalgia and Retrogaming in Digital Culture*, Jaakko Suominen (2007) of the University of Turku (Finland) explains that retrogaming has a social importance that helps define collective social experiences.

In addition to the psychological level of an individual, the term contains a strong collective—if not even collectivising—dimension. In media culture, longing for something old is a mutual event, when referred to

such old moments, situations and experiences, which have been shared with friends and family or even with the nation or “the whole world”.

Suominen notes that nostalgia was particularly important to video game marketing in Japan, where video game companies “with the aid of quite clever pastiche and a slightly increased degree of difficulty attract those parents who play games with their children and who have played similar games already in the 80s.”

Retrogaming not only appealed to the nostalgic sensibilities of older gamers. Younger gamers, many of whom were experiencing classic titles for the first time, turned to older titles from franchise games like *Zelda*, *Final Fantasy*, and *Metal Gear Solid* as a way to experience earlier episodes from their favorite stories. Interest in older titles paralleled the behavior of fans of television remakes like *Star Trek* and *Battlestar Galactica* who sought out the original series from decades past. For example, the highly successful reimagining of *Battlestar Galactica* beginning in 2003 resulted in a surge in DVD sales for the classic series from the late 1970s. Younger gamers may also have heard about great classic games from friends, online discussions, or news articles and simply wanted to experience these titles for themselves.

In many cases, classic games appealed to price-conscious gamers. For example, Sega offered 40 of its Genesis titles on a single PS3 or Xbox 360 disk for \$30, Namco offered 8 of its classic titles for the PS2 and DS for \$20, and Atari offered 80 classic games on one PC disk for \$10. On Amazon, these value packages were consistently ranked among the top 10 best sellers for their respective publishers. The PS3 version of the *Sega Genesis Collection*, which featured classic games from the late 1980s and early 1990s, was Sega’s fourth best-selling title on Amazon in May 2009.

Puzzle Games

The leading publisher of casual games was Seattle-based PopCap Games. PopCap was founded in 2000 by three developers who created a web-based puzzle game called *Bejeweled*. It was the height of the dotcom bubble and PopCap licensed its game to Microsoft for \$1,500 per month. Within a few months, the NASDAQ crashed and nobody was investing in Internet companies. PopCap tried to sell *Bejeweled* for \$65,000, but nobody was interested.

At the time, most Internet users still used dial-up telephone lines to connect to the web. *Bejeweled* fans petitioned PopCap for a downloadable version that could be played offline. Company founder John Vehey then realized that he could make more money selling the game directly to consumers than by licensing it to third-party web sites. People could still play these games online for free, but they could also pay a fee to download a copy to their personal computer for offline use. Downloadable games also typically came with “premium” content that was not available in the free version.

In the first month, we made \$35,000, which was amazing for three guys. The next month we made \$35,000. So we went to bigger companies like Yahoo Games and MSN Games. We said we can give you the web version now. We won't charge you that \$1,500 a month anymore. And we asked them to put this downloadable version up. We could share revenues when people purchased the downloadable version. That created a casual games industry that became the start of the business model. (Takahashi 2008)

According to Vehey, what made puzzle games so successful was that they never became outdated. As technology improved, big budget FPS and fantasy games quickly became dated as gamers turned their attention to the next big title. Therefore, the shelf life of these games was often short and publishers expected to make most of their money in the first year or two on the market. After that, all but the most successful big budget titles were relegated to the remainder bins at retailers and discount outlets. Games like *Bejeweled* and *Tetris* never became outdated because they did not depend on leading-edge technology to entice customers.

Once titles could be purchased for offline use, PopCap Games revenue took off. By 2008, the *Bejeweled* franchise sold more copies than leading FPS franchises like *Halo*. Yet the cost to develop casual games was insignificant compared with core gaming titles. Most of PopCap's titles, which in 2009 numbered about 35, cost between \$200,000 and \$1 million to develop.

In 2005, PopCap created its own open-source development kit for Windows XP to encourage programmers to produce casual games. The wide availability of free and inexpensive development kits contributed to an explosion in casual game development by hobbyists. Most part-time developers had limited resources and created games for personal enjoyment rather than financial gain. Given these limitations, it was not surprising that most casual games

were written for PCs, handhelds, and web-based applets, such as Adobe Flash, Shockwave, and Java.

For sites that hosted these games, community-based development was a boon. Advertising supported online gaming sites like Yahoo! Games, Miniclip, and MSN Games had a nearly unlimited ability to host free games, and the steady stream of new content enticed users to repeatedly visit the most proactive of these sites. In 2008, traffic on advertising supported casual games sites increased by 42 percent, while total Internet traffic increased by only 4 percent.

Online Distribution: Opportunities and Challenges

Even as revenue from casual games and console games continued to hit record numbers, sales of traditional CD-ROM based PC games declined for four years in a row. In 2008, despite the popularity of massively multiplayer online role-playing games like *World of Warcraft*, PC game sales declined 21 percent in North America to just over \$700 million.

Game distributors attempted to slow the decline in PC game sales by distributing games online. The most popular of these was Steam, the online distribution arm of Valve Corporation, a major developer of big budget PC games. However, even Steam derived a significant portion of its revenue from casual games. In May 2009, one of Steam's top 10 best-selling titles was a PopCap game called *Plants vs. Zombies*, an arcade style action-strategy game in which players had to use plants to defend their homes from attacking hordes of zombies. *Plants vs. Zombies* could be downloaded as a standalone title from Steam for \$10 or as part of a \$99 PopCap bundle that included 30 casual game titles.

One of the benefits of Internet distributors was their ability to offer online game play. In 2009, Steam registered between 1 million and 2 million concurrent online players of its Internet based games. The main cost was in providing the bandwidth and servers needed to support sudden surges in game play. This could result when new games were released or for special events, such as free gameplay weekends occasionally offered by Steam to promote its service. The popularity of sites like Steam, Xbox Live, and PopCap Games gave independent studios the opportunity for wide exposure, and because these services cut out the retailer, most of the revenue went directly to the developers.

Garry's Mod was an example of an independently developed program sold directly on Steam. *Garry's Mod* was created in 2005 by Garry Newman using Steam's software development kit. It allowed users to manipulate and customize objects for other games offered on Steam. By the end of 2008, *Garry's Mod* posted cumulative revenues of \$3 million of which 60 percent went directly to the developer. However, few independent developers on Steam were as successful as Garry Newman. John Warner, for example, developed a small game titled *Raycatcher*, a music pattern matching game that sold for \$5. "The money we're making off *Raycatcher* doesn't justify working on a project for a long period of time," Warner complained.

I can't support myself on it. Especially when you release a game and it has bugs, and you have to fix them. In a certain sense, when you release something for money, it's almost like you create a liability for yourself.
(Good 2009)

Although the Internet allowed games to be distributed as never before, it also posed new challenges. Chief among them was piracy. On the day it was released, *Raycatcher* sold 1,000 copies on Steam. However, another 35,000 pirated copies were distributed through illegal file-sharing sites. Warner hoped to circumvent pirates by using in-game advertising instead of game purchases to generate revenue. The challenge was finding sponsors to support the game.

For developers like John Warner, the casual game market may not be the profit machine that they had hoped for. As new development tools continue to drive down costs, more casual games will be offered by independent developers and small-game studios. As the market becomes increasingly saturated with amateur titles, better titles can become lost in the noise. Satoru Iwata, president and CEO of Nintendo, was concerned that many of those titles did not represent the best gaming experiences. Instead, low quality games could give casual gamers the wrong impression. "If a person is disappointed by the software he or she has chosen," Iwata explained, "they may say, 'I won't play games anymore.'"

The increase in software titles per se is good, but we cannot be content with the situation. We have to recognize that our customers have a limited amount of attention, we have to struggle to find out a way to communicate what they really want to know and we have to be considerate so that we will not betray our customers' expectations. This

is going to be an increasingly important mission for us. (Nintendo of America 2007)

As casual gaming increased in popularity, Microsoft created a programming kit to encourage casual game development for the Xbox 360 console. The framework, known as XNA, allowed anyone with a PC to create games for the Xbox 360.

In 2008, Microsoft created its own online XNA development community. For a nominal fee, XNA members could submit their work to peer review, and those games that passed scrutiny could then be sold on the Xbox Live marketplace. Microsoft's publishing terms were generous, with 70 percent of any revenue generated going directly to the developer. In addition, no deductions were made for Microsoft-initiated advertising and promotion. In an announcement to community members, Microsoft hailed the success of its developer program.

You have been producing games at an incredible rate. On average, 10 games are added to the channel every week totaling more than 200 unique titles in only four months. This has never been done before on any console, so when we started this program we weren't sure how large the demand would be. In just four short months, you've shown us the incredible growth potential for community-generated content on Xbox 360. (XNA Creators Club 2009)

Microsoft found other ways to tap into the casual gaming phenomenon. For example, it created the Xbox 360 Arcade to specifically appeal to casual gamers by including five arcade titles, *Boom-Boom Rocket*, *Feeding Frenzy*, *Luxor 2*, *Pac-Man Championship Edition*, and *Uno*. Microsoft also offered Xbox Live Arcade (XLA), an online download service integrated into Xbox Live. More than 200 titles were available for purchase on XLA. Prices ranged from \$3 to \$15 per title and included classics, like *Chess* and *Frogger*, and newer titles, like PopCap's *Peggle* and *Bejeweled 2*.

Nintendo realized early on that impressive graphics were not the main selling point of most games. The Wii, for example, had severely limited graphical capabilities, and yet it led the market in console sales consistently year after year. Unlike Sony, which offered a limited number of PS1 and PS2 titles in its online store, Nintendo offered Wii owners the opportunity to play a large number of titles originally designed for previous generation consoles. In

North America, Nintendo made available more than 300 previous-generation titles in its “virtual console” library. Most titles cost between \$5 and \$12 each, and included games originally developed for NEC, Sega, Commodore, and Nintendo consoles.

One constantly complained-about limitation on the Wii was the lack of an internal hard drive. With only 512MB of flash storage, the Wii was ill-suited for downloading and storing games. Owners had to use external memory cards to store more than a few purchased games, and any games stored on external devices had to be moved back to the Wii’s internal memory before they could be played. Purchased games were also restricted to the system that was originally used to download the game. Therefore, a Wii owner could not play downloaded games on a friend’s system. In order to enjoy games while away from home, Wii owners had to take their entire system with them. To make matters worse, saved game data could not be stored on the same external memory card as the game. The combined result of these limitations made playing retro games unnecessarily complicated.

Sony took a less restrictive approach to online purchases. After all, since gamers who purchased titles on Blu-ray disks could play their games on any PS3 system, they should be able to do the same for downloaded titles. At a time when film studios, music labels, and software firms were finding new ways to prevent users from copying and sharing content, Sony encouraged gamers to share their downloaded games with friends. Once purchased, downloaded content could be played on up to five PS3 consoles. In the days leading up to the PS3’s launch in 2006, Jack Tretton, President and CEO of Sony Computer Entertainment of America presented Sony’s liberal file sharing policy as an important selling point. “You can send that content to four other friends for that initial investment. We want to get the game in as many hands as possible” (Kohler 2006).

Sony had its own list of casual games available on the PlayStation Network, including many of the same titles available on Xbox Live Arcade. The PlayStation 3 also had the ability to run PlayStation One titles, but few of the most popular titles were available for download. Nevertheless, fans sought out titles on the secondary market, often driving up prices in the process.

Lunar 2 was one such title. The RPG was originally released on the Sega Saturn system in 1998, followed by a Sony PlayStation port one year later. Game reviewers gave *Lunar 2* mixed reviews. A 2001 review on Gamespot, for

example, gave it a modest 7.2 out of 10 rating. Even at that time, the reviewer felt the game was dated, noting that “forward-minded gamers will probably want to look toward newer games for their RPG fix” (Shoemaker 2001). Yet nearly a decade later, modern gamers looked beyond the dated graphics that placed it on par with a Nintendo DS or Game Boy title. Gamespot members gave the title an impressive 8.9 average score and praised its “superb story line and memorable characters.” On eBay, used copies regular sold for more than \$60, while new and mint copies sold for between \$100 and \$230.

Lunar 2 was not the only PlayStation One title that fetched premium prices on grey market sites. *Metal Gear Solid*, *Final Fantasy VII*, *Suikoden II*, and *Xenogears* were a few of the older PlayStation titles that sold for more than \$100 each on eBay. Fans criticized Sony for not making classic PlayStation titles available for download. “There are a lot of people who can’t afford eBay prices,” observed one collector. They hoped that North America and Europe would eventually follow Japan, where the most popular PS1 games were available to purchase online.

The Role of Independent Developers in Video Game Innovation

Although Sony did not do as good a job as Microsoft and Nintendo in making classic games available on current generation consoles, it excelled at developing partnerships with small independent studios who were leading the way in innovative game design. The spectrum of games developed by these independent studios often pushed the boundaries of technology and redefined the way we think about games. And with virtually unlimited storage space, the PS3 had the ability to locally store hundreds of these titles on a single console.

Independent studios, like independent filmmakers, were typically more innovative than large studios. What they lacked was the funds to bring grand ideas to fruition. For Sony, the cost of supporting independent studios was relatively small. As a result, Sony had little to lose if a concept failed. If, on the other hand, a concept proved successful, Sony not only stood to gain from the revenues generated by the game, but from its ongoing exclusive relationship with some of the brightest minds in the video game industry.

Sony’s use of “open innovation”, a term coined by Henry Chesbrough (2006), suggests that it recognizes that it cannot conceive, design, develop and market new products and services all on its own. No firm has all the knowledge

capabilities, money or time needed to do innovation alone in today's world. So, some firms are adopting an open innovation approach that "assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology."

Flower is a good example of how independent studios were leading the way in video game innovation. Developed for the PS3 by Thatgamecompany, a seven person studio based in Los Angeles, California, it challenged the way people think about video games. *Flower* was the brainchild of Xinghan Chen, who immigrated to the U.S. in 2003 from Shanghai, China to pursue a master's degree at the University of Southern California. While at U.S.C., Chen was lead developer for an experimental game called *Cloud*, which used atmospheric modeling to tell the story of a seriously ill child whose only escape is to travel among the clouds. *Cloud* combined serene orchestral music with lush hand-painted visuals to create what could best be described as interactive art.

The success of *Cloud* (available as a free download for Windows) prompted Chen to start his own game studio with fellow U.S.C. graduate student Kellee Santiago. At first, Thatgamecompany faced the same challenge as most innovation-based startups, namely finding investors to support an unproven concept. *Cloud*, after all, was an experimental game that was made free to the public. The fact that it had won several awards did not guarantee its commercial success. Chen and Santiago began to "pitch the grand idea" of a commercial version of *Cloud* to American game distributors.

Quickly, we realized that based on the experience we had fresh out of school and the ridiculous budget we asked, there was simply no one who would take the risk with us. (Dillon 2008)

Eventually, they were able to win the support of Sony, which had been looking for exclusive content for PlayStation Network, particularly games that could take advantage of the unique features of the PS3. "They're made to show off a high-definition gaming experience that only the PS3 can offer," explained Peter Dille, senior vice president of marketing at Sony Computer Entertainment America.

They are not retreads; they are not experiences I've had before that are nostalgic—and again, there is a role for nostalgia in this category—but they are things that are new and imaginative and show off the

technology under the hood in the PS3 in ways that other games just can't. (Nutt 2009)

Sony didn't just want a commercial version of *Cloud*, but a whole new game that would push the limits of high-definition video and sound, and it was willing to commit the entire development cost to see it happen. That provided the studio with the funds needed to push the limits of their creative ability, such as simultaneously rendering up to 200,000 individual blades of grass. Kellee Santiago explained that such a feat would have been impossible on any other system. "But, it's one of the pros of knowing your game is exclusive to a specific system—you can really design everything towards that one platform." *Flower* first became available on February 12, 2009 as a download on the PlayStation Network. *Flower* not only offered some of the most stunning visuals and music ever seen on a video game platform, it was, in the words of IGN reviewer Ryan Clements (2009), "one of the most elegantly crafted gaming experiences of all time."

Because of their small development budgets, high-quality downloadable games showed a profit much sooner than big budget games like *Metal Gear Solid 4*. More importantly, it provided console makers like Sony with an opportunity to build ties with talented developers. For Sony, games like *Flower* were part of a shift away from first-person shooters towards games with broad appeal. "Over time, we'll continue to build the install base against the core gamer ... but we'll also be broadening the market to social gamers, casual gamers, A/V aficionados that we can get involved in gaming for the first time," noted Dille.

Independent studios that pushed the boundaries of game design were "not really necessarily looking to appeal to a mass market," noted Simon Carless, chairman of the Independent Games Festival.

They are really looking to appeal to certain people that like alternative games ... they value design over profits, they create games as an exploration of a medium or as an expression, they take bigger risks in the process, and they work in small teams (VanBurkleo 2009).

As such, the path is not as straightforward as a big budget first-person shooter that can build on proven concepts or use pre-built engines. Independent developers must deal with vague unproven concepts, such as the time when Chen arrived at his studio and declared that he wanted to do a game about flowers. He began by showing his team pictures of flowers he had downloaded

from the Internet. He then told them to begin brainstorming. He offered no models, no outline, and no objectives, just the idea of making a game about flowers. “It definitely took a while to finalize the gameplay experience,” recalled Santiago.

Developing Flower was not a straight-forward experience. We initially began with an extremely vague and difficult subject. It took us more than a dozen prototypes to settle on the gameplay. We went through so many different versions of stories and characters, and we ended up not using any of them. Because we are innovating on the experience, the process is very much like walking in the mist. Our destination is very exciting; however, the path leading to it is not clear. Nobody’s left any footprints for us to follow. There is quite a bit of trial and error. But once someone sees the light-tower in the distance, we hack through bushes and jump over ditches to reach there. It’s hard and painful, but the final view is worth the effort. (Steen 2009)

As painful as the process of traveling into uncharted territory may be, it is also liberating, as independent developer Matt Gilgenbach explained.

The best part about being indie is that we have complete ownership of the product. We are making the game that we want to make the way we want to make it. We don’t have to compromise our vision in order to make a game more marketable or to appeal to every demographic if we don’t want to. We don’t have to hit a specified release date, so we can take the time to make the game meet our high standards. (VanBurkleo 2009)

LittleBigPlanet: User Generated Content for the YouTube Generation

One of Sony’s more successful partnerships was with Media Molecule, a UK-based independent studio responsible for the hit platform game *LittleBigPlanet*. Platformers, games in which users must jump over objects to get from one platform to the next, were almost as old as the industry itself. The earliest platformers were developed by Nintendo in the early 1980s and included titles like *Mario Bros.* and *Donkey Kong*. Soon platformers became all the rage, spawning successful franchises like *Sonic the Hedgehog*, *Castlevania*, and *Prince of Persia*.

The introduction of the PlayStation in 1995 ushered in a new era of 3-D gaming and the beginning of the first-person shooter craze. Platformers continued to be developed, but mainly for handhelds like the Game Boy and DS. Some developers also built 3-D platform games for home consoles, but they were never as popular as their 2-D ancestors.

One of the most innovative platformers developed for home consoles was *Psychonauts*. First introduced in 2005, *Psychonauts* was about a summer camp for psychic children who used their powers to defeat evil. Critics praised the game for its unusual story and humor. Among its many awards and honors was the coveted E3 “Best Original Game” award for 2006. Nevertheless, *Psychonauts* sold fewer than 100,000 copies, eventually forcing its publisher, New Jersey-based Majesco, out of the home console business.

On the heels of *Psychonauts*’ failure, Media Molecule founder Mark Healey went to Sony with the idea of building a 2-D platformer for the PS3. Healey was unfazed by the lack of interest in platformers, because he believed that his concept was somehow different. Unlike other platformers, *LittleBigPlanet* encouraged users to develop and modify game content, essentially creating their own customized games. Nevertheless, Healey was appropriately worried that Sony would “think we were a bunch of madmen.” Sony quickly put those fears to rest.

They immediately saw the potential, and at this stage we weren’t showing much (a simple prototype of a character running around a physical 2d world and lots of arm waving and high concepts). It’s a credit to Sony that they saw the concept, accepted our credentials, and just left us to run with the project without ever interfering. (Cornelisse 2008)

By this time, video sharing sites like YouTube and information sharing sites like Wikipedia had already demonstrated the concept of user-generated content. *LittleBigPlanet* extended this concept into the realm of video games. In a public announcement of the partnership, Michael Denny, Vice President for Sony Computer Entertainment Worldwide Studios Europe explained Sony’s support for the concept.

We were immediately struck by Media Molecule’s ambitions for what a next-gen title could be. Innovation is the key to our shared vision

and everyone here at [Sony] is highly impressed by Media Molecule's ability to deliver on that vision. (Media Molecule 2006)

Sony's intuition was right. Gamers, who had for years been inundated with first-person shooters, were clamoring for something different. Just as the Wii changed the way gamers think about controllers, *LittleBigPlanet* changed the way people looked at games. Instead of being passive bystanders, gamers could now take the front seat and customize games to their own liking.

This phenomenon is illustrative of the broad trend towards customer co-creation of value. In an increasingly networked world, C.K. Prahalad and Venkatram Ramaswamy (2003) argue:

Neither value nor innovation can any longer be successfully and sustainably generated through a company-centric, product-and-service-focused prism. A new point of view is required, one that allows individual customers to actively co-construct their own consumption experiences through personalized interaction, thereby co-creating unique value for themselves.

However, despite the success of games like *Flower*, *LittleBigPlanet*, and *Garry's Mod*, Simon Carless believed that exclusive partnerships with large distributors increased the risk for small studios.

As an indie, if you're putting all your eggs in one basket, that's actually kind of risky—especially as an indie when you're only making one game at a time. In some cases it makes sense to only put it on one medium, but what if you put your game on only one medium, then it's a massive flop and you can't make games for a living anymore? (VanBurkleo 2009)

Mark Healey defended his company's exclusive relationship with Sony, which not only provided access to the advanced features only available with the Cell processor, but also provided the funding needed to fully tap into his team's creativity.

*We don't have an awful lot of competition out there. It would feel far more risky to be making an FPS or a racing game knowing that you only have a window of a couple of weeks before 'the next big game' comes out and eclipses yours. Hopefully, *LittleBigPlanet* differentiates itself enough from the other games around at the moment that we'll be*

around a lot longer. And I think it shows a bit of vision on Sony's part to see the importance of a game like LBP in order to differentiate the PS3 even more from the competition and give more exclusive reasons to buy a PS3. (Cornelisse 2008)

The Future of Big Budget Titles

Although the explosion of inexpensive casual, experimental, and retro games posed a challenge for large publishers like EA and Square Enix that invest tens of millions of dollars in each title, there will always be a market for big budget blockbusters. However, publishers will need to be more selective about the titles they bring to market. They can no longer afford to have a large portfolio of titles. Instead, they will need to focus resources on games that stand out from the competition.

Electronic Arts (EA) was the world's largest game publisher, best known for popular sports games, such as *Madden Football* and *Tiger Woods Golf*. However, EA also published games in nearly every category and for every system, including First Person Shooters (*Half-Life*), life simulators (*Sims*, *Spore*), racing games (*Need for Speed*), film tie-ins (*Harry Potter*, *The Godfather*), music games (*Rock Band*), interactive fitness (*Sports Active*), and puzzles (*Scrabble*). A search of online retailer Amazon revealed more than 500 EA titles, including several educational and utility programs unrelated to video games.

The wide variety of titles reflected company founder William M. Hawkins' belief that EA should not rely too heavily on a few popular games. In its early years the company developed a policy that no single game could account for more than six percent of company revenue. When game development was relatively inexpensive, EA's strategy made sense. It ensured that the company could respond more quickly to changing tastes. However, as development costs rose, EA's large assortment of games became burdensome. How could a company, even one as large as EA, allocate development resources adequately and effectively to hundreds of projects?

Despite its large portfolio, Electronic Arts had only one title among the top 10 best sellers during the 2008 holiday season. Retailers criticized the company for producing too many mediocre titles. Unlike Amazon, most retailers had limited shelf space and, as such, constrained their offerings to top sellers. Yet even as the company's profit declined, it sought to further diversify its offerings

by acquiring competitors, like *Grand Theft Auto* publisher Take-Two Interactive Software, which EA tried unsuccessfully to acquire in early 2008 for \$2 billion.

Take-Two had a more focused approach than EA. It owned fewer studios and it developed fewer games. Take-Two's best known studio was Rockstar Games, developer of the best-selling *Grand Theft Auto* series. Take-Two invested unprecedented sums of money in games like *Grand Theft Auto* to ensure that players received the best quality and most value out of their titles. Therefore, even though *Grand Theft Auto IV* cost an estimated \$100 million to develop, it posted industry record revenue in excess of \$500 million in its first week on the market.

Despite the fact that Take-Two was the third largest video game publisher in the world, most of its revenue was generated by only 15 franchises. Some analysts criticized Take-Two for putting its eggs in too few baskets. That didn't bother CEO Ben Feder. "At the end of the day, I'm a businessman, and our profitability speaks for itself," he countered.

We do have the kind of 'James Bond' of the video game business. By that, I mean hits that generate other hits and that every sequel does better than the previous release in that franchise. (Brightman 2008)

Take-Two's strategy was less about controlling costs than "consolidation in terms of costs," meaning that spending would be targeted on fewer blockbuster titles. In fact, Feder believed that skyrocketing development costs gave his company a competitive advantage over other publishers.

I don't mind costs going up as long as the opportunity goes up. By spending more in a game, I get more market share or get to sell games to customers I wouldn't normally. If the market grows and you can justify spending more on a game, then it is fine. (Brightman 2008)

Extending existing franchises had other benefits. For one, publishers could build upon the intrinsic brand equity of popular franchises to reduce marketing costs. Video game analyst Jesse Divnich (2009) of Electronic Entertainment Design and Research noted,

On average, to get a new IP in the same league as your Grand Theft Autos, Pokémons, and Mario Bros., you need to spend almost 10 to 20 percent more in advertising, on top of having larger development

costs—and trust me, these types of marketing budgets would make a Nike advertising manager cringe. Wii Fit alone had a marketing expense that exceeded \$50 million worldwide, 35 percent more than Grand Theft Auto IV.

Divnich added that changing social trends made it difficult to predict the popularity of a new title two years into the future, which is the average time it takes to develop a game and bring it to market. On the other hand, the proven staying power of franchises allowed companies to make accurate sales projections and reduce perceived risk.

Square Enix took a slightly different approach. Like Take-Two, Square Enix developed franchise games that helped establish customer loyalty. However, it specialized in one gaming genre, fantasy role playing games. This allowed it to develop its own game engines that could be shared across several game titles.

As we saw in earlier chapters, most gamers are console agnostic. They will switch brands from one generation to the next. Despite industry efforts to build brand loyalty, gamers were not sufficiently attached to gaming hardware. Games were different. Software offered emotional rewards in ways that hardware could not. Ever since Shigeru Miyamoto redefined gaming by focusing on mythical characters and heroes, people have been able to relate to games in a more emotional way. Films and novels offered similar emotional rewards, but they were passive media. Games allowed players to accompany their heroes on their journeys in ways that film and books never could.

Square Enix built upon those relationships to not only establish successful game franchises, but to sell tie-in products ranging from movies and soundtracks to memorabilia. The company's most successful franchise was *Final Fantasy*, an epic game that blended pagan mythology (druids and dragons) with science fiction (robots and space stations). First introduced in 1987, *Final Fantasy* has spawned 12 sequels and numerous side stories, and made Square Enix one of the most successful publishers in the industry. The game has also been adapted to film, television animated series, manga (Japanese comic books), radio plays, and full length novels.

Square Enix was also one of the first video game companies to take a focused approach to game development. In the late 1980s, the company established a policy of only developing games that would probably sell more than one million copies. In the mid 1990s as Sony and other entrants tried to challenge

Nintendo's dominance in consoles, Square (as the company was known prior to its acquisition of Enix Corporation in 2003) remained an exclusive Nintendo developer. It had to be sure that other console makers had enough market presence to support the company's sales targets. In the late 1990s and early 2000s, when Sony became the market leader, Square began developing exclusive titles for the PlayStation and PS2. It did not begin publishing titles for the Xbox until 2006.

When development costs skyrocketed with the launch of the Xbox 360 and PS3, Square Enix, like Take-Two, was well positioned to take advantage of market changes. The company's latest *Final Fantasy* installment was slated to be released in late 2009. After nearly five years of development, the *Final Fantasy* development team, headed by producer Yoshinori Kitase, felt an "unusual sort of pressure" to deliver "ten times the success and impact" of previous titles in the series (Crossly 2009).

Conclusion

The video game industry was one of many industries that were being transformed by the wide availability of technology. For example, musicians were creating professional quality compositions using inexpensive home studios and distributing their works on Internet sites like MySpace. Amateur photographers were uploading billions of photographs to Flickr and Wikipedia and distributing them free of charge. Craigslist provided free online classified advertising that all but eliminated classified ads in newspapers, which until recently had been a major source of revenue for companies like *The New York Times*.

For more than a century, companies relied on economies of scale to reduce development costs and bring new products to market. Today, many companies still believe in that twentieth century model. At IBM's Microelectronics Division, where the Cell processor was developed, chip designer David Shippy reiterated the mantra of bigger is better. "Great ideas, of which there is never a shortage, require significant monetary investment—top-notch salaries, employee benefits, office space, silicon test chips, lab space, and equipment," he explained (Shippy and Phipps 2009).

That may still be true for microprocessor design, but in the twenty-first century, that model is quickly being demolished by new community-based

paradigms. Placing creative tools in the hands of the general populous created new challenges for large corporations that previously relied on economies of scale to reduce transaction costs. Chris Anderson, editor in chief of *Wired* magazine, refers to the “diseconomies of scale” associated with administrative costs and other expenses that smaller companies and individuals do not need to worry about. “Bigger companies have to place bigger bets,” he writes, “but have less and less control over distribution and competition in an increasingly diverse marketplace. Those bets get riskier and the payoffs lower” (Anderson 2009). Everywhere from Wall Street to Detroit, “top-down companies of the 20th century” were being transformed into “industry ecosystems” dominated by free agents and startups.

In a market saturated with thousands of games, only a few titles will generate the sales needed to make big budget development ventures profitable. Studios that deviate from proven formulae or offer too many game titles risk losing considerable sums of money as they try to compete with low cost startups. Therefore, it was no wonder that developers felt “an unusual sort of pressure” to deliver the next blockbuster. The failure of a big budget title had the potential to bankrupt a company in the way that Free Radical Design was bankrupted by the failure of *Haze*. In such an environment, most publishers will continue to fund safe bets (games that use proven engines and follow well established story lines).

Publishers of big budget titles also need to have the resources to fund such projects. Therefore, only the largest and best-funded companies will survive. Smaller studios will increasingly need to partner with larger companies like Sony that can provide the funding needed for innovative projects. Consolidation can help pool resources provided that acquisitions are strategic. A good example was Square’s acquisition of Enix Corporation. Both companies had a focus on role playing and fantasy games and the merged entity proved a good fit. Without an acquisition strategy, companies can find themselves in the same situation as EA with too many mediocre titles in too many categories. Companies need to focus, and not try to be “all things to all people,” to ensure long-term success.

With hundreds of millions of dollars at stake, fewer publishers can afford to take risks on experimental game designs. That will be left to small studios that are either independently funded or that enter partnerships with larger firms. Companies like Media Molecule and Thatgamecompany have shown that opportunities abound for developers who want to redefine the way games are played the way Shigeru Miyamoto did in the 1980s.