



SHIFT | USING BUSINESS SIMULATIONS & SERIOUS GAMES

A STRAIGHTFORWARD GUIDE TO BUSINESS
SIMULATIONS AND SERIOUS GAMES FOR
CORPORATE TRAINING AND DEVELOPMENT



William Hall



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To my wife and kids.
And to my parents.
I appreciate your love and support.

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ABOUT WILLIAM HALL



INTRODUCTION



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INTRODUCTION

TRAINING IS AN ESSENTIAL part of any corporate environment. At some point, every business will need to get new employees on board or let existing employees know about a shift in direction. It is of crucial importance that the training is accomplished swiftly and effectively, so the company can expand or make changes without undue disruption and unnecessary costs.

Traditionally, corporate training followed the old classroom model, with a teacher up front lecturing to the class, and jargon-filled handouts that no one read. However, as educators began to look at the numbers surrounding information retention, it became clear that this top-down method was a terrible way to foster learning. In fact, lecture-based sessions led to dismal retention levels of around 5 percent. Researchers found that the more engaged the participants were, the greater the retention levels. The most effective ways to get people to retain information was to get their hands dirty: they had to become active participants. And if educators could get participants to teach the information to others, the retention levels soared to 80 percent.

Following this realization, educators began developing a new, more immersive approach to learning. They recognized that they could harness the power of computing to craft learning environments that would not only be fun, but would lead to unheard-of levels of information retention. This book charts that shift to the gamification of business training, and takes an in-depth look at how business simulations and games can transform the corporate environment.

WHAT THIS BOOK HOPES TO ACCOMPLISH

The goal of this book is to help you become better educated about simulations and serious games within corporate training and development. It will help you learn their different types, how they are used, whether you should use them, where they work, where they don't work, the pitfalls associated with them, how to ensure program sustainability, and how to gain a better knowledge set that will help you start using these solutions successfully.

I don't believe there is a one-size-fits-all solution to every problem. For that reason, this book will not give you step-by-step instructions for building a specific simulation. Rather, it will give you practical ideas for building a framework for successful development. Once your framework is in place, you'll find that creating the simulations and games will come easily. Business simulations and serious games are here to stay. The reason is that they work. Today's learners expect action learning, engagement, and job applicability from their corporate training. This book will help you deliver those.

WHO I AM

I started my career in the world of education and technology as a systems engineer with Learning Technology Group. From there, I moved on to Apple Computer, where I worked within everything from K-Hi Ed and ACOT to being one of the product managers for Mac OSX, in addition to providing technical assistance to Steve Jobs in presenting his worldwide keynote demonstrations. I won many awards while at Apple, including a Golden Apple, multiple MVP awards, and a Way to Go award. I have also managed a \$60 million business and global product management, and have worked with executives around the world on strategic change.

I left Apple to start a business simulation development company, Simulation Studios (A Simulation Development Group, LLC Company). You can learn more about us at www.simulationstudios.com. We're a handful of ex-computer geeks, designers, and business executives from Apple, AOL, Skype, and Education Technology Associates, who have either worked in or researched the effective use of technology in learning and adult learning. We're passionate about learning, love sharing concepts and methods, and honestly believe in knowledge transfer, not knowledge protection.

I love technology, and know where it works and where it doesn't within the field of education and strategy. My hope is to share methods and concepts that I've learned during more than twenty years of working in education, technology, and business.



THE TARGET READER FOR THIS BOOK

Many people both inside and outside the corporate world can benefit from the ideas in this book. However, the primary focus is the business environment. Let’s look at some of those.

■ HEAD OF HR/LEARNING AND DEVELOPMENT.

If you’re heading up human resources in a business, this will be a helpful guide in choosing when and how to use a business simulation within your learning and development programs. It will help you understand which ones to consider and how to choose a simulation or game provider. This book will help you set expectations appropriately and can save you a lot of money.

■ BUSINESS MANAGERS.

If you’re trying to implement a new strategy, business simulations and business games provide a fast lane to business strategy execution. If you’re making a change, you can accelerate it with a simulation or game tool. These extraordinary tools can help you achieve strategic and organizational alignment much more quickly than traditional training methods.

■ INSTRUCTIONAL DESIGNER.

This book can help you with new ideas and approaches to instructional design. At the very least, it will expose you to new methods of creating instructional solutions.

No matter what your particular position or job title, the ideas and methods outlined here will get you thinking in different ways, such as how to arrive at new approaches to training content distribution. Creating business simulations and serious games can be intimidating, especially if this is unfamiliar territory. This book will help break down those barriers, allowing you to access this valuable material and adapt it to your situation.



HOW TO READ THIS BOOK

This book is designed for all types of users. Those who are already familiar with gamification may wish to skip ahead to the modules that interest them.

In the instances where familiarity with a different section of the book is necessary for full comprehension, that section will be referenced. In such cases, the two sections may be dependent, and it will be helpful to review both.

Most importantly, this book is designed to be as to-the-point as possible. Just like good sims or games, it is designed to introduce and reinforce what is actually useful.

SUMMARY AND ACTION

This is a straightforward guide to getting started with business simulations and serious games. It is designed for anyone in the corporate environment, including HR managers, learning and development managers, executives and business managers, and instructional designers.

By the end of this book, you should be prepared to jump into the world of business simulation and games. Feel free to contact me if you have queries. Send me a message through www.simulationstudios.com. Yes, I do check this email.

TAKE ACTION

- What led you to purchase this book and start to read it?
- Do you have specific needs?
- Write down your answers, and remember that these are your learning goals as you read this book.

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WHAT ARE BUSINESS SIMULATIONS, BUSINESS GAMES, AND SERIOUS GAMES?

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WHAT ARE BUSINESS SIMULATIONS, BUSINESS GAMES, AND SERIOUS GAMES?

BUSINESS SIMULATIONS, business games, and serious games are similar, but not identical. In this chapter, we'll look at all three, and tease out the similarities and differences.

BUSINESS SIMULATIONS DEFINED

BUSINESS | a person's regular occupation, profession, or trade.

SIMULATION | something that imitates the appearance or character of something else.

A business simulation attempts to imitate the characteristic of a person's (or group's) profession (or future profession). We can therefore think of a business simulation as a learning tool that helps people practice their profession in a condensed amount of time and with little risk. Business simulations allow you to change people's work environment and enable them to learn how to practice their profession more effectively.

A business simulation is a tool for trying new training practices, methods, or skills, with a focus on applying them in the actual work environment. To be clear, a business simulation does not teach very well on its own; it is a tool for practicing. Could you imagine what would happen if pilots only used simulations and had no formal flight training? They would be missing crucial knowledge. If someone tries to sell you a sim with the idea that it's going to take care of your training, you should run the other way. It takes excellent content, structure, and assessment, and a well-executed sim, to create a great program.

SERIOUS GAMES AND BUSINESS GAMES DEFINED

Recently, the terms "serious games" and "gamification" have become prevalent. In my opinion, business games and serious games are very similar; however, it's important to recognize exactly what gamification is. Recently, while reading a book about serious games and gamification, I had to put the book down and laugh. The author actually stated that when airlines created frequent-flyer programs, it was an intentional act of gamification. C'mon! It was an act of economics! Sure, there are points, but such programs really owe their existence to airlines wanting to keep track of you and keep you in their system. Business simulations and games are there to educate team members, not to fleece clients.



GAME | a form of play or sport, esp. a competitive one played according to rules and decided by skill, strength, or luck.

Business games involve the creation of fun and amusing exercises about a learner’s profession. It’s important to note that I do not believe that creating amusement in any way belittles the learning experience or content. Quite the opposite: the more fun the learner has, the more engaged he or she will be. This is how kids learn, right? And kids learn fast! I shake my head when I hear teachers say something along the lines of “You can’t teach an old dog new tricks.” I rebut, saying, “You can’t teach anybody anything with boring methods.”

Simply put, engaging in learning activities that excite, challenge, and reward knowledge adoption and application is the single best way for adults, or anyone, to learn. Why we’re still stuck in classroom-style learning (from chalkboard to whiteboard to PowerPoint) is beyond me. We’re smarter than this, and it’s time we make use of the resources at hand. The research has proven this; we just need to learn how to do it.

DIFFERENCES BETWEEN SIMULATIONS AND GAMES

■ BUSINESS SIMULATIONS.

In the optimal scenario, business simulations will be tailored to your business. An off-the-shelf simulation is hit or miss: it might be suited to your business; it might not. Custom solutions are cheap enough these days to be accessible to many learning and development departments. Business simulations are usually geared more toward strategic alignment, strategic change, business acumen, leadership development, succession planning, or organization silo reduction (cross-function collaboration). These strategy-centric solutions can be effective at helping participants understand their organization, its functions, dependencies, and complexity. They are also a fun yet practical way to train employees.

■ SERIOUS GAMES.

Serious games are a little trickier to define. In my experience, few companies that use serious games try to mimic their actual organizations. Most do not, and the games are usually used to teach some sort of behavioral outcome. The exception to this is leadership, as leadership development is usually far too complex for a game. Of course, there are exceptions to this, and people in the field might argue passionately with me on this. But, in my experience, games don't do well in executive development or leadership development.

Serious games are great for engaging people around a certain behavior. For example, they are a good way to draw people into a topic, such as getting consumers to use a certain app on a smartphone. A good example is Foursquare, which lets users gain points as they share food experiences. These points can earn users badges of achievement. I'm not convinced the developers sat down and said, "OK, I want to gamify the sharing of dining out." They more likely said, "We should create an achievement and rewards system that encourages people to use our application."

In my experience, serious games are usually used with a company's customers. Only occasionally are they used internally. Again, the industry experts may object. As soon as you mention the word game to executives or business managers, they tune out. They just don't take such talk seriously.

I have found one exception, however: business war games. Business war games are a genre of serious game that is fantastic for strategic testing and application. They are engaging, and remarkably practical. However, they represent a specialized niche and are thus beyond the scope of this book. If you have a question about these, drop me an email. Suffice it to say, these are usually left to the top brass and are kept confidential. But boy, do they work!



SUMMARY

The foundational drivers of business simulations and games are similar. The differences are in how you plan to use them and in what you're trying to teach participants. When you are planning to model part or all of your business, a simulation is probably the way to go. When you are more interested in engaging customers, a game might be a better solution.

By way of disclaimer, these are generalizations. There are many instances where this may not be accurate. But for the most part, this should keep you safely in the ballpark.

TAKE ACTION

Write down on a piece of paper what you are trying to teach participants. If you are just thinking about a business simulation or game, pick a program your company is currently running. Look at the topics of this training program. Write down answers to a few questions:

- a. What three topics are you trying to teach employees?
- b. Is the training topic specific or applicable to your business?
- c. Does the training topic only involve internal employees?

If you answered yes to (b) or (c), chances are you need a simulation. If you answered no to (b) and (c), a game is probably a better solution.

Again, these are generalizations. I recommend getting in touch with an expert to help walk you through what you're trying to accomplish.

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WHY USE A BUSINESS SIMULATION OR GAME?

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WHY USE A BUSINESS SIMULATION OR GAME?

IN THIS CHAPTER, we'll take a deep dive into the research on learning we touched on in the first chapter. The highly distilled summary is that active learning is far better than passive learning. Putting all the fancy research aside, I'm quite confident that people intuitively understand and agree with this: adults learn better by doing (trial and error). Business simulations and games take this seriously.

The primary focus of this section will be on experiential learning. Whether you are using a business simulation or a business game, the participants will be engaging in experiential learning. Therefore, it makes sense to simplify things and focus on that.

It's no secret that simulations and games of any kind are effective learning tools. With the exception of either teaching the subject matter yourself or learning through real-life trial and error, simulations and games are some of the most effective ways to learn new subject matter. The ultimate goal is to enable learners to immediately start using the subject matter being introduced. By using the subject matter in a safe and lifelike situation, people begin to change their behavior naturally. This is why mission-critical disciplines such as the military and aviation industries rely so heavily on simulations. Simulations are the fastest and most effective means to safely apply training theory and rapidly transform it into natural behavior.

Connecting the dots of learning is easy when it comes to military or aviation applications. For example: make the airplane climb or you will crash. This is black-and-white. The business application of simulations and games is not quite as clear. For example, how does one apply gamification to leadership? Leadership is an emotional, intangible, and human characteristic. How does one simulate this? We'll touch on ways to accomplish this in chapter seven, "Uses of Simulations and Serious Games."

An equally important issue is: Why should an organization utilize a business simulation within a learning and development program? The answer is simple: it's engaging and applicable, and, best of all, it changes behavior faster and more naturally than traditional methods.

Utilizing a business simulation or game within a training program will become a required component of future curriculum tools. This is inevitable. With the growth of the digital age, reduction of development costs, and advances in technology, sims and games will become the rule rather than the exception. Simulations are not as complex to implement as they were even a few years ago. Creating a custom solution is not only far more effective; it is also now within reach of most companies.

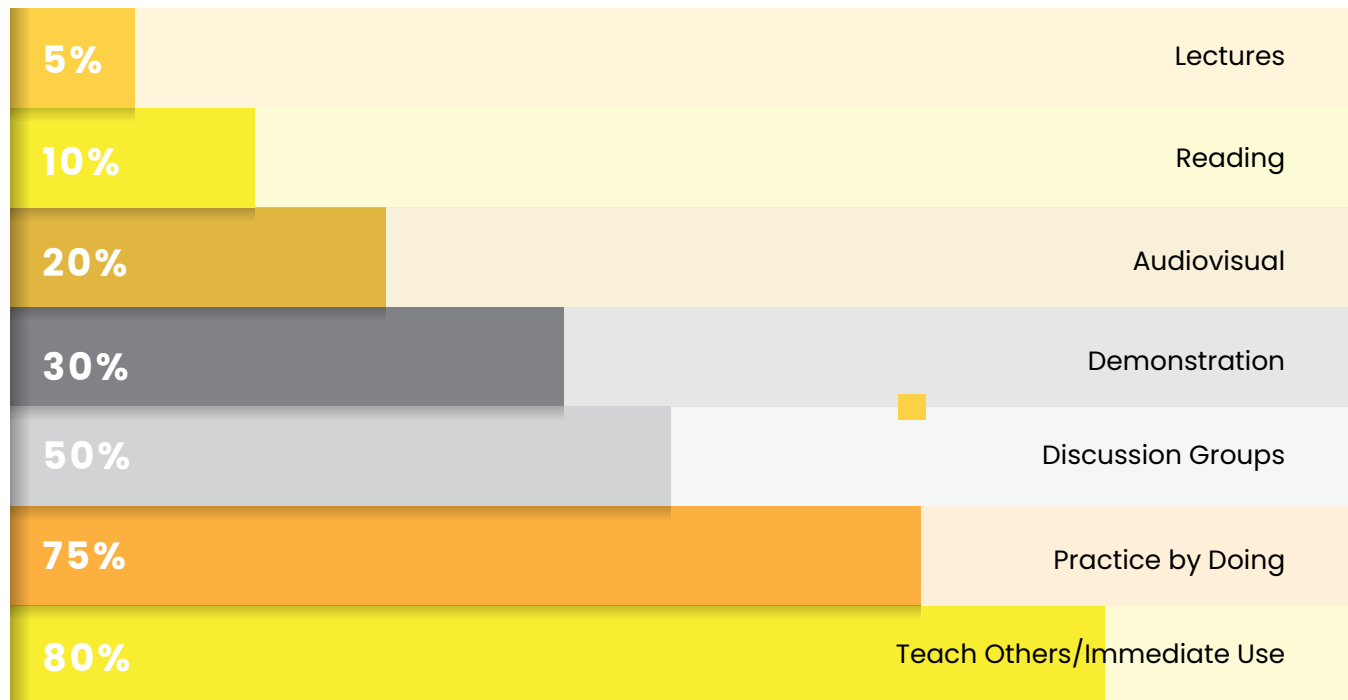
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INCREASING UTILIZATION AND APPLICATION OF THE TRAINING CONTENT

The goal is to empower participants to utilize your training content in an effort to increase corporate value. It's that simple. But do simulations really help? The answer is a clear yes.

Business simulations enable learners not only to practice and work in groups, but also to immediately use your learning content. According to the National Training Laboratories' Institute for Applied Behavioral Sciences, the adult learner's retention rate is as follows for each of the following learning methods.

One advantage to business simulations and games is that all of the methods are utilized. Most importantly, practice by doing alone has a 75 percent retention rate. Business simulations and games give learners the ability to immediately use your leadership development training content. Here are those retention levels in a chart for you visual people:



Using Business Simulation

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With a retention rate of up to 80 percent, learners are going to move much closer to the ultimate goal of full training content utilization. To add to the immediate-use retention level, simulations and games enable participants to work closely with others by discussing, applying, and reviewing how they are going to use the training content in the real world.

GREATER PARTICIPANT ENGAGEMENT

Would you rather stare at a set of slides or run your company's business as your CEO? We'll assume your answer is the latter. Of course it is, because that is a much more engaging and applicable exercise. Introducing the training content is essential, but it shouldn't end there. Today's learners demand that training content be:

helpful

engaging

applicable

challenging

contemporary

Simply showing participants slides, providing examples, and asking them to talk about applicability will put them to sleep. They will nod their way through the program, give better review scores than deserved for the time they got to spend out of the office, and go back to what they were doing before.

Giving the participants something exceptionally challenging, unexpected, applicable, and engaging will surprise and delight them. Most paper-based exercises or generic computer games will frustrate today's learners. A custom business simulation will test their knowledge and challenge them by giving them the opportunity to do some real quarterbacking. It will also enable them to fail at some parts of the exercise, learn from the challenges, and experience the importance of your training content. This will be an unforgettable learning experience. The results are often quick, positive word-of-mouth that creates waiting lists for your leadership development program.

CONNECTING TO TODAY'S AND TOMORROW'S LEARNERS

The next generation of leaders has exceptionally high (some say unrealistic) demands. But isn't this a good thing? It means that a learning organization is going to have to go beyond traditional e-learning games, exercises, and off-the-shelf simulations.

Today's learners need to be challenged. They will see through generic exercises, and crave the opportunity to show off their knowledge. In general, they believe that, given the opportunity, they could do a better job than management. Great! Let's see how they do. Put them at the helm of a complex program that introduces them to the reality of running a global business.

BUSINESS SIMULATIONS AND LEARNING

Conducting these sorts of exercises within a business simulation is less dangerous than giving learners the keys to the business. Give participants the opportunity to run your business against their peers. It's important that the competition should be with their peers, not against the computer! In my experience, when training participants compete against the computer, they are less engaged due to a perceived sense of nonreality.

While working in Apple's education division and at Education Technology Associates (two great companies), some of us had the opportunity to watch how today's learners learn in real time. We helped educational institutions implement ways to effectively utilize technology for learning. While doing so, it became clear that today's learners don't fear trial and error. They learned far faster than we thought possible while "learning by doing" on the computers. Back then, we used simulations that were effective for the time but not as sophisticated as they are today. We experimented with various learning-technology applications and methods. It was abundantly clear even then that simulations were the most effective way for people to learn.

Today's learners are pragmatic. They are visual and do not have the patience to read. They learn by doing. Customization and digital are their norms, and they demand interactivity. This is what they are used to. These are preferences, not faults. They reflect the world as it is today: straightforward, visual, experiential, fast, and customized.

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INSIGHTS FROM THE RESEARCH

Studies have determined that management training programs utilizing a simulation provided significantly improved leadership development in results versus control groups that didn't utilize a simulation.[1]

Other research has proven that business gaming methods are superior to traditional methods.[2] These studies found better results for game-based group learning in comparison to case methods. Libraries of anecdotal research indicate that learners prefer game-based (simulation) learning because such learning promotes more active engagement.

More specifically, Kenworthy and Wong published research in 2005 finding that a hundred participants from six separate training programs experienced a statistically higher level of program enjoyment, usefulness, and learning levels.[3] Looking specifically at the effects of this research on leadership turns up impressive data. The research showed that simulation-based learning has a significantly higher level of likelihood of achievement orientation, directedness, influence, and team leadership. This research was conducted during the course of a year, and looked at one group that utilized simulations and a second control group that simply used the case-study method.

Other researchers, such as Anderson and Lawton (1997), Brenenstuhl and Catalanello (1977), and Callahan (1990) have looked at the effectiveness of utilizing a business simulation within training and development.[4]

In summary, a convincing quantum of research indicates that using a business simulation within learning and development is a highly effective tool for learning.

ADULTS LEARN DIFFERENTLY

It might seem like common sense that adults learn differently from children. Kids, with their malleable brains, soak up information. Adults require more work, and tend to learn better by doing. As adults, we learn by trying, retrying, and applying what we have learned to real-life situations. Children also learn by trying, playing, talking, asking questions, and trying again. The huge advantage kids have is a lack of fear and a lack of risk. For adults, risk and fear are very present. Business simulations and games help reduce this problem. There is next to no risk, and thus there are far lower levels of fear. This gives adults the opportunity to learn as a child learns: try, talk, apply, and try again until the skill is mastered.

REQUIREMENTS OF ADULT LEARNERS

Extensive research has been conducted in the area of adult learning. Malcolm Knowles has written many research studies and authored numerous books devoted to the adult learner. In an article published in 1970, he identified the following traits of adult learners:

- the desire to rapidly apply and test their learning;
- the need to pull from real-life experience as a learning resource (relevance);
- the requirement to self-manage, plan, and individually execute their learning activities; and
- the desire for a real-life-centric approach to learning new information and solving problems.

Knowles has also suggested in several publications that adult learners learn most effectively through activity-based learning (also known as action-based learning). Findings by the NTL Institute for Applied Behavioral Science illustrated that adults learn best through practice and immediate application.

As adult learners, therefore, we clearly learn best by doing and converting theory into applicable skills. David Kolb reviewed this type of learning process in his book *Experiential Learning*.^[5] Kolb reviewed several models of active learning, including the Lewinian/Kolb model and the John Dewey model. These models indicate that adult learners take abstract concepts, test their implications in real situations, compare them to concrete experience, and observe and reflect on the concept effects. Does the following feel familiar by now?

- Learn something new.
- Experiment with it in a realistic scenario.
- Compare it to what you already know.
- Decide to use the new knowledge or not.

The shorthand of these insights is that adults learn something, try it out by applying it in their own real worlds, then either use or discard it.

Business simulations and games give adult learners the opportunity to learn something (delivered by you), try it out, see the results of the new skill, and apply it to their day-to-day roles within your company. Simply put, business simulations and games enable adult learners to learn in the way that's best for them. If you can harness that ability, you will be adding significant value to your company and its shareholders.



AN INFORMAL SURVEY

At the beginning of one leadership-simulation program, we asked senior participants a set of eight questions. At the end of the program, we asked the same eight questions. Here is a summary of the results (N=47):

	BEFORE SIM	AFTER SIM
Why is the strategy?	"I've heard XYZ is the strategy, but we think it's wrong."	"Ok, we get it, we see why we're using this strategy, we didn't understand before."
How do we apply the strategy?	"I hear" the strategy, but don't really understand how we help."	"I now see that our division is critical and better understand how to help."
What is effective leadership?	"Leadership is telling my employees to do."	"Leadership is far more than we thought. It's strategic, complex, and critical to the business."
How does effective leadership help the strategy?	"Leadership is simply getting my employees to do what we say because we know best."	"Leadership is critical to the execution of our corporate strategy, we need to make sure we're in alignment."
How does my division fit into the company?	"I did what we did before and it seemed to work."	"Wow! We didn't know we influenced so many other parts of the company. We are critical!"
What other divisions do we rely on?	"I just need some info from this one group and we can do the rest."	"I had no idea that our department relied on so many others, we think we should work closer together."
What other divisions rely on me?	"We're going to do what we've done before. If ain't broke, why fix it?"	"I didn't know that the way we do things affected so many others, we think we can do better."
How do we apply all this new knowledge?	"I think we know how to apply all this. But it's going to be tough to do in real time."	"I get it! We know exactly what needs to be done and I'm going to take action as soon as we get back!"

It should be instantly clear that the leadership simulation program was effective. The program had allowed the participants to see how the various components of the company were interconnected. By immersing them in the day-to-day decision-making of the organization, the program boosted the participants' knowledge and enthusiasm.



SUMMARY AND ACTION

In summary, utilizing business simulations and games is a highly applicable form of action learning for corporate learning and development. Adults learn best by doing (learn, try, apply).

We now understand why games work. The next challenge is using these tools. This is the tough part. The following section introduces the more common business simulations. How you choose to use these powerful instruments is up to you. The trick is to ease into using them. Don't jump in at the deep end of the pool.

TAKE ACTION

Call around, go to forums, and seek out other managers of training and development who have used business simulations or business games. Ask them three simple questions:

- Why did you use a business simulation or business game?
- What type of business simulation or business game did you use?
- What did you learn over the course of the process?

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REALITY CHECK
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REALITY CHECK

I'D LIKE TO TAKE a step back by asking a simple question: Are you sure you need a business simulation or game? Are you interested in gamification just because it's the flavor of the month, or do you genuinely feel it could help your business?

Business simulations are complex, threaded, tough to manage, hard to learn, require a strange mix of skills to facilitate, and can be unruly. Don't get me wrong—they are fantastic tools when they behave, but you really need to make sure you're not acting like a moth to a flame. This section will help you determine whether business simulations and serious games are an appropriate solution for what you're trying to achieve.

DOING THE REALITY CHECK

Let's take a look at some questions that will help you assess whether business simulations or games are right for you.

Question Sim/Game goal	Your answer (fill it in):
What do you want the game/ sim to apply?	
How are you going to measure applicability?	

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After you answer these five questions, I want you to examine whether the simulation or game will help you achieve your goals and measurable success. As fully and honestly as possible, answer the questions below.

- Should I spend the resources (people/money) in other places (see resource allocation below)?
- Should I look at tools other than a business simulation or serious game?

Question:	Your answer (fill it in):
Why this specific tool?	
Why specifically sim/game the best fit?	
What other tools have you looked at?	
What is the biggest risk with using a sim/game?	
What is the greatest reward of using a sim/game?	

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I'm asking these questions to home in on whether a business simulation or serious game is really worth the risk. I'm also helping you commit your justification for using one of these tools to stark black-and-white form. Take a hard look at the questions above, along with your answers to them, and look for any potential holes. Share whatever insights you gain from this exercise with others in your organization. Perhaps they have additional insights.

Finally, we're now going to look at what you hope a business simulation or serious game might achieve:

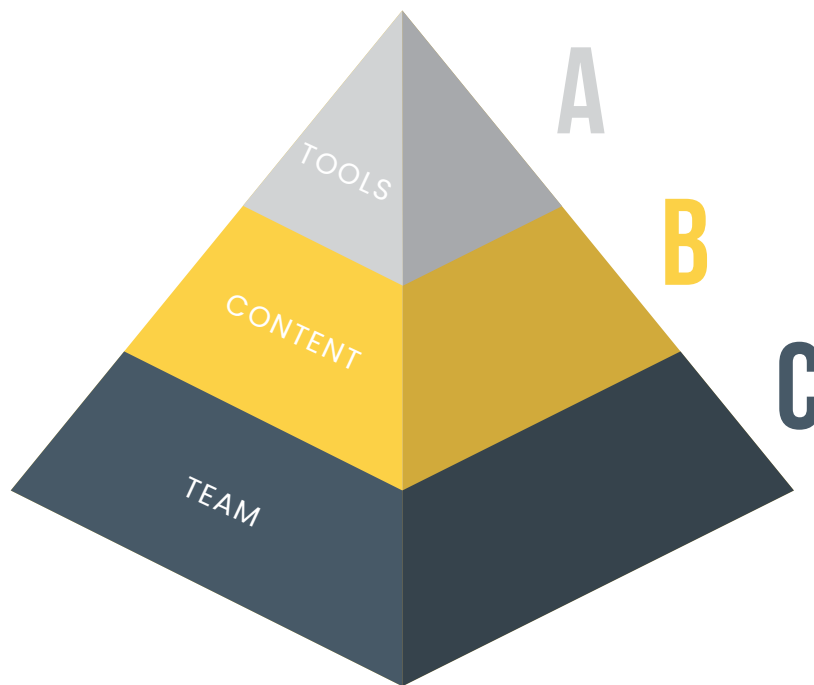
Question Sim/Game goal	Your answer (fill it in):
What do you want the game/sim to apply?	
How are you going to measure applicability?	

It may seem as if I'm trying to talk you out of using a business simulation or serious game. I'm not, but I am trying to help you get safely past the "new-car smell" of the sales process. I understand their appeal. Sims and games are shiny, useful, innovative, and engaging. This part of the book is really an effort to try to ensure you are adopting a simulation or game for the right reasons.



EFFECTIVE RESOURCE ALLOCATION

What works when it comes to using a business simulation or serious game? In order of importance: team, content, and tools.

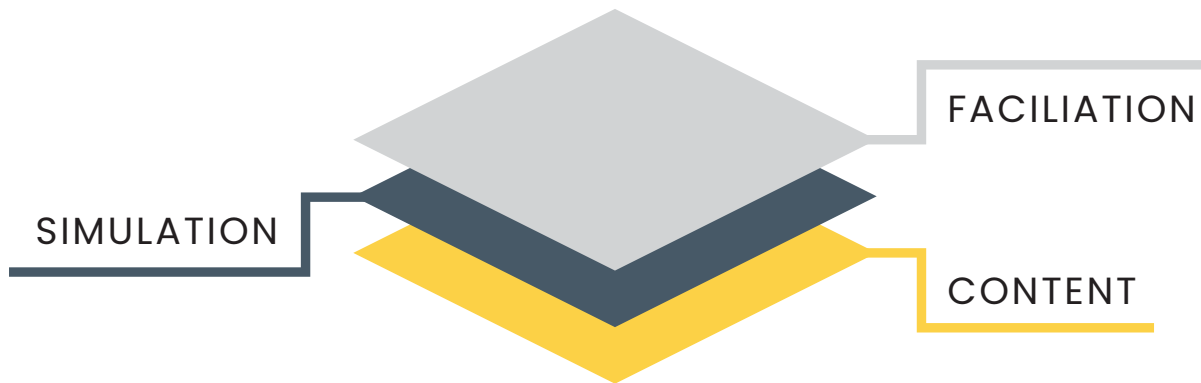


The people on your team are where you should spend your money first. You should then spend your money (or resources) on the best content you can get. I'm not saying you should go outside for content development. Rather, you should spend more money on hiring the best content creators (team) on the planet and have them create the best content in the world. It will save you money, and you'll have the goose that lays the golden eggs.

Once you have the best team and content on the planet, then look at tools. Tools are what you use to deliver the great content that comes from your great people. Great people create great content. Great people also engage participants around great content.

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Yes, it's simplistic and idealistic. I recognize and have experienced how difficult this can be due to headcount versus budget within companies. However, I firmly believe that when you hire the best people and empower them, the results are limitless. How does this apply to business simulations or serious games? Like this: the content is your core. The simulations and games put that core into action, and facilitators apply it and make it cohesive. Let's look at this visually:



Content should be at the heart of your training program. Don't skimp on this. This is where you put the lion's share of your resources. Then the simulation puts the content into action, and facilitation applies the content to the business and keeps the program flowing well.

If you try to make the simulation the core of the program, you are putting the cart before the horse. The content is the core, so you should treat it as such. A great facilitator will keep the whole thing together.



SUMMING IT ALL UP

By no means am I trying scare you away from using sims or games. They are extraordinary learning tools. I am simply trying to help you answer two questions: Do you really need one and would those resources be better used at building a more solid organizational foundation?

In the end, this is going to be for you to decide. If I haven't scared you off yet, great! Let's continue and try to help you dive in effectively and with as little resource expenditure as possible.

TAKE ACTION

This chapter asked you a number of questions to get you thinking about whether a business simulation or game is right for you and your company. Now I'd like you to create a quick list of pros and cons. If you like, you could run the list by your colleagues and ask for their input.

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GOING DEEPER INTO SIMULATIONS AND GAMES

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GOING DEEPER INTO SIMULATIONS AND GAMES

AN ENORMOUS NUMBER of business simulations are available for learning and development. The sheer variety of training solutions on offer can be bewildering to an organization trying to choose the best fit for the situation. To simplify things, we'll place the simulations into three primary categories:

- ■ ■ Branching stories simulations (behavioral)
- ■ ■ Strategic business simulations (strategy/business/leadership)
- ■ ■ Immersive simulations

Each category has pros and cons. None fits every need. There is no magic bullet or a one-size-fits-all solution. The goal of this chapter is to introduce the differences, potential uses, and advantages and disadvantages of each solution.

Some types of simulations are excluded from this overview because they are exceptionally complex and require an army to maintain. They might succeed, but they require a huge commitment of money and people. For the sake of time and simplicity, I've chosen to exclude them to keep things applicable and digestible, and to prevent confusion.

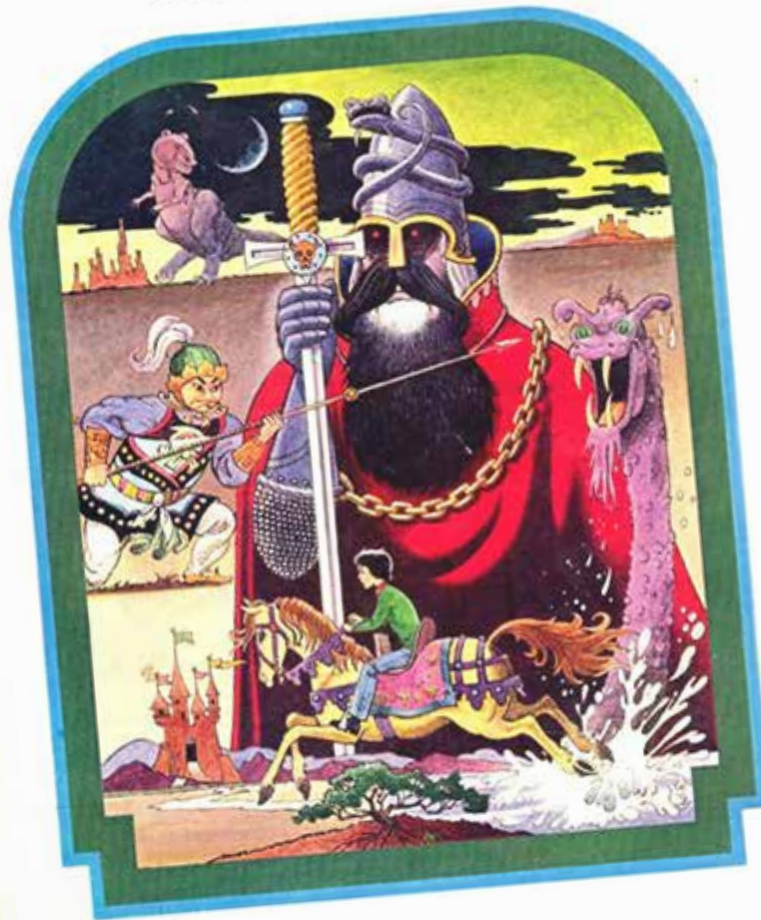
BRANCHING STORIES

Do you remember reading those adventure storybooks in which you had to choose from several options at the end of each chapter? Each choice would send you in a different direction, presenting its own challenges.

CHOOSE YOUR OWN ADVENTURE®

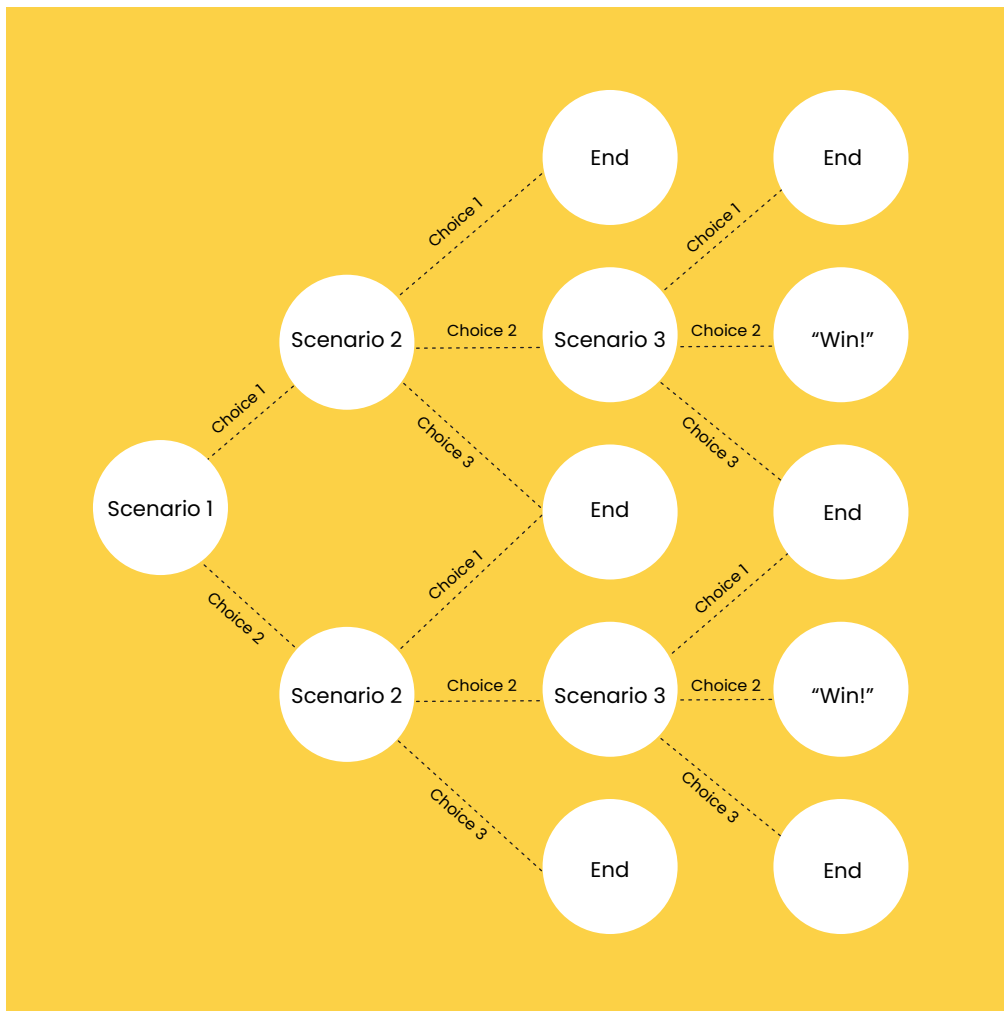
THE CAVE OF TIME

BY EDWARD PACKARD



05

For example, at the end of the first chapter, you might find yourself face-to-face with an enraged bear. The book would give you some choices: "If you fight, go to page eight. If you run, go to page ten. If you lie down and play dead, go to page twelve." If you chose option one or two, you would most likely be the bear's dinner. If you chose option three, the bear would lose interest, and you would live to read on and choose other options. Let's look at the structure:



The general idea is that people learn by doing. People try, fail, learn, and try again. Branching stories are an exceptionally inexpensive way to achieve outcome-oriented learning in an entertaining way. Team-based branching stories are recommended where possible, because participants will have to utilize teamwork skills as well as logic.

Advantages of using branching stories in business training include the following:

- ■ ■ They are inexpensive and easy to create and implement.
- ■ ■ They engage people quickly and are an excellent way to generate excitement within your training program.

However, there are some disadvantages to using this method:

1. Branching stories aren't strategic, and tend to work better for behavioral training goals.
2. People can often "game" the branching stories because they can figure out what outcome the training course is looking for. Thus, they know the pitfalls before they decide. This is especially true in group settings, due to peer perception.
3. Sophisticated participants might perceive this as a juvenile activity and may disengage. The trainer and training department could lose credibility, and it could be a challenge to reengage the participants. At this point, the branching story, though inexpensive to create, comes at a high price: lack of credibility. Word tends to travel quickly within an organization, and this is the wrong type of buzz to generate.

Branching stories can be used in creative ways. Something we commonly create is a bimetric scenario solution, which is a branching story that is focused on two opposing metrics. Scenario-based training is a great tool for behavioral training or awareness building.

We use two metrics because, in the real world, two conflicting metrics are often used to measure people, such as time and quality. In many cases, decisions will have an impact on how long something takes and its eventual level of quality. Other common opposing metrics include:

- ■ ■ employee engagement versus goal accomplishment
- ■ ■ time to market versus product feature level(s)
- ■ ■ employee satisfaction versus investor satisfaction

These are just a few examples. The best way to utilize these is to work backward from the finish line. Ask yourself what impact the training program should have. Once you have picked the two (or more) items you're trying to influence, simply use those as your branching story metrics. Build scenarios that influence the two metrics, boosting or lowering each in turn.

A note of caution for instructional developers: you are probably about to race over to your computers to fire up popular e-learning tools. Unfortunately, those tools can't do this, and you're going to get frustrated if you try to force them to do so. E-learning tools are great for creating a basic branching story that might measure one metric at a time, but they fall flat if you try to measure anything more advanced.

In order to create bimetric scenario solutions, you have two choices:

- ■ ■ Build a quantitative reactive core application using advanced development tools, or
- ■ ■ Do it with paper (yup—as in pen and ink).

In many cases, good old paper and pen rules the world of business simulations and business games. No matter what others say, sometimes the simple solutions are the best solutions. Go with what your capacity enables.

In my experience, participants presented with a choose-your-adventure story will be so engaged, they'll completely forget it's paper. Granted, it doesn't have the sizzle of a computer-based bimetric scenario solution, but it will do the job. You'll just have to ensure the story and framework are of the highest quality. We'll look into this in more depth in chapter eight, "Fundamentals of Game Design."

FIVE STEPS TO CREATING A BIMETRIC BRANCHING STORY

I am going to present this in step format. A word of caution: you are going to have to do quite a bit of work on your own here. I'm simply giving you a basic framework and methodology for building this. You're still going to have to build this solution yourself. At Simulation Studios, we've created hundreds of these things. Even though they are simple by the standards of business simulations, they take time and precision to get right.

STEP ONE: RECOGNIZE AND WRITE DOWN THE THREE LEARNING OBJECTIVES OF THIS PROGRAM.

These need great specificity! Something vague like "to learn about the business" won't cut it. A possible objective might be something like "be able to explain to others the DuPont Model of Finance" or "recite our leadership competency model and explain direct impacts on net profitability."

STEP 2: DEFINE UNITS OF MEASUREMENT.

These are your two metrics. Pick easy ones. Examples include profitability, market share, employee satisfaction scores, and customer satisfaction. It is good if the two are somewhat opposed to each other, because it adds the element of challenge and reality. For example, you might choose net profits and customer satisfaction. The idea is that to be more profitable, you might have to raise prices, which could anger customers.

STEP 3: BUILD A STORY.

This is probably the hardest part. In this case, the story is really a hidden case study, but you want to present it in story form. You need to have a character, challenges, and goals. See the chapter eight, “Fundamentals of Game Design,” for detailed information. This story must outline how the participants are being measured. The participants are being measured from the work you did in step two.

STEP 4: BUILD YOUR DECISION SCENARIO MAP.

These are the points where participants have to make a decision. This might be something like: “The cost of goods has risen, putting pressure on your profitability. What would you like to do? A. Raise prices. B. Try to negotiate with suppliers. C. Do nothing for now.”

NOTE: Do not provide more than three options. I know there is a temptation to provide more, but remember, each outcome is exponential. This means your little branching story will grow faster than you might imagine. Example: Scenario one will create three new scenarios, which will create nine new scenarios, which will create twenty-seven new scenarios. This means that in just three decisions, you have forty ($1+3+9+27$) different scenarios to create!

STEP 5: BUILD A METRICS OUTCOMES MAP.

This is a simple grid that outlines the effect of each decision. Each decision is only going to have impact on metrics (remember, it’s a two-metric simulation). Example: decision (A) Raise prices = +1 to profitability and -1 to customer satisfaction.

It’s that easy. If you’re going to use existing off-the-shelf e-learning tools (branching story tools), all you’re going to do is build the slides and keep track of the scores manually. You don’t really need an engine for this. This is just brute-force work using a tool that wasn’t designed to do this. (Which is why I don’t like using those tools for this purpose.)

If you're using a paper solution, all you're going to do is put each scenario into a slide, have the participants tell you what they choose, and keep track of the scores. At the end of all the decisions, you have a score. Magic! Then have all the participants compare their scores and talk about why or how they got there.

Yes, I know, this is a simple method. But hey, it's free, and it works. Best of all, it won't cost you a ton of money.

STRATEGIC "RUN THE BUSINESS" SIMULATIONS

The strategic simulation or game is the gold standard of business simulations and serious games. These simulations are highly effective when trying to align strategy, reduce silos, increase business acumen, deliver leadership development, or teach people about the overall strategy of your business. The downside is that they are complex, hard to build, and require computer programming skills.

That said, they should not be complex to manage on your own. This is important: just because you didn't build it doesn't mean you shouldn't control it. Stated in another way: if you paid to have the simulation built, you shouldn't pay to continue to use it. Others may be crying foul! I came from a company (Apple) obsessed with customer-centric behavior and blessed with a culture of always doing the right thing, and I know that this is simply the right thing to do for customers. It's fair, and it's right. If you pay someone for something, you should have free rein to use it when, how, and where you like. It's just common sense.

Note that strategic business simulations or games are much more difficult to create than you probably imagine. The ability to create these solutions requires deep knowledge and a robust skill set. The skills must include the following.

SOLID SKILLS IN ADVANCED BUSINESS ACUMEN.

You have to be able to converse with a CFO, CIO, CEO, COO, CMO, and so on. I really mean this. A strategic simulation (done right) has a little bit of every business in it. To make matters more challenging, when you run participants through this solution, they will challenge you as a facilitator, and you have to be able to switch in real time between finance, marketing, operations, technology, and so on. Furthermore, you have to do it with confidence and experience. This is something I have to do every day. The advantage that I have is that I've managed a \$60M+ business, been in charge of worldwide launch of products, come from technology, and have an MBA in entrepreneurial economics. And this is still a nerve-racking job for me (but I love it!). So, I can't stress enough that you have to know your business beyond the theories a book presents.

SOLID FOUNDATION IN LEARNING THEORY/PRACTICE.

You probably have this. You may have a degree in education. If so, great! A sound foundation in learning theory is important because it will help you construct a more solid learning program. This is the invisible undercurrent of a business simulation or business game based learning activity. If you don't have a formal education in learning theory, you should have a plenty of experience in building and delivering training programs. This will help you greatly in both construction and facilitation. If you don't have either of these, you should seek people who do and make friends with them.

TECHNOLOGY ACUMEN AND/OR DEVELOPMENT CAPABILITIES.

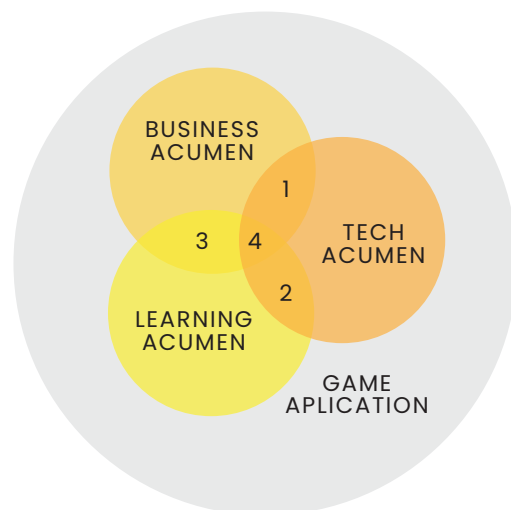
I have seen good off-the-shelf, paper-based solutions. They can be effective. However, to do a business strategy simulation or game right, it has to be computer-based. You are going to have to get your hands much more dirty than just off-the-shelf e-learning development tools. You are going to have to learn Visual Basic, C, C++, Java, HTML5, SQL, or even Swift or something equivalent. I hate being the bearer of bad news, but to my knowledge, good simulation-development tools just don't exist. Business simulations and games still need to be hand-coded. I wish I had better news. I'd love to ditch the formal development tools, but it's impossible to avoid getting your hands dirty in code.

KNOWLEDGE OF GAME THEORY.

This does not need to be too deep, but all sims and games utilize certain components from basic game theory. Chapter eight, "Fundamentals of Game Design," looks at this in greater depth.

For the visual people out there, creating a strategic business simulation or business game requires the following skillsets:

1. Flashy and applicable, but hard to learn from;
2. Flashy and easy to learn from, but content is not as applicable;
3. Content is good, learning principles are sound, but it is not very engaging;
4. Perfect: Applicable, contemporary, and easy to learn from.



It is important to find the right balance between technology, teaching, and business. If a simulation or game is balanced, no single element will stand out. For example, an unbalanced sim with too much business will make you notice the business emphasis of the simulation. Conversely, a sim or game that is all tech will feel too flashy, and that is all you'll really notice. You'll exit the simulation exercise with the feeling that you've just been to a party and didn't meet a soul. You'll feel cheated.

A good simulation will enable participants to be highly engaged, learn a lot, and not be bothered or distracted by the technology. This is one of the reasons I try to avoid big, heavy simulations. In my experience, this is a developer gone wild and getting in the way. The technology should simply deliver the content. The content should apply effective learning methods. It's a simple equation in theory, but is often misapplied.

This begs the question of how to balance the mix. Here's a guide:

- Development takes more than two months total or the overall size of the sim program is huge. Chances are, the sim is too big in technological terms. Are you sure it needs to be this big?
- When you do a run-through of an early version of the sim, do you need to pull out advanced finance, marketing, operations, or management textbooks? If so, you're probably a little heavy on the business side of things. The goal of the simulation is to reinforce the training content. The participants shouldn't have to go beyond the training content materials provided. If they do, you have "scope creep" with the business part of the simulation or game.
- Is there a binder of content more than three inches thick? If so, it looks like the learning and development team has gone wild. Save it for spring break, guys! Unless the sim is massive and the business acumen requirements are substantial, you have an unbalanced program.

COMPETITIVE VERSUS COLLABORATIVE BUSINESS SIMULATIONS

From my experience, I've come to feel that competitive business simulations should be collaborative. Companies within the United States don't seem to have a problem with too little intra-competition. Today's businesses have worse silo and departmental conflicts than those in the past. I have no idea why, but one thing is for certain: reinforcing a competitive environment could reinforce some already destructive behavior. However, competitive sims are still our biggest sellers, and for good reason: engagement is high. Let's look at the differences and applications between competitive and collaborative sims and games.

COMPETITIVE SIMULATIONS

In competitive simulations, participants break into teams of two or more. These teams often start the simulation exercise in identical circumstances, and in most cases are running the same simulated company. As soon as any of the teams begin making decisions, the companies become different due to the forces of a modern business marketplace. For example, if a team changes pricing strategy, this has a profound effect on the other teams because, all things being equal, the team that lowers its price will gain market share. The teams review their results after undergoing one round of the simulation.

Let's say the goal of the training program is to align employees around the new corporate strategy. The simulation will award more points to the team making decisions aligned with the new corporate direction (pricing, product, service, and so on).

This is where it gets tricky. Are the participants competing against a computerized adversary or their colleagues in the room? For more explanation, see "Human versus Computer / Human versus Human" below. No matter the case, a competitive simulation will establish the scenario whereby the team with the greatest score wins the overall simulation game.

In most cases, the simulation game has multiple rounds. If a simulation or game has too many rounds, it may be too big. Watch out for scope creep or unnecessary extras. When the participants don't get it after the first round, either the sim is ineffective or too large. Solutions don't need to be enormous to be effective. In fact, if they get too big, participants can forget the purpose and application. This creates a scenario where the sim or game program ends up being detrimental to the learning objectives of your program. The business simulation or serious game becomes the center of your program. This is precisely the scenario you want to avoid.

Now, I'd like to get back to the competitive nature of these programs. If your company has a silo or departmental rivalry problem, you should think twice about creating a competitive solution. The competitive sims or games are engaging, but within a company that already has plenty of competition, this might be a bad choice.

A competitive simulation or serious game will look like this:

- ■ ■ Participants read the setup and background (case).
- ■ ■ Participants make decisions within their teams.
- ■ ■ Participants see results in the form of a winning metric or metrics.
- ■ ■ Participants make more decisions to try to better their positions against the other teams.
- ■ ■ At the end, there is a placement of team performance. There are clear winners and losers.

That winning score will be either how teams performed against each other or how teams performed against the computer (see "Human versus Computer / Human versus Human" below).

COLLABORATIVE SIMULATIONS

Collaborative simulations are a hybrid of pure collaboration and pure competitive simulations. Unfortunately, a detailed description of pure collaboration simulations would require a book on its own. These are extraordinarily complex solutions used for organizational silo problems within corporations. We'll do just a brief overview here.

Collaborative solutions are especially helpful if you have a competitive organization. If you have a full-blown silo problem, you might want to look into pure collaborative business simulations (aka business silo simulations). These take collaboration to a whole new level and help organizations understand their internal interdependence. They are actually my favorite simulations because of their engagement level and outcomes. They are fantastic to watch but exhausting to facilitate.

The only downside of collaborative simulations is that engagement tends to be slightly lower than competitive solutions. In addition, they are usually more complicated to create. In my opinion, if you have a naturally competitive culture, the downsides are well worth the rewards.

This brings us to the rewards of competitive and collaborative simulations and serious games. Competitive sims and games offer some of the greatest learning engagement we've ever seen, even outside of simulation exercises. When it comes to learning, competitive strategic simulations offer the highest level of engagement. Collaborative business simulations create fantastic corporate culture awareness, with the added benefit of helping participants learn the business. Pure collaborative simulations offer off-the-charts engagement, second-to-none company cultural awareness, and unsurpassed strategic awareness. But, as I already mentioned, they are complex.

In order to help you decipher all this, I've created the following visual reference.

SIM TYPE	ENGAGEMENT LEVEL(S)	STRATEGIC APPLICATION	CORP CULTURAL AWARENESS	COMPLEXITY
Competitive	High	High	Med-Low	Medium
Collaborative	Medium	High	High	High
Pure Collaborative	Very High	Very High	Very High	Very High

In summary, competitive and collaborative simulations each have their place. Pure collaborative solutions are the ultimate solution for siloed organizations. No matter which you choose, ensure you have a clear definition of the goals and objectives of the training program. This will help you recognize intuitively which type of sim to choose.

HUMAN VERSUS COMPUTER / HUMAN VERSUS HUMAN SIMULATIONS

To add to the complexity of the business simulation and games world, let's look at human versus computer and human versus human simulations.

Human versus computer is where teams compete to win against the computer. Depending on the choices participants make, the computer will reward or penalize them. For example, when participants invest heavily in their products and leave prices the same, the computer will reward them with market share. However, this market share is not market share taken from the other participants. It's really you versus the computer. For example, have you ever played a game on the computer with no other participants? This is an example of human versus computer.

Human versus human solutions are those in which your decisions are compared with those of the other participants you're competing against. For example, let's say there are ten teams, each starting with 10 percent market share ($10 \times 10\% = 100\%$). If one team invests properly in their product while keeping prices the same, that team will take market share from the other four teams (all other decisions being equal). This is a substantially different methodology from the human versus computer model. Human versus human should be considered the ultimate simulation/game solution reviewed here. They're deeply engaging.

Which one is better? In my decades of experience, I've found human versus computer to be the inferior solution because participants challenge and discount the exercise. We hear comments such as "This isn't real because it's a computer making predetermined decisions," and "The computer doesn't know my business." Whether these participant comments are right or wrong is not the point. The point is that all that work has been discredited. If the program is discredited, you'll get lower scores, and the participants might even purge their learning, which is the worst outcome of all.

On the other hand, when humans compete against humans, a very real element is injected into the program. If a participant doesn't like an outcome, you can just say, "Tell it to your coworker." Human versus human simulations have a high level of engagement. People know they're competing against their peers. Thus, they know it's real and act accordingly.

The problem is that human versus human simulations and games require some advanced computer programming and mathematical modeling. If you are looking to create a solution yourself but lack the advanced programming and quantitative training, you can achieve impressive results utilizing the bimetric branching story solution outlined above.



In summary, competitive and collaborative simulations each have their place. Pure collaborative solutions are the ultimate solution for siloed organizations. No matter which you choose, ensure you have a clear definition of the goals and objectives of the training program. This will help you recognize intuitively which type of sim to choose.

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Competitive	High	High	Med-Low	Medium
Collaborative	Medium	High	High	High
Pure Collaborative	Very High	Very High	Very High	Very High
Human vs. Computer	Medium-Low	Medium	Low	Medium
Human vs. Human	High	High	High	High

In my experience, human versus human is gaining ground on human versus computer. Human versus human solutions are more engaging and more applicable, and are exceptionally exciting to run. On the downside, they are more complex to both facilitate and build. Most companies we deal with are going with the human versus human, primarily to avoid the dissonance that a human versus computer commonly creates. But if you are forced to go with a virtual solution, human versus computer will be easier. Whichever solution you decide to go with, if you outsource the sim development, talk in great detail about the best method for your training and development goals and objectives.

CANNED VERSUS CUSTOM BUSINESS SIMULATIONS AND SERIOUS GAMES

To put this out there in black and white, your budget may affect your choice when it comes to canned versus custom-built solutions. Most people would like a custom solution, but the cost is often the deciding factor. However, before you discount any of them due to costs, let's define what these solutions are.

Canned (off-the-shelf) simulation and game solutions are predeveloped solutions through which you run the participants. There is little or no customization to your specific business or training content. You have to manually connect what you're doing in the simulation to your training program. I know what you're saying: "This seems like trying to put a square red peg into a round blue hole." You're right, but that isn't a reason to automatically discount them. Canned solutions are cheap, fast, and easy to implement, and can produce good results. It's just going to take work on your part to find the connections between your training objectives and the simulation exercise.

If you're looking to align participants around your corporate strategy, leadership content, or overall training objectives, it might be a tough fit. If you're conducting any sort of leadership development, off-the-shelf solutions usually frustrate current or emerging leaders. If you're doing any sort of executive education, a canned solution is probably something you'll want to avoid (a possible exception being the training objectives). However, if you're looking to do a mass rollout for lower-level employees, off-the-shelf solutions are a great option. They require very little ramp-up time, are easy to access, and will engage your employees around exciting exercises.

Custom business simulations and serious games are at the top end of strategic simulations and games. Custom business simulations are built around three things: (1) the goals of your training program, (2) corporate strategy, and (3) organizational uniqueness.

Custom simulations and games are sensational tools to reinforce business strategy and leadership competencies of your organization, but they can also act to support training content. Participants are able to practice and apply your content directly to your business. These solutions give participants a real idea of what it's like to run your company. This includes both "soft" and "hard" skills (quantitative and qualitative).

One of the most valuable outcomes of these solutions is that participants can see the quantitative impact of a qualitative decision. This is next to impossible to recognize in the real world, and is highly effective when teaching leadership competencies. For example, if participants are courageous in making a business decision, this may (or may not) have a positive impact on net profitability.

Finally, custom business simulations often score the highest in the area of engagement. This is because the participants know the solution is about their business, jobs, and roles. By default, the participants have an emotional investment in the program. Think of it this way: If a policeman told you there was a violent criminal loose on your street rather than just loose in your country, you'd probably be much more engaged due to the increased potential for direct impact.

At Simulation Studios, we also offer solutions that are situated between custom and off-the-shelf. We call these tailored solutions. Tailored solutions utilize a core quantitative model that has been built as a platform (a fancy term for something that is reusable or flexible). This model will require fewer changes to fit within an otherwise custom solution. The nice thing about tailored solutions is that you'll often be able to get a custom solution for a cost only slightly above a canned or off-the-shelf solution.

The trick is finding a simulation or game company that is able to provide a custom solution utilizing a prebuilt quantitative engine that does a bulk of the calculations but does not need to be written from scratch each time. Of course, there's a catch: depending on what you're trying to accomplish, a custom may be able to be reutilized. Unfortunately, unless you have quant and instructional programming gurus on staff, you're going to have to find an outside provider you trust to help you make the call. Later in this chapter, I will touch on this once more to provide you with assistance in finding a simulation provider.

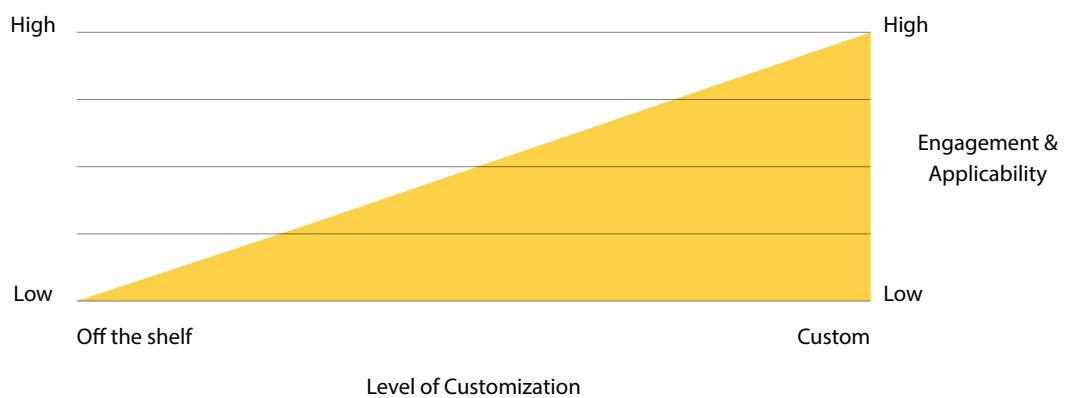
Let's summarize this. An off-the-shelf solution is an inexpensive way to get started, but it has tradeoffs, primarily in the realm of applicability to your training program. Custom solutions are more expensive but offer a high degree of engagement and applicability. A tailored solution could provide the best of both worlds, depending on what training you're trying to reinforce.

Let's look at everything visually so far.



SIM TYPE	ENGAGEMENT LEVEL(S)	STRATEGIC APPLICATION	CORP CULTURAL AWARENESS	COMPLEXITY
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Collaborative	Medium	High	High	High
Pure Collaborative	Very High	Very High	Very High	Very High
Human vs. Computer	Medium-Low	Medium	Low	Medium
Human vs. Human	High	High	High	High
Canned	Low	Low	Low	Low
Tailored	High	High	High	Medium
Custom	High	High	High	High

And here's a visual summary of the solutions in terms of cost versus engagement/applicability:



STRATEGIC SIMULATIONS SUMMED UP

Strategic business simulations and serious games are the most common type of business simulation used within corporate training and development. This is especially true when it comes to leadership development and executive development.

Strategic business simulations and games can be competitive, collaborative, pure collaborative, human versus computer, human versus human, canned, tailored, or custom. They are most often a combination of any of the above. I have noticed a strong correlation between level of customization, engagement, applicability, and cost. In general, a more customized solution is more engaging and applicable, but also more expensive.

VIRTUAL SIMULATIONS

I am not a fan of exceptionally complex and expensive solutions. They just feel too synthetic and are expensive to customize. Furthermore, the participants tend to feel awkward. They are put into situations within break rooms, meeting rooms, or offices. They are expected to make behavioral decisions before (usually) watching some sort of gauge or dial for feedback. To make matters worse, they are often given choices for how they can react. Isn't this a branching story? You're given a scenario, given choices, and there's an outcome. Remember the old saying: "If it looks like a branching scenario and quacks like a branching scenario . . ." Granted, it's a bit less binary, but it's usually a whole lot more expensive and a ton more complex, and the results are often mediocre.

With that caveat out of the way, let's look at some of these solutions.

VIRTUAL BUSINESS SIMULATIONS DESCRIBED

A virtual business simulation is one in which the participants play a given character within a simulated office environment. You'll see graphic characters (crude ones in my opinion), offices, chairs, tables, rooms, and so on.

In some cases, you'll see a thermostat-style gauge, number, or color next to the character. This is supposed to tell you how the character is reacting to your actions. The simulation will insert you into circumstances where you have to take some sort of action. These actions are often in the form of choices (like a branching story). When you choose an action, the other graphic characters react, and their gauges adjust. I'll explain this with an example.

SCENE 1:

You're in your office, and you've been having problems with one of your employees, Bradley Barkley. Bradley has no interest in managing anyone but does a great job at his current position. You're getting pressure to promote Bradley, but he clearly doesn't want to manage anyone.

SCENE 2:

Bradley enters the room. His movements are awkward, and he looks like a character from the days of the Atari 2600. But then you remember that this is a virtual sim, so you let it go. Bradley sits down and stares at you with odd-looking eyes.

SCENE 3:

You have three choices:

1. Make small talk with Bradley.
2. Tell Bradley you need to promote him.
3. Talk to Bradley about his needs.

SCENE 4:

Let's say you choose Choice 1: Small talk. The computer tells you, "You are making small talk with Bradley, but he doesn't seem very interested and asks if he can go back to work." You notice that his engagement gauge is now falling into the red. The computer gives you three more choices:

1. Tell him he can go back and deal with it later.
2. Tell him you'd like to talk about a promotion.
3. Give up on Bradley; he's a bad candidate. Tell him he's fired.

SCENE 5:

You decide to go with Choice 3: Fire Bradley. The computer shows you that you say the following: "Bradley, this organization is looking for someone who can coach and develop others. Therefore, I think we have to let you go. Please empty your desk. You get two weeks' severance pay." You see his engagement gauge is at zero, and he awkwardly gets up and leaves the scene in your office. You once again wonder what his movement problem is, but you move on.

SCENE 6:

The computer shows you two line charts: Engagement and Corporate Profits. You see that, by firing Bradley, you fired the only person who had deep expertise and knowledge about your company. Thus, the line chart shows bad profitability and low engagement.

I know I'm beating a dead horse here, but isn't this just a bimetric branching story with a bunch of glitter thrown over it? In this case, the theme is employee management (high-level theme), with the metrics being employee engagement and corporate profitability, illustrated by the discussion scenario with Bradley. Why not do it yourself, with paper, pen, and some imagination? The point is that you want to engage your participants around learning based squarely on your company—on its strategy and needs. Putting people into an unreal world is, well, unreal. You might want to explore and see if there are solutions better suited to your objectives. Nevertheless, I have seen these solutions work.

REAL-TIME VIRTUAL WORLD SIMULATIONS

This genre of business simulations and games was popular for a short time. I rarely see them any longer, but they are worth mentioning from a historical standpoint.

Have you heard of Second Life? It's a virtual world where you can buy land, build a home, furnish it, meet others, and so on. In essence, it's an alternative world for geeks. Well, companies have also built virtual offices in there. What is somewhat interesting is that participants in your training can log in, choose a character (mainly just deciding what they look like), put on a headset, and start walking around the office. Again, everyone looks like they have real coordination problems, but you soon get used to that.

What some trainers will do is assume a specific role or person in the office. That person might be an employee, manager, or coworker. The trainer will create scenarios in which he or she interacts with one or more of the participants. Because everyone has headphones with microphones on, they can actually communicate with each other. The trainer will set up scenarios and observe how participants react and behave. In a way, this is like role-playing, but no one knows who's who. In my experience, these can be awkward and unintentionally hilarious, but I've also seen them work. In the virtual realm, I've found, people behave the same way they do in the office—that is, often badly.

At the end of an hour or so of scenario setting and testing, all the participants are brought together in real life. They talk about what happened, but no one knows who was who in the simulation. People often get a laugh out of the exercise, and may actually learn things.

These are interesting solutions for behavior-based training. They apply to topics such as difficult conversations and conflict management. They are engaging, can be done quickly, and don't cost a ton of money. A bonus is that people actually talk quite a bit about the experience afterward, which is where much of the learning happens.

At first, I wasn't a huge fan of the solutions. But when I saw companies doing this in the right context, and with the right purpose and method, I grew to appreciate them. They do offer a sweet spot that I think will render the other canned virtual sims obsolete over time. I believe this mainly because they're more "human": because they incorporate human interaction, including audible bidirectional communication with human reaction. They also foster group learning. I am a huge fan of group learning because it encourages people to talk about the learning. This processing of the information is where application and naturalization happens.

VIRTUALIZATION SIMULATIONS AND GAMES SUMMARIZED

Virtual simulations and games are designed to give people the opportunity to react to scenarios and watch the ensuing reactions in real time. They are often run in small groups, but can be conducted individually. Virtual real-world simulations give people the opportunity to live in a virtual world and interact in an office setting. The trainer or facilitator will set up scenarios and take note of the participants' reactions. The participants and facilitator will come together and talk about the reactions, thoughts, insights, and applicability. These solutions are often good for behavior-based topics, such as conflict management and difficult conversations. If used correctly, these solutions can be highly effective.

TAKE ACTION

You should now have a general idea of the different business simulations and serious games available. Here's what I recommend:

- ■ ■ Collate the information you've gathered from the other "Take Action" exercises.
- ■ ■ Run a web search for "business training simulations" and find three simulation or game providers you are comfortable with.
- ■ ■ Contact the providers and tell them your goals and needs. Have them show you a few sims or games that might meet your needs.
- ■ ■ Compare the different providers' solutions and determine whether they are off-the-shelf, custom, strategic, branching, and so on. This information will apply your new knowledge.

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SERIOUS GAMES
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SERIOUS GAMES

THE TERM “serious games” has become popular in recent years. I believe this is primarily due to two things: (1) the explosion of casual games due to mobile devices and (2) the generation of video game -obsessed young people now taking over the workplace. Of course there are other reasons, but when it comes to business use, applicability, and experimentation, these two reasons strike me as the most significant.

Strategic testing or business war games are exciting, and I’ve seen the popularity of these solutions explode over the last few years. Business war games are a subset of serious games and are usually delivered in the form of a business simulation. These games enable managers to test their strategies before formally implementing them within an organization by enabling senior managers to compete against each other within their industry. The goal is to see how different teams (companies) would react to a change in strategy. In a way, this stress-tests the new strategy and adds the most impactful and least-tested element: the human interference factor.

The term “serious game” is most often used in the business-to-customer context. A serious game is created to engage customers around a product or service. Online service providers are doing this commonly now. If you go to support forums, you’ll see that people who reply to forum questions have badges or level certificates (“sage,” “guru,” and so on). This is a simple form of a serious game. The goal is to reward people for engagement around a topic. By doing this, companies keep customers engaged around their services or products.

As for serious games in learning, I’d summarize this by saying business games are the act of creating a game out of delivering content to engage participants around the training topic. Your job as a game maker (see chapter eight on the fundamentals of game design) is to create a challenge, add competition, create a goal, and add rewards. But it all has to revolve around the topic of your training content. The competitive part can be human versus human or human versus computer. The competition does not have to be computer-based; in fact, paper might be your best solution.

HOW ARE SERIOUS GAMES USED?

Simulations are a subset of business games because a good simulation needs all the same elements as a business game. It needs rules, story, metrics, competition, challenge, rewards, goals, and assumptions. Thus, business games are often used in the same way and for the same reason as business simulations: to engage learning participants around a specific learning topic in an effort to make the learning more engaging, applicable, and natural.

People I talk with are often confused about how or when to use a serious game. I tell them that it's not much more than creating engaging exercises with goals, challenges, and competition around training content. It's just a matter of creating a game out of your training content. Once you understand the principles behind building a game, you'll be able to more easily create a serious game for your training program.

BUSINESS WAR GAMES

My background has been concentrated in the areas of business management, strategy development, marketing, and engineering rather than in training and development. I completely believe in the importance of properly executed strategic training and development.

When working for big companies such as Apple and Nortel, I'd have to develop and implement global strategies. These included all the elements of typical strategic development and implementation. This stuff is not easy, but I love it. I can tell you from experience that when you create a complex corporate strategy, it's a drawn-out process because everyone wants to get the unknowns or uncertainties out of the equation. Everyone also wants to comprehend and factor in all the micro and macro economic impacts. Thus, the process of creating a strategy is almost always a long, iterative process.

The one thing I always wish I could do with my strategies is to try before I buy. In other words, I always wished I could have tested them first. Of course, I wouldn't do this alone; I'd ask all my direct reports to test it with me. The only problem is that if we did this, we'd probably fall into groupthink outcomes—not necessarily a good thing.

But what if I could create a set of circumstances in which all senior managers could compete against each other in a reactive marketplace? What if I made one decision that impacted another team, company, or manager and experienced how they would react? What if I could enact this business war over the course of a simulated three years? I could learn how the marketplace might actually react and see how my competitors might react to my change in strategy.

But wait, there's more! What if I ran twenty or so executives through this exercise in one day and showed the outcomes to the board of directors? This would get the board, executive team, and managers all engaged around the probability of my new strategy's outcomes. This is precisely what we do at Simulation Studios, and it is a blast! The learning that happens from this type of serious game is mind-blowing. This level of engagement activates management and gets them thinking about new methods, products, reactions, and competitive landscapes like never before.

This is my favorite type of serious game. There's only one drawback: creating them is not easy. As much as I wish I could explain step-by-step how these are created, these solutions require substantial education and experience in predictive analytics, statistics, and computer modeling. They also require a development team with real-world business experience. Most importantly, they require deep knowledge about your strategy.

These sets of exercises should always include the senior specialist of the learning-and-development group. We often see these solutions run in isolation, which is shortsighted. There is much information to be shared, and the learning-and-development group has the experience and education to apply the learning to the executives' jobs.

The information shared within these serious games and war games can be highly sensitive. The conversations often become animated, and topics can become heated (in a good way). Thus, it takes experienced people to manage these solutions. This is why only the most senior T&D and HR specialists should be recruited to facilitate them.

If this training option intrigues you, I recommend telling executives about it. I'm certain that you'll see their level of engagement increase substantially when you tell them about these powerful solutions.

SUMMARY

Serious games are the process of creating challenge, competition, goals, rules, and rewards. This may sound simple, but it will take a little practice.

The chapter covering the creation of games will outline the process of doing this. It's going to be your job to take your training content, create the required game elements, and create a reward system to engage your learners. It can be tricky, but is well worth the effort.

TAKE ACTION

- ■ ■ Ask your manager if the company has a need to test its strategy.
- ■ ■ Think about ways serious games could enable people to test or better understand strategic initiatives within the company.
- ■ ■ Write down three ways your company could use serious games.

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USES OF SIMULATIONS & SERIOUS GAMES

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USES OF SIMULATION & SERIOUS GAMES

This chapter will look at some of the most common uses of business simulations and serious games within corporate learning and development. Prepare yourself, because this is a rather dense chapter. Keep in mind that this is not an exhaustive list; it is a list of the uses I most commonly see. In reality, the uses are limitless, and you will no doubt find other circumstances (or invent your own) where business simulations or serious games can be used. But, due to the complexity of building these solutions, the feasibility of using simulations and games is probably limited.

Keep in mind that you can apply basic game theory to almost any learning program or learning module. I'm confident that your participants will greatly appreciate the opportunity to apply the learning content to some sort of action-learning module. I can't remember a time when a participant said, "Excuse me, could we please be drowned in more slides and additional e-learning content? I'd like to sit here and be bored for another hour." It just doesn't happen.

In looking at the following use cases, you'll probably notice that most of these apply to more senior or executive-level management. I believe this is primarily due to the time, resources, and financial commitments of utilizing a custom business simulation or serious game.

I should also point out that most of these cases involve the use of custom solutions. Due to the high-applicability requirement and strategic nature of these programs, off-the-shelf or canned solutions aren't always a good fit. This is not to say that they never are. However, I more often see companies invest in more applicable, strategic, and robust solutions.

I'm going to focus on three of the most common programs in which sims and games are used:

- ■ ■ Leadership or executive development
- ■ ■ Strategic execution or strategic alignment
- ■ ■ Business silo or organizational silo reduction

LEADERSHIP AND EXECUTIVE DEVELOPMENT

This is the most common use I see for business simulations (and occasionally serious games). Within large companies, training and development groups spend significant time building leadership curriculum around competency models, management growth plans, emotional intelligence requirements, management skills, assessment skills, business acumen, and a lot more. At the same time, senior managers are expected to have solid business acumen and a clear understanding of corporate strategy.

Countless books have been written about leadership and executive development. Entire consulting companies are happy to take over the demands of leadership development for their corporate clients. But few resources exist to help learning-and-development managers align these curricula with the corporate strategy. To make matters worse, I've found next to no resources for how to involve the participants in modern, applicable, engaging, and action-learning methods. This is extraordinarily shortsighted, since this is how adults learn—especially tomorrow's leaders, who were raised on computers, the internet, and video games.

I believe this state of affairs has arisen because most of these leadership-development resources were written by PhDs and other academics, who find theory easy and don't bother connecting it to reality or corporate strategy. It's not their core strength. Their core strength is inventing knowledge, no matter how well it can be applied to corporate strategy (or anything else, for that matter).

Business simulations and serious games are a phenomenal answer to the problem of how to engage leaders around stimulating programs that can apply advanced curriculum to corporate strategy and uniqueness. Business simulations and serious games challenge, apply, and empower learners to live a day as an executive or CEO. They allow participants to experience the exceptionally complex challenges and interdependencies of a global organization.

The only problems are, first, that it takes quite a lot of time to create complex scenarios and, second, there is a high level of risk inherent in putting less-experienced individuals in a position of responsibility. These are two things companies don't want to deal with: higher risk and a lot of time. Employees need the experience and exposure, but the enterprise wants less risk.

Business simulations and serious games greatly reduce both of these problems by letting experience do the teaching application. By no means does a simulation completely replace experience as a teacher, but it certainly reduces time and risk. It also enables learning-and-development managers to focus on particular topics, such as decision-making, business acumen, leadership, and strategy. Best of all, you can compress a simulation of three years' worth of complex and interdependent decision-making into a day or two (at most) for your leaders.

Business simulations and serious game programs do not need to be super-sized. It frustrates me to see learning-and-development managers try to manage simulations that are unnecessarily large. They usually wind up falling apart under their own weight. This is usually due to pressure to "capture everything in the business." The point of a business simulation is to apply the learning. A simulation is a terrible teacher, but a gifted tool for application. Thus, a simulation should be very compact, focused, applicable, and, most of all, managed and owned by you.

You should always feel in control of your simulation or game program. In addition, you should always be able to facilitate when, where, and how you wish (assuming you have the resources). I'll talk more about this in chapter thirteen, "Choosing a Provider."



When using a business simulation within a leadership or executive-development program, it should be designed to reinforce the three most important concepts of your program. Anything more, and participants will forget what they are attempting to apply.

For example, if you are seeking to apply corporate leadership competencies, business acumen (ideally, a specific part of business acumen, such as income statement management) and strategic awareness ensure the simulation or game applies those concepts only. Avoid “scope creep.” Great detail is usually not necessary. In fact, I’ve found that if you provide too much detail in the simulation or game, participants get so bogged down in the details that they forget the concepts you’re trying to teach. For example, if you’re trying to teach a sample leadership competency of, say, coaching others, make sure you don’t have ten or twenty decisions that measure coaching others because there are probably many other competencies and two additional topics yet to apply. At that rate, you’ll wind up with more than two hundred decisions, which is far too large.

You should avoid having the simulation turn into the leadership-development program. Due to the sizzle factor that business simulations and games provide, it can be easy to get carried away. It is important to remember that the simulation-learning tool is just that: a tool to reinforce and apply your leadership development content through action learning.

I often come in after a failed simulation or game that made an absolute mess of a perfectly fine leadership development program. The sim or game overpowered the leadership program, undermining its effectiveness. The role of the simulation is to reinforce, engage, and enable more natural learning of the training content. The best simulation and game programs we’ve seen involved retaining a company to reinforce content obtained from a leadership development provider.

This doesn’t mean home-cooked content is necessarily inferior. It’s simply that, in most cases, we’re brought in to create a leadership-development simulation or game, and we’re set up to partner with a leadership-development company. Incidentally, I can’t tell you how many times leadership-development companies try to copy business simulation or serious game provider solutions. However, it’s just not their core capability, just as the core capability of a sim/game provider is not creating leadership theory, knowledge, or research materials. Experts should stick to what they do best.

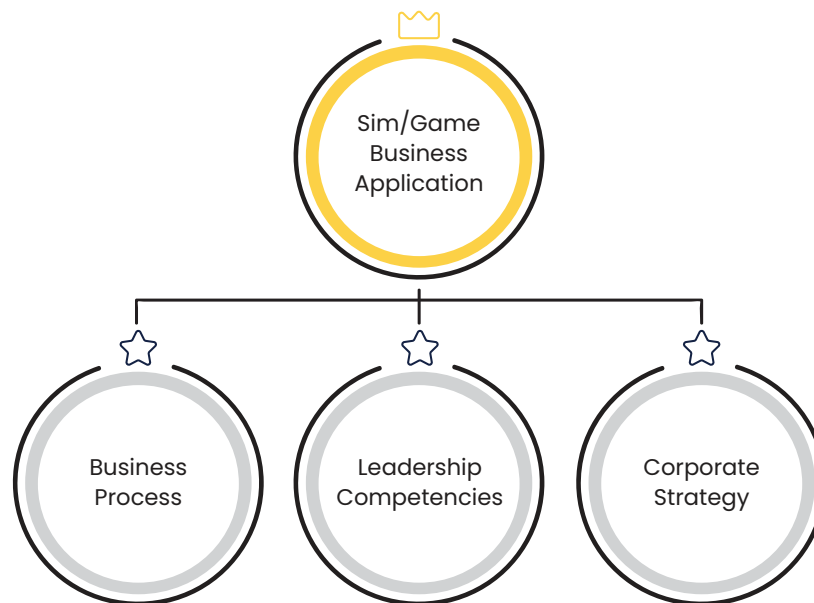
If you’ve created (or are creating) your own leadership development content, fantastic! Now, if you’re looking for a way to engage participants around this content in a way that will demonstrate the application to their business and the outcomes it can create, a business simulation is the way to go. This is better than just saying, “Trust us, this is important,” and leaving it at that.

If a business simulation or serious game is beyond your instructional-design capabilities, I would advise you to find a provider you trust—one who has great references, doesn’t push giant solutions, empowers you with full licensing rights, and is fun to work with. To assist you, I have devoted chapter eight to that process. What’s most important is to find a non-consultant simulation or game provider that you trust.



Back to leadership development simulations and games: one of the most important components the simulation or game should reinforce is alignment and application around your leadership competency model. This is unique and specific to your company, and is probably the core of what drives your company’s values.

This process should be pursued in light of your company’s specific business strategy and method. When you combine your leadership model with strategy and method, you have covered more than 80 percent of the business management. Of course, endless details make up the remaining 20 percent, but if you try to boil the ocean with a single match, it will be extinguished without any change in temperature. This is one of the biggest lessons I learned from Apple—the 80/20 rule works! However, it is often hard to execute, which means you’re going to have to learn to say no. While working with Steve Jobs, I often heard him say, “Focus is about saying no.”



Using this model, you’ll get 80 percent of what you need by applying this model to most leadership development simulations.

Keep in mind that there are most likely sub-points inside each bubble of the diagram above. This should be considered a high-level view, and is why I sometimes recommend that companies obtain outside talent to create simulations or games for leadership or executive development. These are complex animals that require exceptionally strong business experience, great computer-programming chops, and the ability to understand effective learning processes.

Don't feel the pressure to go big or complex. Start small and try to utilize your internal abilities if possible. If you think your instructional designers have this combination, take advantage of it! The best knowledge is homemade. My only advice would be to keep an eye on scope creep. These solutions are magnets for complexity when they don't need to be.

SIMULATION SIZE

Leadership simulations and games do not need to go beyond two days. In reality, one or one and a half days is enough time. One very long day (ten hours) is doable, but exhausting.

If you find yourself in a situation where a simulation is more than two days and requires more than one facilitator, you've entered the overly complex and costly zone! I'm guessing you're finding yourself there due to outside influence. If this is the case, resist the pressure unless there is a very good reason for it to be longer. Sims in excess of two days are overwhelming and have crept beyond the proper scope. Keep in mind that I'm only talking about the business simulation/game application portion of the program and not content delivery. For better or worse, good, rich content takes time to deliver. It's just the nature of the beast.

A business simulation should not take up an overwhelming amount of time. The sim's job is to quickly apply the leadership-development content and enable participants to experience its impact on the business. You'll want the simulation to give participants an idea of the complexity of the business and all its interdependencies. Humans learn quickly through experience, and the sim does not need to boil the ocean. It doesn't take much hot water for people to get the idea that it's hot, so there's no point in boiling a vast amount just to deliver that message.

What is the ideal size? I wish I had the perfect answer for you, but it really depends on the size of the content you're attempting to deliver. I will reiterate, however, that two days is the maximum. This includes reinforcement content delivery during the actual sim program. I'll talk a bit more about this below.

The other advantage of avoiding a monster two-plus day program is that it saves even more money due to travel. I've seen research suggesting that each day someone travels costs the company over \$325. This was estimated by calculating rental car, hotel, food, travel, and so on. When you multiply this by twenty-five, it adds up to \$8,125 per day! My recommendation is to see if you can start a program early, end late, and make it a compact one-day program. When I say early and late, I mean starting at eight a.m. and ending at six p.m. By keeping breaks tight, you'll find you have a significant amount of working time.

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You may be saying that's a long day of training, but working in a simulation/game is different from traditional learning methods. Participants love the work time, are engaged by the challenge and teamwork, and don't seem to mind the time commitment at all. Most employees work until five thirty or six p.m. these days anyway, so it's a matter of getting the participants to arrive early.

Doing some quick back-of-the-napkin math demonstrates the cost savings by attempting to use time this efficiently:

AVERAGE COST OF TRAVEL PER DAY: \$325

NUMBER OF PARTICIPANTS: 25

PER-DAY TRAVEL COSTS: \$8,125

PROGRAM REPETITION PER YEAR: 8 (ONCE A MONTH EXCEPT FOR DECEMBER AND JUNE-AUGUST)

TOTAL COST SAVINGS PER YEAR: \$65,000 PER YEAR, OR \$130,000 IF TWICE PER MONTH.

WOW!

To emphasize my point: Business simulation and game programs do not need to be huge to be effective. In reality, highly focused and correctly developed programs are far more effective than the "do everything and address every detail" monster business simulations and games. In the latter, participants become more concerned with running the sim or game than learning from it. Unfortunately, the lesson turns into how to run the program instead of applying your training content.

TIPS AND TRICKS FOR PROGRAM STRUCTURE

How you structure the business-simulation program is almost as important as the simulation itself. As I've mentioned a few times, simulations and games can be poor teaching tools on their own, but they shine like learning lasers when combined with effective teaching and facilitation. I strongly recommend, therefore, that you provide a sturdy support system of structured facilitation around delivering a simulation or game program.



The structure I believe to be most successful is a three-step process. Participants should:

- ■ ■ Take action by making decisions.
- ■ ■ Have the opportunity to review results.
- ■ ■ Apply lessons learned to their future decisions and to their jobs.

This is a high-level overview and exceptionally common in the world of business simulations and games for learning. The addition I strongly recommend is to give the participants time to talk through what they have learned—specifically, how it is relevant and how it applies to their jobs.

The best learning will come from the discussions the simulations and games create. Your job as a facilitator is to get the participants talking about what happened, why it happened, how it applies to their work, and why it's important, as well as the process behind how they got there. When you get the group talking about everything, there will be differences of methods, outcomes, and ideas, and this is an ideal learning environment. People learn most effectively by teaching others—and this scenario makes that learning happen.

When your participants begin to share their insights, they are actually teaching others. This is the single most powerful way to get participants to become one with the information they are learning. At this point, the learning is natural and will stay with the participants long after they have left the training program. Get them talking! I can't emphasize this enough.

An additional highly effective tool in the process is to get upper-level management to spend an hour or so with your participants. The focus here is to discuss the topic of the business simulation or game: Why is it important, how does it apply, and what are examples of its real-world applicability? Internally, Simulation Studios calls these the executive sessions. By the end of this hour (or more—whatever your executive can spare), participants will be better able to understand why the business simulation or game exercise and your training content are important. If you're a training manager, you probably do this often. But if possible, try to schedule it during the business simulation or game program. The reason is that the exercise is very close to the real world, and bringing the executive in to talk about real-world application brings the program to vivid life.

The best practice is to have the executive go through the simulation program at some point ahead of time. Then he or she can talk about how the simulation or game program is applicable, how it can be used, and what he or she got out of it. This will help raise the level of engagement and applicability for your participants and will help apply the learning to their roles.



The optimal way to use a business simulation is:

- ■ ■ Let participants make decisions. They'll make some mistakes.
- ■ ■ Let them see and think about the mistakes that they've made. Show them the results as a group and encourage discussion. Try to apply the insights back to their business and roles.
- ■ ■ Give them an opportunity to try again and use what they learned in the previous round in another round. Of course, there are other formats and flows; this one just seems to be the most widely used. Again, I'm trying to focus on the 80/20 rule, and this is definitely where 80 percent land.

HOW MANY ROUNDS PER SIMULATION?

A common question I get is: "How many rounds should a business simulation include?" As usual, my answer is: "It depends." But I've rarely seen simulations or games be effective in excess of three rounds.

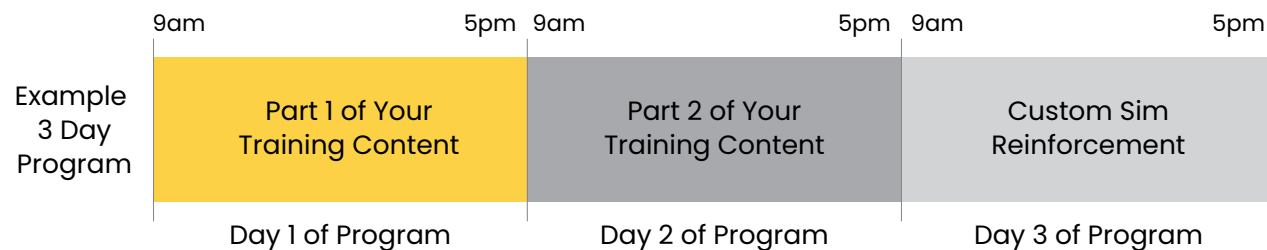
Three rounds seem to be the sweet spot of rounds. More than that, and you've begun to cross over into overkill. The only exception to this is if they involve flash rounds, but I'm trying to stay within the 80/20 rule. More than 90 percent of what I've seen involves three rounds. Maybe 5 percent have two, and the remaining 5 percent have four.

Now, what is a "round" in the context of simulations? A round is any segment of time you think is appropriate. A round could be a week, month, quarter, or year. The simulation doesn't care. It's a matter of story and labeling.

The big question is how to use these solutions. I recommend one of two ways to integrate these. The two methods are:

CAPSTONE METHOD.

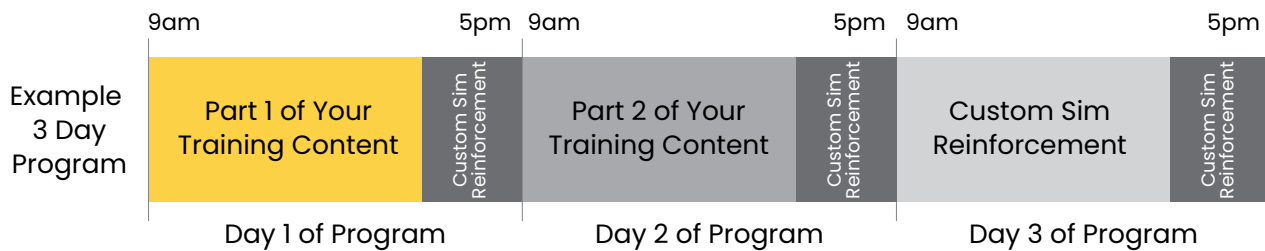
This is where you unleash the participants onto the simulation at the end of the program, where they can apply all your content in total.





MODULAR METHOD.

This is where you provide some content, apply it within a simulation exercise, provide more content, and apply it within another simulation exercise.



WHICH METHOD IS BETTER?

No one method is better than the other. It seems as though some program managers prefer a capstone method while others prefer the simulation exercises sprinkled throughout the program. In my experience, capstone simulations work best at the end of a multi-segment program. For example, in a leadership-development program in which the participants go through three three-day sessions, a capstone seems to fit nicely. Additionally, I have noticed that participants tend to be more engaged when the simulation program is delivered in one big session because it takes time for participants to get into game mode. When a simulation is presented in tiny pieces, it creates a jerky start-stop-start-stop experience.

It is important to emphasize that both methods work well; I'm not trying to imply that the capstone method is superior. I have certainly seen circumstances where the distribution method seems to fit better. For example, when introducing topics where one concept must be mastered before the second concept can be introduced, a distribution method is often superior. This helps ensure that participants have learned and applied the first concept before moving on to the second.

TAKE ACTION

- ■ ■ Write down your company's three most important training programs.
- ■ ■ Do you think using a business simulation or serious game within one of these programs could apply your learning to your company?
- ■ ■ Ask colleagues about this idea, and spend thirty minutes brainstorming ways to apply your learning using a simulation or game.



FUNDAMENTALS OF GAME DESIGN



FUNDAMENTALS OF SERIOUS GAMES

DESIGNING A GAME IS DIFFICULT. It requires a particular set of skills that engage both sides of your brain. In my experience, some people have a natural understanding of gaming and others just do not. Like many skills, it can be learned; however, for those who have natural ability, it's much easier. Nevertheless, I've seen people who appeared to have minimal natural ability in game design create some fantastic games.

On the whole, individuals who are open to game input always do the best. I talk more about the necessity of feedback and input below, but this can be summarized by saying that feedback is critical to game design. To create a great game applicable to many, the game designer must obtain many rounds of feedback about the game itself.

NECESSARY SKILLS

To design a game, you're going to need a broad set of skills. In a sense, you'll need to be a jack-of-all-trades and master of them all. The fundamental skills in game design are audio, art, writing, storytelling, and program-structure architecture. Now, if we look at the requirements for a business simulation or game for training and development, take all of the above and add business acumen and teaching skills.

There is one other important skill, which is the ability to listen and transpose. (Wait, aren't these two skills? Well, yes, but they should act as one.) If the game designer can't listen and convert what is heard into something meeting the given criteria, the outcome will be unacceptable.

This is essential, because often people who give you input don't know what they want or aren't able to describe it. This is particularly the case with business simulations, because if they knew exactly what they wanted, they would probably not be talking to you. Yes, they might know what they want it to produce (outcome), but they don't know what it is.

Your job as a game designer is to listen to people, understand what they are telling you, have compassion for what they need, and transpose this into a simulation or game. To be candid, there are two camps in this category: those who can naturally listen and transpose, and those who half-listen and then do what they want anyway. I hate to be a downer here, but most consulting firms are the latter. They are so used to creating what they want that it's what comes naturally to them. They take what you're saying and turn it into something they think will work best for their systems. The good news is that not all are like that.

When you either hire a designer or contract a firm, it is critical that you be comfortable with the people you'll be working with and that they have the ability to listen and openly transpose. The candidate(s) shouldn't hold back ideas out of a sense of protection. They should let the flowers bloom through the pollination of ideas.

Whether you are looking to hire or are developing the skill for your own use, you'll need to work on these skills in equipoise. This is to suggest that if you have a strength in only one or two skills, your game will simply act as a mirror of your skill set and may end up feeling unbalanced. You'll have to work on either building the weak ones or muting the strong ones. This can be exceptionally difficult, but having a clear understanding of your strengths and weaknesses is half the battle.

DEFINING THE GOAL OF THE GAME

When you embark on designing the actual game play, you will be tempted to work from the idea that the goal of the game is for the participants to simply win at what it is you're trying to measure. Yes, this is a goal, but only if you're looking at the goals of the participants in the game. You should strive to take the goal up to the level of the gaming gods. I believe that the goal of the game should be to create an exceptionally memorable and applicable experience. If the participants remember the experience, the learning outcomes will naturally be attached to that experience. If you create a great experience, you have created a solid foundation upon which to build your business simulation or serious game program.

The biggest challenge in creating an applicable and memorable experience is that the experience will vary substantially from one participant to the next. To help address what I call experience variance, you need to work on your game design in an iterative process. If you are the one who is designing the game, it is critical that you gain input from as many stakeholders as possible. If you are hiring a firm to do this or are managing a designer, you are going to have to insist on seeing constant versions of the game in an effort to keep "experience variance" to a minimum.

In the end, you'll always have differences in perception, but you should aim again for the 80/20 rule. If you try to achieve 100 percent acceptance from everyone, the product will never see the light of day. I can tell you from experience as a software product manager at Apple that, while you cannot please everyone, you can delight a large core if you focus correctly.

You'll have to grow thick skin when it comes to gathering feedback about your game. Everyone will have a different opinion. By nature, some will be quite strong. You need to remember that, even though your game feels like your child, it is not—it is a game designed for others to use. You should respect and appreciate the input of other people because they are the keys to driving down the experience variance. Remember that they are helping you create a better experience through diversity, and participants always appreciate diversity in a game. So don't fret if someone has an issue with a portion of your game. The people providing feedback surely still like you as a person. Incorporate the feedback and move on.

THE PRIMARY COMPONENTS OF A GAME

Many pieces make up a game, but all these pieces roll up into three main components of any game:

1. THE STORY.

This is traditionally where a serious game or business simulation's scenario or setup is created. This gives the game or sim its context and relativity.

2. THE RULES.

Without rules, the game is unmanageable. With too many, it's boring. You'll need to find a balance.

3. THE DESIGN.

This is how the game looks. It is important because if it looks confusing, participants will be confused. The game needs to look appealing.

None of these three components is more important than another. They are equal. For example, if you have a game that has strong game play but terrible design, participants won't be able to play the game. In contrast, if you have a beautifully designed game with poorly conceived rules, the participants will discredit the game. Without an engaging backstory, a business simulation or serious game has no context and nothing on which to apply the learning. When creating a game as a game designer, your responsibility is to ensure that your game or simulation has all three components, and that they are used in harmony and balance. As I mentioned previously, you need to test your game or simulation on others.

When you test your game with others, you need to look for certain reactions from your test group. Here are five questions to ask:

- Do you understand what you're supposed to accomplish? This question measures your story and rules.
- Do you understand how to play? This question measures rules and design.
- Was it easy to learn how to play? This question also measures rules and design.
- Do you understand why you're playing this? This question measures story.
- What would you change? This question measures all-around game experience.



Let's look at an example: Angry Birds™ by Rovio Entertainment. Angry Birds was amazingly successful. Why? Because (a) there was a good story, (b) the rules were easy to understand, and (c) it was good looking. Anyone could play it. They knew what they had to do, and it was pleasing to the eye. Simple. Granted, some advanced technologies are going on in the background (real-time calculation of physics), but users didn't see that. Their job was simply to enjoy, and they clearly did.

As I've mentioned before, I learned many valuable lessons while at Apple. But one of the most valuable was to hide the "how" (the technology) and increase the ease. I find it strange and frustrating when simulation and game providers make solutions overly complex and ugly. Games and simulations should have a great story and a great set of rules, and should look great. It's just not that difficult, but it is often out of balance. In my experience, I either see a solution that has elaborate rules or solutions that look nice. Rarely do I see a compelling story, and hardly ever do I see the right balance of all three. I believe this is usually because game and sim designers have been creating for too long and have forgotten the user's perspective.

It's important to remember that the components combined make up the game play. It is your responsibility to ensure that the components are making up a great game-play experience. An interesting metaphor I use for game and simulation design is the human body. The rules are the skeleton of the body; the design is the skin, hair, and color; and the rules are the blood.

You're probably saying, "OK! I get it! I need to have a story, some rules, and a good design. But how do I know I have this right?" As noted above, you have to test it over and over. You are its parent, which means you are biased and know it too well. You need to get your friends or coworkers together to test it. I'm telling you right now, it won't go so well at first. This is perfectly OK and normal. Just laugh and learn.

THE IMPORTANCE OF GAME REALITY

Another common question I get is whether the business simulation or game will be exactly like the real business. My answer to that is yes and no (I should have gone into politics). Let me explain. You want your business simulation or serious game to be similar to your business but not an exact copy. Use an industry close to the one you are designing for. For example, let's say you are in the business of making passenger cars. When you design a simulation or game, you might make the industry motorcycle production. The two have many similarities. Then choose a name for the simulated company that is similar but not the same as the real company. For example, if your car company was Diamond Automobiles, your fictional motorcycle company might be Sapphire Motorcycles.

Why do this? Primarily to lower the barriers to learning while raising the level of protection for the program's facilitators. Making the company or industry similar but not exact reduces the level of assumptions participants bring into the program. By changing the company and industry, the participant is going to focus more on the learning they are supposed to be applying than on whether the simulation or game is "accurate."

It is important to make your simulation familiar but not exact. If you decide to make your simulation as exact as possible, you will spend a significant amount of time explaining how it is or is not like your real business instead of helping your participants learn your training content. This is time that is poorly spent. Furthermore, your facilitators will ultimately lose this battle. It is next to impossible for a facilitator to be a knowledge expert in everything.

By creating a like-but-not-exact program, your facilitator will have a shield they can easily hide behind. You'll hear them say things like, "Yes, I understand, but this program is not Diamond Automobiles. It's Sapphire Motorcycles." The reaction from the participants will be, "Oh yeah, OK, I forgot." This is good, because it means they are applying the program.

TAKE ACTION

Think of a real-world company for which you might have to create a simulation or game. Now imagine a fictional alternative that would have a similar weight for participants. Give it a name. What does it produce? Where is it based?

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FIVE STEPS TO CREATE A SIMULATION OR SERIOUS GAME

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FIVE STEPS TO CREATE A SIMULATION OR SERIOUS GAME

I CAN'T TELL YOU how to program or give you the granular step-by-step process for building your business simulation or your serious game. After all, I don't know what you're building. But I can suggest some high-level steps you might take as you embark on that large-scale construction process.

1. Start with an idea.
2. Build the story.
3. Build the rules.
4. Build the prototype.
5. Test and iterate.

Some advice: Don't look up at the mountain; look at the next step before you. The next thing you know, you'll be on top. By breaking the simulation or game building into these five steps, you'll find that it's not quite as difficult as you may think. This framework will help you whether you are working with your own instructional designers or with an outside simulation-development company.

Let's look at the steps one by one.

STEP 1: START WITH AN IDEA

I know this is obvious. After all, if you didn't have an idea, you probably wouldn't be reading this. But bear with me here. You probably have thought something along the lines of "Using a simulation/game would be engaging," or "We need participants to retain more knowledge from our training program." These are valid reasons to use a business simulation or serious game, but they aren't really ideas about the game itself.

You need to define the idea in relation to the game element of the business simulation or serious game. Let's look at an example.

Problem:

Your learning programs have feedback comments such as: "The content is good, but I don't know how I can use it," "This doesn't apply to my business," or "I fell asleep at slide number fifty-two."

Solution:

"I think using a simulation/game would be engaging," or "We need to make this content applicable to their businesses."

Idea:

A business simulation/serious game that requires participants to work together so they can see potential outcomes similar to their business.



By looking at the example above, you'll see a significant difference between solution and idea. People often believe they have an idea when in fact they have a solution. You're probably saying, "Wait, isn't the solution more desirable?" Yes, of course it is! But the solution needs to be tailored, and this starts with the idea of how the solution is going to be assembled. This is where most people stumble.

Use the following matrix help you formulate your idea.

What is the problem you are trying to solve?	
What is your company's primary success metric (net income, market share...?)	
What are you trying to teach your participants?	
What do you want them to practice?	
How do you want participants to interact (e.g., compete, collaborate)?	
What types of decisions do you want participants to make (e.g. marketing, finance)?	
Based on the answers above, tell me about your idea for simulation and/or game?	

After answering the above questions, I hope you have a better sense of what your idea for the simulation or game is. This may take a little practice, which begs the question of how you know when you have the right idea. You'll know when it feels right, and when others react positively to the idea. You cannot create these solutions alone in a dark cave. You need to let your garden bloom. The only way to achieve this is to give it some sunlight. Feedback from others is your sun source. Use it!

STEP 2: BUILD THE STORY

“Yikes! I’m not a writer!” You may not be a writer, but everyone is a storyteller. You don’t need a publishable story; you just need bullet points or an outline. An actual story written out is awesome (and that is what we do here at Simulation Studios), but it can be overkill.

Your story needs to cover a few topics:

- The history of the simulated company.
- The responsibility of the participants in the simulation or game.
- The winning metric or measurement method of success.

This is simplified, but it will get you in the ballpark. You’re trying to give the participants an idea of why they are making their decisions, what is expected of them, and how they will succeed. Let’s look at an example.

What is the problem you are trying to solve?	
What is your company’s primary success metric (net income, market share...?)	
What are you trying to teach your participants?	
What do you want them to practice?	
How do you want participants to interact (e.g., compete, collaborate)?	
What types of decisions do you want participants to make (e.g. marketing, finance)?	
Based on the answers above, tell me about your idea for simulation and/or game?	



We now have the idea: A business simulation or serious game that requires participants to work together so they can see potential outcomes similar to their roles in marketing and sales. Excellent! Let's convert this into a story.

- MiniGames, Inc., our company, has a long and proud history. It started as a garage-based company that made games for family and friends in the neighborhood. Word of our great games traveled quickly, and the founders soon found themselves looking for office space and hiring engineers to help them. Historically, the products "sold themselves."
- MiniGames grew at an amazing pace and took themselves public ten years ago. MiniGames's background is in superb game design and world-class programming. Because the games "sold themselves," MiniGames didn't have a large marketing and sales division.
- The game industry has grown competitive, with many disruptive technologies being introduced. In recent years, MiniGames has expected more from its marketing and sales divisions. MiniGames is still very design-centered, but is growing more reliant on marketing and sales to deliver the required numbers.
- Last year, the founders of MiniGames retired and were replaced with a new CEO. The first action item the CEO took on was to expand the sales and marketing teams. He quickly found that the two divisions rarely talked and, in many instances, had disagreements over the actions to take.
- The CEO has mandated that the two divisions work more closely together and will be measured on the profitability of the company during the next four quarters.

Done! It's that easy. In just five bullet points, you have created the how, why, and what of the entire business simulation or serious game. The participants now know how they got here, why they need to do what they need to do, and against what units they'll be measured.

Of course, you can add some spice if you'd like, but the outline is a great place to start. Here's an example of a recent history we wrote for an automobile company:

CHEFRON MOTORS

MILITARY BEGINNINGS

Chefron Motors had its genesis in the iconic Armadillo, the lightweight utility vehicle developed by the US Army in World War II. Americans back home saw footage of the sturdy little vehicle ferrying their generals to and from the front lines and fell in love. Alfred Dance, who owned a department store in Chicago, glimpsed the economic potential. In 1953, he licensed the name and set up a factory in Oconomowoc, Wisconsin, to produce roadworthy Armadillos for the American public.

The Armadillo garnered a tidy niche market but would never be a best-seller like the boat-sized sedans produced by the big Detroit-based auto companies. Dance knew that he had to make the transition to a family car and do so innovatively. While he was mulling over options in his department-store office, he spotted a vivacious young woman directing an overhaul of the store displays and asked her to try her hand at designing a car.

Charlotte Byron became the first female automobile designer in the United States. Her classic Motion Brigantine, with its sleek lines and sumptuous interior, won the Automotive Companion's Gold Award three years in a row and set the stage for a massive expansion.

THE JAPANESE INVASION

Throughout the 1960s, Chefron continued to solidify its market share. It was known for quality and cutting-edge design, and there was no reason to believe it would ever face a threat. Then, in 1969, a Japanese company called Akoa Motors shipped its first Advance compact car to the United States. It was pretty. Its engine was sturdier than American engines. And, most importantly, it cost half as much as Chefron's flagship car, the Banner. This was the first tremor of the Japanese tsunami that would upend the US automotive industry, forcing it out of its complacency.

The oil crisis of the late 1970s, precipitated by the Iranian Revolution, cemented the Japanese hold on the American market. The Japanese cars, as well as being cheaper, were much more fuel-efficient. They had better warranties and were early adopters of new technologies. Through the 1980s and 1990s, Akoa and its Japanese and Korean imitators would take lion's share of the US market, expanding into sport utility vehicles, pickup trucks, and finally, with the Akoa Aspiration, the luxury market.

THE CONNECTED CUSTOMER

The rise of the internet in the late 1990s disrupted a slew of industries, including car manufacturing. Suddenly, customers could compare stats and prices of hundreds of cars at a glance. They were no longer at the mercy of slick salespeople and often showed up at showrooms with detailed printouts of specs and price comparisons. The Great Recession that started in 2008 only boosted this trend. Customers became much more cautious and choosy.

These trends did not play to Chefron Motors's strengths. Chefron had become a behemoth, saddled with unionized workers who were getting up to eighty dollars an hour. The company was constantly playing catch-up with its designs and innovations. It completely missed the "green" revolution, and the Akoa Aqua garnered a 90 percent share of the hybrid vehicle market.

The only thing Chevron still had going for it was brand loyalty and patriotism, which it milked in ads plastered with American flags. But the new ultra-connected customers, armed with smartphones that could pull up any stat in a couple of seconds, were no longer easily duped. They knew the features they wanted and could compare prices across dozens of vehicles. Chevron Motors was losing share year after year.

RETOOLING FOR COMBAT

In 2012, Chevron Motors brought in a new CEO, Adam Revere. He had cut his teeth in the computer industry but had a background in engineering. Revere knew that Chevron had just a few years in which to reinvent itself before the industry completely shifted over to green and electric vehicles. What the customers were demanding was clear: they wanted sleek, comfortable cars that got fifty miles to the gallon but didn't decimate their bank accounts. Developing a car that could compete with the Aqua would take enormous resources. It would require letting a large segment of their workforce go and cutting several traditional lines, including the old Brigantine and Banner.

Though it would require a delicate budgetary balancing act, Revere was convinced that Chevron could successfully pivot into the modern era of electric, computerized vehicles. He started mustering his troops to produce the car of the future: the Chevron Mantra.

Now that's some spice! But it's fun, right? That's what helps make these quantitative solutions more engaging. There's a story to tell here, and the story makes it compelling and real.

Building a solid story is often overlooked. Don't make this mistake. It will probably take less than an hour to create an outline of your story. Simply use the matrix from the idea section, take the idea, and start writing down the story elements.

STEP 3: BUILD THE RULES

This is probably the hardest part of the process, and the hardest to explain in text. A few principles are important to remember when building the rules:

1. Keep it as simple as possible. Don't create a modern version of bridge.
2. Keep the participants in mind first! Again, you need to ensure that this is playable by anyone. You have to assume participants won't want to take the time to learn a whole new game. They just want to play.
3. Start with creating bullet points of the rules. Don't write the manual first. The rules are going to change with each iteration, so you'll go mad if you write a manual each time.



The rules are what create the structure within the business simulation or serious game. Participants are going to rely on this, and it will be what keeps the program up. Without rules, you'll have undirected chaos.

On the flip side, too many rules squelch engagement and learning. You need to find a balance. Test the game with others. Don't worry if they call your baby ugly. Take the feedback with a grateful smile. People will give you better feedback when they don't see you turn red with anger.

We try to keep the rule set down to ten items. A rule set is defined as being a top-line rule (sometimes there are subrules, but try to avoid those). Here are examples of top-line rules.

Rule 1. Participants can only use the resources the simulation or game makes available to them, but they don't have to use them all. If the sim or game gives them an employee pool of a hundred people, they can use no more than that, but they can use fewer if they like.

Rule 2. Participants must not make any decision the simulation or serious game (or facilitator) tells them is out of bounds. When you program your solution, you should build elements of feedback that help participants know if they are not allowed to make a decision. In the solutions we build, the computer simply won't let them make decisions outside of the rules, but this requires advanced programming skills. If you're building something simple, try to build in some sort of alert method. If this is a paper-based solution, you need to tell participants what the parameters are and ensure they are not out of bounds.

Rule 3. Participants cannot make illegal decisions (that is, decisions that are literally unlawful in the real world). I know this sounds obvious, but we often hear something along the lines of: "I didn't see anything saying we couldn't bribe. So we bribed and went out of bounds." This should be made clear at the outset.

Rule 4. You must submit your decisions in the given time allotment. In the real world, most companies close their books at midnight on December 31. They are not allowed to add more receivables realized in February and apply them to receivables for the previous year. The IRS rightfully considers this a no-no. Your participants need to play by the same rules.

Rule 5. No special treatments are given to any one team. This is to ensure fairness and is critical in a competitive simulation environment. If a team asks for special treatment, you must either deny them or give the special treatment to each team.

Rule 6. All information must be made available for every team. Again, like Rule 5, this is a fairness rule. If you share some information with one team, you must share it with the other teams as well.

Rule 7. Teams cannot dump a business. Teams will sometimes try to "game the solution" so that they look good at a specific point in the simulation or game. They usually try to accomplish this by dumping a business. They won't invest a dime in the business but try to get all the revenue they can. Of course, this doesn't work in real life, so it shouldn't in the solution either.

Rule 8. Teams cannot move more than a certain amount of market share per round (say, 10 percent). This addresses the team trying to sell only one unit that has profit margins of more than 100 percent. Like Rule 7, this is an “antigaming” rule. It prevents teams from cheating in ways that don’t really work in the real world.

Rule 9. Teams must continue to invest in all the businesses they are given. Like Rule 7, this rule ensures that teams continue to invest in the business. In real life, they would do this, and so they must in the simulation or game. But this doesn’t always apply. If the goal is strategic alignment, this sometimes requires divestment of a business. If this is the case, by no means insist on this rule. Quite the opposite: Find ways to reinforce the correct behavior.

Rule 10. Be kind to each other. Games can get intense. I once witnessed a physical fight break out between members of a team. Quite frankly, I didn’t know what to do because I wasn’t sure of the legalities of this situation. Then common sense kicked in, and I stepped in and broke up the fight (with some help). Moral of the story: Ensure that participants are kind to each other and remind them at the outset that it’s just a game.

Keep in mind that the ten rules above are just examples. Most likely, as you create your simulation or game, you’ll add and remove rules as you go. This will be especially true after you test a game on willing participants.

STEP 4: BUILDING THE PROTOTYPE

This is one of the most enjoyable parts of building a simulation or game. When building a prototype, do not worry about the graphic design early on. You need to concentrate on developing the game play first. The reason is that if your game play is off, you are going to have to change the rules. And if you must change the rules, you’ll probably be forced to change the visual design of the business simulation or serious game.

I like to restore old muscle cars. One of the golden rules of restoring a car is to paint it last. Why? Because if you paint it first, you’ll wind up damaging the paint or potentially altering the body. If you do this, you have to either repair the paint or paint it all over again. The result is wasted time and money. The same is true for game design: do the visual design of your solution in the latter part of development.

What you do want to focus on are the actual game play and rule sets. You’ll need a solid foundation for testing. The whole goal of building a prototype is to build a platform for testing. There are three critical elements to a successful prototype:



1. The story must be solid. A rough draft is fine, but the general story needs to be well baked. Do your best to avoid an unfocused story. Without a good story, participants will be confused.
2. Have the rules clearly defined. I'm not suggesting you have all the rules 100 percent perfected. This is nearly impossible. You should walk into testing your platform with an open mind. You'll want to harvest feedback and be open to changes. That being said, you still need a good set of clearly defined rules.
3. It helps to have a beginning and an end to the prototype. Since you create the prototype to enable testing, your participants will appreciate it if there's a start and a finish. If you start a test with your prototype and leave testers hanging midway through a test, you'll get skewed feedback because they'll be left with an unsatisfactory feeling. Remember, you're trying to create an experience. People don't like incomplete things, and this is especially the case with people taking the time to test a game for you. Even if your project isn't finished, try to create some sort of closure. This will help with gathering accurate feedback.

When building your prototype, your primary goal is to create an environment to test your simulation or game. Keep this in mind when building the prototype. For example, if you need to test a specific portion of the game because you're uncertain (about play, clarity, or any other aspect), build a prototype of just that one section, but place "bookends" on each side. Bookends are scenarios you create that start the game and end the game, the goal being to isolate the portion of the simulation or game you're trying to test. In some cases, you'll find that you have a few different prototypes of the same solution, but they're in pieces. This is perfectly normal and acceptable. Again, the goal of the prototype is to test, not show off. Thus, you should focus your prototypes on what you're trying to measure or test.

STEP 5: TEST AND ITERATE

Testing and adjusting is one of the most critical steps in the development of business simulations and serious games. I know I've said this too many times, but it's crucial that you absorb all the feedback you can without getting defensive. You need to thank testers for their time and take good notes.

Testing a business simulation or a serious game has three primary steps:

- ■ ■ Test environment setup
- ■ ■ Test and gather
- ■ ■ Apply feedback to new iterations

TESTING STEP 1: TEST ENVIRONMENT SETUP

When most people think about testing, they imagine some sort of lab with one aluminum light fixture hanging from the ceiling, a square table, four chairs, no windows, and a two-way mirror with men in white lab coats and clipboards.

If you're doing a full test of the program, I recommend you try to create an environment as similar as possible to the eventual environment in which it will be used. No, you don't need to copy paint colors and furniture brands, but if you plan to have a team-based program with three to five participants per team, do your best to mimic that. If your solution will require six people working in teams of two, try to mimic that. What you're looking to accomplish is a program structure or framework similar to what you'll use in the final version. You will be surprised at the influence program structure and team dynamics exert on your final business simulation or serious game. If you test a program with three teams when the final specification outlines five teams, you're not accurately testing the program.

At Simulation Studios, we actually go so far as to rent space outside our office, set up furniture, and even provide refreshments, just as we will in the final version. Granted, this is time consuming. But we only do this when we're testing a whole new platform of business simulations or serious games, and we find the attention to detail useful. We don't usually go to this extent if it's an existing platform, as it would be a waste of money in light of the extensive testing we've already conducted.

On a final note, you should do your best to create a comfortable environment for testing: lots of sunlight, refreshments, comfortable furniture, and so on. You need to remember that your testers are doing you a favor. Treat them well and show your appreciation for their time.

TESTING STEP 2: TEST AND GATHER

I'm going to assume that you have created a prototype and a good test environment. Now for the painful-yet-important part. We need to ensure you're testing for the right metrics. For this, I'm going to drag down an exercise we worked on previously. Do you recognize this?

What is the problem you are trying to solve?	
What is your company's primary success metric (net income, market share...?)	
What are you trying to teach your participants?	
What do you want them to practice?	
How do you want participants to interact (e.g., compete, collaborate)?	
What types of decisions do you want participants to make (e.g. marketing, finance)?	
Based on the answers above, tell me about your idea for simulation and/or game?	

You are going to use this framework to ensure that you are collecting the correct data from your tests. It's your job to ensure the questions on the left are being addressed. Write them down on your notepad and get ready to test.

During your tests, you need to be as disconnected as possible. There might be a brief introduction that explains the rules, but most of this will be covered in the documentation supporting your game, which should include an intro and the story—often called a case study.

From there, it's up to you to sit back and watch participants. Keep a notepad handy and just take notes. You are looking for the following:

GAME FLOW. Is the game easy to start, play, and end?

VERBAL RECOMMENDATIONS. You'll hear participants say things like "You know, it would be cool if I could do this or that," or "Wow, it would be easier if I could just do this," or "I don't understand why it doesn't let me do that." Comments like these are your gold mine. Just take notes and don't comment. At this stage, your job is simply to collect as much of this sort of feedback as possible.



VOLUNTARY SUGGESTIONS. This is where participants will stop the game play and actually give you feedback. Again, your job is simply to say, “Hey, great! Thanks for the information. This is helpful. Keep throwing things at me! I appreciate your time; this is valuable to me.”

SERIOUS DISCONNECTS IN INFORMATION. You are seeking to ensure the participants have everything they need to be successful. This is the process of looking for what’s missing, not for what’s already there. You’ll rarely get feedback as to what is there. Most feedback is about what’s missing, so no news is good news here. Participants may say things like: “I didn’t understand that. Where does it say this?” or “I don’t know where the information I need is. Is it available?” Basically, they’ll let you know if they need more information. Remember, in some cases, a lack of information is part of the learning and is therefore intentional. If they comment that they don’t have something that is missing by design, you’re doing your job. Just say thank you.

EASE OF PLAY. Is the game easy to get started, understand, and play? If it’s too hard, and they ask many questions, the game probably needs to be simplified. Take notes and apply this valuable information to the next iteration.

Let’s take another look at the framework I posted previously.

What is the problem you are trying to solve?	
What is your company’s primary success metric (net income, market share...?)	
What are you trying to teach your participants?	
What do you want them to practice?	
How do you want participants to interact (e.g., compete, collaborate)?	
What types of decisions do you want participants to make (e.g. marketing, finance)?	
Based on the answers above, tell me about your idea for simulation and/or game?	

In this example, during the testing, you need to ensure the game is helping participants learn that profitability is the measurement for success, collaboration will help profitability, they are making marketing and sales decisions, and the game requires that participants work together. I know this seems simple, but I want to stress that none of it needs to be complex. Complexity is the single biggest reason I see companies fail in their forays into using serious games or business simulations. Simulation and game providers create something overly complex and therefore not applicable. Keep your simulations small and focused. Bloat will create expensive problems for you.

So remember: You want to gather feedback and incorporate it in alignment with the idea of your simulation or game. If your solution is not aligned with your initial idea, something went wrong in development. This is the point of testing. Test, test, test. Then test again. Testing will be your clearest path to success. The bridge between testing and success is iteration. In my job as learning and development manager, I spend most of my time in iteration. On average, we have more than a hundred iterations of any one simulation. Granted, we're a little obsessed, but it's necessary.

I remember a story Steve Jobs told a group of us while I was working at Apple. The story was about his vivid memory of a rock tumbler a neighbor had in his garage. The neighbor was a retired employee from Hewlett Packard, and Steve had a great deal of respect for him. Steve brought some interesting-looking rocks for the neighbor to put in his tumbler. After a day or so, Steve went back to the neighbor for a look. Steve thought the rocks looked great. All done! But the neighbor thought differently. The neighbor wanted to continue refining the rocks, so Steve went along with it. Another day or so passed, and Steve went back. They removed the rocks from the tumbler, and Steve was amazed. He thought they were fabulous. But again, the neighbor wanted to continue refining them. This was repeated, and Steve grew frustrated. He stopped going daily. After two weeks, he decided to go over once more. This final time, the neighbor pulled out the most beautiful objects Steve had ever seen. My takeaway: Refinement and patience are the genesis of beauty.

At Simulation Studios, we use a technique called branching (or branch testing). Branching is where we test branches of the trunk. Metaphorically, the trunk is the overall simulation, and a branch is a component of the simulation solution.

EXAMPLE: A Business Simulation Aligning Marketing and Sales

There are two divisions, sales and marketing.

- The trunk is sales, marketing, and the supporting materials (case, rules, etc.).
- One branch is sales.
- Another branch is marketing.



Let's say we need to test something solely within marketing. Then all we do is test the marketing decisions within the simulation. To accomplish this, we abbreviate the supporting material or alter it to support only the marketing part, and then just test the sim. We will do this to make adjustments and create iterations of just the marketing portion of the simulation. Why boil the ocean when you only need a cup?

You are probably thinking two things: (1) what does this have to do with iterations, and (2) isn't this obvious? My answers to these questions are (1) yes, this is testing, but you're going to apply the feedback back to new versions of the solution, and (2) yes, this is obvious, but remember, if you hire an outside company, they are usually paid on an hourly basis so they'll be more than happy to boil the ocean. Don't let them. It's not necessary, and it costs a lot of money.

Now that we've set up testing correctly, the iteration is easy. By now, you've gathered a set of testing feedback notes, in either handwritten form or on the computer. Now you're going to create a bug report for your prototype. The goal of creating a bug report is to produce a record of needed improvements and assign them useful categories and appropriate priorities before referring them for correction. This helps create order out of chaos and will ensure that the next version of your project is an improvement based on feedback generated by the testing.

Here are the steps of creating a bug report. If you can create a basic spreadsheet, you'll be able to do the following.

Within your spreadsheet program, create seven columns entitled:

Priority	Status	Category	Title	Description	Class	Owner
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These are in a specific order. I don't want to get into the complexities of why, but if you use a spreadsheet program, you have the ability to sort by column. The nice thing about this order is that you can do a primary sort by status and then a secondary sort by priority. In results, you'll be able to see a rank in order of importance.

Let's take an in-depth look at the terms used in the columns.

PRIORITY. This is important, but can cause confusion. We usually rank problems (bugs) on a scale of one to five. Please ensure that you decide at the outset whether one is high or five is high. And if you're looking at an outside company's bug report, make sure you understand their terminology.

No matter the case, bugs need to be prioritized from high to low. High obviously needs to be addressed before low. Typically, you'll forever have low-priority bugs even when the solution is being used in production. The lowest bugs are things the users will never see but that irritate the developers. They are no big deal, but together constitute a failure to achieve absolute perfection.

STATUS. This is a binary indicator: open or closed. I have seen bug systems with three levels: open, under review, and closed. In large companies, it may be something more along the lines of open, under review, assigned, and closed. But what you care about is open or closed.

This creates a logical question: Why not just delete the bugs that are fixed? This is a good question, and there are many reasons they are not deleted. There are two important reasons: (1) bugs have a habit of reappearing and need to be reopened, and (2) it's helpful to have a record of all fixed bugs for future reference.

CATEGORY. This is where you can categorize your bugs. For example, if it's a problem with the rules of the game, assign the bug a category of RULESET. If it's a problem with documentation, give the bug a category of DOCUMENTATION. Whatever categories you choose, keep them consistent.

TITLE. This is simple. You want to title the bug (problem) something concise yet descriptive. Let's suppose you have a problem where testers expressed confusion about contradictory information. An appropriate title for this might be "Contradictory Information in Documentation." Something very simple, yet when you reference it later, you'll recall the substance. Although it may sound minor, it is important to make this easy to understand. If at some point you need to share this with others (or insist a contractor creates one and shares it with you), it needs to be easily understood by others.

DESCRIPTION. You'll want to leave room within this category to write a good amount of information. This is where you describe the problem, as well as the steps to reproduce the problem. Go into detail here. You might think you'll recall the details later, but you probably won't, and you may wind up with a huge pile of bugs over time. To make matters worse, different bugs will have different priorities. Therefore, if you create a bug report with a low-level priority, it may be some time before you address this problem, giving yourself plenty of time to forget the details.

You are going to want to be precise here. Don't just copy the title and move on. Here's an example of precise versus imprecise when it comes to description:

IMPRECISE: Software crashes about three minutes into running the software.

PRECISE: When opening software, clicked on button two and opened summary window. After spending about one minute in summary window, closed it with keyboard shortcut (ctr-w). Then moved on, selecting to buy Megtron Company. When I clicked Accept Term button, software shut down with no error message.

It only takes a couple of minutes to create a good description, so just do it. You'll thank yourself later.

CLASS. A class refers to a specific software-coding tool. If you're not a programmer, don't worry about this. If you are a programmer, you probably already know what this is. If you're not a programmer and will be working with programmers, ask the programmers to explain what the various classes are and what they mean.

OWNER. This is just the name of the person who is working on the bug or who should be working on the bug. This is usually a person but may be a department. For example, if the bug is within the realm of graphic design, it should either be assigned to graphics or someone within graphics. This is important for two reasons: (1) People must know what they should be working on, and (2) If someone needs to fix a similar bug later, he or she will be able to reference the closed bug and find out how it was previously fixed.

You'll find that bug reporting will become one of your best friends. I've seen small companies build their own elaborate bug-tracking systems, but I believe this is an unnecessary burden. Your system just needs to keep track of a few basic things and be easy to access and use. If you use a spreadsheet program such as Google Docs, it's accessible by anyone to whom you grant access. This is nice because anyone with a web browser can see where the bug list stands. Another idea is your company's shared drive system. Just put a spreadsheet in there and let people access it as needed.

No matter who creates your solution, let the manager see how the bug squashing is going. You should insist on the creation of a periodic bug report. You'll probably find some resistance to this, but it's a good idea. You're welcome to download a free basic version at: www.simulationstudios.com.

TESTING STEP 3: APPLY FEEDBACK TO NEW ITERATIONS

Why does all this bug-tracking stuff matter? It matters because testing and recording (bug tracker) is 90 percent of creating effective iterations of your solution. If you have this framework in place, you will find that creating iterations becomes natural and effective. In addition, by taking the time to set up an effective method for gathering and tracking necessary changes, you are simultaneously generating iterations of your solution. It's simply a matter of taking what you put in the bug-reporting systems and applying it to new versions of your project.

In my experience, the hard part of the iteration process is keeping track of the needed changes. Most often, this record is in the form of scribbles on a notepad. This makes the iteration process both painful and ineffective. That's why I devote so much time to gathering and logging bugs. Remember, a bug can be a problem or a suggestion for improvement. A bug is anything that relates to changes your project requires.

In summary, effective iterations are rooted in effective tracking and reporting. If you have a good system to keep track of necessary changes, iterations of your solution will be easy and natural. If you have a poorly defined or nonexistent tracking system, iterations of your solution will be disjointed, unfocused, and rare. Take the time and either build a simple tracking system or ask your contractor or designer to produce a formal tracking system you can review.

SUMMARY

We have spent some time looking at the five recommended steps to creating a business simulation and/or serious game. In review, here are the steps:

1. Start with an idea
2. Build the story
3. Build the rules
4. Build the prototype
5. Test and iterate

You may not be the one building your solution. Chances are, you'll hire an outside company or utilize internal resources to build the solution. Regardless of your particular case, by partnering with your developer, you should have a clear idea, a great story, a strong rule set, prototypes built for testing, and many iterations.

Be forewarned: This is not as simple as one, two, three. It takes time. It is critical that you are comfortable with the developer of your solution. I've seen it countless times: The project lead loses control of the solution due to the creeping level of complexity. Complexity tends to creep in at all steps, but simulations and games really go off the rails when complexity creeps into the idea itself.

If you're the project lead, it is your responsibility to say no! One of the most important lessons I learned from Steve Jobs was: "Focus is about saying no." Once I heard this, it was as clear as day. We have a tendency to say yes to things we want but are scared to say no to things we don't want. Feel free to say no. You want to keep your project focused, on-plan, and company-changing.

TAKE ACTION

1. Go through the steps outlined above. Using the table provided, fill in the blanks, and use these steps for an existing (or future) training program. Do this within a spreadsheet or word processing application.
2. Create your own simple bug-tracking spreadsheet.
3. Use the bug-tracking spreadsheet for an existing or future training program. These bug-tracking sheets work on many things beyond sims and games. Customize them as you please. You can download a free basic version from: www.simulationstudios.com.

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LIMITATIONS OF SIMULATION AND GAMES

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LIMITATIONS OF SIMULATIONS AND GAMES

I LOVE FLYING SMALL PLANES. To get my pilot's license, I spent a lot of time with my flight instructor, Rob. We spent countless hours together in a tiny airplane, day after day. Rob taught me what to do if my engine went out (which actually happened to me years later—thanks, Rob, you saved my life!), what to do if the plane stalled, the procedure to follow if my avionics went out, and how to land the thing. There were times when I used a flight simulator to practice my skills. But in the end, Rob taught me how to fly an airplane. It was not the simulator; it was the instructor.

In my opinion, it is simply inaccurate when someone suggests that simulations and games are more effective at teaching than traditional instructors. Once again, I want to make this as loud and clear as I can: business simulations and serious games should be used to reinforce and apply learning, not as a primary instructor.

Simulations and games are tools in your toolbox of learning, not instruments of teaching. They facilitate and reinforce practice. If you are convinced they can teach, or if you try to use them to teach, you will be disappointed, and your participants will be frustrated. Remember: use business simulations and serious games as a learning-reinforcement tool that enables applied practice. Anything more is asking too much of them.

WHAT CAN BUSINESS SIMULATIONS AND SERIOUS GAMES ACTUALLY DO?

I've seen the results of overinflated programs more often than I'd like. Here are a couple of examples:

- The project is so darned big that it collapses under its own weight. It never gets off the ground. In this case, everyone fails.
- The project manager expects the simulation or game to teach people on its own. People walk in, go through the exercises, and give bad reviews. Of course they do! They were thrown into a mode of practice rather than given an opportunity to engage in knowledge absorption.

Simulations and games can engage participants in an environment that safely provides a means to practice learning content better than any other tool can. Thus, it's important that you view a business simulation or serious game as a means to practice and apply. To make this as simple as possible, a business simulation or serious game can reinforce almost anything you are teaching.

Let's suppose that you are interested in teaching effective leadership skills based on your company's internal leadership competency model. Great! A simulation can help people practice this, but it would be comical to watch it trying to teach people the concept.

A simulation or game is effective when, for example, participants compete against each other in the successful application of your leadership competencies to your business. The trick here is to make it relevant. It needs to assess what the company uses to measure success. Once they have had the opportunity to apply the leadership model within the game, they may reconvene for additional feedback and content introduction.

How you do this, and creating the actual game, are comparatively minor details (I know this sounds strange). The reinforcement, application, and practicability of the game itself are what are important. I've seen great games that don't apply to the participants' business get terrible reviews. On the flip side, I've seen mediocre but highly applicable games get rock-star feedback. The takeaway from this is to make the solution applicable to the participants' work.

CAN DO AND CAN'T DO FROM SIMULATION/GAME TYPE

If your goal is to help participants within your organization make decisions based on anything specific to your company, you will need to lower your expectations for an off-the-shelf solution. This does not mean off-the-shelf solutions are always bad solutions. I am simply suggesting that you shouldn't expect an off-the-shelf solution to apply your training content to your specific business needs. Simply put, a canned solution will have a great deal of trouble helping your participants apply your training content to your business. It would be unfair to the solution to expect otherwise.

A custom-built solution will be able to apply your specific training content to your specific business goals and outcomes. The good news is that the cost of custom-built solutions is far lower than it was even five years ago. Long gone are the days of the unattainable custom solution. The tools are better, the knowledge base is far broader, and the focus is much sharper. With all this comes a lower cost of development. This is great news for companies looking to apply their training content to their business.

In general, I've seen custom solution prices come down to where off-the-shelf solutions were two to five years ago. If you are laboring under the impression that custom solutions are too expensive, it might be worth a day or two to take another look. You'll be surprised.

WHAT SIMULATIONS AND GAMES WON'T DO

Simulations and games cannot teach on their own. If you purchase or build a solution with the idea that you can simply drop participants into the scenarios to be taught, you will be disappointed. To make matters worse, your participants will leave with an empty feeling that they have been wasting their time.

When creating a solution, you need to think about the simulation or game as a component of the overall training strategy. I'm sure you have developers or contractors telling you it can do everything. It can't, it won't, and you'll waste your money. My advice: start small and focused, and build the program over time.

If you build the program with the idea that you are going to start small and focused, you're setting yourself up for success. Yes, I am also talking about Fortune 500 companies with huge training strategies. This is where I see the most mistakes: Fortune 500 companies seem to universally believe that bigger is better. I've been there. I've run departments within big companies, so I get it. "We're a big company so everything must be big" is what subconsciously swirls around in the back of your head. I implore you: Instead of spending wasted dollars on large sim programs and huge facilitation costs, invest in good people. This will give you the ability to own it and use it how you wish, and will give you complete control. Otherwise, you will lose control of your program.

The takeaway from this is to use the business simulation as a learning reinforcement tool that is focused and manageable. Don't try to build a monster program with the assumption that it will teach your participants. It won't. Business simulations and serious games are terrible teachers on their own.

TAKE ACTION

- Look at an existing training program.
- Write down three ways a simulation or game might help reinforce the learning.
- Put a yes or no next to these three ways to indicate whether you really think a simulation could accomplish the goals you have set for it.
- If you are unsure, talk to one of your instructional designers or an outside company.

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CREATING A SUSTAINABLE TRAINING PROGRAM

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CREATING A SUSTAINABLE TRAINING PROGRAM

YOU DON'T WANT TO SPEND time and resources building a great program if it can't sustain an economic hiccup. Let's look at ways to ensure your program is nicely protected and sustainable in almost any corporate circumstance.

The most common reason I see simulation training programs fall apart is the practice of management siphoning money and resources away from training and development. This is shortsighted and thoughtless. I can say this because I've been in management and have had to make the hard choices myself. The costs associated with training and development are minute compared to the general waste that happens within big companies every day. Killing knowledge development is easy, but will create ineffective organizations.

So, how do you create a program impervious to the corrosive effects of quarterly earning requirements? There is one answer: make it cheap! This chapter is going to look at not only how to make programs inexpensively, but also how to increase engagement, applicability, and knowledge transfer all at the same time. No, this isn't an infomercial. It's simply what I've seen work well in other companies.

LOWER YOUR COSTS AND INCREASE BUY-IN

When it comes to business simulations and serious games, how do you lower costs and increase management buy-in? You do so by creating a program architecture that doesn't require outside assistance.

You can lower costs by more than 80 percent by ensuring two things:

1. Unlimited-usage, fee-free licensing of your simulation or game (for custom solutions). You bought it, and you should own it and use it as you please without being taxed every time you wish to use it.
2. Self-facilitation. If you use an outside company for simulation or game development, ensure there's a train-the-trainer component to the solution so you can successfully hand off the facilitation to your company.

In most cases, the real cost of managing a program with business simulations or serious games is in the utilization of outside firms to facilitate the simulation or game. Yes, I come from one of these firms, but at Simulation Studios we do everything we can to transfer the management to the companies that hire us. We don't like to travel. We're nerds—we like to build things.

If you can use the simulation or game (which you already paid for) when and where you want without paying any licensing fees, you have already saved yourself a boatload of money. In essence, you are able to buy the razor and an unlimited number of blades. If you've purchased a custom solution, there should be no licensing fees, transfer fees, hostage fees, or taxes.

It is different if you need to have an outside company facilitate. For a one-day facilitation, the outside consultant is away from his or her normal job for three to four days. There's a half day of prep, one day of travel, one day of facilitation, and another half day to get back to his or her normal job. This means that for a one-day program, the outside facilitator loses almost a week of productivity. This is a lot, and they should certainly receive compensation. But you should only be paying for facilitation and not the use of a product you've already purchased. Paying for the latter is simply unfair.

The big question is: How do you set up a sustainable self-facilitation model? Simple: have your internal leaders (senior managers) act as the facilitators.

LEADER FACILITATORS

The leader facilitator is probably the most powerful tool in your training arsenal. With up-front training, your leader can help you lead program facilitations. This will have a profound effect on your organization. Let's look at three of the most profound effects leaders as facilitators can have.

1. True business and organization application. Because of their inside knowledge, your leaders are in the best position to apply the training content and simulation/game tool to your actual business. There is simply no way an outsider can do this better.
2. Sharing of experience. It is inevitable that your leaders will share their experience with the program participants. This is a great way to transfer years of on-the-job training with future leaders.
3. Engage leaders around your training program. By putting executive leaders behind a simulation or game, you'll get a high level of engagement. It's like putting a kid in a candy store. They quickly roll up their sleeves and are more engaged than you'll ever see them in a training program.

I do have a gotcha to watch out for: underdevelopment. You want to avoid setting up your leaders for failure. I'm sure they are smart and experienced, but they will jump through self-development too quickly. They need to effectively complete the "train the trainer sessions" to be successful. I have a five-step process for effective leader facilitator training:

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The big question is: How do you set up a sustainable self-facilitation model? Simple: have your internal leaders (senior managers) act as the facilitators.

STEP 1: 0 PERCENT/100 PERCENT

No facilitation, all participation. In this first step, the leader facilitator needs to participate in the program as an actual student at least once. That way, he or she will acquire the participant's perspective.

STEP 2: 25 PERCENT/75 PERCENT

Observe and assist facilitation. In Step 2, the leader should assist the existing professional facilitator in program facilitation. This will introduce how the program works. This is essentially 25 percent facilitation and 75 percent observation.

STEP 3: 50 PERCENT/50 PERCENT

Assist facilitation. In Step 3, you want the leader facilitator to take over most of the back-end management of the program while still letting the professional facilitator do the actual facilitation.

STEP 4: 75 PERCENT/25 PERCENT

Mostly solo facilitation. In Step 4, have the leader facilitator facilitate most of the program with just a little help from the professional facilitator.

STEP 5: 100 PERCENT/0 PERCENT

All leader facilitator. In Step 5, have the leader facilitator lead the whole program but still have the professional facilitator on site to ensure success.

NOTE: When I talk about a professional facilitator, I am talking about either an internal or an external facilitator. This is going to have to be a judgment call on your part. I am not suggesting it has to be an outside facilitator.

SAY NO TO JUNIOR

If you are utilizing a business simulation or serious game, I am going to assume this is for managers within your organization who have ample experience, education, or both. If this is the case, just say no to Junior! A “Junior,” in my book, is any facilitator who is assigned to facilitate simulation or game programs and has just an undergraduate degree and less than five years of actual employee management experience.

It is simply inappropriate and will work to your detriment when Junior tries to tell management how to manage their business. Nothing against Junior, but he or she just doesn't have the experience to do this credibly. I know Junior has a lot of knowledge, but Junior hasn't been in the trenches long enough to relate to the managers he or she is trying to change. For better or for worse, I can also tell you from experience that as soon as the program starts, the participants tune out Junior. They immediately discredit Junior as not knowing what he or she is talking about. I am not saying this is fair—it probably isn't. But it's what happens.

By incorporating a leader facilitator program into your architecture, you will alleviate this problem. Your program will gain credibility. Word will spread that your program is the real deal and participants will expect to be challenged, enlightened, and engaged. This is the type of buzz you want to create within your organization.

SUMMING THIS UP

The trick to creating a sustainable program is lowering costs. You can lower costs by doing two things:

1. Licensing a fee-free simulation or game
2. Doing self-facilitation via leader facilitators

Those two steps alone will save you more than 80 percent in costs. With lower costs comes greater sustainability.

By utilizing your internal leaders, you'll help with engagement, experience transfer, and program sustainability.

TAKE ACTION

1. Write out a budget for your entire program. You need to break this down into program development, train-the-trainer, and facilitation costs.
2. Write down three possible leader facilitators whom you would expect to be excited about doing this. They should be natural facilitators with the ability to entertain and manage a group of twenty-five and with the quantitative ability to work on a simulation or game.



TWO STORIES



TWO STORIES

THERE ARE MANY THINGS you can learn from real-world examples. Let's take a look at two.

INTRODUCTION

Up until now, we've talked pretty high level and mostly theoretically. It's now time to look at two examples. One of these examples went very well, the other not so well. These are true real-world examples, chosen to align with what we've talked about and recommended in the book so far.

In order to preserve anonymity, I've removed the company names, altered many details, and completely changed the industry within which each company operates. There is absolutely no way you could ever guess what the company is.

BACKGROUND

Both of these examples were simulation solutions that were designed to be facilitated by the company that purchased the solution. Simulation Studios was contracted to align with an existing training program or a training program under development. We built a software-and-service solution that nicely augmented an existing leadership program within each of these Fortune 500 companies. Each of these solutions was custom built to suit the needs of the program, and each took approximately thirty to forty-five days to create from scratch. This is a very short amount of time, but it is something we're accustomed to and have done many times before.

REAL WORLD EXAMPLE 1

The Pure Persona Makeup Company

Though this is loosely based on a real-world example, the name of the company, the industry, and all names and details in this example are fictional.

Simulation Studios was contacted by a large Fortune 500 company to submit a proposal for a marketing simulation. This simulation was designed to be delivered in over fifteen countries for the company's leaders. After some initial questions, we agreed the project was both something we could effectively do and something we would enjoy doing. There are many jobs we turn away because the job is either something we don't think we can do well or something we won't enjoy doing. One of the primary requirements of the project was full ownership rights; the company wanted to be able to use the simulation without any restrictions or ongoing fees.

The simulation was designed to fit into an existing two-day leadership program where the simulation exercise component of the training would comprise six hours of an eight-hour training day. The program was designed to be team based, with the teams competing against each other, and it was to be facilitator led. Much of this was standard, and there was nothing that stood out as unusual.

Simulation Studio's written proposal was chosen as one of three finalists. The final step was a one-hour meeting to review the proposal and discuss any questions or concerns. So far, everything was normal.

During the discussion (which lasted almost two hours), I asked the simple question: "Who is going to facilitate this program, and how would you like the simulation program transitioned from Simulation Studios to you?" This is where I felt a wheel begin to wobble on the wagon. Pure Persona replied, "We're going to have Chris facilitate this, and we don't foresee any need for a transition." Three Simulation Studios employees stared at each other in a panic. (We were on a conference call.)

One of my greatest weaknesses is being over-courteous. With caution, I suggested that the company should carefully think about this decision. I believed they were worried about costs and probably thought we were trying to upsell. We continued to talk to them about the idea of having Simulation Studios present or co-present—at least for the pilot. In my opinion, this was the minimum involvement we should have. We were talking about a brand-new computer program with over twenty thousand equations in it, twenty-five participants, and lots of moving parts. C'mon, protect yourself! The company would not budge, so I reminded them that the pilot program was included in the cost price in the proposal. Amazingly, the phone went silent and they said, "Oh, OK, then we'd like to have you there." My head flopped down. I was worried that this program was getting off to a challenging start, but I chose to let it go (my mistake). I thought we could see how it went, and then they could make decisions based on the pilot.

Then came the topic of the facilitator. After the last discussion, I gently and kindly asked about the facilitator. "Chris Robinson graduated from Yale two years ago and has been assisting us with our marketing plan for the last six months," said Pure Persona's program sponsor. Yikes! Again, we all stared at each other in extreme concern.

I courteously voiced my concerns once more, but it was clear that their minds were made up. So I caved. To this day, I see this as a huge mistake on my part, but I often walk a fine line between controlling and giving. I was extra giving in this case.

Right there on the phone, they said they liked the Simulation Studios solution and would like to move forward. Great, I thought. This is an interesting project, and I look forward to getting started. The legal process took about half a day and contracts were signed. We started working.

Development went well. We worked closely with Chris and crew. We shared development progress (sent them versions of the simulation), documentation, presentations, and so on. To give Chris credit, he did indeed know the training topic. This made development incredibly easy for us.

The simulation was hands-on and high energy. It looked and played like a great solution, and the head of marketing within Pure Persona was delighted. I was a little worried that I was never on a call with the program sponsor because everything was channeled through Chris, but I can only control so much. I trusted things were going well on their side. It was time to schedule the pilot.

The first pilot was scheduled in two weeks in Shanghai. This isn't all that uncommon, but there were some decisions that concerned me. First, this was Chris's first time traveling overseas. Second, Chris and I were scheduled to arrive at four p.m. the day before the pilot. And third, the program sponsor was scheduled to fly in via corporate jet at seven a.m. the day of the program (one hour before it was due to start). I really didn't like the sound of this timing. The leaders were arriving from all over the world, and would arrive before us. This was a bad sign. However, this was the plan and I had very little say in it.

I flew in the day before and, with no sleep, immediately asked to enter the room where the training would take place. The room wasn't available until six a.m. the next day, which meant we couldn't even set up anything until the next morning. As a result, I set up all the equipment in my tiny room and tested everything. Everything seemed to be working just as it should. I hadn't heard from Chris yet, but I left a message.

I fell asleep watching TV and, still on California time, woke up at midnight the night before the program. "Oh no, I didn't hear from Chris!" I thought. I called the front desk, and he had indeed checked in. "Oh boy, this is going to be a bumpy one," I told myself. I watched movies for a few more hours, went to the gym, got some breakfast (or was this dinner?), and headed downstairs.

I was relieved when I saw Chris in his perfectly pressed suit with an extra-powerful power tie. "Well, at least he looks good, which might help him," I thought, knowing these executives would eat him alive at the sight of any mistake. We set up the computers and everything was working fine. Maybe my concerns had been overblown.

My relief was short-lived, as they immediately changed the agenda on me. "Bill, we're going to go straight from topic two into the simulation. We'll just quickly set up the computers while they're on a fifteen-minute break."

"Not ideal," I thought, but it was doable. So that was what we did.

Chris did a great opener, and things seemed to be going well. Again, I thought maybe I was being overprotective. The intro was done, and it was time to release the execs on the sim.

Everything worked incredibly well. The execs were making decisions, debating (in a good way), and engaging around the learning content. It was beautiful.

We spent a couple of days really thinking about an engaging and innovative solution, something the customer could handle on their own. Everything was going exceptionally well. The teams submitted their decisions, and the decisions made their way into the simulation flawlessly. "Yes!" I thought.

I was sitting in the back of the room with the head of marketing and the program's sponsor. "Oh, by the way, Bill," he said, "we changed the agenda again. We're going to facilitate the sim after the fifteen-minute break."

"What? Does Chris know this?" I asked.

"Yes, we decided a few minutes ago."

I unfortunately got mad and my brain-to-mouth filter busted. "You guys are nuts. This is going to go very, very badly. I promise you. Chris isn't ready to analyze this much data and create a presentation in fifteen minutes. He doesn't know what he doesn't know," I said with passionate sincerity.

The sponsor got irritated with me and said, "He knows what he's doing."

"No, he doesn't," I said as I walked out of the room to locate and assist Chris in any way I could.

My primary goals were to (1) protect Chris, and (2) ensure the program went well. Thus, I went to give Chris as much cover as I could in the seven minutes we had left to look at all the decisions, look at all the outcomes, think about the learning opportunities, and create a story to help the participants learn.

When I got to Chris, he was in a panic. He had somehow deleted all the data in the computer. He was almost hyperventilating, and kept saying, "I can't fail. This can't fail. What did I do?" I calmly asked Chris if he would like me to help or leave him alone.

For approximately two years, I worked with Steve Jobs helping to create his keynote presentation demonstrations. These were not "prebaked" demos. They were done in real time. Nothing canned. Thus, we created very elaborate systems of redundancy and fail-safes. Even with all this, Steve liked to demo state-of-the-art, bleeding-edge technology. Things were bound to go wrong (and they did a number of times). It was common for me to be on the stage at a worldwide keynote presentation minutes before the auditorium doors were to open, fixing a huge problem with seconds to get it done. In these circumstances, I usually appear to be comically calm. In reality, I'm not, but I don't see any benefit to running around with my arms flailing, screaming that the sky is falling. That doesn't fix the program. I actually got a bad mark on my annual review because "Bill didn't show much emotion during keynote presentations." I told this to Steve and, magically, the mark was removed from my review.

I had the same calm disposition when Chris jumped up from the computer and ran into the training room. I didn't know where he was going or what he was doing, but I had to repair whatever was done. "Oh, great," I said to myself as I saw an overtired and uninformed program sponsor come out of the training room.

"Chris says the sim isn't working." Chris has clearly thrown me under the bus. I didn't really care. The problem was that the sponsor now decided it was his time to lay into me. Needless to say, this was poor timing.

I finally said to him, “You need to go in and tell Chris that he has to stall for five minutes. This will only set us five minutes behind schedule. Also, he’s going to need help tap dancing up there. You should give him a hand. I’ll be in with everything ready to go in five.” Thankfully, the sponsor did just that.

I walked in with everything ready to go in about seven minutes. I asked Chris and the sponsor if they wanted me or Chris to facilitate. They both laughed and pointed at me. All worked out very well and the participants had a great time.

Chris did a good job facilitating the program for the rest of the day, and I guided him along the way. He needed a lot of assistance, which is normal. After the program, we had a debriefing session.

The reviews were good and everyone was happy. I took the heat for what had happened, but I viewed the program as a failure. I failed to insist on cofacilitation or on an experienced trainer.

EXAMPLE 1 SUMMARY

Obviously, this is an example of what not to do. Facilitating a business simulation is not easy. At the very least, the facilitator needs to either be an experienced trainer, or a previous or current executive with training experience.

As I see it, these are the top lessons:

1. Keep the program manageable (small)
2. Enforce a strong train-the-trainer program
3. Build prep time before training day
4. Don’t underestimate the power of the simulation
5. Try to have facilitator backup/overlap

Don’t underestimate how incredibly engaging and useful business simulations and games can be. They are some of the most powerful learning tools available. With great power comes great responsibility. Since you’re spending the time creating a solution, take the time to set it up correctly to help ensure success.

REAL WORLD EXAMPLE 2

The ClearBase Paper Company

Again, all details, including company name, industry, and names of participants have been changed.

INTRODUCTION

Simulation Studios was contacted by a large Fortune 100 company to submit a proposal for a leadership development simulation. This simulation was to augment an existing leadership development program that was already created but had not started its rollout. This program was required by the CEO and was part of a huge strategic global initiative.

After some initial questions, we agreed the project was something we could effectively do and would enjoy doing. One of the primary requirements of the project was full ownership rights: the company wanted to be able to use the simulation without any restrictions or fees. Interestingly, the company had chosen a previous provider who had verbally agreed to full ownership, but when it came time to sign a written agreement, they said they couldn't. I thought this was a dirty trick. ClearBase dropped the firm and started a new search. (At any rate, that was what we were told later.)

After a thirty-minute call with ClearBase, it was apparent that they had solid ideas of what they wanted and could do. They wanted full ownership, a strong process of program transition (from Simulation Studios to ClearBase), and a clear self-assessment of their own competencies. To this day, I've never had a more productive initial meeting. They said they would decide within two days.

The next day, they said they would go with Simulation Studios for two solutions. I'm going to focus on only one. The only downside was that both programs had to be done in forty-five days. The first sim was to last a full day and the second was to last one and a half days. All of us at Simulation Studios looked at each other in great concern. The time frame isn't that uncommon. The only worry was that we were going to be creating two in that time frame. I told them this was doable, but that ClearBase needed to assign someone to this full time to help us with ClearBase's internal bottlenecks. ClearBase thought this was a good idea and agreed. Contracts were done in a matter of a week (which set a record in this company), but we started working immediately, even before agreements.

ClearBase assigned us Kelly. Kelly was energetic and enthusiastic, and was from the Corporate University division of the company. She was task-oriented, clearly understood her capabilities, and was exceptionally effective at her job. She was also pleasant to work with. We had a kickoff dinner with the head of T&D and the team we'd be working with. It felt like a great fit.

Development was rough. It was very time-compressed, and everyone had to make some compromises for the pilot. But it was clear that for the first few programs, Simulation Studios would facilitate in order to enable ClearBase to observe. ClearBase was not in a huge hurry to control the delivery. They wanted to watch and methodically learn and apply in order to create a self-sustainable and high-quality program.

On the pilot date, the sim was working, but I would only call it a beta product. I knew this going in, as did ClearBase. We made this clear to the participants as well. All expectations were managed and very transparent. The target audience for the pilot was the top thirty-five leaders within the company. (No pressure, right?)

I was sweating it on this pilot. I had to manage a beta sim with thirty-five top execs within the company. It was a competitive simulation within a competitive company. This creates a pressure cooker. We chose to send out an extra facilitator (two of us total) at no cost—just to cover myself.

We flew in two days early for setup. We did mock presentations, tested, adjusted, and tested again, along with ClearBase. We had access to the facilities well ahead of time. ClearBase was engaged, but not over-controlling. They contributed and learned. Everything was working fine, but I still barely slept the night prior.

On the day of the pilot, all the participants arrived about twenty minutes early and we started on time. Everything went flawlessly. The scores averaged 6.89 out of 7, and the participants hung out afterward to talk about the training. ClearBase had never had scores this high. Overall, it was successful. But David (co-worker) still drafted about two to three pages of notes. We had a lot of work ahead of us.

Fast-forward two years: we finally just transitioned this full-time over to ClearBase. They decided to train their leaders to facilitate the program. This added an extra year to the timeline. We trained five global leaders on three different continents. ClearBase is now running this program 100 percent on their own, and the reviews are still off-the-charts high.

SUMMARY TAKEAWAYS

As you can probably guess, this is a successful example, but even successes have elements to learn from. Let's take a look at a few.

I don't recommend creating two simulations in forty-five days. This is one clear takeaway. That being said, ClearBase didn't plan it this way. The previous vendor had delayed things for over three months with their shenanigans. Try to keep development times timely.

If you have a clear idea of your skills and goals, this can almost guarantee success. Take a strong look at what your company and people are able to do and what they'd like to do (or find beneficial for themselves and the company). A clear understanding of capabilities will prevent potentially disastrous circumstances.

Think about a transition plan. In most cases, two years is not necessary. Three or so facilitations will usually work well. It helps to think about this ahead of time.



SUMMARY

It's important that you don't push things too far. I'm talking about the size of the simulation or game, the responsibility, the timing, and the setup. Take your time thinking about the logistics, the skills, the requirements, and the facilities. A day or two of work up front will save you a lot of money and time, in addition to preserving your reputation.



CHOOSING A PROVIDER



CHAPTER THIRTEEN

CHOOSING A PROVIDER

IF YOU FIND THAT YOU have to go outside your organization to get what you need, this section will help you navigate finding a suitable provider.

You may find yourself in this situation for a few reasons:

1. Your company does not have the skills to get done what you need.
2. Your current instructional designers are backed up with other projects.
3. Your company doesn't have the bandwidth to manage development or delivery of a business simulation or serious game.

There are other possible reasons, but these are the most common. You don't need to worry about going outside. Most Fortune 500 companies outsource this type of work, so you're not alone. You're probably saying something like, "Of course they do; they have the budget." You'd be surprised. In many cases, business simulations or serious games are managed within training and development, which usually falls under human resources. There's usually little budget there. You're not alone if you have a small budget. The good news is that using sims or games doesn't have to break the bank. There is an investment to be made, but it doesn't always need to be costly. With a little good planning and a good partner, you'll be fine.

THE SIX RULES OF FINDING A PROVIDER

RULE 1. Find a partner, not a provider. This is number one for a reason. You need to find a provider you trust, are comfortable working with, and in whom you have the utmost confidence.

You are going to have a very close relationship with this partner. You will spend a large amount of time together, and you will disagree at times. You need to feel comfortable saying things like no, yes, stop, slow down, speed up, explain this, do this, do that, why this, and why that. You need to remember that the partner works for you, and you should not be bullied by this person or company. This is your project, and you need to drive it the way you see fit.

In the end, the most important aspect of this relationship is trust. You need to trust the information the provider is sharing with you. You also need to trust his or her abilities. I can't tell you how to test trust, but I do have some recommended questions for you that might help you gauge it.

Questions to ask a potential provider:

- Have you ever turned down a client? Why or why not? You want to see if they have turned anyone down due to a lack of skill or capability. No sim or game provider can do it all, I promise you!



- Have you ever “failed” at a project? If so, what did you do about it? Why did it fail? You want to find out what happened and how they handled it.
- How do you handle a company asking for something you don’t do? You’re looking to see if they refer you to a competitor. Again, no simulation or game company can do it all.
- Tell me about your weaknesses. You’re looking for honesty. Once again, none of us can do it all. We all have significant weaknesses.

These are just some examples. You’re really looking for a company willing to tell the truth and be helpful, honest, and clear about their capabilities.

RULE 2. If it’s customized, you should have unlimited licensing, fee-free. You bought it, so it should belong to you.

Coming from Apple, I learned that success comes from always doing the right thing. Charging somebody for the privilege of using something they already paid for is not doing the right thing. Keep in mind that this, of course, does not apply to off-the-shelf solutions. This is a completely different category of solution. You did not pay to have it written; you are only paying to use it, which is perfectly fair.

RULE 3. Call their references. When getting references, call and ask them a few questions you might not normally think to ask:

- Did the provider listen closely to your needs? Did you wind up with exactly the solution you wanted?
- Did you get to use your solution license-free?
- Did the provider accommodate to your needs, or did you end up having to adjust around what they said was “possible”?
- What seemed to be the provider’s biggest challenge?
- What struck you as being the provider’s greatest asset?

Having a thorough and open conversation when calling a provider’s references will be a great help to you.

RULE 4. Say no to Junior! Avoid the company that has you working with an experienced project manager at first but then switches to a young and inexperienced person after the launch for facilitation.

Let me explain this clearly. You are using these business simulations or serious games with participants who have a good amount of real-world experience. Do you really want to put a less-experienced person who’s in his or her first job in front of your leaders? How can they teach adult leadership with any credibility? My advice is to make sure the facilitators are experienced leaders and that you keep this caliber of facilitator for as long as they facilitate your program. Leaders teaching leaders tends to be more effective.

RULE 5. Think about the size. Working with a small company is great—great attention, great service, and great product. This is especially the case with a custom solution. The downside is that if you have massive facilitation needs, the small company might not be your best pick. Therefore, if you are building a program with huge facilitation needs beyond what you can handle yourself, you might look at a larger company that is better equipped to meet your needs.

If your facilitation needs are more casual, say two or so a month, then the smaller firm might be the way to go. It's my experience that the smaller firms are easier to work with and often cost less. The problem is that they may not have the number of people you need to get the job done.

The only way you are going to arrive at your answer is by assessing your facilitation needs. This is simple: If you can't facilitate yourself and need more than four people a month, smaller might be a tight squeeze.

RULE 6. Find a provider with a sense of humor. I know this might seem strange, but you are going to want to find a provider with a personality. This will make its way into your product, and you'll find the participants will enjoy it much more. It's a game, after all—have some fun with it. It will engage your participants more, and they'll have a great time, which opens the gates of learning.

TAKE ACTION

Time to do some exploration: The training and development industry is small. Get on some popular forums or call around. Try to find others who have used simulations or games before. Ask about their providers. They should have good and bad points. Try to find someone who found a partner, not a provider. Try to learn from their experiences.



WRAP-UP



4



WRAP-UP

BUSINESS SIMULATIONS and serious games have the potential to be exceptionally powerful when used within reasonable expectations. It's important to recognize that they can't do everything. Business simulations and serious games should not be relied on to teach and should be kept to a reasonable size. They do not need to be super-sized.

SUMMARY POINTS

When thinking about business simulations and serious games, work from the goals of the program backward. Write down three goals of the training program and three skills participants should practice.

Do a reality check on yourself and ask if a business simulation or serious game is really necessary. Ask yourself if there is a better tool for learning. Is the effort really worth the return? Could the budget dollars be better used another way? Shop your ideas around with your colleagues and get their ideas. You're looking to see if the project is worth the return on time, resources, and budget.

I have found simulations and games to be most effective when they are tight and focused. Try to resist the internal and external pressure to go large. The solutions that are highly focused on the training outcomes are often the best use of funds and time. This will help you save valuable resources.

Look around at different simulation and game solutions. Get to know which ones fit where. Ask people who have used them before. Spend a little time educating yourself. This will pay off greatly later.

Business simulations and serious games should not last more than a day and a half. Be considerate of manager's valuable time. Make a simulation or game that is focused on the outcomes of the training program.

Do your best to keep business simulation and serious game development in-house if possible. That said, don't keep it in-house if the results are going to be terrible. Word will get out that the solution is terrible, which will damage your reputation. This is the worst of all scenarios. If you really need a simulation or game and the in-house resources don't cut it, explore going outside.

When finding an outside provider, decide if you're going off-the-shelf, custom, or tailored. If you're going off-the-shelf, ensure you're not putting a round peg in a square hole. Ensure it's applicable to the goals and metrics of your training program. If you're going custom or tailored, make sure it's yours at the end and free of usage fees. You shouldn't have to pay a per-usage fee, and you should insist on having the freedom to facilitate yourself when, where, and how you wish. This is critical! Also, find a provider you are comfortable with and trust.

To ensure the sustainability of your training program, install a train-the-trainer model. A great way to do this is to see if managers within your company are willing to act as facilitators. This is yet another reason to keep the simulation or game small. You need to be considerate of their valuable time.

FINAL THOUGHTS

If they fit your situation and you have the capabilities to create and host one, business simulations and serious games can provide significant benefits. The participant feedback scores are off the charts. Participants stay long after the program is over, thank you when leaving, and tell others about their great experiences.

You will also be adding significant value to the execution of your company's corporate strategy. Using a business simulation or serious game will move you and your training division much closer to being a critical element to corporate strategic change. Training has always been critical to strategic change, but usually lacked the applicability that senior managers look for. Business simulations and serious games will get you and the division into the place training and development deserves.

Finally, please take your time as you look into this area. If it's a new endeavor, this can be tough to comprehend and analyze. It has endless layers of possibility. I equate it with looking at a blank canvas the size of a wall with the intent of creating a masterpiece. Don't try to boil the ocean. Take time to ask around, bounce ideas, and explore the possibilities. As I've said before, feel free to contact me at www.simulationstudios.com. I'll be happy to answer your questions, explore possibilities, and help you brainstorm next steps and resources.

Best of luck to you! Have fun and make great things happen!



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ABOUT WILLIAM HALL

WILLIAM (BILL) HALL is an expert on the effective utilization of business simulations within corporate leadership development programs and strategic alignment. Bill has consulted for and worked within companies such as Apple, Boeing, Sephora, Sony, General Dynamics, McDonald's, and Lockheed Martin. Before starting Simulation Studios, Bill was responsible for Skype's strategic software business and worked in executive marketing roles at AOL and Nortel. Bill spent over ten years at Apple, where he worked with the executive team, including Steve Jobs on products such as the original iMac, and the launch of Mac OS X. Bill is a five-time Apple MVP and a Golden Apple award winner and has appeared in publications such as The Huffington Post, Entrepreneur, Business Insider, Bloomberg, and Forbes. Bill has an MBA in entrepreneurial economics and lives with his family in the San Francisco Bay Area.

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