Use Design Thinking: From Theory to Practice
with Tim Brown, CEO and President, IDEO

Tim Brown, CEO and President of IDEO, explains why Design Thinking is such an innovative and transformational approach to problem-solving, and offers suggestions as to how we can incorporate design thinking into our everyday lives.

Human-centered

- If it’s not something you already do everyday, make an effort to go through the experience of your customers. Use empathy to create a better and more efficient experience.

Divergent and Convergent

- Explore multiple options in the beginning. Experiment with combining or eliminating ideas. Allow your investigations to reveal which ideas to prioritize or take to the marketplace.

Iterative

- Build simple, inexpensive prototypes to explore and develop your ideas. Don’t wait too long to build the first one!

Balanced

- Evaluate solutions according to three criteria:
  - Does this idea suit the needs of our users? (Desirability)
  - How can we use technology to deliver this idea in a better or less expensive way? (Feasibility)
  - How can we build a sustainable business model around this idea? (Viability)
Human-Centered

Human-centered design is powerful not only because it’s more likely to please the humans interacting with it, but also because it reveals problems and opportunities designers would otherwise miss. Human-centered design is powerful not only because it’s more likely to please the humans interacting with it, but also because it reveals problems and opportunities designers would otherwise miss.

Case Study 1: TSA

Tim Brown describes IDEO’s experience working with the Transportation Security Administration (TSA) on improving airport security. Nobody is happy about airport security—at best we tolerate it as a necessary evil. And IDEO’s role wasn’t to make the TSA lovable, exactly, but Tim and his team realized that by ignoring the user experience and focusing solely on preventing terrorist threats, the TSA was also overlooking potential security risks and inefficiencies. So they began with a series of exercises designed to put TSA agents in the shoes of travelers, to give them a 360-degree view of airport security. This perspective shift enabled them to spot flaws in their system that had previously been invisible to them.

Exercise:

*Think it through:* Think of a product or service you absolutely love to use. In what sense(s) is it human-centered? Walk through all the ways and contexts in which you use it, in light of the case study above.
Now think of a product or service you hate to use. A necessary evil, perhaps, like riding the subway or going to the DMV. In what ways does it fail to be human-centered?
Apply it: Carefully consider a product or service your company offers, one you’re closely involved in designing or implementing. Put yourself in the shoes of the customer or client.

What is the aesthetic experience of using the product? Is it pleasant to look at or interact with?
What is the **emotional** experience? Does the product make the user feel good about him or herself, or elevate mood in any way?

What is the practical experience? Is the product or service necessary or a significant improvement to quality of life?
In what ways could the product be made more human-centered?

Divergent and Convergent

One mistake creators often make is to latch onto their first good idea and run with it. Design thinkers, on the other hand, are disciplined about exploring divergent ideas—multiple directions in which a given project could go. This allows them (and their clients) to envision the full range of possibilities before committing to (converging upon) a specific angle.

Divergent thinking often results in a stronger final design because it gives everyone involved the breathing room to experiment before they’re corralled into a particular vision. It also communicates that feedback and experimental ideas are welcome from all quarters, rather than the sole property of the design team. This often sparks “outsider innovation” from team members who can see the forest for the trees because they’re not so immersed in the design process.

Case Study 2: HBO

When IDEO was tasked with helping HBO think through the future of streaming video, divergent thinking meant taking over an entire floor of HBO’s New York City headquarters and setting up stations with prototypes of future streaming on different platforms. Walking from station to station, HBO executives were able literally to get their hands on the possibilities, start asking themselves the right questions, and begin to narrow down their future priorities.
Exercise:

*Think it through:* What are some of the advantages of divergent design? Why is it not a waste of time and resources, but rather the opposite?

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Apply it: Consider a product or service your team is currently working on or soon to start developing. Time yourself for 5 minutes. Try to jot down at least 5 radically different forms the product or service could take.

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In what ways do the ideas you came up with broaden your thinking about the scope of the project?
Iterative

Divergent thinking gives designers and their clients many prototypes to choose from, many possible directions for the project. But even when they've selected one, the creative process is far from over. Iterative design means building, observing, rebuilding and refining until you've got a final product everyone is happy with.

Case Study 3: Apple Mouse

When Steve Jobs commissioned IDEO to help him design Apple's first mouse, they were faced with the daunting challenge of capturing the user's hand motion and transferring that to the computer. The first prototype, says Tim Brown, was a Ban Roll-on deodorant top glued to a butter dish.

Prototype 1 was simple, cheap, and quick to make. It gave Tim and his team something to work with right away. Dozens of prototypes later, they'd solved all the major challenges and designed the first computer mouse ever. Tim Brown emphasizes the importance of prototyping early—from day one, ideally—and the fact that iteration always results in much better design than all-at-once flashes of inspiration.
Exercise:

Think it through: What are some of the key advantages of iterative design? What makes it preferable to a quick path/shortcut to a final product?

Apply it: Consider a product or service your team is currently working on or soon to start developing. Jot down what a simple prototype might consist of and look like—one you could put together in less than a day.
Follow the thought experiment further. Imagine testing or working with this prototype you’ve sketched out. What immediate questions or concerns does it raise? What new points of focus?
Balanced

Perhaps the most challenging aspect of design is the *balance* it needs to strike between three (sometimes competing) criteria: The client’s need, the available technology, and what’s sustainable from a business standpoint. Balancing them effectively requires as much—if not more—creativity than any other aspect of design. In fact, these constraints often inspire brilliant innovation.

**Case Study 4: Africa, Microfinance**

Tim Brown cites a case in which *IDEO* was working with microfinance banks in Africa. His team wanted to design an easy way for financiers to track transactions in the field, where much of their business was done—something more efficient than pen and paper.

The trouble was it had to be extremely portable and affordable. The banks didn’t have the resources to purchase fancy technology, and if the design were too bulky, it wouldn’t be sustainable. Nobody would use it.

In the end, they turned to toy technology—the kind used in Fisher Price calculators, for example—for something sturdy, easy to repair, and cost-effective. Trying to balance the three criteria had forced *IDEO* to seek its solution in a completely unexpected direction.
Exercise:

**Think it through:** Why do you think Tim Brown calls balance one of the trickiest aspects of design? What are some of the potential pitfalls?

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Apply it: Consider a successful product or service your company currently offers. Think through the ways in which it balances customer need, available technology, and economic viability.

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Now think of a product or service that is less successful. Where are the imbalances?