



FUTURE-PROOFING BUSINESS WITH BABSON

« Backcasting to Build the Future

A Strategic Innovation Toolkit

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Research and advising from
Babson Business Advisory expert and
Professor of Innovation Management,
GINA O'CONNOR

« Backcasting to Build the Future

A Strategic Innovation Toolkit



Unlike forecasting, which fosters incremental innovation, backcasting starts with the future in mind and works backwards to outline the necessary steps to get there.

Babson Executive Education has created a toolkit series for future-focused business executives. This Strategic Innovation Toolkit stems from Dr. Gina O'Connor's observations over a 25-year research program on how large established companies manage for breakthrough innovation (BI).

Dr. O'Connor focuses on how companies' efforts to create BI capabilities require them to engage in market-driving behavior. The study took place in 3 phases, using a cross-case comparative, prospective design, with data collection over 5 years for each phase.

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Dr. O'Connor has expertise in Breakthrough Innovation, Corporate Entrepreneurship, Organizational Design for Innovation, and New Market Creation. She develops curricula and action plans for executives

based on her research in Breakthrough Innovation capabilities in large mature companies. Dr. O'Connor works with companies from strategy to execution phases. Before joining Babson, Dr. O'Connor spent 29 years at the Lally School of Management at Rensselaer Polytechnic Institute. She has also worked as a contract administrator for McDonnell Douglas Corporation and as a research analyst for Monsanto's Department of Social Responsibility. She was named a Crawford Fellow by the Product Development and Management Association, one of only six recipients of that award.

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» REWRITING THE WRITING ON THE WALL



Incremental, market-driven innovation is the bedrock of business. Your company can buy growth through acquisition or grow through geographic expansion. But how can you achieve continuous organizational renewal?

Evolutionary and transformative innovation are key to sustainable growth, increased adaptability, and all-around future-proofing against uncertainty. How else can established companies avoid being disrupted by startups? But there's still a lot of confusion around **how to foster a robust innovation culture** once a company has established itself as a market leader.

Misguided Enthusiasm Around Innovation:

- Let's have a hackathon!
- An innovation competition!
- An open innovation portal!
- We want to encourage moonshots/
game changers/breakthroughs!



Common Pitfalls of Innovation Initiatives:

Lack of guidelines and objectives resulting in random innovations, misaligned with the company's vision of its future

Limited time and resources for innovators—six weeks of funding and time off is not enough

A loss of enthusiasm to pursue innovation for those whose ideas weren't chosen



» A CULTURE OF INNOVATION ISN'T FRUITFUL WITHOUT DIRECTION

Believe it or not, removing all restrictions does not foster creativity. **Guardrails unleash creative responses.** Breakthrough innovation is most likely when companies establish clear storylines within “Domains of Innovation Intent.”

Domains of Innovation Intent describe overarching problem areas—like reduction of energy use, shortage of fresh water, crowded cities—and make them Horizon 3 priorities (long-term and aspirational) for your company. These Domains are essentially stories about the future, and how your company can play a role. They are not a single project. Domains are strategic buckets, or opportunity fields, that can house an entire portfolio of opportunities.

Large companies have the advantage of relationships with scientists, governments, and more. They have the tools to open minds, to imagine futures, and to articulate them in a way that inspires creativity among their R&D and innovation personnel—while keeping the business committed to new stages of business creation. This environment provides many opportunities for breakthrough innovation.

CASE

Opportunity Spaces for Large Companies Informed by Science and Technology

The Possibilities of Gene Manipulation
CRISPR technology provides an easy way to manipulate genes (with ethical grey areas). This method was used to create the mRNA vaccine for COVID-19, using research into how mRNA could be delivered into cells that was developed in the 1970s. This technology is not new, yet hasn't been leveraged nearly to its full potential. Only now are companies imagining the many disease states that could be addressed.

A World without Plastics
Chemical companies are currently scanning for startups addressing the plastics that line the ocean floor. In fact, the chemical companies who made these plastics are now looking for ways to dismantle them.



Domains of Innovation Intent actually reduce risk. Your goal is to learn quickly in an opportunity area via small investments, reducing uncertainty before major investments.

» HOW TO SET YOUR DOMAINS OF INNOVATION INTENT

Innovation Council

Your company leadership will be at the helm of developing this capability for strategic innovation. The Innovation Council should have a composition of 3–5 top executives.

Goals for your Innovation Council include:

Quantifiable

- A set number of Domains to pursue, usually 3–6 to nurture over the next 5–7 years
- Established methods to ensure the Domains are diverse
- Objectives for the number of opportunities a Domain must generate and for resource allocation across incremental, evolutionary, and breakthrough innovation

Skills-Based

- A plan to foster the additional capability of a market-driving approach, including support and training for executives leading this effort
- The ability to oversee creation and nurturing of these new streams of business using a new set of methods and metrics for backcasting, while continuing to oversee the mainstream business using traditional methods and metrics to support an ambidextrous company

Domain Identification Team

The Innovation Council doesn't do this alone. They require a support team to conduct much of the legwork and provide input. Your Domain Identification Team will conduct a range of activities to help you build your future-story.

These activities include:

- Examining trends that fall outside of your company's usual scope
- Considering current and future technological possibilities
- Identifying the company's deep-seated and potentially unrecognized competencies that you could repurpose or leverage in new ways

» HOW TO WRITE YOUR FUTURE-STORY

Consider what major industrial or societal problems you can address with new or existing technologies, products, or business models. Aim for large, rich opportunity spaces that require strategic focus and decisions over long periods of time.

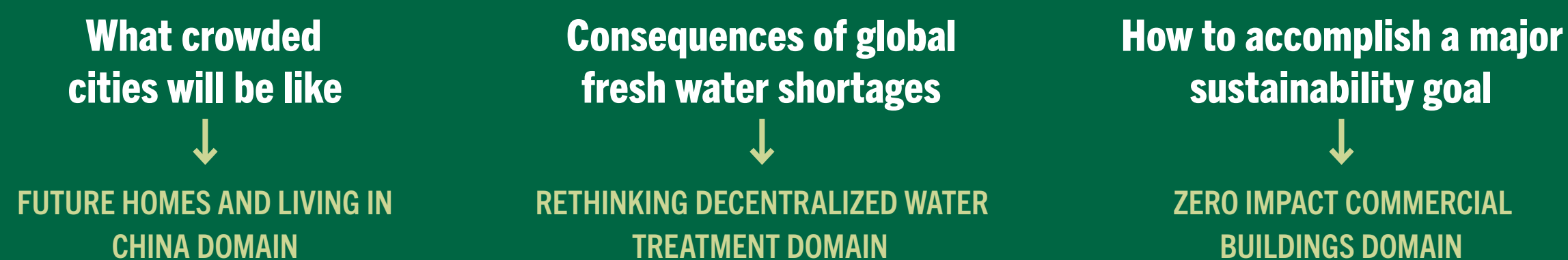
In describing each Domain of Innovation Intent, consider **three elements**:

- | | | |
|--|--|---|
| <p>01</p> <p>Imagine when...</p> <ul style="list-style-type: none">• We will be able to (achieve this technological feat) ... or the world is experiencing this (social/environmental/technical problem) ... | <p>02</p> <p>Our company can contribute to this domain because of our...</p> <ul style="list-style-type: none">• Heritage/brand reputation• Specific know-how/expertise | <p>03</p> <p>The gaps we must fill by hiring new skill sets or building new partnerships include...</p> <ul style="list-style-type: none">• New technological competencies• New market domains and business models• Regulatory influences |
|--|--|---|

CASE

From Future-Stories to Domains with Grundfos

At Grundfos, a company that makes industrial water pumps, leaders and their Breakthrough Innovation staff imagined three futures to build their Domains of Innovation Intent:



As long as you have several active and varied Domains, over time you'll create new streams that become whole platforms of business with multiple product lines, use cases, and addressable markets.

» HOW TO GET STARTED IN YOUR DOMAINS OF INNOVATION INTENT

Once the Domain Identification Team and Innovation Council have written the future-stories for your Domains of Innovation Intent, the Strategic Innovation Team gets to work. These efforts around Domains of Innovation Intent—from inception to new business—can also be guided or supported by expert consulting faculty at Babson.

Strategic Innovation Team

This team will be dedicated to managing the day-to-day of strategic innovation. They begin the work by backcasting for each Domain to outline the necessary steps in your future-story.

The work of the Strategic Innovation Team includes:

- Exploring many opportunities within the Domain(s)
- Developing a strategy for the new business(es) over time
- Forming partnerships to access new competencies and influence market agents to participate



Keep in mind:

Many opportunities in a Domain may start out as small, niche markets that are worth pursuing, but some may not work out.



Best-practice companies have about a **60%** success rate in moving Domains from inception to new businesses, according to the research team's findings around participating companies' success rate. This continues to be validated in the companies Babson Executive Education works with.

CASE

From Domains to New Businesses with DSM

In 2011, DSM's Chief Innovation Officer Rob van Leen described five Domains of Innovation Intent. Today, three have become new businesses, with each having several product categories offering societal benefits that weren't possible ten years ago. Rob's leadership in strategic innovation ensured that DSM's senior team committed to the future, identified the major problem areas they could contribute to, and stayed the course.

ADVANCED SOLAR

BIOBASED PRODUCT AND SERVICES

DSM BIOMEDICAL

» HOW TO ASSESS YOUR DOMAINS OF INNOVATION INTENT

You've created your future-stories, defined your Domains, and begun the work. Time to assess. Remember to treat each Domain as a portfolio.

When looking at the opportunities and experiments within each Domain, consider:

- The impact the Domain could have on the market
- The potential of the Domain to impact your company's growth and renewal, and to contribute to filling your growth gap
- The impact on your capabilities (Does it foster the development of new ones or repurpose existing ones?)
- The maturity of each project or opportunity in the portfolio (Is it promising on its own, and/or can you combine it with others in the Domain to create something bigger?)

CASE

Metrics for Your Domains

Instead of focusing on financial value, evaluate your Domains by the richness of the opportunity spaces they offer and by how they impact your learning about growing your business.

When Grundfos, a pump manufacturer, focused on the problem of fresh water shortages, they came up with three domains. Each offered many possible technological and business model approaches to address the problem 1) in the context of crowded cities, 2) in the context of decentralizing water treatment, and 3) in very large commercial buildings.

Dialoging with your Strategic Innovation Team as they move through learning loops and checkpoints, the Innovation Council can create a set of meaningful metrics around opportunity and insights.



» IT'S NOT ALL TRANSFORMATIONAL

By developing Domains of Innovation Intent, you'll build a portfolio of evolutionary (and incremental) innovations, adjacent market moves, business model changes, and breakthrough technologies. This approach diversifies your portfolio management, as it is really a "portfolio of portfolios."

As you and your team learn within each Domain, you may find that a Domain is too small, narrow, or incremental. When this happens, you can:

- Fast-track a Domain to a line of business
- Sell off a Domain
- Sunset it completely



Transformational innovation shouldn't be costly. Companies will throw money at one big idea that doesn't always bear out. By creating diverse Domains of Innovation Intent, companies can learn small, low-risk lessons in an area that enriches their future possibilities.



WE CAN HELP WRITE YOUR FUTURE-STORY

Babson Executive Education faculty know how to help companies build a different structure—one based on strategic innovation, with research-based processes and team structures. Stop calling for ideas and start channeling creativity into possible futures.

We Can Show You How To:

- Set up your company for strategic innovation
- Establish and run an Innovation Council made up of company leadership
- Add backcasting culture, non-financial metrics, and more to the skillset of top executives
- Structure the role of Domain Leader
- Resource each learning loop within a Domain

Take Your Next Steps With Us

 **GET AN ACTION PLAN
FOR YOUR COMPANY**

 **LEARN MORE ABOUT
STRATEGIC INNOVATION**

Babson Executive Education Faculty

Our faculty experts can advise and support execution on any topic. What we deliver is based entirely on your unique needs.



Bradley George

Associate Professor
of Entrepreneurship



Peter Cohan

Lecturer in Management



Chris Meyer

Affiliate Faculty
Member in Strategy



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