

Innovative ways companies are using design thinking

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Proponents of design thinking, the process of continuously redesigning a business using insight derived from customer intimacy, persuasively argue that it is a key capability for revolutionary innovators and a potential source of sustainable competitive advantage[1]. Several years ago a number of researchers at the University of Virginia's Darden Business School and the Design Management Institute published *Designing for Growth: A Design Thinking Tool Kit for Managers*, in which we distilled what we had learned from designers that we thought would be relevant to managers. In it, we offered a view of the design thinking process as incorporating four questions (see Exhibit 1).

Each of the four questions – What is? What if? What wows? What works? – explored a different stage of the design thinking process. “What is?” examined current reality. “What if?” used the learning from that first stage to envision multiple options for creating a new future. “What wows?” helped managers make some choices about where to focus first, and “What works?” took them into the real world to interact with actual users through small experiments. These four questions had an accompanying set of ten design tools to help managers navigate the question space (see Exhibit 2).

The design thinking process can be illustrated by combining the four basic questions, which correspond to the four stages of the process, with the ten essential tools (see Exhibit 3).

But how widely is design thinking being adopted in leading companies and how effectively is it being adapted in a variety of industries? That is the question that our team of researchers set out to answer several years ago. We began our new research by interviewing boundary spanners – leaders who operated at the intersection of design and business – in a number of *Fortune* 100 organizations. Those conversations led us to conclude that the process of “innovation” in many large organizations could fairly be described as a battlefield in which R&D, marketing and business development functions seemed to wrestling for control and often work at cross-purposes with each other. And proponents of “design thinking” seemed to be frequently caught in the crossfire.

Talking to managers at ten organizations that implemented design thinking

But the dysfunction was not universal, and in some corporations we found pockets of cooperation between managers and designers who were achieving noteworthy successes by working together. The stories they told inspired us. So we made a conscious decision to focus our attention on ten organizations where design thinking was having an impact on practice. Taking a cue from the design thinking process, we wanted to have a conversation with successful managers about possibilities rather than constraints and about particulars rather than generalities. Not that the constraints and the generalities they had to deal with were not real and relevant. Focusing on them, however, did not seem to make anyone smarter about what design thinking could produce – when implemented in the right environment, with the right kinds of managers and designers working together, on the right

Exhibit 1 The four questions

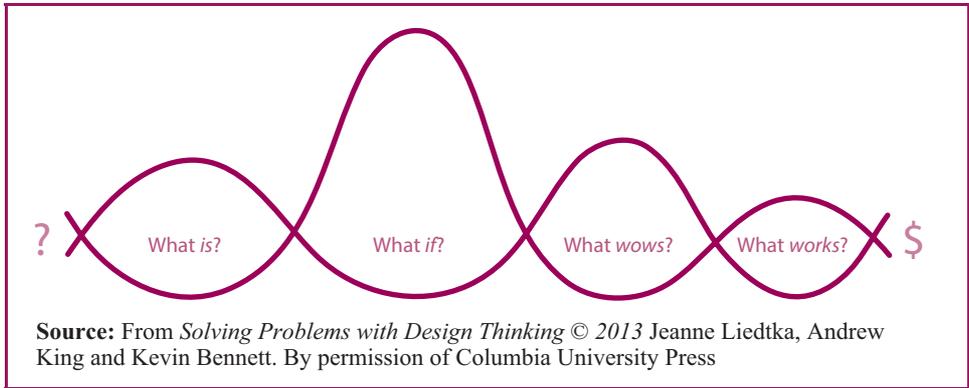


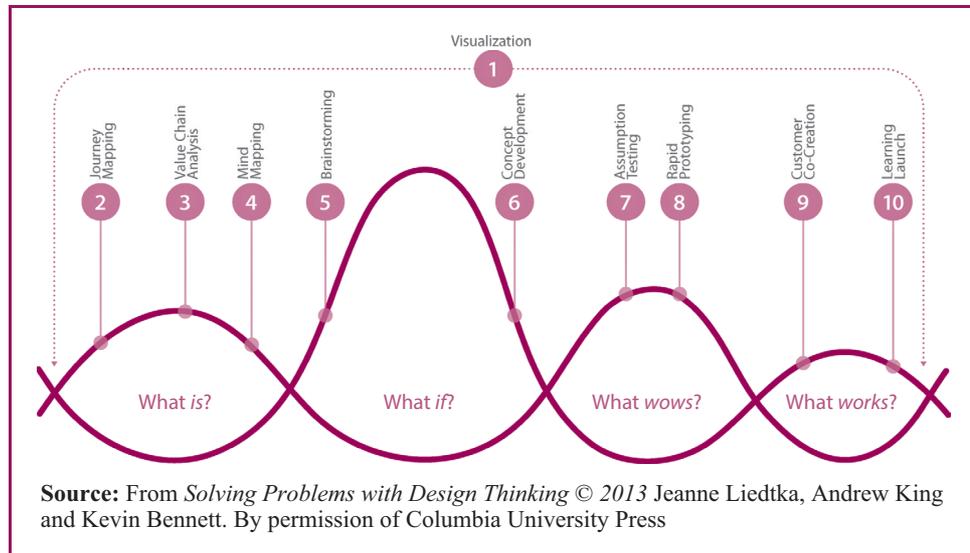
Exhibit 2 Ten design tools

- 1 Visualization**
using imagery to envision possibilities and bring them to life
- 2 Journey Mapping**
assessing the existing experience through the customer's eyes
- 3 Value Chain Analysis**
assessing the current value chain that supports the customer's journey
- 4 Mind Mapping**
generating insights from exploration activities and using those to create design criteria
- 5 Brainstorming**
generating new possibilities and new alternative business models
- 6 Concept Development**
assembling innovative elements into a coherent alternative solution that can be explored and evaluated
- 7 Assumption Testing**
isolating and testing the key assumptions that will drive the success or failure of a concept
- 8 Rapid Prototyping**
expressing a new concept in a tangible form for exploration, testing, and refinement
- 9 Customer Co-Creation**
enrolling customers to participate in creating the solution that best meets their needs
- 10 Learning Launch**
creating an affordable experiment that lets customers experience the new solution over an extended period of time, to test key assumptions with market data

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kinds of issues. Taking another cue from the design thinking process we wanted to have conversations that were abductive rather than deductive – ones that would encourage managers to take some creative leaps and envision what might be. And so we elected to report in detail on several inspiring stories of design thinking successes in real organizations.

What we found inspired us to write a book, *Solving Problems with Design Thinking: Ten Stories of What Works*. In it, we recount the cases of designers who wanted to share design rather than hoard it and also on their work with managers who were open to new ways of thinking and eager to learn. Instead of chronicling battles for control, these stories illuminated the kinds of new ways of thinking and acting that design thinking made possible. And these were happening, we discovered, in all kinds of organizations – business, government and social sector – all around the world.



We came away from the research with a clearer sense of the kinds of problems that design thinking could solve and the many diverse ways it could be used. We also learned a lot about the specifics of how design outcomes could be measured and uncovered a set of unexpected strategic contributions it was making.

How the boundary spanners use design thinking to solve problems

In our previous research, we had come at design thinking with a very specific lens: how to use it to produce organic growth in business organizations. In this new research, it turned out that using design thinking to achieve organic growth was just the start. We found that design thinking was, in fact, also a problem solving process, not just an innovation process. And one that could help any organization – not just for-profits – become more successful at innovation.

Some of the organizations we studied used design thinking for internal challenges:

- Suncorp, one of Australia’s largest financial services firms, used it to drive a post-merger integration process. They did this by creating a division-wide strategic conversation that engaged every level of the organization and built alignment on strategy and vision using the design tools of metaphor and storytelling.
- SAP, the German-owned business process management company, melded design thinking with traditional approaches to strategy in order to compose and communicate new strategies around the nebulous concept of Web 2.0.
- Toyota employed design thinking to analyze one of its West Coast customer-contact centers from the ground up, engaging a cross-functional team of frontline call reps, software engineers, business leaders and change agents in a redesign process that transformed the service center experience for both customers and associates.

Other organizations were leveraging design thinking to engage customers more fully:

- 3M saw in design thinking a chance to reimagine the sales process in the materials science business and equip their sales force with new tools to engage customers, moving beyond a focus on presenting technical specs to one aimed at demonstrating the power of new materials. The approach used design tools such as ethnography and visualization.
- Design thinking helped a team at IBM use insights generated from a wide-ranging study of human interaction to transform that ubiquitous marketing event, the trade show, into a

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collaborative experience. Instead of a critique of the new model by the management hierarchy, the design team prototyped and tested it with real customers.

- In a very unusual collaboration, a group of financial service executives from the largest banks and insurance companies in France created an industry-wide innovation group, Le Club Innovation Banque Finance Assurance, and teamed up with Ecole Parsons Paris anthropologists and designers, to develop a more thorough understanding of the industry-wide needs of the customers they served.

Still other organizations were bringing design thinking to management development and individual skill building:

- A design-minded entrepreneur founded MeYouHealth, a start-up that partnered with an established industry incumbent, Healthways, to figure out how to use social networking to increase well-being by helping individuals take healthier practices one step at a time and, in the process, teach the value that design thinking's qualitative approaches could bring to a highly quantitative corporate strategy.
- At Intuit, the Design Services Team led the effort to embed designing for customer delight into its DNA, using design thinking to provide a set of principles and tools for engaging employees across the organization to think more creatively, and experimentally, about enhancing value for customers.

But as we discovered, it was not just for-profit organizations that were reaping the benefits of design thinking. In Denmark, The Good Kitchen, a social service entity that fed the elderly and infirm in the municipality of Holstebro, started out intending to update their menu, but instead used a comprehensive design process to make a transformational change in every aspect of their meal delivery service, and in the process, enhanced the motivation and satisfaction of kitchen employees. And the city of Dublin, Ireland, embraced design thinking as a way to improve civic engagement in revitalizing urban spaces, marshaling residents' energy and ideas and developing them into tangible prototypes. More importantly, the project showed how citizens could be equipped with the tools to help create their own future.

Learning to reframe the opportunity by asking more questions

In these stories, we saw some unexpected contributions that design thinking was making. We started our research believing, as most managers do, that design thinking's primary use was producing better, more creative solutions to problems or in helping managers to envision possibilities that they hadn't seen before. That turned out to be true enough, but a range of other outcomes we saw design thinking produce during the process of seeking those solutions were equally, maybe even more, interesting.

One of the most significant of these was the way in which design tools – such as, ethnographic interviewing, customer journey mapping and job-to-be-done analysis – encouraged people to stay involved with the problem long enough to reframe the opportunity. The Good Kitchen started out intending only to create a new menu. IBM just wanted to make its trade shows more consistent with its “Smarter planet” strategy. Toyota initially thought that a new database was all it needed. In each case, design thinking helped the involved participants ask better, more penetrating questions that expanded the boundaries of the search itself. If the path to innovative, exceptional solutions begins with

asking innovative questions, then the normal managerial tendency to rush through questioning period as rapidly as possible may be the critical obstacle to actual finding an ideal solution. Design thinking's core principle, that would-be innovators first extensively and patiently explore the question, proved to be invaluable, as Dublin's Barry MacDevitt told us:

The design thinking approach forces you to stay in the question and not define exactly what the problem is. We all have a tendency to jump to solution mode far too quickly, so the design thinking approach forces you really to live in this unclear, sometimes very muddy place. This ends up producing a much better understanding of the problem you're trying to solve.

Spending time at the front end of the process exploring the question and its context paid big dividends in producing more effective solutions in the organizations we studied.

How design thinking builds better teams

Another unexpected bonus of the design thinking approach was that it helped build better teams. Contrary to the heroic, lone-genius myth of innovation is the reality that success is often the result of a team effort. And we know that diversity – of perspectives, talents and experiences – is the most reliable source of new thinking. But managing all that diversity is a problem, and instead of producing better solutions, diverse teams often find themselves locked in debates that end up with compromises that are actually worse than what any individual could have produced. Economist and Nobel Laureate Herb Simon called this phenomena “satisficing,” picking the least bad solution that everyone will agree to. Instead of rising to new heights of creativity, teams sink to the lowest common denominator. But not because they want to; they just cannot find a productive way to work with their differences.

Design thinking's collaborative methodology and tools help teams to actively leverage their differences in positive ways. Tools like mind-mapping encouraged them to align around their assessment of current reality and the nature of promising possibilities and paved the way for them to create a new future together. The creation of explicit design criteria laid assumptions out in the open where they could be scrutinized definitively, and dialog was driven by data rather than opinion. Prototyping and experimentation produced conversations with real customers, a better source of information than PowerPoint presentations to colleagues in conference rooms. And all of this market-based learning generated forward momentum and energy for the project.

We also witnessed the positive impact when teams were able to identify and focus attention on what really mattered to the people for whom they were trying to create value. Agreement on what really mattered to these “customers” allowed teams to cut through the clutter, confusion and information overload to achieve focus. Our research found that the biggest obstacle to innovation in most organizations is not cut-throat competitors, fickle customers or a stagnant economy – rather, it is bureaucracy and inertia. An amazing thing happens when design teams combined engagement and alignment with focus. They produced another invaluable asset for any organization trying to move innovative ideas through bureaucracies: speed.

We came away from our research convinced that the highest payoff from adopting a design-thinking approach was not necessarily in identifying a solution, but rather in innovating how people worked together to envision and implement the new possibilities they discovered.

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Changing the conversation and the mindset

Design thinking's most significant impact, we concluded, may well be the way it adds new possibilities to the ongoing conversation between those doing the work and those controlling the resources. Finding new opportunities for learning from this conversation is perhaps the most productive path to innovation. The stories we heard impressed upon us the importance of the kinds of changes in the conversation that design thinking processes produced:

- People talked about envisioning new possibilities together instead of pointing out constraints or defending their personally favored recommendations.
- They spent time together exploring what was going on in the market today in order to get alignment on a definition of the problem instead of jumping immediately to solutions.
- They shared deep primary data gathered from the customers they wanted to create value for and mined it for deep insights instead of compiling web-based surveys that revealed only superficial attitudes and opinions.
- They listened with the intent to understand their teammates' perspectives and to build on them instead of listening for weaknesses to use in their debates.
- Teams spent their time in meetings figuring out how to start small and learn instead of trying instead to create the perfect plan before any action could be taken.
- They designed marketplace experiments instead of just arguing over PowerPoint presentations in conference rooms. Then they actively searched for disconfirming data instead of picking out the data that supported their ongoing hypothesis.

These changes we heard in the conversations reflected a significant change in the mindset with which the managers and their design partners approached innovation, and set in motion a series of behavioral changes that impacted the outcomes they produced.

And so we came away from our investigations convinced that design thinking has the potential to be a game changer. Will it live up to its promise? That question will have to be answered one organization at a time. But in at least ten companies, we know that it already has.

Note

1. Roger Martin, *The Design of Business* (Harvard Business Review Press, 2009). See also Leavy, B. (2010) "Design thinking – a new mental model of value innovation," *Strategy & Leadership*, Vol. 38 No. 3, pp. 5-14; Martin, R. (2010) "Design thinking: achieving insights via the 'knowledge funnel'", *Strategy & Leadership*, Vol. 38 No. 2, pp. 37-41; and Leavy, B. (2011) "Roger Martin explores three big ideas: customer capitalism, integrative thinking and design thinking," *Strategy & Leadership*, Vol. 39 No. 4, pp. 19-26.

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