

# 1

## CHAPTER

# NEW OPPORTUNITIES FOR GAME DEVELOPERS

Three of the biggest challenges faced by independent game developers (that is, those not owned by a publisher) are the development of new technology, the creation of content required for ever-bigger games, and the task of keeping their development teams busy between projects.

The retail video game industry has historically been driven by technology. Whether it's new hardware or new software, developers have been chasing a moving target. This moving target can make it hard for developers to see a return on investment in technology because they have to discard what they've done and recreate it for the next generation of hardware, software, and customer expectations.

While there have been some stabilizing influences in the technology used by video games, the content required for video games continues to grow. The team of artists, modelers, and musicians working on AAA retail titles has grown to be two, three, five, and even 10 times the size of the programming team. Since the content created is usually tied to the technology in a particular game, much of it is not useful on future projects.

This growth of the teams needed to build video games makes employee costs the single largest budget item of game projects. Meeting payroll for these large teams, especially after the project has ended and no milestone

payments are coming in can be a serious challenge. This challenge has proven to be the end of many independent game developers.

This chapter shows how serious games can help developers realize a greater return on their investment in technology and content while avoiding or reducing the impact of downtime between retail projects. Furthermore, serious games may allow developers to enter other markets beyond retail outlets, increasing the possibility of multiple revenue streams. Finally, serious games can allow developers to experiment with new styles of gameplay and even new distribution avenues.

Serious games are not all good news and gravy train, though, and this chapter also talks about the new challenges that come with the new opportunities. Learning how to deal with public sources of funding is just one of the complicated issues that most game developers may not have faced before.

## **SERIOUS GAMES CAN REDUCE RISK BY USING EXISTING TECHNOLOGY AND CONTENT**

Whether developers build their own game engine or license and modify an engine like Criterion's RenderWare, that investment in time and resources is one of the biggest outlays the developer will face. Often only content creation is a greater budget item.

The most obvious way to recoup the investment is to create another game that leverages the engine. Ideally, this new game will not require new technology or significant additions. Content creation will benefit from a tried-and-tested pipeline. If existing content resources can be used again, that's even better.

The retail game market, however, doesn't always offer the best way to leverage existing resources. The long development cycle dictates that the target platform, whether console or personal computer, no longer represents the coveted high end. Plus, with the amount of content required in a retail title growing at a rapid rate, the time dedicated to create the new title becomes considerable.

Serious games, with a few exceptions, do not demand the same level of technological "wow" factor nor the same staggering amount of content.

Military-grade simulations still squeeze all the juice they can out of top-of-the-line hardware and software, but most other categories of serious games can be satisfied with much less. Accuracy of the simulation *behind* the graphics is often the primary goal. Therefore, the prettiest graphics aren't always required.

Thus serious games can be built with smaller teams, using existing technology with proven content pipelines. This in turn allows for much shorter development cycles. Shorter development cycles mean that more products can be completed by the same team. In a survey conducted for this book (see survey result 1.1), game developers, sponsors, and researchers noted the smaller team sizes and shorter development timeframes.

### **Serious Games Survey Result 1.1**

**Question: What is/was the team size of your most recent serious games project?**

73.77%	1–10
18.03%	11–25
6.56%	26–50
1.64%	51–100

(Survey Note: 61 Respondents)

**Question: What is/was the (projected) time frame of your most recent serious games project?**

28.33%	1–6 months
35.00%	6 months–1 year
21.67%	1–2 years
13.33%	3–5 years
1.67%	5+ years

(Survey Note: 60 Respondents)

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Once they have completed their retail product, game developers could create an internal team whose sole purpose is to seek out ways to re-use what was created for the retail product. This team would research the local government, healthcare, education, and corporate institutions that might be interested in utilizing the accumulated assets. Since this requires control of the intellectual property (IP), such as the source code and art assets, and the ability to have team members that aren't working on the current retail project (non-exclusivity), the developer would need to have this plan in mind before signing the publisher's contract.

Serious games, especially training games, usually target very specific market segments. However, several such games could be created for different market segments, using many of the same technology and content components. Many companies follow this strategy. As indicated by survey result 1.2, serious game developers, sponsors, and researchers noted that there were many possible audiences for their products.

BreakAway Games, a leading serious games developer, has an underwater diving simulator game called *Crate* that is used for training purposes by the United States Navy, but it is also used to relieve the pain of children undergoing chemotherapy. In this case, the exact same game is being used in two very different niches for two very different purposes.

Beyond personal computers in the home and office, serious games are also appearing on consoles like the Sony PlayStation 2 and Microsoft Xbox. Though many serious games do not have the kind of mass market appeal required for console games, the success of new peripherals, such as the EyeToy, and the growth of dance pad games like *Dance Dance Revolution* have fueled an interest in serious games for consoles. As serious games increase in popularity, it's likely that more will appear on the same platforms as retail game products.

## Serious Games Survey Result 1.2

**Question:** *Who has been the target audience(s) of your serious games projects?*

53.97%	Students (any level)
47.62%	General public
26.98%	Corporate management and/or executives
23.40%	Education professionals
23.81%	Government personnel
23.81%	Healthcare professionals
22.22%	Corporate employees
17.46%	Military personnel
7.94%	Healthcare patients (including Mental Health)
7.94%	Emergency Medical Personnel/First Responders
1.59%	Activists
4.76%	Other

(Survey Note: 63 Respondents)

## SERIOUS GAMES CAN KEEP TEAMS BUSY BETWEEN RETAIL PROJECTS

New game development shops are often born in the crucible of development of a retail title for a publisher, only to die in the long, dry period between the end of one project and the beginning of another.

The development team is put together as the project grows, using funds acquired from the publisher as milestones are reached. Once the project is

completed, though, and the final advance check cashed, developers are faced with an extended period of time in which they have a lot of employees expecting paychecks—and no income. Even if the company managed to save some of their advance, the “burn rate” for even just 20 employees can exceed \$100,000 per month. And that’s a small team by modern standards. Imagine the burn rate of a team of 50, or even 100, employees.

So what happens? Sometimes, the shop lands a new publisher-funded contract quickly. More often, however, is that the months stretch out, either because the developer can’t find a publisher who is interested in the next idea or because contract negotiations occur at the glacial speed of business. The shop begins to let people go, hoping to hire them again when the deal is ready. Sometimes the deal goes through. Sometimes it doesn’t. A lot of game development shops don’t survive this kind of inter-project stress.

Serious games may be able to offer an alternative. With their reduced technology requirements, smaller content footprint, and quicker turnaround, serious game projects may be a perfect fit for the time between big retail contracts.

When asked in a survey (see survey result 1.3) whether or not serious game development was compatible with entertainment game development, serious game developers indicated that it was quite synergistic to do both types of development.

While serious games don’t always have the same kind of budgets as AAA retail games, they are still worthwhile endeavors. The budgets for serious games can range from tens of thousands up to tens of millions. The most common budgets, though, are less than \$1 million. The agencies and organizations interested in funding serious games often do not have the same kind of deep pockets as the game publishers. However, in the period between retail projects, when no money is coming in at all, any revenue is likely to be good revenue and could make the difference between laying off a few people and sending home the entire team. It could mean survival as a business or shutting the doors for good.

As shown by survey result 1.4, large budgets for serious games are possible, but most companies land smaller contracts.

### Serious Games Survey Result 1.3

**Question:** *If you are a developer, do you only develop serious games?*

62.50% No

37.50% Yes

(Survey Note: 56 Respondents)

**Question:** *If not, do you see much overlap between your entertainment and serious game projects?*

80.00% Yes

20.00% No

(Survey Note: 37 Respondents)

### Serious Games Survey Result 1.4

**Question:** *What is/was the budget of your most recent serious games project?*

18.03%     \$0 – \$5000

8.20%     \$5001 – \$10,000

9.84%     \$10,001 – \$50,000

9.84%     \$50,001 – \$100,000

26.23%    \$100,001 – \$500,000

11.48%    \$500,001 – \$1,000,000

14.75%    \$1,000,001 – \$10,000,000

1.64%     \$10,000,000+

(Survey Note: 61 Respondents)

In conclusion, as described earlier, creating an internal team solely for the purpose of seeking serious game opportunities is one approach to utilizing employees that with the completion of the most recent project have transitioned from “essential” to “extra.” It might even be better to create such a team *before* the completion of the retail project so that there is a possibility of a new project ramping up within a couple weeks or months. Again, this kind of pre-emptive action, during-the-project team re-assignment might require special contract negotiations or permission from the publisher.

## **SERIOUS GAMES CAN EXPERIMENT WITH ALTERNATIVE PLAY STYLES**

The small budgets and specific target markets of serious games may offer developers the chance to experiment with totally new styles of gameplay, user interfaces, and game design. With far fewer resources on the line, serious game designers can be more creative. The reduced resources can actually force designers to be more innovative as they struggle to create a game under such constraints.

The subject matter of serious games may include possibilities for new ways to display the game to the player or new ways to get input from the player. Representing and interacting with abstract concepts such as voter attitudes and subatomic particles could open up new possibilities. The subject matter itself might prove to be a whole new source of entertaining gameplay concepts. Subjects for games have tended to be constrained by what has been done before. Japanese games have tended to go further afield, sometimes creating for entertainment what in the U.S. would be thought of as serious games.

The reverse is also true: Using an established game user interface to present real-world information may help serious games buyers with a new way to look at their issues. Game simulations are seldom 100 percent accurate, but they do offer a way to simplify abstract problems in a way that even untrained people can understand them.



## SERIOUS GAMES CAN EXPERIMENT WITH ALTERNATIVE DISTRIBUTION

The growth of the Internet in the 1990s opened up the possibility of digital distribution of games. Though the percentage of games sold through digital distribution is still small, it continues to climb every year.

Retail AAA games, with their huge number of art assets creating a huge download package, have been slow to utilize this new distribution channel. The growth of broadband since the dawn of the 21st century has been making it more feasible, however, and growth is accelerating. Serious games, with their smaller budgets, team size, shorter development cycles, and smaller final products provide an opportunity for developers to experiment with selling those games direct to players, broadband optional.

At first glance, many serious games appear so specific in their target market that finding players outside of that niche seems unlikely. By simply offering the game via the Web, developers may discover that a whole new market has been waiting for them.

While the money from direct sales to consumers and players may not start out as much, it's still revenue. Such games may also help the developer reduce its dependence on the retail publishers. For smaller developers, any additional cashflow can be helpful. Moreover, these games may attract the attention of retail publishers looking to expand into the serious games space.

On the other hand, “vertical” products, products that service a particular industry or market segment, have been very profitable. These vertical markets are the domain of highly profitable corporations and businesses, which allow for much higher price points and much richer profit margins because the products are tailored to the specific needs of the market. A product that supports one vertical market can often be retooled to serve the needs of a similar vertical market. This is the approach used by Cyberlore, an independent game developer who is leveraging the social simulation engine of their game, *Playboy: The Mansion*, to create training software for a large corporation. Cyberlore is the subject of a case study in Chapter 7, “Corporate Games.”

So with serious games, a developer could experiment with distribution that bypasses the retail publishers and has the potential to open up new business models and revenue streams.

## **SERIOUS GAMES CAN OPEN UP NEW FUNDING POSSIBILITIES**

Along with new distribution, serious games offer access to additional sources of funding. Traditionally, the retail video game publishers have been the primary source of funding for video games. Serious games, however, are of interest to a much wider collection of organizations, foundations, and individuals.

The government, especially the military, is the largest source of funds for serious games. The government has programs like the Small Business Innovation Research (SBIR), which we will cover in detail later. There are quite a few other groups that have money to spend on serious games. Among them are the following:

- Public and private foundations
- Non-government organizations (NGOs)
- Universities
- Corporations, including retail chains
- Non-profit organizations
- Individuals
- Other governments
- Publishers

We will cover all of these groups in Part 2 of this book.

## SERIOUS GAMES CAN MAKE YOU PART OF YOUR COMMUNITY

To move beyond simple profit motive, serious games also give developers a chance to give back to their communities. Game developers are part of the larger community that surrounds them. And there's much more going on in those communities than game development.

Every community, big or small, has a rich history and goals for the future. Both of these, past and future, as well as the present, are excellent material for serious games. Such games can teach local school students about the community's colorful history. They can help community officials to communicate and decide policy issues, or they can show the impact or benefit of plans for expansion.

Are the city fathers planning another “cosmetic dam” on the river that runs through downtown? Do they want to build a new event arena or other construction to be funded with a new sales tax? Even if you don't have a definite opinion on these issues, someone does, and he or she may be willing to fund a quick (a key word in local politics) game or simulation that demonstrates the negative or positive effects of the proposal. The attention such a game brings, especially from the local press, could help you grow your business.

The point is that these groups exist and they may be looking for a game developer in the local area who is willing to take on the project. The problem they face, though, is that they don't really know where to look or who to ask. So you could become the solution to someone's problem.

These local-interest games may seem to have a very limited market, but with the power of the Internet, their reach could be much greater than originally thought. “All politics is local,” Tip O'Neill said, but an issue in one city or region is often an issue in many others. Your local issue game may be able to be used elsewhere in your nation or even internationally.

Also, many cities in the United States have international “sister cities,” located on other continents (see Sister Cities International at [www.sister-cities.org](http://www.sister-cities.org)).

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The goal of Sister Cities International is to “promote peace through mutual respect, understanding, and cooperation—one individual, one community at a time.” Games that describe your city, show the local culture, or just give a feel for what it’s like to live in that city can be a new kind of “international ambassador of good will.”

Beyond the local community, there is also the county or parish, the state, and even the nation. All of these are communities that game developers can join. The opportunities for participating in and contributing to these communities are almost endless.

The above represents just a few ideas for how game developers can use serious games to give back to their local community or region. It’s also possible to use serious games to help bolster the reputation of the video game industry to the larger national and world communities. Most of the media attention for video games has tended to be negative. Game developers who create games that teach valuable skills, that bring awareness to political and social issues, and that help make the world a better place overall could do a lot to help improve the global opinion of the video game industry as a whole.

## ON THE OTHER HAND

Serious games are not all new markets and new revenue, however. There are new processes to learn—especially in regards to procuring funding—and new challenges to face.

Serious games are a very different market than traditional retail, with different expectations, budgets, and profit margins. It can be difficult for developers to attract and maintain both markets at the same time. This divided focus can be distracting. Also, as business on one side of the divide grows, there will be increased competition for resources and attention.

Experienced developers may not think there’s anything more painful than the process of pitching a game to a publisher and the ensuing negotiations over content, storyline, and milestones. In the serious games arena,

though, imagine the same process with clients who are even more finicky, less sure of what it is they want and are trying to achieve, and (often) have less money to offer. If you think it's hard to convince a publisher to fully fund your \$5 million dollar project, imagine explaining to a corporate financial officer from a health insurance company how he's going to get that large sum back in training or safety savings.

Currently, the budgets for serious games are much smaller, outside the military and corporate arenas especially, with thinner profit margins. And royalties are virtually non-existent. Most serious games are "work for hire" products with no back end money. Developers work as contractors in most cases.

The design of serious games also diverges from the design of games intended for retail. These design issues are discussed in Chapter 3, "Serious Games Design and Development Issues."

These issues do not mean that it is impossible to mix both traditional game development and serious games development. It only means that serious games need to be approached and handled with an understanding and appreciation of their particular nature.

BreakAway Games is an example of a company that has made serious games a part of their business plan. They create original games for retail and also do serious games for the military and other government agencies. They make it work by leveraging pre-existing art and code assets, when they can, to cross-collateralize effort and expense over multiple projects. A number of smaller, independent game developers already mix "work for hire" contracts with game development in a similar manner. So the mix of business approaches can work well together.

Though there may be few, if any, royalties from serious games, in many cases the developer owns and controls the bulk of the intellectual property of the resulting game. This allows the developer to generate additional revenue by creating updates or selling similar, customized games to other companies and organizations.

## CONCLUSION

Serious games offer developers ways to reduce, cross-collateralize, or otherwise mitigate some of the costs of developing technology and content for games. Serious games can also help developers keep their teams busy between larger, retail-oriented projects. In addition, serious games can allow the developer chances to experiment with new styles of gameplay and even new types of distribution.

There are, of course, challenges to working in both the retail and serious games arenas. The two markets can be very different as the sources of funding and the motives for development bear few similarities. It is not impossible to operate successfully in both, however, and the two types of game could prove complementary to each other.

In the next chapter we discuss in detail what exactly are serious games.