Change by Design Summary

By Tim Brown

Do you know that innovative business idea you had in the shower recently? It's time to act on it, and here's how.

Change by Design is a popular business book, by author and award-winning designer, Tim Brown. It explains how to apply the design thinking process to innovation challenges, and follow "design thinking" guidelines to foster creativity and build tomorrow's innovations today.

Introduced almost two decades ago, the concept of design thinking remains popular at business schools and corporations. This is primarily due to the work of IDEO, the undisputed world-leading strategy, innovation, and design firm headed by Tim Brown. In *Change by Design,* Brown teaches us his design methodology, to help us be more creative, innovative and solve the world's burning problems. He draws on his experience, and offers real-world examples of how design thinking makes all the difference to true innovation. This book provides a framework that allows for both creativity, and rigorous systematic execution, that'll help to address problems in society.

We'll briefly unpack what it takes to be a design thinker, and the process behind design thinking. We'll touch on important design thinking concepts, such as why it's important to "put people first," fail quickly, embrace the art of storytelling, and encourage participation from our consumers from the very start of the design process.

Aboard a Design Thinker’s Train of Thought

Desirability. Feasibility. Viability. These are three words every design thinker keeps in mind when approaching a project.

What makes design thinkers unique is their integrative approach to projects. They bridge the gap between business, technology, and people. Design thinking teaches us to match human needs with available technical resources and act within the practical constraints of the business.

A perfect example of a design thinker is the English engineer Isambard Kingdom Brunel. In 1841 Brunel designed the Great Western Railway (GWR), otherwise known as “God’s Wonderful Railway.” This feat of ingenuity links London with the southwest and west of England, the West Midlands, and a large part of Wales.

Despite being an engineer, Brunel wasn’t solely interested in the technology behind his creations, but how people experienced them. He wanted travelers to have the sense of “floating across the countryside.” His vision wasn't just to create an efficient transportation system, but the best possible transportation experience. To achieve this, Brunel designed the flattest gradients for any railway project, including long viaducts and tunnels to smooth the journey. A century and a half later, the Great Western Railway still exists and stands as an icon of the industrial revolution. More so, it's an example of the power of design, to shape the world around us.

Brunel had a remarkable talent for balancing technical, commercial, and human considerations. He wasn't just an engineer but the earliest

example of a design thinker. By integrating what's desirable from a human-centric viewpoint, with what's technologically feasible and economically viable, design thinkers such as Brunel have been able to create the products we enjoy today. More importantly, this thinking helps to solve future problems.

Design Thinking Is How We "Keep With the Change"

Design thinking is about more than style, it's about true innovation.

Are you the type of person who wants to save money but struggles to do so?

Bank of America hoped to bring a human-centered, design thinking angle to an industry that's hardly known for innovation. In 2004, they created a program, "Keep the change," where they automatically rounded credit card purchases to the nearest dollar, and transferred this balance into a customer's savings account. This creative, goodwill approach sprawled more than 700 thousand new cheque accounts and more than one million savings accounts in its first year. According to Brown, this is a perfect example of how design thinking converts need, i.e. a desire to save, into demand, in a way that's technically doable and good for business.

Design is typically associated with making things more accessible and more attractive to use. However, design thinking is so much more than this and shouldn't just come in at the *end*, but at the *start* of any innovation process.

Having a tech-centric only outlook, or starting with a business approach, isn't enough to solve today's complex problems. According to Brown, 'We are now in the midst of massive change, with many of our existing solutions obsolete, and we're facing questions about global warming, education, how we stay healthy, get clean water, and how we keep ourselves secure. In times of change, we need new, alternative ideas.' And this is where the beauty of design thinking comes in.

Design thinking encourages us to think divergently, create choices that didn't exist before, and apply this thinking. It might sound simple, but Brown believes we don't devote enough time to this kind of thinking in our organizations. We spend most of our school and tertiary education being taught to think convergently: to make the best of many choices and then converge on an option and execute this. Brown explains, 'We also tend to spend much of our time analytically. We pull apart one problem and solve one piece of it. And perhaps, if we're lucky, we're able to assemble it together at the end.'

What makes design thinking unique is that it helps us tap into capacities that we all have, but that tend to go unused when we automatically go into problem-solving mode. Design thinking relies on our ability to be creative, intuitive, recognize patterns, and construct functional and meaningful ideas that benefit the end-user.

However, creating something that's both meaningful and impactful doesn't happen overnight. It's a journey. And Brown offers a blueprint to help us map the course.

The Design Thinking Process

According to Brown, ‘The myth of innovation is that brilliant ideas leap fully formed from the minds of geniuses.’ In reality, our final ideas are often radically different from the original ones. Most innovations are the result of a process that involves constant re-evaluations, self-reflexivity, and modifications.

The process of the design thinker, says Brown, is like a ‘rhythmic exchange between the divergent and convergent phases, with each subsequent iteration less broad and more detailed than the previous ones.’ And this process, according to Brown, involves five phases. These phases are: empathize, define, ideate, prototype, and test. It's a process that invites us to truly understand users, challenge assumptions, redefine problems, and create innovative solutions to prototype and test.

An attitude of experimentation and being open to new possibilities is pivotal. But above all, design thinkers have one primary concern, namely the end-user. Design thinkers put people over products; they operate from a human-centered framework.

Put People First

Design thinkers are unique in that they understand how people act and feel in relation to the product or service.

In the 1990s, Procter and Gamble's most prominent and best-known skincare brand, Oil of Olay, was struggling, and the company wanted to turn the brand around. But how? They turned to their customers for answers. They observed customers in mass retailers as well as high-end retail stores. They realized their industry had primarily targeted women over fifty. These women tended to be concerned about wrinkles, and

there was a missing market of women in their thirties and forties, who showed concern about other aspects of skincare. The thirty to forty age bracket was a huge potential market.

Proctor and Gamble decided to create new formulas, develop prototypes, test these, and take advantage of price points and store displays. Finally, through the process of design, and focusing on people, the company launched a premium range of products. These products were very well received by a wide range of consumers. In this case, design thinking helped the company unlock new markets and double its sales, which led them to grow profit margins in record time.

For this reason, innovative solutions need to be designed with human beings at the center of the story. What could make someone's life easier or more fruitful? What truly meets the needs and desires of customers, stakeholders, or employees? These questions should be the starting point for any project.

Brown names three mutually reinforcing essential "human elements" for any successful design project, they are insight, empathy, and observation.

Human-centered design involves learning from the actual experiences of others. If people aren't able to articulate their needs, we can watch their behavior for clues. Insight is a completely different type of "need assessment" to that of analyzing data or statistics, but it ultimately leads to a more nuanced understanding of a particular problem.

Empathy is walking in the shoes of others. It's the ability to experience, for ourselves, what our customers are experiencing and feeling. Empathy allows us to enter a new realm of understanding. Brown uses the story of designers being patients in an emergency room to comprehend the

reality of the experience, instead of relying on how someone else describes the process.

Observation is about watching what people don't do, or listening to what they *don't* say. Brown says good design thinkers are great at observing. They observe the ordinary. As in the case of the Olay brand, watching people's real-life behavior is crucial because it provides meaningful insight into pressing needs.

So design starts with the idea of focusing on people, then flows into the process of rapidly making things. We need to go from speculating and thinking about “what to build,” and move towards "build to think."

Think With Your Hands, Not Just Your Head

Prototyping speeds up the innovation process. From a mechanical viewpoint, prototyping is how we get to test if it'll work or break. From a consumer front, we get to test its attractiveness and if people actually want it.

However, it's not just prototyping that's important; it's the speed at which we do it that counts. Entrepreneurs understand this intuitively. Large companies? Not so much.

Larger operations think that prototypes slow things down, opting instead for extensive planning before "making" things. The reality is that the faster we make things, the faster we put them into the real world. And the faster we do this, the faster we learn about the quality of our idea and if it's something that's going to work.

When design consultants from Brown's company IDEO, advise large companies, the first thing they ask about and measure is the company's average time to "first prototype." In many industries, this time frame is cripplingly slow. This is why it's easier for entrepreneurs to disrupt large companies, as they have a quicker speed at which they can go through the interactive prototyping process.

Rapid prototyping helps us to quickly loop through the three spaces of the design process, which Brown calls "inspiration, ideation, and implementation." It allows us to stay inspired, ideate, and implement, all at the same time. Once we make our ideas tangible and put them out into the real world, we observe how people use them, learn about their limitations, and make necessary improvements. We get to ideate and play with our prototype, test its viability, develop new ideas, and test those until we find a feasible, viable, and desirable solution.

But remember, when it comes to your prototypes, good enough is good enough. 'Don't let "perfect" be the enemy of the good. Your prototype isn't an end product but rather a way to cycle through the design process to quickly see what works and what doesn't. Consider that a ball from a roll-on deodorant, and a plastic butter dish was all it took to prototype Apple's first mouse.

Brown offers a case study of how rapid prototyping can lead to faster, more accurate surgery. Baxano, an innovative medical company, enlisted IDEO to assist with developing a medical instrument to help surgeons perform spinal surgery in a safer, faster way. IDEO's challenge was to help Baxano design a surgical instrument that could make spinal surgery less demanding. While reconstructive spinal surgeries can be life-changing, even a minimally invasive spinal procedure puts patients under anesthetic for hours. This can be physically demanding for the surgeons

and their team. The design team went through a 7-week rapid prototype process, worked with surgeons, and finally developed an implementable solution, the *iO-Flex*.

The iO-Flex is a minimally invasive surgical device that allows surgeons to remove just enough bone to take pressure off nerves that pass through the spinal cord, but not so much bone that the spine becomes unstable. Using this device significantly reduces surgery time and improves the accuracy of reconstructive spinal operations. Just eight months after the project began, surgeries using this instrument were being carried out. This timeframe is astonishing given the production rate of many large-scale medical companies.

Irrespective of the kind of project, if innovation is what you're after, the design thinking process has got your back. However, no matter how great your innovative idea might be, the hard truth is that a good idea doesn't sell itself. The key to getting "buy-in" is participation.

Create Meaningful Participative Experiences That Can Build Value

According to Brown, in today's economy, 'Good ideas rarely sell themselves.' As we learned from *Made to Stick* and *The Tipping Point,* presentation is everything. When selling a product or idea we need to embrace the art of storytelling and get people to participate in our ideas from the beginning of any design project.

Brown explains how the 20th century saw the arrival of an industry that was designed to sell things. However, how we sell and advertise these

things have changed. We've seen a move from simply being passive "consumers," to being participants in the things we care about. Our author quotes Paul Saffo, who describes the 19th century as the industrial economy, the 20th century as the consumer economy, and the 21st century being a creator economy. We've seen a seismic shift in advertising and design, where instead of encouraging people to consume, the emphasis is on creating meaningful, participative experiences that build value.

To create such passionate involvement, we need to involve the customer in the story of how our innovative product, service, or strategy came into being. Stories make our ideas more relatable to consumers.

Does your winter jacket connect you to its roots? What was your reason for buying your winter coat?

Icebreaker, the New Zealand-based outdoor apparel company is committed to the use of natural fibers and sustainable production. The company's "why" is about transparency, and each Icebreaker garment is tagged with a unique barcode. Customers can track the wool in their jacket to its source in New Zealand, even down to the exact farm where the Merino sheep are bred.

Meaningful stories are the ones customers write themselves. However, Brown believes that today, telling stories isn't enough. Stories make our ideas and concepts relatable, but the most meaningful stories are the ones customers write themselves, because this creates "common commitment." And we don't just need creative solutions, we need "creative moments." The solution is to encourage passionate involvement in the things we create.

Our author's personal "passionate movement" is about getting more people involved in design thinking and emphasizing its importance as a field. Faithful to this aim, Brown launched OpenIDEO, an online innovation platform that engages the global community to collaborate and develop solutions for the world's most challenging problems. The idea is to create a social impact, which is inspired by design thinking.

Renowned British chef Jamie Oliver, took advantage of this platform to tackle childhood obesity and hosted a design challenge on OpenIDEO. He aimed to get kids to eat healthier fresh food. Oliver briefed participants on how to 'create environments, businesses, ideas and solutions around engaging people, especially children, with real food, fresh food, where their food comes from, so we can help make the future for them a better place.' The initial part of the challenge involved participants posting stories, videos, articles, and sketches on the OpenIDEO website, to inspire solutions to the challenge. They got over 200 concepts from community engagement, and had design experts narrow those down to 17 implementable solutions.

One of the winning concepts was "What's for dinner!? The last class of the day," submitted by Chris Waugh. For the last lesson of a school day, kids cook a healthy dinner to bring home to their families, in doing so they learn how to cook fresh nutritious food. Parents don't have to stress about dinner plans, and teachers have a hands-on teaching activity at the end of the school day, when many students' attention spans are shorter.

So at the heart of creating buy-in is starting at the beginning. Consider how a product or service comes into being and how the customer will use it over time? Involve the customer in every chapter. Or better yet, get them to write and partake in the story of your innovation right from the

start.

In Conclusion

Design is something that many people take for granted, and people tend to cut corners and costs throughout. Saul Bass argues that, ‘Design is thinking made visual.’

So, if your job requires you to be more creative or innovative, or if you just want a better way to address problems in society, then this book is the perfect companion. The process of design is inclusive and collaborative and invites all of us to be a part of designing a better tomorrow, today.

Change By Design offers a holistic, interdisciplinary approach to designing solutions that address any sort of innovation challenge. We’re taught the fundamental principles required to travel from problem to solution. What's important is that these principles don't only apply to physical products. These are principles that can be applied to any type and scope of problem, ranging from an order-taking process to global poverty.

If you could solve one problem right now, what would it be? Maybe you can use design thinking to solve this problem, right now?