STRATEGIC INNOVATION

If It Feels Comfortable, You're Not Doing It Right

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Organizations continually strive to find the right mix of projects and outcomes that will both drive growth in the near term and position the organization for the future. Organizations tend to struggle most with this "positioning for the future" part, so they often consciously work to develop opportunities in areas (often referred to as "adjacencies," "whitespaces" or "Horizon 2 and Horizon 3"[1]) that are outside the technology and markets that comprise the organization's current "performance engine." While these strategic innovations may cause the most heartburn, they are critically important to an organization's future growth and even survival.

This paper is the first in a series that proposes a new way to look at strategic innovation and opportunities designed to be strategic. This paper defines what is meant by "strategic" innovation and presents a framework for looking at innovation initiatives and the opportunities created by them, from both an external and internal basis. This approach allows an organization to define its strategic boundary, and it illustrates why identifying, pushing against, and gradually expanding this boundary is necessary. Exploring the essential nature of boundary-pushing opportunities offers guidance on how to discover, create, nurture and sustain them.

The Strategic Imperative

In 2010, a multi-billion-dollar, multinational advanced materials company ("MatCo") under-took an initiative to identify new "Horizon 3" opportunities. Management's intention was to grow top-line revenue by at least 15% for the next five years, but they had only identified ways to reach 70% of this goal. There was a "growth gap" that needed to be filled with new opportunities. To fill this gap, MatCo was seeking opportunities that would generate "signifi-cant" revenue (>$100M) and be profitable (raising the average margin) within five to eight years. The opportunities also had to be currently unaddressed by the company's businesses, while somehow relating to the firm's core competencies, culture and identity.

Often, organizations recognize an anticipated growth gap between what their business divisions can deliver in their existing markets (even with innovative new products) and what the company's stakeholders desire for growth – and what their competitors are promising for growth. This gap must, of necessity, be addressed by new, strategic opportunities that are outside any business division's 'normal' innovation portfolio.

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[1] Christian Terwiesch and Karl Ulrich, *Innovation Tournaments* (Harvard Business Press, 2009).

The problem facing MatCo is not unusual in today's world. They are a commodity chemical company (with an established -- and successful -- culture and legacy) that is trying to become a more strategic, value-added player in the specialty chemicals and materials sector. They are very good at technology but less skilled at navigating, and changing, value-chain dynamics and established business models. It is no surprise that, facing a mandate to "find new $100M opportunities that are different than what we do now," MatCo executives struggled to determine just what this meant.

In pursuit of this objective, each of the company's divisions was free to define what was and was not possible and "in scope." Naturally, the success of these initiatives depended largely on individual managers, who were tasked with addressing the anticipated "growth gap" while still meeting their regular quarterly growth demands.

> There is an overwhelming desire to strike the right balance between a stretch and a folly, and this exactly comprises the realm of the strategic.

This balancing act is universal. Conflicting tensions between the present and the future, between the familiar and the unfamiliar, between a company's performance engine and its aspirations for (and concerns about) growth, are present in every strategic innovation initiative.

Companies often address this balancing act by trying to create disruptive, or "breakthrough," innovations. Distinguishing between incremental (or sustaining) and disruptive (or breakthrough) innovation is a widely recognized way of classifying and analyzing new initiatives and offerings. But while the distinction between these two ends of the innovation spectrum is valuable and instructive, it fails to illuminate many key factors that influence how an innovation is conceived and realized by complex organizations functioning in complex ecosystems.

The desire to create new opportunities is often pursued without the organization's leaders fully understanding the "strategic" aspect of innovation. What does "stretching the boundaries -- but not by too much" mean in practice? Without clear definitions or criteria, or even a defined empirical approach, executives and managers resort to an "I'll know it when I see it" approach that is, not surprisingly, ineffective. Strategic innovation is more than just a way of implementing an articulated strategy. It is a way of evolving and shaping that strategy based on both internal and external forces.

When looking at new ideas, companies often first look at unaddressed businesses and core competencies, as MatCo did, and ask the questions, "Why are we the ones to pursue this?" or "Why do we believe we can succeed?" In MatCo's kickoff meeting for its innovation initiative, some division leaders expressed desire to push boundaries ("We need to get outside our traditional mindset"), while others expressed fear of pushing too far ("But we're not going to

become a fast food company!"). These comments illustrate the desire to strike the right balance between a stretch and a folly, which perfectly defines the zone of the strategic.

Conflicting tensions between the present and the future, between the familiar and the unfamiliar, between a company's performance engine and its aspirations for (and concerns about) growth, are present in every strategic innovation initiative. They are real, and they reflect the strategic imperative all companies feel to define and differentiate themselves with compelling new offerings while building off core strengths and not doing anything "too crazy." This is exactly the rationale for looking at strategic innovation in a new light.

Companies have long used the well-known Ansoff Matrix[2] and its many derivatives, as well as offshoots such as the "Horizon 1-2-3" perspective, to view their portfolio of opportunities. Use of these assessment tools is an explicit acknowledgment that, for a company to thrive in the long run, it must both pay attention to its current businesses and create new ones.

While the view provided by the Ansoff Matrix has been valuable for the past 65 years and will remain a useful tool, something more is needed today. The Matrix fails to distinguish the essential nature of an opportunity that sufficiently pushes strategic boundaries. It does not effectively capture the relevant distinctions among different types of innovation initiatives and opportunities that define what truly is strategic to the company; it does not allow a company to envision where its strategic boundary lies. This is the rationale for looking at strategic innovation in a new light.

Defining Strategic Innovation – The Adjacent Possible Zone

Innovation is crucial to a company's survival, but not all innovation is *strategic*. Instead, most of the innovations that a typical organization undertakes serve existing businesses and business models, and they fall well within the corporate culture and capabilities. Their creation is therefore a *tactical* component of a corporate strategy.

> An opportunity's location in the strategic innovation zone depends on how much it changes the world and how much it changes the company.

A strategic innovation expands a business's boundaries by creating new options. It is more than a tactical maneuver or response to keep the company well positioned. It is instead a key component of an emergent effort to surprise and delight future customers and to surprise and confound competitors. A company needs *tactical* innovations to drive its performance engine, and some of these may indeed be disruptive. A company needs *strategic* innovation to shape its future and evolve its business model to become dominant in the complex, fast-changing ecosystem in which it chooses to exist.

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[2] Igor Ansoff, "Strategies for Diversification," *Harvard Business Review* (Vol. 35, Issue 5, Sept-Oct 1957), pp. 113-124.

In the summer of 2011, as MatCo was ramping up its innovation initiative, discussions about the nature of desired opportunities became more focused. The team found it very difficult to define, a priori, what would satisfy some very qualitative and highly subjective criteria. It is all well and good to say that a viable opportunity "must be greater than $100M in five to eight years" and "must build on our core competencies," but what do these phrases really mean when a team is faced with identifying, defining and designing specific opportunities? The answer lies in how one defines and identifies strategic innovations.

Strategic innovations push an organization in two dimensions. The first dimension is *external* and defined by designs (what is possible) and demands (what is wanted), with an identifiable boundary that a company can push against. The second dimension is an *internal* one, defined by capability (what is possible) and culture (what is wanted). It, too, has an identifiable boundary that a company can push against. These two dimensions define a company's innovation space and, as such, allow an organization to identify what is, and is not, a strategic innovation.
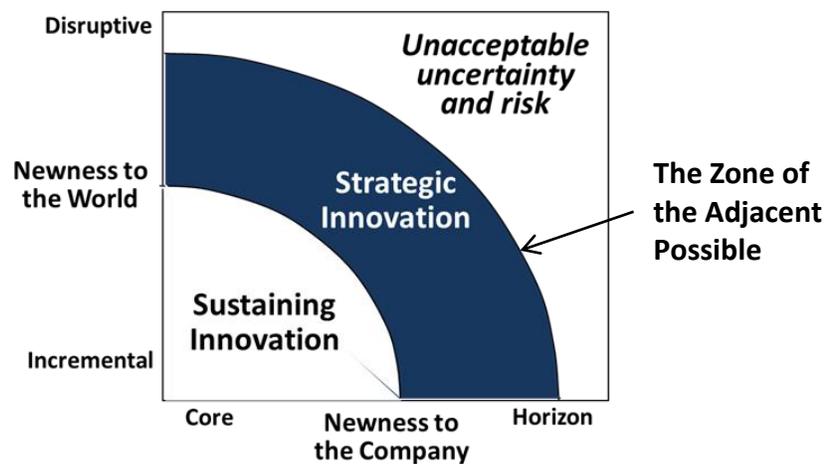

Figure 1 – The Strategic Innovation Canvas

Figure 1 depicts the whole space, or "canvas," comprising both the internal and external dimensions of innovation. We call this the Strategic Innovation Canvas (SIC). This canvas depicts the zone that represents the organization's adjacent possible opportunities.

Stuart Kauffman first introduced the term "adjacent possible" in his book *Investigations,*[3] and Steven Johnson made the term popular in his book *Where Good Ideas Come From*.[4] It is neither the area well in hand nor the far leap. As Johnson has described, technology, economy and

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[3] Stuart Kauffman, *Investigations (*Oxford University Press, 2000).
[4] Steven Johnson, *Where Good Ideas Come From* (Riverhead, 2010).

society most often advance by moving into areas that are adjacent to the here-and-now. If companies push too far, too fast, innovations usually will be rejected – not because they are "wrong," but because the relevant community is not ready to accept them; they are too different.

Although Kauffman and Johnson both used the term adjacent possible to apply to technology, the term can be equally applied to organizations. A natural extension of Kauffman's and Johnson's adjacent possible is therefore a perspective that yields a view of an organization's efforts that is measurable along two dimensions or axes. The x-axis represents the "Core – Horizon" internal dimension; the y-axis, the "Incremental – Disruptive" external dimension.

The Internal Dimension

This dimension, the x-axis, captures what is new to the organization. It is measured by an opportunity's characteristics when it intersects with both the culture and capabilities of an organization.

Core:	What is familiar, known, and compatible with current businesses and business models – and what is within current capabilities. The dimensions of analysis are known and available.
Horizon:	What is unfamiliar and/or incompatible with existing businesses and business models. The dimensions of analysis are unknown and need to be developed.

The External Dimension

This dimension, the y-axis, captures what is new to the world. It is measured by an opportunity's demand and design characteristics. It answers two questions:

1. How incremental or disruptive is a new opportunity in changing *demand dynamics* (such as creating a new demand paradigm like Apple's iTunes did)?

2. How incremental or disruptive is a new opportunity in changing *design possibilities* (such as creating a new form, function or performance level paradigm like Amazon's Kindle)?

Incremental:	Opportunities that are small, low-risk and have value that can be clearly calculated because the experiential variables are well known.
Disruptive:	Opportunities that are new-to-world, new-to-industry, or new-to-market and push beyond existing design and/or demand boundaries. The experiential variables are new and therefore cannot be studied and quantified.

The following table depicts the attributes of each axis:

External – Newness to the World			Internal – Newness to the Company		
	Design	**Demand**		**Culture**	**Competency**
Incremental	Added feature or performance upgrade	Existing behavior adjustment	**Core**	Expand current culture to new business opptys	Enhance current skills and abilities
Architectural	Novel design combination	Novel usage and new behavior	**Adjacent**	Upgrade culture to accept new models	Add-on familiar partners, capabilities
Disruptive	Significant new performance dimension	New experience dimension	**Horizon**	Whole new ways of thinking and behaving	Whole new skills, people, organization

Table 1 – The Strategic Innovation Dimensions

The columns are defined as follows:

- **Design** – New designs enabled by the technological possibilities of new inventions;
- **Demand** – New experiences and behaviors driven by unmet community wants;
- **Culture** – The ingrained behaviors of all levels of a company with respect to newness; and
- **Competency** – The people, processes and organization needed to grow new opportunities.

The Strategic Innovation Zone encompasses those opportunities that make the organization a little uncomfortable, that make it stretch beyond its core -- but not so far that there is no "fit." This is the region where the world of customer demand and technological design possibilities intersects with an organization's culture and capabilities. This is the realm where strategic opportunities are designed. It is the zone where the most valuable innovation occurs.

Discovering and designing opportunities that fall within this zone is not an exact science. But it helps to know the relevant dimensions and the attributes that determine an opportunity's location on the canvas, so the organization can push itself as far as it is willing. An opportunity's location in the strategic innovation zone depends on how much it changes the world and how much it changes the company.

The Strategic Innovation Canvas depicts the zone of strategic innovation that lies between opportunities that are simply sustaining and those that present unacceptable levels of uncertainty or risk. Strategic innovation initiatives should be focused here. As one might expect, the Strategic Innovation Zone has fuzzy, ill-defined borders, and the size and shape of the zone differs from company to company – as does each organization's willingness to scratch the surface of the zone or push deeply into it.

The "Adjacent Possible" in Practice

The most archetypical examples of opportunities within the strategic innovation zone are Apple's iPod, iTunes, iPhone and iPad. Each pushed both the new-to-the-world/market boundary towards the disruptive and the company/organization boundary toward the horizon. The iPod was a disruptive combination of existing technologies that created a new music experience, and the iTunes store required an entire reconfiguration of the music industry pricing model ($0.99 singles instead of albums). Apple had to create a whole new culture and competencies to operate within the music industry ecosystem rather than the (familiar) consumer electronics or computer ecosystems. One of the reasons Apple is so admired as an innovative company is because its adjacent possible zone of strategic innovation is so far out along both dimensions of the canvas.

> The explicit acknowledgement and integration of the offering and its business model is one of the powerful features of this strategic innovation analysis.

The attributes of the external dimension not only relate to technology and the offerings created with technology, but they also relate to the demand aspects of anything new. Incremental and disruptive changes can occur with demand experiences just as with design.

Both dimensions encompass business model components, such as changes in internal operating processes and external ecosystem relationships that result in new organizational behaviors. These occur both within the organization and within the segment of the value network within which the company operates. The explicit acknowledgement and integration of the offering and its business model is one of the powerful features of this strategic innovation analysis.

The Strategic Innovation Zone explicitly acknowledges the potential disruption in both design and demand, and it merges them into one axis of the space. It also acknowledges the critical role that culture and competency play in a company's ability to innovate. The new view offers a much better picture of how opportunities push into the unknown – for the company, the world, the industry, and the market – and how a company balances the combined risk of external and internal disruption.

Mapping Opportunities

For any company, the specifics of its Strategic Innovation Zone are determined by an opportunity's newness to the market, or its degree of external disruption, as well as by an opportunity's newness to the company, or its degree of internal harmony. The lower-left section of the canvas is the area of comfort, where all new opportunities are reasonable and well understood. The upper-right section of the canvas is the area of discomfort, where new opportunities are a far stretch or "discontinuous." The zone between the comfortable and the unreasonable represents the extent to which an organization is willing to pursue, both internally and externally, new opportunities.

> The new canvas offers a much better picture of how opportunities push into the unknown – for the company, the world, the industry, and the market – and how a company balances the combined risk of external and internal disruption.

Different organizations have different adjacent-possible boundaries. Many organizations feel comfortable pushing disruptive, new-to-the-world (or new-to-an-industry and/or market) offerings when they are compatible with their core culture and competencies. An example of such a "disruptive yet near the core" innovation is one that is new-to-the-world (and therefore requires significant changes in customer behavior) but is well within a company's existing business model. Development and introduction of electric vehicles by automotive OEMs exemplifies this type of innovation.

Similarly, "incremental but outside the core" innovations are equivalent to an existing offering but are nevertheless beyond a company's "normal" capabilities or business model. Amazon's Elastic Compute Cloud service (EC2) was not especially disruptive – many other cloud server offerings existed – but it was far from Amazon's core and required the company to devise a new business model.

Figuring out its own possibility boundary (along with its competitors'), as well as the level of discomfort it will tolerate as it pushes this boundary, represents a significant effort for any company. At MatCo, this discomfort became apparent when executives considered opportunities that would cause disruption within the company's existing markets. For instance, one opportunity would have involved eliminating or merging a segment of the value chain, resulting in greatly increased value capture for MatCo. Comments such as "But we can't compete with our own customers" or "We tried that before and it didn't work" illuminated strong identity and cultural norms that can be difficult for a company to overcome. But it is exactly these strategic options that are so important for an organization's future.

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Key positions within the Strategic Innovation Zone are shown in Figure 2:
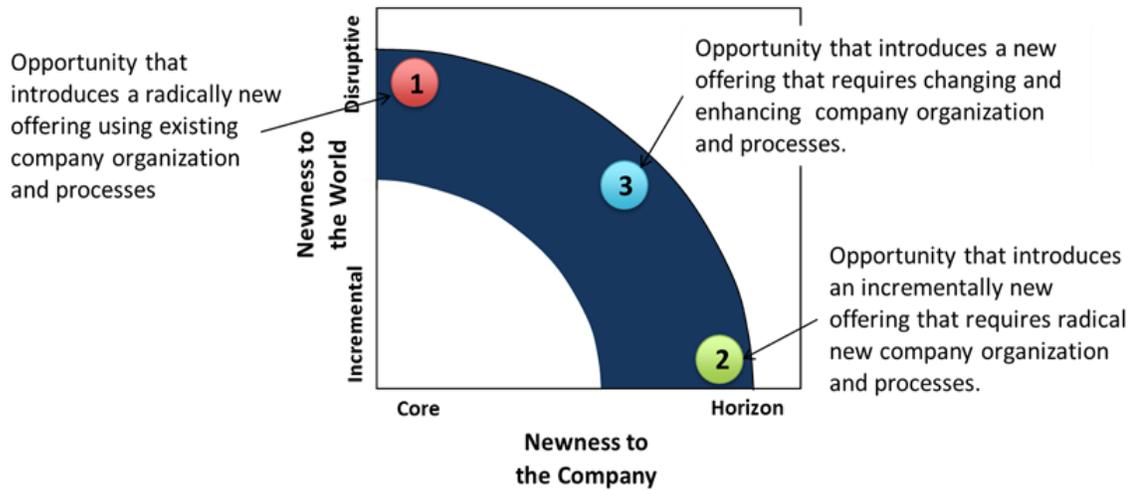

Figure 2 – Strategic Opportunities within the Zone

The upper-left circle (Circle 1) in the figure above represents a radically new technological breakthrough (design possibility) and/or a radically new value proposition (demand possibility) that addresses either current customers or non-customers through existing organizational means.

The electrification of transportation (that is, hybrid and electric vehicles) illustrates the area represented by Circle 1. The breakthrough technologies are themselves disruptive, but, for the most part, vehicle OEMs and Tier 1 suppliers are implementing them in ways that are entirely compatible with existing culture, competencies and business models.

MatCo was considering opportunities all along the vertical axis (ranging from incremental to disruptive), from slight enhancements to their current chemical offerings to whole new chemistries that fell into the area represented by Circle 1. The former included new materials that addressed previously unmet needs (for example, a degradable barrier coating that could be spray applied instead of film extruded), and which could be made with slight changes to existing means of production and sold through existing channels to current and new customers. Even though these were new disruptive chemistries, the company felt it had the necessary competencies and culture to exploit them.

The lower-right circle (Circle 2) in Figure 2 represents a new business breakthrough that addresses current or new customers in new ways through new organizational means. This could consist of an offering that isn't especially different from what currently exists. Such an opportunity might:

- Start with an existing product or service;
- Spark partnerships to combine the existing offering with complementary offerings in new ways;
- Eliminate or combine one or more roles in an existing value chain or ecosystem; and
- Build a new business organization with people who have different skills than the current organization.

The zone represented by Circle 2 is what most companies think of as a new "business model opportunity." For MatCo, this meant using an existing material family but moving downstream into the formulation and potentially end-product arena, forming new partnerships and sales channels, in order to address a new industry with materials it already produced. Opportunities such as these made MatCo extremely uncomfortable and required a higher burden of proof than Circle 1 opportunities.

A well-known example of such a Circle 2 opportunity is, again, Amazon's EC2 cloud service. Amazon built EC2 for its own use and understood it inside and out. The modifications needed to make it accessible to the outside world involved straightforward engineering. What pushed the boundary for Amazon was the new business model, with its new customers, a new delivery and support system, different service culture, and other aspects of moving into a new business.

The middle circle (Circle 3) represents the combination of new-to-the-world and new-to-the-company that creates the most tension, but also the best opportunities. While Circle 1 illustrates a known path for a disruptive new offering, and Circle 2 illustrates a new path for a known offering, no comfortable path or known offering exists for Circle 3.

Monsanto's Roundup Ready soybeans, introduced in 1996, illustrate a Circle 3 innovation. A disruptive, new-to-the-world technology, it also required an entirely new business model and internal capabilities to manage how farmers bought and used the seeds. The resulting adoption of this new offering, and the controversy surrounding it, dramatically illustrate both the opportunity and risk inherent in strategic innovation.

MatCo's innovation initiative discovered and shaped hundreds of potential opportunities over the course of six months. The effort resulted in the distribution of opportunities shown in Figure 3. The opportunities indicated by the solid circles have been moved into development. The other opportunities were not selected for further effort, although the company may pursue them in the future.
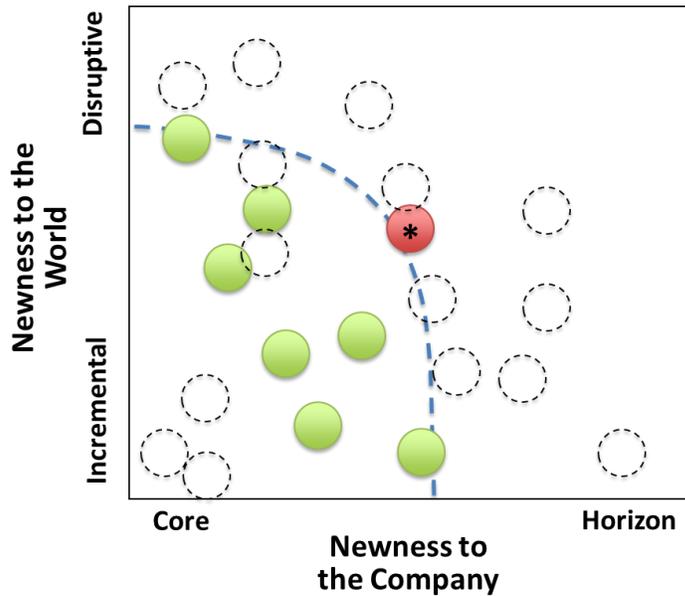
**Figure 3 – Distribution of Opportunities
Defines the Strategic Innovation Zone**

This view of the opportunity distribution does not reflect how attractive an opportunity is, only where it falls within the Strategic Innovation Zone. In order to determine the attractiveness of an opportunity, other tools and methods are needed. The picture becomes more complex, and insightful, when an assessment of each opportunity's attractiveness is combined with information about its strategic nature.[5]

The mapping in Figure 3 clearly shows the organization's strategic boundary. Through an iterative process identifying potential opportunities, assessing them according to analytic and qualitative criteria, and mapping them onto this strategic canvas, the zone of the organization's adjacent possible becomes clear. Achieving this clarity is necessary if a company is to explicitly manage its strategic innovation portfolio.

Making Your Organization Uncomfortable (in the Right Way)

By their nature, strategic innovations push boundaries and therefore create tensions within an organization that must be addressed and managed if the innovation process is to continue over time. Differences in incentives, knowledge, experiences, perspectives, beliefs and opinions

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[5] This is not done here so that the key principles of strategic innovation can best be illustrated. For more on opportunity attractiveness metrics and tools, please contact the author.

among all stakeholders create potential conflict, as does the high-wire juggling act between ongoing operations and innovation initiatives.

Many companies choose to stay well within their tactical zone, and they may prosper for long periods of time – until they get disrupted. Consider newspaper companies' struggles with the emergence of the Web and the disruption of information distribution. In contrast, other companies venture too far and make outsized bets that end up costing a lot of money. Consider Cisco's $590 million acquisition of the company behind the Flip Video camera in 2009, and its decision to shut down the Flip division just two years later. When companies take steps to discover where their Strategic Innovation Zone and adjacent possible boundary lie, the odds of such costly missteps decline dramatically.

To best manage – and sustain – strategic innovation, organizations must undertake a consistent, organized and continuing process for discovering new opportunities. Such a process, or strategic innovation initiative, should enable the organization to:

- **Identify and define its Strategic Innovation Zone**. Determine both the market boundaries and the organizational boundaries that exist, both explicitly and tacitly within the organization, and can be pushed against to achieve new strategic opportunities;

- **Explore and exploit its Strategic Innovation Zone**. Find opportunities within the zone and develop and deliver new offerings that address them; and

- **Expand and enhance its Strategic Innovation Zone**. Constantly push the organization's boundaries outward through both demand/design and culture/capability development.

Incubating and launching strategic innovation opportunities requires processes and methods other than the traditional new product development (NPD) approaches, such as Stage-Gate and Voice of the Customer. Strategic opportunities need a new paradigm that accounts for the complexity of today's demand and design world and the increasing pace of knowledge creation and evolution.

For MatCo, the opportunity represented by the asterisked circle in Figure 3 stands out. When implemented, this opportunity most likely would require that the company form a new group operating outside one of its existing business divisions. This new group likely would hire staff and acquire companies from different parts of the value ecosystem in a different industry than the company currently serves. The group would create new service offerings, and the new business might bypass some traditional providers to the target industry with an offering that has significant new performance dimensions. To do all this effectively, one must think and behave more like a startup.

The Strategic Innovation Zone requires new design or demand capabilities and new ways to exploit them – that is, new processes, methods and tools, and new organizational capabilities. To be successful, corporate leaders must pursue strategic opportunities as if they are running a startup, rather than by employing conventional NPD processes that are ill-suited to the task. Companies must move fast; continually engage, adapt and refine their business plans; build the right team; and find the right funding – and manage all of these aspects well, all at the same time.

The tension between a company's existing performance engine and a new entity born from a strategic opportunity are palpable. But in the end, success comes down to how the company reacts. Mapping opportunities on a canvas such as the one shown in Figure 3 cannot create an environment for success, but it can illuminate the factors that make a company "uncomfortable" in the right ways. The potential heartburn aside, what companies need is a system that continually pushes the adjacent possible boundary. For this is where strategic innovation shapes the future, for customers and for the company itself.

<p style="text-align:center">*   *   *</p>

In subsequent white papers, we will explore the various aspects of Strategic Innovation that demand new ways of thinking and behaving. We will investigate what it means to "think like a startup" within a large organization and how these behaviors can be effectively interfaced with existing operations. We will look at the various aspects of business model innovation that seem to cause the most heartburn for corporations, and we will explore the nature of an Opportunity (defining all of its facets and exploring ways to discover and design compelling opportunities). Together, these papers will chart a path towards new innovation processes, methods and tools for the coming decade.

About The Inovo Group

Founded in 2001, Inovo is an innovation consulting firm based in Ann Arbor, MI, that helps leading technology-inspired organizations succeed at strategic innovation.

About the Author

LARRY SCHMITT, PH.D. is co-founder and President of The Inovo Group. He is the lead architect of Inovo's theory-based framework and tools, which Inovo uses with its Global 1000 clients to identify significant unmet needs and develop compelling new-to-the-world products, services, and business models.

Larry teaches innovation at the University of Michigan's Medical Innovation Center and has served as an invited guest speaker on innovation in the U.S. and India. In addition, he serves as a subject matter expert for the Industrial Research Institute (IRI)'s Research-on-Research Working Group on Business Model Innovation.

Larry previously served in technical roles at General Electric and Unisys, as well as in executive roles at two successful tech start-ups, Applied Intelligent Systems (acquired by Electro-Scientific Industries) and Intelligent Reasoning Systems (acquired by Photon Dynamics in 2001).