

Innovation and Growth: UNDERSTANDING THE POWER OF DESIGN THINKING

CONTRIBUTOR

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“
**Innovation doesn't
come from organized
plans. It comes from our
preparedness to deal
with the uncertainty of
the future.”¹**

Brian Junling Li, Vice President,
Alibaba Group

Here's a news flash: Established companies are notoriously bad at finding new opportunities for growth. They go to great lengths to churn out the next big thing, allocating ever more resources to innovation. However, a majority of business leaders are disappointed with the results.

Why is the search for new ideas such a hit-or-miss in most corporations?

Some blame an excessive reliance in the business world on analytical thinking, which results in only small improvements to the status quo. Others point to the myth of the “lone creative genius”—a persistent belief that only uniquely brilliant minds are capable of generating breakthrough ideas.

And yet some large, established companies are consistently good at innovation. What's their secret?

If you ask Darden Professor Jeanne Liedtka, the biggest secret is that everyone can learn how to innovate. “A recipe for innovation isn't ‘add genius and stir,’” Liedtka said. Her research suggests that to improve their odds of success, business leaders need to learn how to help everyone in the organization to think creatively. As she put it, “Innovation happens when you treat it as an *outcome*—an outcome that takes effort, expertise and new behaviors and problem-solving skills.”

There's no easy formula for innovation. There is, however, a body of research that provides valuable insights. In this *Batten Briefing*, we will take a closer look at the “growth mindset,” which some have and others need to develop in order to become comfortable with the messy, non-linear search for game-changing growth opportunities. Next, we will explore “design thinking”—a process that can help companies get closer to customers, uncover their unmet needs, and develop innovative products and services to fill those needs.

Embracing Uncertainty: INNOVATION IS A JOURNEY OF LEARNING

According to a recent Accenture study of

519 American, British and French companies, **fewer than half** of the surveyed executives believe they have an “effective approach to new product development or are seeking innovation effectively.”²

“**Though not easy to develop, the capacity to innovate comprises a mindset and a methodology that can be learned through rigorous practice.**”

Jeanne Liedtka
Darden School of Business

“Innovate or die”—the mantra of today’s knowledge economy—has become a cliché. Yet it would be hard to find an executive who’d question its veracity. To grow, or just survive, in today’s fast-changing global environment, companies must constantly develop new products, services, processes and business models. While business leaders understand that, few actually manage to hit their ambitious growth targets.

In her research and work with large organizations, Liedtka has encountered scores of senior executives who have expressed frustration with their attempts to jump-start innovation projects and foster organic growth. For them, growth is a gamble they aren’t sure how to approach.

“**Innovation means moving into uncertainty. To foster innovation we need to embrace that. Learning only occurs when we step away from the familiar and accept the uncertainty that inevitably accompanies new experiences.**”

Jeanne Liedtka, Darden School of Business

The first step, Liedtka says, is to embrace uncertainty. Executives and frontline managers need to understand that pursuing growth through innovation means entering uncharted waters. They must become comfortable with the fact that innovation is a messy, inefficient process—hard to manage and measure. It happens through ideation, exploration and experimentation, and involves a cycle of iterative learning with inputs from different places, false starts, mistakes and detours. The outcome is impossible to predict, and so is the exact cost. Embracing all that can be hard—especially for managers who have been trained to develop and implement processes that ensure error-free operational efficiency and excellence. “Most managers have been taught to *avoid* risk, not to *manage* it,” Liedtka says.

The good news is that managers at all levels can acquire the skills to spark growth. Though not easy to develop, the capacity to innovate comprises a mindset and a methodology that can be learned through rigorous practice.

¹ Pinelli, M., et al. 2012. “Innovating for Growth: A Spiral Approach to Business Model Innovation.” Ernst & Young.

² Koetzier, W., and Alon, A. 2013. “Why ‘Low-Risk’ Innovation Is Costly: Overcoming the Perils of Renovation and Invention.” Accenture.

The Growth Mindset:

HOW CHANGING YOUR BELIEFS CAN DRIVE INNOVATION

Most people display a bias toward what they know—they tend to favor solutions that they’ve used before or that are backed by data. They are uncomfortable with the uncertainty that is intrinsic to the search for new ideas. Successful innovators are different. They understand that innovation is a learning process. And they have the right mindset for that process, what Stanford psychologist Carol Dweck calls a “growth mindset.”

More than 30 years of research convinced Dweck that our mindset—our beliefs and particular ways of viewing the world and our place in it—has a significant impact on the choices we make and the success we can achieve.

Dweck discovered that some people believe that their intelligence is an inborn trait and their abilities, as well as their environment, are to a large extent immutable. Those beliefs constitute what Dweck calls a “fixed mindset.” Developmental psychologists have shown that having a fixed mindset causes people to fear failure, avoid new or difficult assignments, and get easily discouraged when success doesn’t come right away.

Others believe that their intelligence and skills, as well as the world around them, are malleable. That belief makes them more willing to stretch themselves and learn new skills. They often view life as a journey of learning and experimentation and seek out new challenges to develop and grow, instead of coasting on their talent. Because they value effort and struggle, they don’t get discouraged by setbacks—they attack and surmount them. People who exhibit those beliefs have a “growth mindset.”³

“**The growth mindset—with its willingness to embrace mistakes—ultimately fosters greater creativity, innovation and achievement.**”⁴

Carol S. Dweck

Mindsets can be changed, but it takes awareness and effort. The research of Dweck and her colleagues demonstrates that the growth mindset can be taught to managers who don’t have it.

Not surprisingly, Dweck’s work has drawn the attention of business executives. One large multinational, for example, launched an initiative to implement a growth mindset across its divisions and create a culture that rewarded risk taking and teamwork, instead of individual talent. The CEO, who was driving the change in order to foster innovation, put people with the growth mindset in charge of key units. The new corporate culture liberated everyone from having to maintain an illusion of knowing all the answers. The focus was on learning.⁵

“**Innovation happens through ideation, exploration and experimentation, and involves a cycle of iterative learning with inputs from different places, false starts, mistakes and detours. The outcome is impossible to predict, and so is the exact cost.**”

Jeanne Liedtka

Darden School of Business

³ Dweck, C.S. 2006. *Mindset: The New Psychology of Success*. New York: Random House.

⁴ Watt, S. 2010. “Questions for: Carol Dweck.” *Economist Intelligence Unit—Executive Briefing*.

⁵ Dweck, *supra*.

A Tale of Two Managers:

JEFF AND GEORGE

PREPARING FOR INNOVATION: How to Develop a Growth Mindset

- Find quiet time every day for reflecting on what you're thinking and why
- When you find yourself in a fixed mindset, ask if it is coming from **discomfort with change** or fear of making mistakes
- Make it a priority to **learn or try something new every day**
- **Ask questions** more often than you give answers
- Do something that **stretches you beyond your current capabilities** at least once a week

Source: Jeanne Liedtka

In 2006, Liedtka, along with coauthors Robert Rosen and Robert Wiltbank, embarked on a three-year research study on growth leadership. The team interviewed more than 70 operating managers in some of the most established companies in the world, such as Corning, Dow Chemical, General Electric, Hewlett-Packard, IBM, Dell, Microsoft, Pfizer Consumer Healthcare, Mars Masterfoods, Raytheon and others.⁶ What they uncovered was astounding: seemingly ordinary middle managers who were producing above-average organic growth in mature organizations without relying on disruptive technological breakthroughs. These managers were creating better value propositions for customers by leveraging their organizations' existing resources and technologies.

Liedtka and her collaborators discovered that those “corporate catalysts” had what Dweck calls the “growth mindset.” The research team also encountered plenty of talented, capable managers who were equally committed to pursuing innovation and growth but were struggling. Not surprisingly, those managers had a “fixed mindset.”

The catalysts in the study acquired their growth mindsets on their own, through varied life experiences, and retained them even while surrounded by people with fixed mindsets. However, anyone can develop a growth mindset through education. As Liedtka's research attests, once executives and frontline managers develop this mindset, they are able to see and seize growth opportunities.

To convey the advantages of a growth mindset in pursuing innovation, Liedtka created “George,” a composite based on the fixed-mindset managers she and her research team encountered. “Jeff”—an innovator with a growth mindset—is a composite of the successful managers. Jeff believes that innovation can be learned and should be viewed as “another important dimension of what it takes to lead healthy, growing companies.”⁷

⁶ Liedtka, J., Rosen, R., and Wiltbank, R. 2009. *The Catalyst: How You Can Become an Extraordinary Growth Leader*. New York: Crown Business.

⁷ Liedtka, J. 2011. Learning to Use Design Thinking Tools for Successful Innovation. *Strategy & Leadership*. 39 (5): 13-19.

THE ENVIRONMENT THAT FOSTERS INNOVATION

For most people, developing a growth mindset requires a corporate culture that encourages experimentation, where failure is accepted as part of the journey of learning. 71% of executives surveyed by PwC agree that fostering an environment where failure and risk are reasonably tolerated is important for innovation.⁸

Source: Adapted from research findings by Jeanne Liedtka, Robert Rosen and Robert Wiltbank.⁹

Meet Jeff THE GROWTH MINDSET

Believes that his abilities, intelligence and personality are malleable and can be developed over time with effort and work.

Believes that life is a journey of learning; is driven to develop and grow.

Embraces uncertainty. Seeks out new challenges and experiences.

Has a broad repertoire based on lifelong learning.

Has a deep understanding of his customers from direct interaction with them.

Understands his customers as people whose lives he's trying to improve.

Customer intimacy enables him to identify their unarticulated needs.

Can spot growth opportunities that others overlook.

Is equipped to succeed in an uncertain environment.

Meet George THE FIXED MINDSET

Believes that personal attributes such as abilities, intelligence and personality don't change much over time.

Believes that life is a test; tries to avoid making mistakes and looking stupid.

Shies away from new experiences and uncertain situations. Sticks to what he does well.

Has deep expertise in a narrow specialty.

Knows his customers indirectly, through data such as market research reports.

Knows his customers as demographic or marketing categories.

His reliance on second-hand data about customers doesn't help him to uncover their unarticulated needs.

When challenged to find growth, is not prepared to do so.

Can succeed in a stable environment.

Doesn't do well when his job requires the exploration of uncertainty.

⁸ Shelton, B., and Percival, D. 2013. "Breakthrough Innovation and Growth." PricewaterhouseCoopers.

⁹ Liedtka, J., Rosen, R., and Wiltbank, R. 2009.

Design Thinking: AN INNOVATION PROCESS THAT WORKS

INNOVATION STARTS WITH EMPATHY

Empathy for others permeates the culture of IDEO, Frog Design and Jump Associates—some of the best-known design firms in the world—where it plays a central role in problem solving. In fact, those consultancies use “design empathy” to unlock employees’ capacity for innovation.

When teams of ethnographers, anthropologists, psychologists and designers put themselves in the shoes of their clients’ customers, they develop a deep emotional understanding of their unarticulated needs. They can then respond to those needs by developing innovative concepts, products, services, strategies and systems.

In their efforts to find new growth opportunities, smart companies are increasingly adopting “design thinking”—a rigorous, collaborative, human-centered approach to problem solving that uses tools and methodologies designers have been employing for decades. The process works. It helps companies to be more innovative and creative, breaking the mold of the “lone creative genius.”¹⁰ However, because it involves discovery-driven learning in situations where innovators may not know exactly what problems they are trying to solve, design thinking requires a growth mindset.

Design thinking can be used to transform the way companies develop products, services, processes and even strategy. Though not a silver bullet, it can be successfully applied in environments where design has not previously played a role. SAP, the German-owned enterprise software company, used design thinking to develop and communicate new strategies around the concept of Web 2.0. At Intuit, a leading developer of personal and small-business software, design thinking not only has become a powerful innovation driver but also has been adopted as a core management practice.¹¹

As defined by Roger Martin, a former dean of the Rotman School of Management at the University of Toronto and the author of *The Design of Business*, design thinking is a process of continually redesigning a business on the basis of insights derived from customer intimacy.¹²

“**The most secure source of new ideas that have true competitive advantage, and hence, higher margins, is customers’ unarticulated needs. Customer intimacy—a deep knowledge of customers and their problems—helps to uncover those needs.**”

Jeanne Liedtka

Closely observing customers to uncover their unmet needs and then working through iterative cycles of prototyping, learning, testing and refining—these are the fundamentals of design. Because innovation is ultimately about solving customers’ problems—even the ones they don’t realize they have—using a process built around deep customer knowledge to discover opportunities and drive innovation makes perfect sense. By engaging actual customers through a series of prototypes and incorporating the insights gained from these real-world experiments, rather than relying on historical data or on market research, design-thinking minimizes the uncertainty, and therefore the risk, of innovation.

¹⁰ Brown, T. 2008. “Design Thinking.” *Harvard Business Review*. 86 (6): 84-92.

¹¹ Liedtka, J., King, A., and Bennett, K. 2013. *Solving Problems with Design Thinking*. New York: Columbia University Press.

¹² Martin, R. 2010. “Design Thinking: Achieving Insights via the ‘Knowledge funnel.’” *Strategy & Leadership*. 38(2): 37-41.

The Case of P&G:

A DESIGN-DRIVEN COMPANY

The beauty of design thinking, Liedtka says, is that it can be taught and scaled throughout any organization in any industry.

Procter & Gamble is a case in point. Under then-CEO A.G. Lafley, design thinking became part of P&G's DNA. First, Lafley appointed a chief innovation officer, Claudia Kotchka, who brought in designers from the best design shops in the world to build P&G's design capability. To build a design infrastructure, Lafley created the innovation "gym"—a place to train managers in design thinking.¹³

Before Lafley took the helm, P&G's volume growth was essentially flat. While the company cared about products' functionality, it neglected to pay attention to how customers used those products and how they felt about them.¹⁴ Design thinking helped change that. In addition to chemists and marketers, the company brought together anthropologists and behavioral psychologists to better understand consumer behavior.¹⁵

That was a crucial step in P&G's growth initiatives. Consumers usually don't know what they want, but they respond to stimuli, such as physical prototypes. Prototyping allowed P&G's product developers to observe how customers engage with a new value proposition and to test and improve it. This classic trick from the designer's tool kit led to more robust and relevant solutions, increasing the chances of breakthrough success. As Lafley wrote, "Through an iterative process that involved customers with early-stage concepts and product prototypes, we got to be really good at designing better consumer experiences and commercializing new products quicker and more successfully."¹⁶

Thanks to design thinking, P&G revolutionized the mundane task of floor cleaning. Historically, product developers at P&G focused on improving the detergents used to clean floors. With the help of design thinking, they asked the basic question: What is the job to be done? This resulted in an important insight: What the customers really wanted was cleaner floors, which could be achieved through means other than better detergents—a better mop.¹⁷ By focusing on solving their customers' problem—getting their floors cleaner—P&G created the Swiffer, a totally new floor-cleaning system and a totally new user experience. The Swiffer with its dry and wet wipes became a runaway best seller and a billion-dollar brand.

According to a recent global study of more than 4,000 C-SUITE EXECUTIVES conducted by IBM,

ONLY
41% of CEOs have an in-depth understanding of their customers.

HOWEVER
78% of CEOs expect to deepen that understanding within three to five years.¹⁸

¹³ Nussbaum, B., Berner, R., and Brady, D. 2005. "Get Creative!" *BusinessWeek*. (3945):60-68.

¹⁴ Ibid.

¹⁵ Lafley, A. G., Norman, D., Brown, T., & Martin, R. 2013. Q&A. *Design Management Review*. 24 (2): 4-11.

¹⁶ Lafley, A. G., et al. 2013.

¹⁷ Liedtka, J., and Ogilvie, T. 2011. *Designing for Growth: A Design Thinking Tool Kit for Managers*. New York: Columbia University Press.

¹⁸ Berman, S., et al. 2014. "Exploring the Inner Circle: Insights from the Global C-Suite Study." *IBM Institute for Business Values*.

Growth by Design: A FIELD GUIDE FOR MANAGERS



To help managers innovate and accelerate organic growth, Liedtka and her collaborators developed a process that explores four questions:

What is?
What if?
What wows? and
What works?

Source:

Adapted from Liedtka, Ogilvie and Brozenske.

Before You Begin

As the authors explain in *The Designing for Growth Field Book*, the process starts with identifying the right opportunity.¹⁹ This is a very important step, because design thinking is not a one-size-fits-all solution. “It works best on wicked problems—problems that are complex, ambiguous and involve diverse stakeholders, who often can’t even agree on a definition of a problem,” Liedtka says.

What is?

This stage explores the present reality. The focus is discovery. One of the tools that’s particularly useful at this stage is an ethnographic technique called journey mapping. Companies such as Xerox have been using this technique for years, “following customers home” to study their behaviors as they interact with office equipment. Looking closely at the present situation—especially at what customer don’t like about it—helps uncover their unarticulated needs.

Fifteen Steps to Growth

1

Identify an Opportunity

2

Scope Your Project

3

Draft your Design Brief

4

Make Your Plans

5

Do Your Research

6

Identify Insights

7

Establish Design Criteria

¹⁹ Liedtka, J., Ogilvie, T., and Brozenske, R. 2014. *The Designing for Growth Field Book*. New York: Columbia University Press

²⁰ Liedtka, J., and Ogilvie, T., 2011. *Designing for Growth: A Design Thinking Tool Kit for Managers*. New York: Columbia University Press.

What if?

This question builds on the knowledge and deep insights about what customers or other stakeholders really need. With the help of design tools such as brainstorming, teams can formulate hypotheses (in the form of concepts) about future possibilities. During this highly creative stage—ideation, in designer speak—it’s important to start with possibilities rather than constraints, which inhibit breakthrough thinking.

8

Brainstorm Ideas

9

Develop Concepts

10

Create Some Napkin Pitches

What wows?

Going through the first two stages often generates many ideas, and managers face a challenging task of narrowing them down to a manageable number. The third stage is all about finding the concepts that are in the “wow” zone—those that hit the sweet spot where a chance of creating a significant upside for customers meets attractive profit potential. To find out whether a concept is indeed in the “wow” zone, designers use tools such as assumption testing, which involves taking a low-fidelity prototype of a promising concept into the real world.

11

Surface Key Assumptions

12

Make Prototypes

What works?

The final stage involves taking a low-fidelity prototype into the real world. Through small experiments with actual users, teams can learn what works and what doesn’t, and use that knowledge to refine the prototype. The design tool used in this stage—rapid prototyping—reduces the cost of conducting experiments. Another useful tool, called a learning launch, enables companies to plan and conduct small experiments to test their new concepts in the marketplace. Those tools help innovators fail fast (and cheap) and succeed sooner.²⁰

13

Get Feedback from Stakeholders

14

Run Your Learning Launches

15

Design the On-Ramp

Final Thoughts

ADDITIONAL RESOURCES

Design@Darden

Learn more about Darden's design thinking initiatives by visiting an online community of academics, practitioners and students interested in design-driven innovation.

www.designatdarden.org

In-Person Executive Education Program Design Thinking

21–24 April 2015

Join Professor Jeanne Liedtka for a one-week program at the Darden School of Business. Learn a practical, step-by-step process to spur innovation and drive organic growth in your organization, regardless of your creative bent. Among other things, this program will help you to decrease the risk and cost of your growth projects by teaching you how to frame your challenges correctly, engage customers in co-creation, test your assumptions early, and conduct experiments in the marketplace quickly and inexpensively.

www.darden.virginia.edu/exed

Management guru Peter Drucker once said that any business has two basic functions: marketing and innovation. Although some may challenge that assertion, most would agree that innovation capability is essential to success. Even though creativity is considered a trait of the privileged few, research attests that anyone can be an innovator. As Roger Martin wrote, “The best creative thinking happens on a company’s front lines. You just need to encourage it.”²¹

By learning to develop a growth mindset and borrowing from the tool kit of designers, business leaders can boost their creative output. With practice and effort, they can learn to uncover unmet customer needs and develop innovative solutions to their problems, thus creating value for customers and sustainable profit for their enterprises.

²¹ Martin, R.L. 2011. “The Innovation Catalysts.” *Harvard Business Review*. 89 (6): 82-87.

Essential Reading

The Art of Innovation: Lessons in Creativity from IDEO. Tom Kelley, with Jonathon Littman. 2011. New York, NY: Crown Business.

Business Model Generation: A Handbook for Visionaries, Game Changers and Challengers. Alexander Osterwalder and Yves Pigneur. 2010. Hoboken, NJ: John Wiley & Sons.

The Catalyst: How You Can Become an Extraordinary Growth Leader. Jeanne Liedtka, Robert Rosen and Robert Wiltbank. 2009. New York, NY: Crown Business.

Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation. Tim Brown. 2009. New York, NY: Harper Business.

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Wired to Care: How Companies Prosper When They Create Widespread Empathy. Dev Patnaik, with Peter Mortensen. 2009. Upper Saddle River, NJ: Pearson Education.

Online Program

Design Thinking for Innovative Problem Solving: A Step-by-Step Project Course

19 January–15 March 2015

In this new online program, you'll apply the design-thinking process to one of your real-life projects. Using a clear, guided process that combines creative right-brained thinking—like brainstorming and visualization—with traditional left-brained analysis, you will reach an innovative solution to your challenge.

<http://bit.ly/DTJan2015>

A Design-Thinking Research Project **Designing for the Greater Good**

We are launching a new research project—*Designing for the Greater Good*. Our aim is to identify and study organizations in the nonprofit sector—in areas such as health care, education, the arts, the environment, government policy and social services—that are using design-thinking methods to create enhanced experiences for those they serve. If you know of a social-sector organization doing interesting work using design thinking, or if you're doing this work yourself, please let us know.

<http://bit.ly/DTGreaterGood>

THE INNOVATORS' ROUNDTABLE

For the past four years, senior executives from some of the world's largest and most innovative companies have been coming to Charlottesville, Virginia to talk about innovation. They are members of the **Innovators' Roundtable**, an initiative of Darden's Batten Institute for Entrepreneurship and Innovation. They meet in a highly interactive and candid environment to share best practices, discuss common challenges and explore the latest research on corporate innovation.

The fifth gathering of the Innovators' Roundtable, hosted by the Batten Institute on 17 April 2014 at Montalto, overlooking Monticello, brought together executives from Corning, Danaher, DuPont, Eastman Chemical, Johnson & Johnson, MeadWestvaco, Novartis and Siemens. This Batten Briefing expands on the themes that emerged during the morning discussion facilitated by **Darden Professor Jeanne Liedtka**.

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