

What I Wish I Knew When I Was 20

*A Crash Course on Making
Your Place in the World*

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For Josh,
Happy 20th Birthday

CONTENTS

1	Buy One, Get Two Free	1
2	The Upside-Down Circus	15
3	Bikini or Die	33
4	Please Take Out Your Wallets	55
5	The Secret Sauce of Silicon Valley	71
6	No Way . . . Engineering Is for Girls	99
7	Turn Lemonade into Helicopters	117
8	Paint the Target around the Arrow	137
9	Will This Be on the Exam?	159
10	Experimental Artifacts	175
	<i>Acknowledgments</i>	185
	<i>Notes</i>	191
	<i>About the Author</i>	
	<i>Credits</i>	
	<i>Cover</i>	
	<i>Copyright</i>	
	<i>About the Publisher</i>	

Chapter 1

BUY ONE, GET TWO FREE

What would you do to earn money if all you had was five dollars and two hours? This is the assignment I gave students in one of my classes at Stanford University. Each of fourteen teams received an envelope with five dollars of “seed funding” and was told they could spend as much time as they wanted planning. However, once they cracked open the envelope, they had two hours to generate as much money as possible. I gave them from Wednesday afternoon until Sunday evening to complete the assignment. Then, on Sunday evening, each team had to send me one slide describing what they had done, and on Monday afternoon each team had three minutes to present their project to the class. They were encouraged to be entrepreneurial by identifying opportunities, challenging assumptions, leveraging the limited resources they had, and by being creative.

What would you do if you were given this challenge? When I ask this question to most groups, someone usually shouts out, “Go to Las Vegas,” or “Buy a lottery ticket.” This gets a big

laugh. These folks would take a significant risk in return for a small chance at earning a big reward. The next most common suggestion is to set up a car wash or lemonade stand, using the five dollars to purchase the starting materials. This is a fine option for those interested in earning a few extra dollars of spending money in two hours. But most of my students eventually found a way to move far beyond the standard responses. They took seriously the challenge to question traditional assumptions—exposing a wealth of possibilities—in order to create as much value as possible.

How did they do this? Here's a clue: the teams that made the most money didn't use the five dollars at all. They realized that focusing on the money actually framed the problem way too tightly. They understood that five dollars is essentially nothing and decided to reinterpret the problem more broadly: What can we do to make money if we start with absolutely nothing? They ramped up their observation skills, tapped into their talents, and unlocked their creativity to identify problems in their midst—problems they experienced or noticed others experiencing—problems they might have seen before but had never thought to solve. These problems were nagging but not necessarily at the forefront of anyone's mind. By unearthing these problems and then working to solve them, the winning teams brought in over \$600, and the average return on the five dollar investment was 4,000 percent! If you take into account that many of the teams didn't use the funds at all, then their financial returns were infinite.

So what did they do? All of the teams were remarkably inventive. One group identified a problem common in a lot of college towns—the frustratingly long lines at popular restaurants on Saturday night. The team decided to help those people who didn't want to wait in line. They paired off and booked reservations at several restaurants. As the times for their reservations approached, they sold each reservation for up to twenty dollars to customers who were happy to avoid a long wait.

As the evening wore on, they made several interesting observations. First, they realized that the female students were better at selling the reservations than the male students, probably because customers were more comfortable being approached by the young women. They adjusted their plan so that the male students ran around town making reservations at different restaurants while the female students sold those places in line. They also learned that the entire operation worked best at restaurants that use vibrating pagers to alert customers when their table is ready. Physically swapping pagers made customers feel as though they were receiving something tangible for their money. They were more comfortable handing over their money and pager in exchange for the new pager. This had an additional bonus—teams could then sell the newly acquired pager as the later reservation time grew nearer.

Another team took an even simpler approach. They set up a stand in front of the student union where they offered to measure bicycle tire pressure for free. If the tires needed filling,

they added air for one dollar. At first they thought they were taking advantage of their fellow students, who could easily go to a nearby gas station to have their tires filled. But after their first few customers, the students realized that the bicyclists were incredibly grateful. Even though the cyclists could get their tires filled for free nearby, and the task was easy for the students to perform, they soon realized that they were providing a convenient and valuable service. In fact, halfway through the two-hour period, the team stopped asking for a specific payment and requested donations instead. Their income soared. They made much more when their customers were reciprocating for a free service than when asked to pay a fixed price. For this team, as well as for the team making restaurant reservations, experimenting along the way paid off. The iterative process, where small changes are made in response to customer feedback, allowed them to optimize their strategy on the fly.

Each of these projects brought in a few hundred dollars, and their fellow classmates were duly impressed. However, the team that generated the greatest profit looked at the resources at their disposal through completely different lenses, and made \$650. These students determined that the most valuable asset they had was neither the five dollars nor the two hours. Instead, their insight was that their most precious resource was their three-minute presentation time on Monday. They decided to sell it to a company that wanted to recruit the students in the class. The team created a three-minute “commercial” for that company and showed it to the students during the time

they would have presented what they had done the prior week. This was brilliant. They recognized that they had a fabulously valuable asset—that others didn’t even notice—just waiting to be mined.

Each of the other eleven teams found clever ways to earn money, including running a photo booth at the annual Viennese Ball, selling maps that highlighted local restaurants during Parents’ Weekend, and designing and selling a custom T-shirt to the students in the class. One team actually lost money when the students purchased umbrellas to sell in San Francisco on a rainy day, only to have the weather clear up shortly after they launched their effort. And, yes, one team ran a car wash and another started a lemonade stand, but their returns were much lower than average.

I count the “Five-Dollar Challenge” as a success in teaching students about having an entrepreneurial mind-set. But it left me feeling a bit uncomfortable. I didn’t want to communicate that value is always measured in terms of financial rewards. So, I added a twist the next time I assigned the project. Instead of five dollars, I gave each team an envelope containing ten paper clips. Teams were told they had four hours over the next few days to generate as much “value” as possible using the paper clips, where value could be measured in any way they wanted. The inspiration for this was the story of Kyle MacDonald, who started with one red paper clip and traded up until he had a house.¹ He set up a blog to document his progress and to solicit trades. It took a year, but step-by-step he reached his goal. He

traded the red paper clip for a fish-shaped pen. He then traded the pen for a doorknob and the doorknob for a Coleman stove, and so on. The value of the items increased slowly but surely over the year until he had his dream house. Considering what Kyle did with one paper clip, I felt quite generous giving the students ten paper clips. The assignment began on a Thursday morning and presentations were scheduled for the following Tuesday.

By the time Saturday rolled around, however, I was anxious. Perhaps I'd gone too far this time. I worried the assignment would be a bust and was ready to chalk it up to experience. These concerns couldn't have been further from the mark. The seven student teams each chose to measure "value" in different ways. One decided that paper clips were the new currency and went about collecting as many as possible. Another team learned that the current world record for the longest paper clip chain was over twenty-two miles and set out to break that record. They rallied their friends and roommates, pitched local stores and businesses on their plan, and showed up in class with a mountain of paper clips linked together. Apparently the students in their dorm were so moved by the challenge that they committed themselves to breaking the world record even after the assignment was over. (I'm pretty sure they didn't break the record, but it's a good measure of the energy the team was able to generate.)

The most entertaining and provocative team came to class with a short video, with the song "Bad Boys" blaring in the

background, that showed them using the paper clips to pick locks and break into dorm rooms to steal tens of thousands of dollars worth of sunglasses, cell phones, and computers. Just before I fainted, they announced that they were joking and showed another video documenting what they really had done. They traded the paper clips for some poster board and set up a stand at a nearby shopping center with a sign that read, “Stanford Students For Sale: Buy One, Get Two Free.” They were amazed by the offers they received. They started out carrying heavy bags for shoppers, moved on to taking out the recycling from a clothing store, and eventually did an ad hoc brainstorming session for a woman who needed help solving a business problem. She paid them with three computer monitors she didn’t need.

Over the years, I’ve continued to give groups similar assignments, changing the starting material from paper clips to Post-it® notes, or rubber bands, or water bottles. Each time the students surprise me, and themselves, by what they accomplish with limited time and resources. For example, using one small package of Post-it notes, students created a collaborative music project, a campaign to educate people about heart disease, and a public service commercial—called *Unplug-It*—about saving energy. This exercise ultimately evolved into what has become known as the “Innovation Tournament,” with hundreds of teams from all over the world participating.² In each case, participants use the competition as a means to look at the world around them with fresh eyes, identifying opportunities in their

own backyard. They challenge traditional assumptions, and in doing so generate enormous value from practically nothing. The entire adventure with Post-it notes was captured on film and became the foundation for a professional documentary called *Imagine It*.³

The exercises described above highlight several counterintuitive points. First, opportunities are abundant. At any place and time you can look around and identify problems that need solving. Some are mundane, such as scoring a table at a popular restaurant or pumping up bike tires. Many, as we well know, are much larger, relating to major world issues. As Vinod Khosla, a co-founder of Sun Microsystems and a successful venture capitalist, says so clearly, “The bigger the problem, the bigger the opportunity. Nobody will pay you to solve a non-problem.”⁴

Second, regardless of the size of the problem, there are usually creative ways to use the resources already at your disposal to solve them. This is actually the definition many of my colleagues use for entrepreneurship: an entrepreneur is someone who is always on the lookout for problems that can be turned into opportunities and finds creative ways to leverage limited resources to reach their goals. Most people approach problems as though they can’t be solved and, therefore, don’t see the creative solutions sitting right in front of them.

Third, we so often frame problems too tightly. When given a simple challenge, such as earning money in two hours,

most people quickly jump to standard responses. They don't step back and look at the problem more broadly. Taking off the blinders opens up a world of possibilities. Students who participated in these projects took this lesson to heart. Many reflected afterward that they would never have an excuse for being broke, since there is always a nearby problem begging to be solved.

These assignments grew out of a course I teach on entrepreneurship and innovation at Stanford University. The overarching goal is to demonstrate that all problems can be viewed as opportunities for creative solutions. I focus first on individual creativity, then move on to creativity in teams, and finally dive into creativity and innovation in large organizations. I give my students small challenges and slowly make them more difficult. As the course progresses, the students grow increasingly comfortable seeing problems through the lens of possibility and are eventually willing to take on just about anything that comes their way.

I've been at Stanford for ten years as the executive director of the Stanford Technology Ventures Program (STVP),⁵ which is located in the School of Engineering. Our mission is to teach scientists and engineers about entrepreneurship and to provide them with the tools they need to be entrepreneurial in whatever role they play. We believe, along with a growing number of universities around the world, that it isn't good enough for students to come out of school with a purely technical education. To be successful, they need to understand

how to be entrepreneurial leaders in all working environments and in all parts of their lives.

STVP focuses on teaching, scholarly research, and outreach to students, faculty, and entrepreneurs around the world. We strive to create “T-shaped people,” those with a depth of knowledge in at least one discipline and a breadth of knowledge about innovation and entrepreneurship that allows them to work effectively with professionals in other disciplines to bring their ideas to life.⁶ No matter what their role, having an entrepreneurial mind-set is key to solving problems, from small challenges that face each of us every day to looming world crises that require the attention and efforts of the entire planet. In fact, entrepreneurship cultivates a range of important life skills, from leadership and team building to negotiation, innovation, and decision making.

I’m also on the faculty of the Hasso Plattner Institute of Design at Stanford, affectionately called the “d.school.”⁷ This cross-disciplinary program draws upon educators from across the entire university, including the Schools of Engineering, Medicine, Business, and Education. The institute was envisioned and launched by Stanford mechanical engineering professor David Kelley, who is also the founder of the design firm IDEO, known for creating wildly inventive products and experiences. All d.school courses are taught by at least two professors from different disciplines, and cover an endless array of topics, from design for extreme affordability to creating infectious action to design for agile aging. As part of the d.school teaching team, I’ve experi-

enced the thrill of radical collaboration, extreme brainstorming, and rapid prototyping as we give our students and ourselves big, messy problems with more than one right answer.

This book draws upon the stories that come out of the classrooms at Stanford as well as from my prior experiences as a scientist, entrepreneur, management consultant, educator, and author. Other stories come from those who have taken a wide range of paths, including entrepreneurs, inventors, artists, and academics. I'm fortunate to be surrounded by those who have done remarkable things by challenging assumptions and are eager to share their tales of success and failure.

Many of the ideas presented here are the polar opposite of the lessons we are taught in a traditional education system. In fact, the rules that apply in school are often completely different from those in the outside world. This disparity causes incredible stress when we leave school and attempt to find our way. Gracefully bridging that gap to tackle real-world challenges can be extremely difficult, but it's doable with the right tools and mind-set.

In school, students are usually evaluated as individuals and graded on a curve. In short, when they win someone else loses. Not only is this stressful, but it isn't how most organizations work. Outside of school, people usually work on a team with a shared goal, and when they win so does everyone else. In fact, in the business world there are usually small teams embedded inside larger teams, and at every level the goal is to make everyone successful.

The typical classroom has a teacher who views his or her job as pouring information into the students' brains. The door to the room is closed and the chairs are bolted to the floor, facing the teacher. Students take careful notes, knowing they will be tested on the material later. For homework they are asked to read assigned material from a textbook and quietly absorb it on their own. This couldn't be any more different from life after college, where you are your own teacher, charged with figuring out what you need to know, where to find the information, and how to absorb it. In fact, real life is the ultimate open book exam. The doors are thrown wide open, allowing you to draw on endless resources around you as you tackle open-ended problems related to work, family, friends, and the world at large. Carlos Vignolo, a masterful professor at the University of Chile, told me that he provocatively suggests that students take classes from the worst teachers in their school because this will prepare them for life, where they won't have talented educators leading the way.

Additionally, in large classes, students are typically given multiple-choice tests with one right answer for every question, and the bubbles must be carefully filled in with number two pencils to make for easy grading. In sharp contrast, in most situations outside of school there are a multitude of answers to every question, many of which are correct in some way. And, even more important, it is acceptable to fail. In fact, failure is an important part of life's learning process. Just as evolution is a series of trial-and-error experiments, life is full of false starts

and inevitable stumbling. The key to success is the ability to extract the lessons out of each of these experiences and to move on with that new knowledge.

For most people, the world is quite different than a typical classroom. There isn't one right answer that leads to a clear reward, and facing the wall of choices in front of each of us can be quite overwhelming. Although family, friends, and neighbors will happily give us pointed advice about what to do, it is essentially our responsibility to pick our own direction. But it is helpful to know that we don't have to be right the first time. Life presents everyone with many opportunities to experiment and recombine our skills and passions in new and surprising ways.

The concepts presented in this book turn many well-worn ideas on their heads. My hope is to challenge you to see yourself and the world in a fresh light. The ideas are straightforward, but not necessarily intuitive. As an educator focusing on innovation and entrepreneurship, I have seen firsthand that these ideas are relevant to those working in dynamic environments, where situations change rapidly, requiring those involved to know how to identify opportunities, balance priorities, and learn from failure. Additionally, the concepts are valuable to anyone who wants to squeeze the most juice out of life.

In the coming chapters I will tell stories that come from a wide variety of sources, from recent college graduates to seasoned professionals. Hopefully, some of their experiences will resonate with you, providing insights and inspiration as you

consider the choices you face throughout your life. Essentially, the goal of this book is to provide a new lens through which to view the obstacles you encounter every day while charting your course into the future. It is designed to give you permission to question conventional wisdom and to revisit the rules around you. There will always be uncertainty at each turn, but armed with the confidence that comes from seeing how others have coped with similar ambiguities, the stress will morph into excitement, and the challenges you face will become opportunities.

Chapter 2

THE UPSIDE-DOWN CIRCUS

Why don't most of us view problems as opportunities in our everyday lives? Why did the teams described previously have to wait for a class assignment to stretch the limits of their imaginations? Essentially, we aren't taught to embrace problems. We're taught that problems are to be avoided, or something to complain about. In fact, while speaking at a conference for business executives, I presented video clips from the Innovation Tournament as part of my talk. Later that afternoon the CEO of a company approached me and lamented that he wished he could go back to school, where he would be given open-ended problems and be challenged to be creative. I looked at him with confusion. I'm pretty confident that every day he faces real-life challenges that would benefit from creative

thinking. Unfortunately, he didn't see that the concepts easily relate to his life and business. He viewed my assignments as something that could only happen in a controlled, academic environment. Of course, that isn't and shouldn't be the case at all.

We can challenge ourselves every single day. That is, we can choose to view the world through different lenses—lenses that allow us to see problems in a new light. The more we take on problems, the more confident and proficient we become at solving them. And the better able we are to see them as opportunities.

Attitude is perhaps the biggest determinant of what we can accomplish. True innovators face problems directly and turn traditional assumptions on their head. A wonderful example is Jeff Hawkins, who revolutionized the way people organize their lives with the Palm Pilot. Jeff was drawn to the problem of creating small personal computers that were easily accessible to the general public. This was a grand goal, and along the way he faced an endless array of additional challenges. In fact, he admits that being an entrepreneur means constantly facing big problems and finding creative ways to tame them.

Jeff's problems began at the very beginning. When Palm released its first product, the Zoomer, it failed miserably. Instead of walking away in defeat, Jeff and his team called the customers who had purchased the Zoomer, as well as those who had purchased its rival, the Apple Newton, and asked what they had hoped it would do. The customers said they had expected

the product to organize their complicated schedules, helping them integrate several calendars into one. That's when Jeff realized the Zoomer was competing much more with paper calendars than with other computer products. This surprising feedback, which contradicted his original assumptions, provided useful input for the design of the next-generation product, the fabulously successful Palm Pilot.

Along the way, Jeff and his team tackled the daunting problem of determining how users would enter information into the new, small device. Jeff felt it was critically important to allow people to use a pen to enter information, in addition to a tiny keyboard, to make this process more natural. But handwriting-recognition programs of the day weren't up to the task. So Jeff and his team created a new written language, Graffiti, which was easier for the computer to recognize. There was considerable resistance inside the company to mandating the use of a new language, but Jeff was confident customers would spend a small amount of time up front in return for saving lots of time going forward. Graffiti was a radical innovation that challenged all the rules and solved a real problem.

Jeff Hawkins is a perfect example of a problem solver who is willing to look at the world with a fresh eye. His most recent company, Numenta, is built around his own theories about how the brain works. Jeff spent years teaching himself neuroscience in an attempt to understand how we think, and came up with a compelling and provocative theory about how the neocortex processes information, which he describes in his

book *On Intelligence*. With these theories in hand, Jeff decided to use his ideas as the foundation for a “smarter” computer that processes information like the human brain. Of course, one could argue that Jeff Hawkins is one-of-a-kind, and that we can’t all develop revolutionary theories and groundbreaking inventions. But it is much more productive to see Jeff as a source of inspiration, as someone who demonstrates that problems can be solved if we give ourselves permission to look at them differently.

Why don’t we all focus on the opportunities that surround us each day and take full advantage of them? One project that came out of the second Innovation Tournament sheds some light on this idea. During the tournament, participants were challenged to create as much value as possible with rubber bands. One team came up with the idea for “Do Bands,” bracelets that give people a simple incentive to “do” the things they often put off doing. Do Bands is a clever idea, inspired by the now-familiar rubber bracelets worn to show solidarity with a cause, such as Lance Armstrong’s Live Strong bracelets. Do Bands have a few guiding principles:

- Put one around your wrist with a promise to do something.
 - Take it off when you have completed the task.
-

- Record your success online at the Do Bands Web site. Each Do Band comes with a number printed on it so you can look up all the actions it has inspired.
- Pass the Do Band along to someone else.

Do Bands give individuals an incentive to do what they wanted to do all along. In reality, a Do Band is just a rubber band. But sometimes something as simple as a rubber band is all that's needed to mobilize people to actually do something, to bridge the gap between inaction and action. The Do Bands campaign only lasted a few days, but in that short time it inspired a long list of actions: Some people called their mothers, some showed their appreciation to others by sending thank-you notes, and one began a new exercise program. One participant used the Do Band as an impetus to start a summer camp, one was inspired to reach out to long-lost friends, and some donated money to charities of their choice. It's fascinating that a rubber band was all that was needed to move people to act. It's also a clear reminder that there is just a tiny switch between doing nothing and doing something, but that the two options have wildly different outcomes.

I assign a simple challenge in my class, using a related concept, that's designed to give students experience looking at obstacles in their lives from a new perspective. I ask them to identify a problem, and then pick a random object in their environment. They then need to figure out how that object will help them solve the problem. Of course, I have no notion

about their personal challenges, what objects they will select, or whether they will successfully solve their problem. However, in most cases they manage to find a way to use random objects in their environment to tackle a seemingly unrelated problem.

My favorite example is a young woman who was moving from one apartment to another. She had to transport some large furniture and had no idea how to make it happen. If she couldn't move the furniture, she would have to leave it in her old apartment. She looked around her apartment and saw a case of wine that was left over from a party a few weeks earlier. Aha! She went to craigslist®, an online community bulletin board, and offered to trade the case of wine for a ride across the Bay Bridge with her furniture. Within a few hours, all of her furniture was moved. The leftover wine collecting dust in the corner had been transformed into valuable currency. The assignment didn't turn the wine into currency, but it did give this woman the ability and motivation to see it that way.

There is no limit to the size of the problems you can tackle. In fact, most of the Innovation Tournament projects were crafted to create "social value." That is, students used the competition as an opportunity to address a significant social problem, such as saving energy, encouraging people to stay healthy, or providing community support for disabled children.

The first step to solving big problems is to identify them. In the world of product design, this is called "need finding." This is a skill that can be learned. In fact, it's a key component

of the curriculum for the BioDesign Fellows at Stanford.¹ Postgraduates who have studied engineering, medicine, and business come together for a year to identify significant needs in medicine and then design products to address them. Paul Yock, a cardiologist, inventor, and entrepreneur, runs the BioDesign Program.² Paul believes that “a well-characterized need is the DNA of an invention.” In other words, if we clearly define a problem, the solution will logically present itself.

The BioDesign Fellows spend three months shadowing doctors in action and identifying problems they appear to be facing. They watch carefully; talk with all of the stakeholders, including physicians, nurses, patients, and administrators; and figure out where things can be improved. They whittle a list of hundreds of needs to just a handful, with the goal of picking the biggest problems they can find. After they settle on the challenge, they design and quickly build prototypes for a variety of solutions. After a focused, iterative process, they present their new product concepts to the key stakeholders to find out if they have successfully met the need.

Interestingly, in many cases those who are on the front lines are so used to the problems they experience every day that they don’t even see them, or can’t imagine radical approaches to solving them. Paul Yock shared a story about the development of balloon angioplasty, a technique that involves inserting a balloon into an artery and expanding it so that it opens up the blocked artery. Before this breakthrough invention, most cardiologists felt that the only way to deal with clogged arteries

was to do bypass surgery to remove the damaged blood vessels. This procedure requires open-heart surgery, which carries substantial risks. When the balloon angioplasty procedure, which is much less dangerous and invasive, was first introduced, it was met with tremendous skepticism and resistance among physicians, especially surgeons who “understood best” how to treat the disease. Significant roadblocks appeared in front of pioneers of the procedure. For example, John Simpson, one of the inventors of balloon angioplasty, wound up having to leave the university to do his research at a private hospital. However, over time, the efficacy of balloon angioplasty was firmly established and became the standard of care for most patients with clogged arteries. This is a great example of a case where the status quo is so entrenched that those closest to the situation can’t imagine anything different.

“Problem blindness” applies to consumer product development as well. For example, it is well documented that automatic teller machines (ATMs) failed in focus groups where potential customers were asked if they would use a machine to deposit and withdraw money from their accounts, as opposed to going into a local bank to complete the transaction with a teller. These customers couldn’t imagine changing their behavior so dramatically. But, in retrospect, ATM machines represented a radically new and effective improvement for personal banking, one that few of us can now imagine living without.

I’ve experienced problem blindness myself. About fifteen years ago my husband, Mike, gave me a cell phone. This

was long before cell phones were ubiquitous, and I had no idea I needed one. In fact, I got somewhat annoyed, thinking it was one more electronic gadget that would sit around unused. Mike urged me to try it for a week. It took me only two days to figure out I couldn't live without it. I was commuting at least two hours each day and was able to catch up with friends and colleagues during the drive. I came back to Mike with sincere appreciation for the gift, and now always try to keep this story in mind when I look at new, potentially breakthrough, ideas.

The key to need finding is identifying and filling gaps—that is, gaps in the way people use products, gaps in the services available, and gaps in the stories they tell when interviewed about their behavior. I got a chance to talk with Michael Barry, an expert in need finding at Point Forward, and he told a terrific story about his work with Kimberly-Clark, the company that makes Kleenex®, Scott® paper towels, and Huggies® diapers. Essentially, Kimberly-Clark was disappointed with their diaper sales relative to diaper giants such as Procter & Gamble (makers of Pampers), and brought in Michael's team to help figure out how they could improve their business. By making detailed observations on how diapers are sold, assessing the messaging on the diaper packages, and conducting interviews with parents, Michael realized that Kimberly-Clark was missing the point: they were selling diapers as though they were hazardous waste disposal devices. But parents don't view them that way. To a parent, a diaper is a way to keep their children

comfortable. Dealing with diapers is part of the nurturing process. A diaper is also viewed as a piece of clothing. These observations provided a great starting point for improving how Kimberly-Clark packaged and positioned Huggies. Then, upon closer scrutiny, Michael identified an even *bigger* opportunity. He noticed that parents become terribly embarrassed when asked if their child is “still in diapers.” Bingo! This was a huge pain point for parents and for kids on the cusp of toilet training. There had to be a way to turn this around. How could a diaper become a symbol of success as opposed to failure? Michael came up with the idea for Pull-Ups®, a cross between a diaper and underwear. Switching from diapers to Pull-Ups served as a big milestone for both children and parents. A child can put on a Pull-Up without help, and can feel proud of this accomplishment. This insight led to a billion-dollar increase in annual revenue for Kimberly-Clark and allowed them to leapfrog ahead of their competition. This new product grew out of focused need finding, identification of a clear problem, and then turning it an opportunity.

In my course, I use a case study about Cirque du Soleil³ that gives students a chance to hone their skills at challenging assumptions. The backdrop is the 1980s, when the circus industry was in trouble. Performances were predictable and stale, the number of customers was diminishing, and animal treatment was under attack. It didn’t seem like a good time to start a new circus, but that is exactly what Guy Laliberté, a