



## **Innovation Strategy is About Managing Future Uncertainty Creating an Innovation Strategy for a VUCA World**

### **ABSTRACT**

Managing uncertainty is more important today than ever. The pace of change is accelerating; the volatility, complexity and ambiguity of the future is increasing. A company's strategy and strategic planning process used to be sufficient to face those challenges. That is no longer true. Today, in addition to its business strategy, a company needs an innovation strategy to survive, and thrive in the future.

**Larry Schmitt**

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*Strategic thinking is about synthesis, about using intuition and creativity to formulate an integrated perspective, a vision, of where the organization should be heading.*

**– Henry Mintzberg**

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Every company has a business strategy, but too few today have an explicit innovation strategy<sup>i</sup>. Often, corporate strategy is assumed to encompass how innovation is to be used to influence and guide your company's future, even if this question is neither explicitly asked nor answered. This raises critical questions every company should be asking: What is the relationship between our company's business strategy and our innovation strategy and what constitutes a comprehensive innovation strategy?

A business strategy includes several key components<sup>ii</sup>:

1. Situation Analysis
2. Winning Claims and Guiding Principles (Winning Propositions)
3. Key Priorities and Gaps
4. Alignment and Coherent Action

The outcome of a business strategy is therefore a set of specific actions that everyone in the organization is (hopefully) aligned behind. It is, by definition, a statement of the here and now. An emergent or "strategic learning" process defines how this strategy evolves over time but -- make no mistake about it -- corporate business strategies are all about the present and immediate future. They don't deal with uncertainty. In fact, most business strategies are geared toward *eliminating* uncertainty within an organization.

You cannot eliminate uncertainty.

Cue innovation strategy. An innovation strategy addresses the four key strategy components above through the lens of future uncertainty. An innovation strategy enhances corporate business strategy to *explicitly* address the forces and dynamics of a VUCA world<sup>iii</sup>. It explicitly outlines how the company will develop the knowledge and knowhow required to manage uncertainty and turn it into well understood risks. An innovation strategy is a company's statement about and plan for how it is going to approach its future.

#### *The Importance of Innovation Strategy to a Fortune 500 Firm*

A large (>\$10B in annual revenue) industrial component and equipment company with many business divisions was struggling with little to no growth over the past several years. Despite a strategy to "grow the business," most of the business units were grappling with how to do that. It was clear major transformations were taking place in the industrial world, driven in large part by the Internet-of-Things (IoT) or the Industrial Internet. While the company's corporate business strategy acknowledged the IoT, said strategy did not address how to manage the uncertainty inherent in the rapidly evolving IoT ecosystem or the company's potential role and influence within it.

This particular company embarked on a six-month project to look into the future of the IoT, understand the rapidly evolving forces and trends, create future insights and identify the key uncertainties facing it.



The innovation strategy that emerged from this work led the company to form a new business unit, one dedicated to a new services business model and unlike any of its other business units.

Today, the new division is ensuring the company's future with essential software, services and business models. Leading the new division, which has \$0 revenues now, is an executive who used to lead a \$4B chunk of the company's revenue. A good innovation strategy is powerful. It can lead to new behaviors, new cultures and new organizational structures that would be difficult, if not impossible, to achieve with even the best corporate strategy process.

While it may be possible to define alignment and coherent action (key component #4 above) for the next 3 years, it is impossible to do so farther out when it is unclear which future will unfold.

This is where an innovation strategy is essential. A good innovation strategy accomplishes three things:

- Guides the company to manage future uncertainty
- Guides the company to create new knowledge and knowhow that turn future uncertainties into manageable risks
- Helps the company turn those risks into influential offerings and business models

### Uncertainty is Accelerating

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*"We always overestimate the change that will occur in the next two years  
and underestimate the change that will occur in the next ten."*

**– Bill Gates**

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The U.S. military came up with the term VUCA (**V**olatility, **U**ncertainty, **C**omplexity and **A**mbiguity<sup>iv</sup>) in the 1990s to help understand the challenges it would face in the coming decades. The belief was, and still is, that not only will VUCA increase and continue to do so into the foreseeable future, but also that the pace will accelerate. This has proven to be true.

While VUCA forces describe our external experience of the world as it is changing, the effect of these forces on a company creates internal uncertainty, or anticipation of the unexpected. These include competitors emerging from unexpected places, an explosion of new business models, technologies that create "tipping point" disruptions in established markets, and dramatic changes in customer behaviors. All of these, and many more examples not listed, make any decision about a company's future much less certain today than in the past.

Current corporate strategy processes focus on the near term, less than five years out. They implicitly, if not explicitly, assume a future that can be reasonably predicted by extrapolating using linear projections of current trends from the immediate past. But, as Peter Drucker once famously said, linear projections of current trends are like *"... trying to drive down a country road at night with no lights while looking out the back window."*

The fact that we live in an increasingly VUCA world means there *will* be nonlinearities in many of the trends corporate strategies are built upon. People don't do well with non-linear trends. They are



impossible to predict, but they still must be taken into account. Since the internal uncertainty caused by a VUCA world is increasing at a faster and faster rate, it demands an explicit means to address it.

### *A Cause and Effect of Uncertainty - Innovation*

Since innovation is the act of creating new artifacts<sup>v</sup> that people and organizations adopt<sup>vi</sup>, it is both a cause and an effect of uncertainty. New artifacts, whether introduced into the world by your company or others, change future company and individual behaviors in complex, surprising and uncertain ways.

Innovation is also the means by which companies manage uncertainty. Innovation is how a company can "probe" the future through experiments and influence it, by introducing new artifacts, in ways beneficial to the company. While others' innovations create uncertainty, your company's own innovations reduce uncertainty by forcing a future of your own making.

One of the primary effects of your innovations is to cause a very specific future to come into existence – the future that is determined, in part, by the new artifacts you create. Through this mechanism, your innovation activities reduce uncertainty about the future. Yes, there are risks. The future you were intending to create may not turn out exactly the way you envisioned. But the very act of innovating itself puts the company in a position of influence over the future and thereby reduces important uncertainties in specific and purposeful ways.

Approaching innovation strategy from this perspective clarifies many of the issues that have bedeviled business strategies and strategic planning activities. It has always been difficult for companies to connect the future to present actions and to describe exactly how the company should approach future uncertainty. Now, instead of abstract "mega-trends" and "horizons," a company can view its strategic innovation objectives through the lens of reducing uncertainty through the purposeful act of introducing new artifacts that create the futures you desire – but only if you have those futures in mind.

### **Integrating Business and Innovation Strategy**

Strategy has been addressed by many of the greatest minds in business<sup>vii</sup> but fundamentally it is the formulation of a company's future intentions that answers three questions: Who are we? What do we do? Why do we do it? Future uncertainty affects the answer to all of these questions. An innovation strategy, as a subsidiary component of a comprehensive corporate strategy, is the formulation of how your company manages future uncertainty.

Of course, a good business strategy assumes a certain future but often these futures are insufficient to prepare a company for the accelerating pace of a VUCA world. With the pace of uncertainty accelerating, it makes sense to address this fact explicitly with strategy components and a process that directly and explicitly states how the company will manage the uncertainties it faces. Defining an explicit innovation strategy that separates uncertainty factors and complements the business strategy allows an organization to address the uncertainties faced and define appropriate actions to reduce them.

### *Even Emergent Business Strategies have a Blind Spot*

Almost every book on strategy makes the distinction between the process of creating a strategy (what is often called strategic planning) and the strategy that is the result of the process. They all make the point



that 'planning' and the 'strategy' are distinct and should not be confused. This is true for innovation strategy as well.

One of the ways that business strategy is attempting to deal with the accelerating VUCA world is through the process of 'emergent' strategy processes. These are strategy processes that emerge and evolve over time and are constantly being updated based on the current situation. It is how the field of business strategy is trying to cope with VUCA and is an important and necessary step. But even this is inadequate in the face of VUCA. We need to arm an emergent business strategy process with better foresight because simply reacting to near-term situations without knowledge of future uncertainties will result in blind spots.

One way to think about it is that near term uncertainties are easily codified as risks which can be accounted and planned for in an emergent business strategy. Longer term uncertainties, because they tend to be non-linear, cannot be codified as risks and therefore need a different mechanism to deal with. This is the job of your innovation strategy.

### *The Components of a Comprehensive Innovation Strategy*

Going back to the components of a good strategy listed earlier, an innovation strategy complements each of these four elements with an emphasis on how the firm will resolve uncertainties through explicit actions.

1. Situation Analysis
  - **Business Strategy:** Future insights about strategic challenges
  - **Innovation Strategy:** Future insights about key uncertainties
2. Winning Claims and Guiding Policies
  - **Business Strategy:** Strategic choices and vision
  - **Innovation Strategy:** Key domains to focus on for new opportunities
3. Key Priorities and Gaps
  - **Business Strategy:** Top five priorities and scenarios
  - **Innovation Strategy:** Strategic portfolio gaps
4. Alignment & Coherent Action
  - **Business Strategy:** Message, responsibility and metrics
  - **Innovation Strategy:** The culture and structure necessary for the firm to create new knowledge and knowhow

Since innovation strategy is about reducing internal uncertainty, particularly in the face of increasing VUCA, the following five components of a comprehensive innovation strategy are critical:

1. **Future:** Where is the world going? What major transformations will take place over the next 10 - 20 years, and how will they affect our current business and open up new opportunities?

The answers to these questions give definition to uncertain but plausible futures. The futuring component of an innovation strategy is designed to set the bounds on external uncertainty by defining future states, scenarios and trajectories that are plausible and that challenge the contingencies the business strategy is based upon.

2. **Domains:** Where should we exploring new opportunities? How do these domains allow us to explore the futures we wish to influence?

A view of plausible futures informs where it makes sense for a company to explore new opportunities. While the Futures set the bounds on uncertainty, the Domains define the regions within these bounds that could be fruitful hunting grounds. Exploring a domain is a means to probe a specific future. By defining specific domains, a company is creating options it can exercise.

3. **Portfolio:** How should we allocate our innovation resources and efforts within the spaces defined by the dimensions of our company, our industry, our markets, our technology and the world in general?<sup>viii</sup>

Your portfolio of *all* corporate initiatives (R&D, new product development, marketing, HR, finance, operations, legal, organizational change etc.) is the tangible manifestation of what you believe the future will be. There is only so much time, attention and money to go around. The allocation of resources to tactical vs. strategic innovation (or incremental vs. disruptive, sustaining vs. breakthrough) is important. Unfortunately, research has shown<sup>ix</sup> that our ability to predict which initiatives will succeed is sorely lacking. This is itself an uncertainty caused by our poor predictive powers.

A well-defined method for assessing corporate initiatives and allocating specific types of innovation resources (people, money, time, attention) defines the innovation portfolio architecture. It is this architecture that specifically determines the company's approach to uncertainty.

4. **The Firm:**

- **Structure:** How do we innovate innovation? How do we advance our innovative capacity through new processes, methods and tools? How do we create an innovation system that is more than the sum of its parts?

An innovation strategy needs to address how the company continually improves its innovative capacity in the face of ever-changing organizational structures and external forces caused by competitors (known and unknown) who are themselves constantly innovating. This does not mean the strategy needs to identify specific tools and methods. It *does* mean the strategy needs to address innovation processes, funding and organizational structures that determine how, and how well, the company innovates.

- **Culture:** What new leadership, people and competencies must we develop in order to innovate the way we want to?

The act and process of innovating changes behaviors -- your company's, your customers', your partners' and your competitors'. New behaviors necessitate new leadership skills and competencies. A great way to help manage future uncertainty is to develop people who know how to deal with a VUCA world and to identify what competencies will be required in the future, despite – or rather because of -- uncertainty.

Strategy is about long-term thinking. Long-term thinking must accommodate the uncertainties inherent in the complex ecosystems our companies operate within and among. In most things a company does, there is a relatively tight feedback loop between action and result and between cost and benefit.



Companies can ramp their spending up and down according to the impact they see. For innovation strategy, however, this is counterproductive.

Companies need to take a different approach to innovation strategy, knowing the feedback loop is often beyond their longest strategic planning horizons. They need to commit to an innovation strategy that will survive changes in leadership, corporate reorganizations and generational changes in their people, partners and customers. This is the only way for companies to manage uncertainty and to control their own destiny.

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- <sup>i</sup> Pisano, G. [You Need an Innovation Strategy](#). *Harvard Business Review*. June 2015. A review of this article by the author can be found [here](#).
  - <sup>ii</sup> These strategy components as well as the process for creating an 'emergent' or 'learning' strategy are taken from [Strategic Leaning](#) by Willie Pietersen and [Good Strategy, Bad Strategy](#) by Richard Rumelt
  - <sup>iii</sup> VUCA is a term coined by the military to refer to the Volatility, Uncertainty, Complexity and Ambiguity of the future. In this article, we use the term "uncertainty" to represent all of these factors.
  - <sup>iv</sup> Bennett, N. [A Framework for Understanding VUCA](#). HBR.org. September 2014.
  - <sup>v</sup> The term "artifact" is used here to refer to any human created entity. This can include physical and informational products or services as well as sets of rules such as business models, processes or laws. For more discussion on the nature of artifacts see [Innovation or Artifact – An Objective View](#).
  - <sup>vi</sup> There are many definitions of innovation (see some of them [here](#), [here](#) and [here](#)). The one used here is a short, precise and accurate definition that has proven to be very robust and useful in practice.
  - <sup>vii</sup> For more definitions and discussions of strategy see [here](#), [here](#), and [here](#).
  - <sup>viii</sup> Schmitt, L. [Strategic Innovation](#). May 2012
  - <sup>ix</sup> International Project Leadership Academy. [Why Projects Fail: Facts and Figures](#).