

CLOSING THE GROWTH GAP:
BALANCING **BIG I** AND *small i* INNOVATION

by

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Organic growth has risen to the top of CEO agendas in four of five companies¹. These executives know that the expectation of superior organic growth is the most important driver of enterprise value in capital markets. It is also a less expensive way to grow because firms typically pay a premium in capital costs to acquire another business. Yet only 29 percent of managers of large-cap firms were highly confident they would reach their organic growth targets². Judging from the available evidence, their lack of confidence is justified.

Why is profitable organic growth so hard to sustain? One school of thought emphasizes external constraints. In this view, companies are mired in saturated price competitive markets, pressured by customers who themselves are squeezed, and forced to compete for incremental share gains with rivals who follow similar strategies³. The antidote is to explore new market spaces with new business models and offer a better customer experience. While this is an appealing growth path, the returns may not compensate for the higher risk and long delay before any returns are realized. This story also does not account for the exemplary growth records of Wal-Mart, Dell, and IKEA who have been methodically leveraging their low cost business models in closely adjacent markets.

Other pathologists of persistent growth disappointments point to pervasive organizational impediments: short-term incentives that subvert long-term objectives, risk-averse cultures, and inferior innovation capabilities. Eighty percent of CFOs of major U.S. corporations would

reportedly hold back on discretionary spending designed to fuel growth if they were likely to miss their quarterly earnings target⁴.

The combined effect of these external and internal impediments to growth is for incremental “*small i*” innovation to displace “**BIG I**” innovation and discontinuous growth initiatives. *Small i* projects make up 85 to 90 percent of the average development portfolio⁵. These projects are necessary for continuous improvement, but don’t change the competitive balance or contribute much to profitability. By contrast, one study found that 14 percent of a sample of business launches that were discontinuous or substantial innovations accounted for 61 percent of all the profits⁶.

This bias toward safer, incremental line extensions and product improvements seems to be intensifying. Between 1990 and 2004 the proportion of “new-to-the-world, true innovations” in development portfolios dropped from 20 to 11.5 percent⁷. Even the less ambitious development of products “new to the company” dropped by a third. There are many reasons for the growing emphasis on *small i* innovations.

How *small i* Displaces BIG I

Tunnel Vision. Market incumbents are prone to miss the early weak signals of market opportunities that offer openings for rivals⁸. For example, by the time of its IPO in 2004, Google had emerged from the periphery as a threat to larger companies such as Microsoft (web-browser and search), Amazon (search for products), Yahoo! (email, search and other services), and even eBay. Among the blinders that limit the peripheral vision of organizations are: (1) the early signals are masked by confusing and random noise, so their meaning is hard to discern; (2) an early signal of a promising opportunity that is received deep in the organization is likely to be delayed, diluted, or lost on its way to someone who can take action; and (3) short-term metrics tend to focus attention on immediate issues and narrow the field of vision.

Exploration versus Exploitation. There is a well-known organizational trade-off between activities that exploit existing capabilities and those that explore new market spaces and create break-through innovations that stretch capabilities⁹. This uneasy trade-off is tilted toward exploitation by process management methods that emphasize the reduction of variance in organization processes. When the mindset and methods of business process re-engineering, Six Sigma and ISO 9000 are applied to innovation processes they tend to displace the inherently divergent and variance increasing activities needed for creative

exploration. Slowly – and perhaps imperceptibly – the choices of research projects to select and products to develop is steered toward the incremental and more certain opportunities¹⁰.

Short Termism. Most of the financial yard-sticks used to choose development projects to fund are biased against the lengthy pay-offs and uncertainty of **BIG I** innovations. A *small i* project can be readily assessed with a discounted cash flow analysis. The market is known or knowable, the technology is available and time-to-market is short. The inevitable risks can be calibrated from past experience. When a **BIG I** project is forced through a DCF process, the long payback period plus a hefty risk premium added to the cost-of-capital means the returns are usually unappealing. These projects seldom get credit for the options value they create, in terms of follow-on opportunities that would otherwise not be possible.

Resource Constraints. Further displacement of longer-term investments in innovation comes when reactions to urgent requests from customers and salespeople soak up development time and resources. These requests stem from fragmenting markets, demanding channel partners and new forms of competition that require a proliferation of product offerings and accelerated development cycles. Meanwhile, R&D budgets are being held constant or tightened to meet short-term earnings targets. This leaves firms with more projects than they can handle, and pressing *small i* projects get priority.

Assessing Innovation Risks. The apparent aversion to discontinuous or exploratory **BIG I** growth strategies is a natural fallout of the belief that the potential rewards will be received too far in the future at too high a risk. Both beliefs have point and weight, but they impose costs that need to be understood and contained. For example, while the actual rewards may be realized far in the future, the equity markets account for them in their expectations of (suitably discounted) earnings. If the firm is viewed as mired in slow-growth markets, vulnerable to emerging technologies, and lacking a compelling story about its future growth thrust, the stock price will surely suffer.

Risk aversion may have more crippling consequences. Certainly the probability of failure goes up sharply when the business ventures beyond incremental initiatives in familiar markets. But this should not be an excuse for passivity. It's healthier to properly assess the risks and then seek creative ways to reduce the risk exposure. Guidance on these issues can be seen in the matrix in Figure One that contrasts the probability of failure of different growth paths and helps calibrate the risks of unfamiliar markets and technologies¹¹.

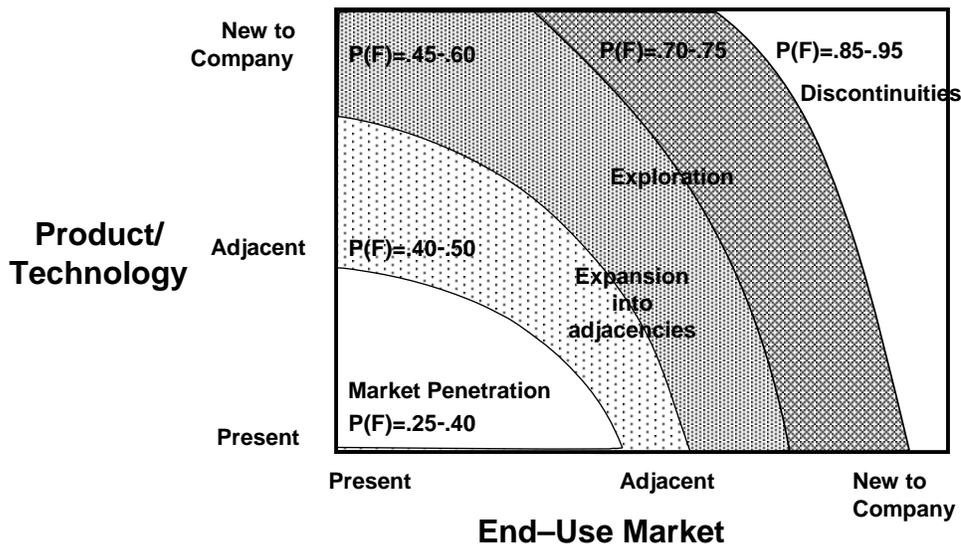
Appraising The Risk Matrix

This matrix has many sources, including long-buried consulting reports by firms such as A.T. Kearney, the extensive literature on the economic performance of acquisitions and alliances, and numerous post-audits of growth initiatives. The ranges in probabilities absorb some of the variability in the definitions of “newness” and “failure.”

We have tried to consistently define failure as missing the objectives that were used to justify the investment in the growth initiative. An innovation could be judged a failure on these criteria, yet still be retained in the portfolio. These estimates have been extensively validated in interviews with consultants and senior managers and are consistent with recent surveys that place the overall failure rate of new products close to 40 percent. Because most discounted cash flow analyses of growth initiatives require a sizeable risk premium, the superior rewards anticipated from highly risky projects are indirectly considered.

In deference to the saying that “all generalizations including this one are false,” there are several qualifications to keep in mind. The probabilities do not apply to fast-moving consumer goods (where incremental innovations have high long-run failure rates) or ethical pharmaceuticals, and don’t distinguish whether “new to the company” is also “new to the world.” Also new markets mean new customers and not new geographies.

Figure One
Calibrating the Portfolio Risk



P(F) = Probability of Failure after the New Product is Introduced

The risk matrix signals that it is far less risky for a business to launch a new product or technology into a familiar served market, than to adapt the current product to a new end-use market. Market risks are much greater than product risks because there are more dimensions of uncertainty, including competitors, channels, and consumers. If the market is entirely unfamiliar, the firm doesn't even know what it doesn't know – and the knowledge is hard to acquire. Market risks are not only less controllable than technology risks, they tend to be confronted much later in the product development process, and are harder to resolve. A further complication is that an existing brand name has no meaning in a “new to the company” market. It is not simply a lack of awareness. Because the prospective buyers lack any experience, they view the new entrant as risky and have to be given special inducements to try the new product.

While the risks are directionally correct, the location of a growth initiative in the matrix requires deep insight. McDonald's abortive effort to offer pizza was initially viewed as an adjacent product for the current market. Pizza was actually a “new to the company” product because it didn't fit the basic service delivery model. No one could figure out how to serve a pizza in 30 seconds or less. This meant that service flow rates were disrupted, and pizzas couldn't be served through the drive-in window. The post-mortem of the failure revealed that the brand name didn't give them permission to offer pizza. They lacked credibility! While the demographics of the consumers of pizza were roughly the same as their core fast-food market, they arrived with different expectations because of the time of day.

Overcoming Inertia. Some firms have been able to overcome the centripetal pull of innovation resources toward cautious, lower yield *small i* growth initiatives and improve their organic growth rate. There has to be visible and vocal top management commitment, supported with resources and incentives, to get started. These enablers are given meaning and direction

with a disciplined organic growth process that actively shifts the balance of the portfolio of growth initiatives toward opportunities with higher risk-adjusted returns.

General Electric has tackled the challenge of growing faster on a number of fronts. The CEO, Jeff Immelt, started by boosting the organic growth goal from five percent to eight percent per year¹². This means finding an additional \$3.4 billion in organic growth each year! Stretch goals – that are within the reach of this organization – can’t be realized from sales momentum and incremental initiatives that simply keep up with served market growth. They challenge the organization to think more expansively about new business, new geographies, and new customer segments. These goals also signal top management’s commitment to organic growth, especially when they are backed up with new resources.

Many moves were made within GE to encourage fresh thinking. These ranged from diversifying the top ranks with outsiders (in a break from their “promote-from-within” history), to keeping executives in their positions longer so they become deeply immersed in their industries, and then tying more of their compensation to new ideas, improved customer satisfaction, and top-line growth. The leaders of each GE business were required to submit at least three “Imagination Breakthrough” proposals per year promising at least \$100 million in additional growth.

Growth initiatives that offer break-through potential are awkward to manage within the constraints of the existing organization. There will inevitably be conflicts over resource allocation, with *small i* initiatives gaining the upper hand. Yet the fledgling **Big I** initiatives may need to share resources, such as brand presence, manufacturing expertise, or market access with the established units. An “ambidextrous” solution¹³ is to house the initiative in a structurally

independent unit with its own processes, structures, and culture, but still integrated within the existing senior management hierarchy.

The lead role for the “Imagination Breakthrough” growth initiative within GE was given to the marketing team within each of the eleven business units, while holding the business leaders accountable for results. This is a startling departure for a company with a belief that superior products and technology are what really count. Until recently, there were no marketers among the senior ranks and no coherent approach to marketing beyond building communication programs and designing product launches¹⁴.

The GE Imagination Breakthrough program aims to shift the balanced toward larger growth initiatives, by giving the organization permission to break away from the tyranny of past success, and take calculated risks with departures from the way the business has been run. By early 2006, there were about 100 growth initiatives underway within GE – ranging from business model innovations and new ways to segment and serve the global energy market, to products for new market spaces such as small super-efficient jet engines for the next generation of air taxis. Preliminary projects were for an extra \$33 billion to \$35 billion of top-line growth in the mid-term from three to five years in the future. The 35 best projects were subject to monthly CEO reviews – a strong signal of commitment. This procedure also encouraged the sharing of best practices and the further search for cross-division business opportunities.

PUTTING DISCIPLINE INTO THE ORGANIC GROWTH PROCESS

As the top-down pressure for organic growth intensifies, the number of growth initiatives being pursued is likely to expand faster than the capacity of the organization to bring them to market. The result is an internal traffic jam that delays all projects and seriously stresses the organization.

A leading firm in activator systems suffered from having too many projects to absorb while they were entering a number of new markets, expanding their line, and struggling with a shift from hydraulic to linear induction technologies. They were so overwhelmed that few projects were properly completed. Instead of fully prepared launches with tested new products, they had “product escapes.” Pushing new products out the door without adequate sales training, documentation, or support spawned a host of problems that had to be fixed later – at high cost.

The antidote is a disciplined process for closing the growth gap; starting with a realistic assessment of the growth gap – to set achievable goals – followed by a directed expansion of the search for new growth opportunities that are properly screened to reveal their potential, and managed so risks are contained.

Assessing the Growth Gap

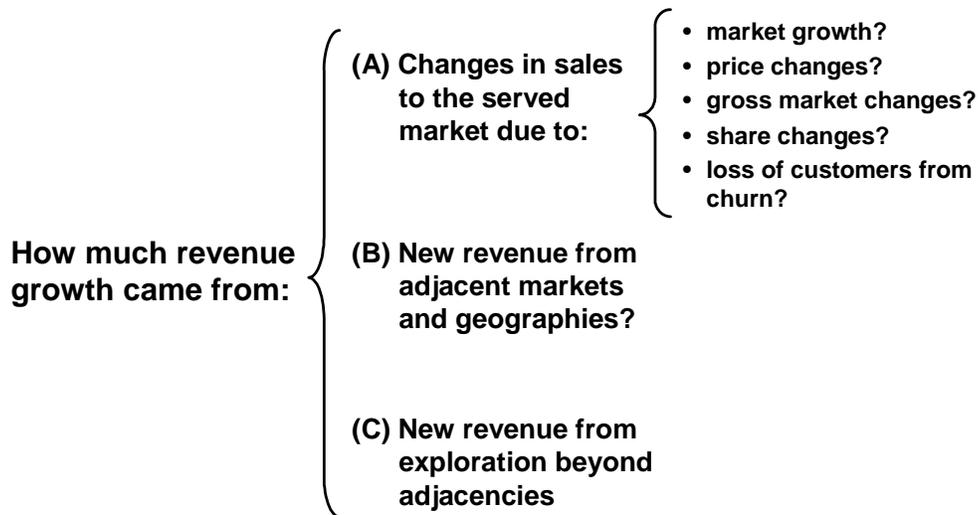
In 2003 Praxair, the global maker of industrial gases, set out to find \$2 billion in revenue growth in the next five years¹⁵. One half was to come from acquisitions. The other half required double digit organic growth at the rate of \$200 million per year. This was far beyond the annual growth that could be realized from repackaging helium, hydrogen, oxygen, and other gases. This organic growth goal was broken down into actionable categories: the first 15 percent would come from incremental growth in the base business and new channels for serving current markets; the rest would come from new service such as nitrogen injection of oil and gas wells, servicing the helium coolant used in MRI magnets, and developing new reactor cooling and nitrogen injection cooling methods for the bioscience industry.

These growth initiatives came from an intimate knowledge of changing customer needs that could be met with Praxair’s existing capabilities in industrial gas production and delivery and their mastery of combustion, freezing, and metal fabrication technologies. The lead role in

exploring the market, articulating and screening the opportunities, and orchestrating the specific projects was assigned to marketing, with sustained top management support and oversight. As a clear signal of commitment, the CEO of Praxair spent one day per quarter reviewing the growth prospects for each business. The pay-off was immediate, as the \$200 million growth target was exceeded by \$30 million in 2004.

Setting achievable goals. The first question in the growth process is whether the current portfolio of growth initiatives can possibly achieve the organic growth goals. Abundant evidence points to a widening gap between increasingly aggressive targets and increasingly risk-averse portfolios. This gap arises because the growth goals are initially set from the top-down, to meet the demands of the financial markets for revenue and profit growth. These goals usually do not reflect either the likely *momentum* of the business (the revenue and profit growth that the present strategy can yield in light of the known threats and opportunities in the market) or the *prospects*, *timing*, or *riskiness* of the available growth initiatives.

To get a grip on what is feasible – rather than what is desired – management needs to dissect the sources of past growth and then set realistic goals for each source of future growth. The starting point is the decomposition¹⁶ of the prior year's revenue growth into the categories that correspond to those in the growth matrix:



The pivotal step is the forecast of revenues from each of these sources in the next three to five years. It may be surprisingly difficult to compile all the growth initiatives that are underway throughout the business. Development will likely know all about the technology and new product initiatives. But there are many other ways to grow: marketing may be exploring a new end-use market with a joint venture partner, while senior management is investing in early stage start-ups, and is considering a business model innovation. These dispersed activities need to be put on the same footing, so informed comparisons can be made.

An overall picture of the contribution of the current growth initiatives begins with the subjective location of each growth initiative on the two axes of the risk matrix. A useful graphic can be created by plotting each initiative as a bubble, with the area proportional to either the planned investment or the forecast revenue stream. The average of the initiative – weighted by relative size – shows the “center of gravity” of the growth portfolio. A comparison of the forecast risk-adjusted revenue from the portfolio and the growth objective then reveals the size of the growth gap that remains to be filled.

Sometimes a subjective assessment is all that is needed to reveal the health of the portfolio. It was clear that poor health afflicted a European healthcare and beauty aid maker that

found that 95 percent of all its development projects were package changes, line extensions, and other incremental improvements designed to match competitive moves and react to demands from important customers. This meant that new platform projects and breakthrough technology development were starved for resources. Most companies go further to decompose the market and technology risks, so they can see where they are most exposed.

Once the growth gap is estimated in light of the available growth initiatives, trade-offs are usually required. It may be possible to achieve the revenue growth goal but not the earnings goal – or vice versa – which starts the negotiation of these goals and the resources needed to attain these goals. Most likely there is an expanding growth gap that has to be filled with a directed search for better opportunities.

Expanding the Search for Growth Opportunities

“There are no mature markets – only mature marketers.”

David Johnson
CEO, Campbell Soup

The key to finding attractive growth opportunities is a systematic search of the three feasible domains for organic growth:¹⁷

- Penetrating the served market
- Expanding into adjacent markets
- Exploration beyond adjacencies

A directed search of these domains is an antidote to a more reactive posture that narrows the search for growth opportunities and dulls the curiosity.

Penetrating the Served Market

The first priority is to protect share; which usually means proliferating the product line to match rivals or satisfy customer demands. With the base more secure against a direct attack, the

next avenue for growth is to capture market share from rivals. This can be costly and counterproductive if it invites retaliation, which will likely happen if the move is so clearly visible that it leads to price cutting or an escalation of marketing spending or “tit-for-tat” matching of features. Defenders have several advantages in this struggle, including deeper knowledge about their current customers and lock-in arrangements that make switching costly.

Market penetration strategies can be myopically imitative – yielding “me too” offerings and meager rewards – or inspired “innovative imitations” that combine deep insights into changing market needs and a willingness to study rivals deeply and learn from their mistakes and oversights. SoBe (South Beach Beverage Company) became a leader in the new-age soft drink market by using “innovative imitation” to learn from rivals such as AriZona Beverage Co., Snapple Beverage Corp., and Mystic Brands, Inc. It didn’t do this just to copy them but to find out what to avoid. It also exploited three converging trends: the emphasis on healthier foods and beverages, the growing acceptance of natural or holistic treatments, and the aging of the baby boomer segment. Their brand attitude was quite irreverent, which further helped them stand out from the rivals. Growth was further accelerated by line extensions such as herbal tonics that took them towards the nutraceuticals market.

Among the surest ways to further penetrate a market is to keep more customers than the competition¹⁸. Cutting the churn rate by two percent directly adds two percent to revenue growth. Reducing defections by this much is no small achievement; it can’t be done with cosmetic changes such as loyalty programs that are easily copied or the latest CRM package which may create more problems than it solves. Instead there must be deep insight into the reason for defections, which will be especially hard for the 20 percent of businesses that didn’t even know their defection rates. The big gains will come from aligning the entire organization to retention as

a priority supported by the right incentives, structural changes, information management, and leadership that is impatient for improvement.

Expanding into Adjacent Markets

In the middle of the innovation continuum are strategies that edge the firm outward from the served market but stay close to familiar territory¹⁹. These strategies are often motivated by two related questions: (1) how can we leverage or extend our existing competencies into adjacent markets? And, (2) which of the functions that our customers perform could we perform better?

General Electric has used these questions to great effect to guide the evolution of the company toward services. The Aircraft Engine Business Group now sells “power by the hour” with a package of engines, servicing, certification, and financing alternatives and a commitment to deliver the right engine to an aircraft when the airline needs it. A variant of this strategy is to leverage the brand equity into new markets where the brand meaning gives it permission to participate.

This growth trajectory can be accelerated by the convergence of supportive trends. Thus FedEx found opportunities in global components handling that emerged from trends in globalized freight flow, outsourcing demands, and Internet availability. Trends may emerge from fringe markets. Snowboarding, microbreweries, and extreme sports have become popular with wider audiences.

Strategies for pushing the boundaries of a business into adjacent products, markets, channels, or geographies are most successful when they combine inside-out and outside-in thinking. The aim is to find promising market opportunities that leverage the competitive strengths of the core business. These two essential ingredients can only be effectively blended if

there is a superior ability to anticipate latent or emerging needs of prospective customers in the adjacent market zone.

Seeking adjacencies from the “outside-in.” The departure point is expansive thinking about the structure and boundaries of the market. When Merck began planning the launch of their nonhormonal drug Fosamax for treating osteoporosis (which causes bones to become more porous and gradually weaker and more brittle), the market was narrowly defined as those with an existing fracture because of bone loss. In part this was because there was no way to readily measure bone mass, so the only indication of osteoporosis was a fracture. Their strategy was to broaden the indicated use of the drug from treatment to prevention of bone loss. They first held a trial using a new and convenient bone-mineral testing machine to redefine osteoporosis as loss of bone mass density. With a successful trial they were able to get key influentials to support a shift in the diagnostic guidelines. The next step was another trial that showed that Fosamax could not only slow bone loss, but helped reverse its process and reduce the incidence of hip fractures. Then they could appeal to the 34 million women in the U.S. with low bone mass. They could also support the brand claim that Fosamax “builds bone to preserve independence.” Worldwide sales growth was equally expansive, from less than \$300 million in 1996 to \$3.2 billion in 2004.

Seeking adjacencies from the “inside-out.” A winning value strategy leverages an internally consistent value creating system that meshes together capabilities, assets and culture, with a strategy that gives it meaning and direction. Thus, price value leaders grow best by leveraging their low cost value system within similar markets. Why has the European low cost airline easyJet been able to expand into car rentals and internet cafes (with mixed results), and consider launching easyCruise.com, easyBus.co.uk and easyDorm.com? The common denominators are a high convenience and low cost value creating system, for achieving high utilization to cover fixed costs, with great appeal to price- sensitive tourists, small business

people and backpackers. All of these new businesses are “no frills” operations that vary prices according to demand, use low cost locations and sell only through the web. The same logic can be used to understand why Dell is growing successfully in printers and low end servers and storage systems, and why Wal-Mart can experiment with used cars, financial services, and flower delivery.

Companies with different value creating systems will find their best growth paths push out their boundaries in other places²⁰. *Relational value leaders* like IBM, that succeed by offering solutions and superior service, are best suited to growing by further expanding their scope, by broadening the definition of a solution, taking over the activities of customers and exploring activity adjacencies. *Performance value leaders* like Pfizer, GSK or Medtronic keep growing by innovating continuously. Their value creating systems are able to deploy decentralized, loose-knit teams that value discovery and probe-and-learn experimentation.

Exploration Beyond Adjacencies

These organic growth initiatives stretch the firm into unfamiliar territory on either the product or market dimension. The expertise that helps the firm navigate adjacencies with some confidence is no longer relevant. At the extremes are discontinuities that stretch the connection with the core competencies of the firm to the degree that there is no discernable connection to the key success factors in the new market²¹.

Discontinuities may still hold interest if they fall into one of two broad categories of innovation. The first exploits a disruptive technology. While nanotechnologies, intelligent materials, smart sensors, digital imaging, and the myriad of breakthroughs in genomics and

proteomics promise revolutionary changes, it's often hard to know in advance if there will be a disruption or a sustaining innovation.

The second type of discontinuity finds new ways to deliver customer value through creative strategic thinking but doesn't depend on a technological breakthrough. Thus Callaway innovated with the Big Bertha to help golfers hit the ball more easily rather than simply improving on the existing club designs. Bloomberg came to the fore in online financial services by redefining the buyer for data terminals as the trader and analyst, rather than focusing on the IT manager. While the former wanted features-rich terminals with tailored analytical screens, the latter wanted standardized systems at the best possible price. Bloomberg thus joined a host of innovators who have disrupted existing industries by challenging conventional practice and thinking.

Screening for Learning

In the mid-nineties, 3M almost killed a struggling project to develop computer privacy screens using their proprietary micro-louver technology. Fortunately they didn't; five years later this product was the basis of one of their fastest growing businesses.

A troubled development history with two unsuccessful launches, plus nagging concerns about the small size of the market for privacy screens, and sales force resistance had put the product development team on probation. A rigorous screening of the project revealed flawed assumptions and numerous holes in their understanding of the true opportunity in the adjacent markets for antiglare filters for computers. Armed with deeper insights into the market, and the potential risks, they launched a full line of screens that leveraged their brand name and sales presence.

To reduce the possibility of screening errors based on faulty assumptions, and to help identify areas where corrective action was needed, 3M adopted the *Real-Win-Worth It* (R-W-W) screen (sometimes known as the Schrello screen)²² to evaluate the 1500 projects in their development portfolio. Many firms, including GE and Honeywell, have followed suit. This is a robust and simple – but not simplistic – framework based on three sequential questions:

- Is there a *real* market and a *real* product (that someone could make)?
- Can we *win*? Can our product or services be competitive? Can our company be competitive?
- Is it *worth* doing? Is the return adequate, at an acceptable risk? Are there other strategic considerations?

While the R-W-W screen has face validity, it gains the greatest acceptance by managers when the questions are drawn from the firm's own experiences with successes and failures. The full set of screening questions in Appendix A come from more than 50 post-audits of failures within two companies that asked teams of auditors, "What questions could we have asked that might have prevented the failure, if they had been properly answered?" For example, one of the companies had failed with a promising laminate technology that clearly improved the performance of high speed circuit boards. After the fact, they learned that while they could interest technical people in the merits of their materials solution, the manufacturing people for the customers had found other cheaper ways to solve it as an electronics problem. By not asking "Is there any other way for the customer to achieve the same result?" they didn't realize that, while the market was real, their product was not competitive.

It is most appropriate to use the R-W-W screen as a learning tool throughout the development process – not just at the early stages. The word "screening" connotes a "go-kill" choice which is antithetical to learning for improvement. Eventually that choice will have to be

made, and a kill decision should be made if a negative, on one of the major branches, cannot be neutralized. But that choice should only be made after all avenues for improvement have been explored.

Containing the Risks

A healthy portfolio of growth initiatives promises superior returns with a “tolerable” level of risk. While risk is an unavoidable consequence of market and technology uncertainty – bad things will happen – the fall-out can be contained. This means delaying large and irreversible commitments as long as possible, sharing the gains and losses with partners, and getting early warnings of problems so that corrective action can be taken. These aims can be achieved with some combination of:

- probing and learning
- collaborating and sharing
- waiting in readiness.

Probing and learning. There are cautious investments made to reveal markets, or understand the potential of a new technology through a process of successive approximations and accumulating learning. The aim is to create “real options.” If the initiative is successful the company can exercise the right to make larger investments. Should the probe fail to deliver, the company has only risked the seed money it has put into the initiative²³.

Many small initiatives can help to create opportunities while keeping risks small. For example, Philips Lighting designed a number of initiatives that provide hands-on experience with new solid-state technologies – from launching LED (light emitting diode) candles to creating ambient lighting systems for a hospital. “We have used a launch-and-learn strategy to learn about the application of solid-state lighting, as well as try out new business models,” said

Govi Rao of Philips. “This is where incumbent companies are often blindsided. These experiments allow us to monitor many factors such as channel conflicts or cannibalization effects. By creating pilots, we minimize risks. If we make mistakes, we make them small and change them quick.” Philips designed different launches to test different aspects of the emerging solid-state world. One, for example, looked at applying a solid-state solution to retro-fit traditional lighting technologies. Another used solid state in a radically different model for lighting.

As part of this portfolio of experiments, some will not have an immediate payoff. For example, a lighting environment installed in an urban hospital explored more far-reaching applications of solid-state lighting. Solid-state lighting creates opportunities not only to replace bulbs in existing sockets but also to change the entire infrastructure and paradigm of lighting. “The entire value chain is built around building and filling sockets,” Rao said. “Solid-state lighting completely changes that paradigm. You can now create light without having sockets.”

These experiments test not only the technology but also new business models, value chains, and market reactions. All of this helps to illuminate the potential of this new market space. “We are learning by doing and create strategic options based on what we’ve learned,” Rao said. “The value of such experiments lies in our ability to challenge the current paradigm of doing business and this is exactly what we accomplished with these two experiments. I would like to have at least half a dozen of these experiments, quickly, to act on the learning.”

Within the discontinuous zone, where the prospects are dismal and even acquisitions have a poor track record, the imaginative strategist can still find opportunities to learn. These could be educational acquisitions intended to learn about the market, internal venture groups that acquire knowledge about emerging markets and technologies via licenses, or minority equity

stakes in start-ups. The objective is to shift the discontinuous innovation into an adjacency growth initiative where the risks are more palatable.

Collaborating and sharing. The “share to gain” approach to containing risk looks to partners, outside suppliers, and specialized contractors to either absorb some of the risk or reduce it with their superior skills, experience, and market insights²⁴. This is a big departure from the “not invented here” or NIH mind-set that still subverts many innovation processes. There are many ways to open up the organization to new possibilities, such as:

- *Use knowledge brokers* such as InnoCentive or Nine Sigma, to quickly tap into a much wider array of technology solutions than a company could possibly reach on its own. These brokers facilitate a direct dialogue between a company with a need for a technology solution, and a vast pool of potential problem solvers outside the company. Universities and research labs perform somewhat the same function by offering innovations for sale and inviting companies to sponsor research projects.
- *Open up the innovation process.* Most companies are genetically disposed to start with a product and then see if there is a market, rather than aiming to create a better customer experience. A growing number are realizing that they can't change on their own so they are teaming up with design firms such as IDEO, that have robust processes for designing better customer experiences. The design firm orchestrates the innovation process – based on the client's brief – and the client participates in all the consumer research, analyses, learning, and refinement of the innovation. This helps overcome one of the biggest innovation risks, that good ideas don't go anywhere because key players in the organization don't have something concrete to work with.
- *Take equity stakes in innovators.* These investments offer visibility into emerging technologies or markets that are relevant but very risky. The stakes are not large, so the initial risk exposure is small, and further investments are made only when the opportunity becomes more promising. This is also a way to bypass an entrenched business model, and overcome corporate inertia.
- *Sharing costs and capabilities.* The risk matrix highlights the dangers of entering unfamiliar end-use markets. This is one of the most persuasive arguments for seeking a joint venture partner with market access and insights. This is not a panacea as such joint ventures may have only a 50 percent probability of success. But this is still much better than trying to absorb all the market risks on your own.

Waiting in readiness. Some companies simply wait for the fog of uncertainty to lift, so they can have a clearer picture of the risks. There is a price to be paid, since the rewards from a more certain investment will surely be lower.

Some firms consciously accept this trade-off by adopting a fast-follower posture. The essence of this strategy is to wait for a dominant design to emerge, and set the standard for product features and benefits that commands the support of early buyers. Once the dominant design or standard begins to emerge, the key is to move fast and be a part of the shaping of the market. This means being as ready to move as any first mover, by having the technology in hand, the product design ready, and the manufacturing or sourcing plans in place. Without these pieces in place, there is a risk that the window of opportunity will be missed.

APPENDIX A. Real – Win – Worth It Screening Factors

IS IT REAL?

- **Is the Market Real?**
 - **Is there a need/want?**
 - What kind of need?
 - How is it presently satisfied?
 - How often? Duration?
 - How good is the evidence?
 - **Can the customer buy?**
 - What is the size and potential of the market?
 - What is the decision making process?
 - Availability of customer funds?
 - **Will the customer buy?**
 - Perceived risks/benefits?
 - Expectations:
 - prices?
 - availability?
 - standards?
 - Constraints?
- **Is the Product Real?**
 - **Is there a product concept?**
 - Modification of existing product?
 - New to the world?
 - Acceptability? (legal, social, environmental)
 - **Is the concept feasible?**
 - Can it be made? Is the technology available?
 - Does it satisfy the needs?
 - Do the specifications exist?
 - **Will it satisfy the market?**
 - Will it offer a relative advantage over existing products?

- Can it be produced cost-effectively?
- Are the risks perceived by customers acceptable?
- What barriers to adoption?

CAN WE WIN?

- **Can Our Product Compete?**
 - **Do we have a competitive advantage? Can it be sustained?**
 - Performance? Features?
 - Patent protection?
 - Potential barriers to entry?
 - Is the price competitive?
 - How else could the customer satisfy the same need? solve the same problem?
 - **Is the timing right?**
 - **Does it fit *de facto* standards?**
 - **Does it fit our brand name? (Is the brand equity transferable?)**
 - **Competitor responses?**
 - How much will they improve? How soon?
 - New entrants?
 - Reactions to our entry?
 - Trajectory of price?
- **Can Our Business be Competitive?**
 - **Do we have superior resources?**
 - Engineering production?
 - Market access? Coverage?
 - Financing?
 - Fit with core competencies?
 - Potential weaknesses? How can they be corrected?
 - **Do we have the management?**
 - Related or direct experience?
 - Fit with culture?
 - Development process skills? (Can we get to market quickly?)
 - Is there sufficient commitment? (Is there a champion?)

- **How well do we know the market?**
 - Customer behavior? Responses?
 - Competitive behavior and capabilities?
 - Channel reactions?

IS IT WORTH DOING?

- **Will It Be Profitable?**
 - **Is the return adequate?**
 - Break-even and net present value?
 - Is it superior to other alternatives?
 - **Can we afford the project?**
 - Timing of cash outflow?
 - Timing of sales and profits? Duration?
 - Impact on other products?
 - **Are the risks acceptable?**
 - Sensitivity of financial forecasts to changes in assumptions re price? Market growth? Competition?
 - What could go wrong? Likelihood and seriousness of impact? What can be done to limit risk?
- **Strategic Considerations**
 - **Fit with growth strategy?**
 - **Contribution to enhancing existing competencies/utilizing resources?**
 - **Impact on brand equity?**
 - **Follow-on opportunities = options value? Does it open up to new markets? Prospects for follow-on business?**
 - **Will it enhance or degrade relationships with key external stakeholders? (dealers? distributors? government? regulators?)**
 - **Does top management like it?**

Footnotes

¹ *The Global CEO Study 2004*, conducted by IBM Business Consulting Services, as quoted in D. Meer, “Can a Chief Growth Officer Rev Up Growth?” *Marakon Commentary*, (Winter 2005), 1-6.

² As reported by D. Meer, *op.cit.*

³ W.C. Kim and R. Mauborgne, *Blue Ocean Strategy*, Cambridge MA: Harvard Business School Press, 2005.

⁴ J. Lahart, “Corner Office Thinks Short-Term,” *Wall Street Journal*, April 14, 2004.

⁵ R. Foster and S. Kaplan, *Creative Destruction*. New York: Currency, 2001. Confirming evidence that major innovations in the auto industry generate significant investor returns was reported by Dominique Hanssens, “Staying Ahead in the Innovation Race: New Products and Firm Value,” Presentation to the MSI Trustees meeting (April 15, 2005).

⁶ W.C. Kim and R. Mauborgne, “Strategy, Value Innovation and the Knowledge Economy.” *Sloan Management Review*, 40 (Spring 1999), 41-54.

⁷ Robert G. Cooper, “Your NPD Portfolio May Be Harmful to Your Business Health” *PDMA Visions* 24 (January 2005)

⁸ This section draws on G.S. Day and P.J.H. Schoemaker, *Peripheral Vision: Detecting the Weak Signals that Will Make or Break Your Company*, Cambridge MA: Harvard Business School Press, 2006.

⁹ The trade-off was most clearly identified by J. March, “Exploration and Exploitation in Organizational Learning,” *Organization Science* 2 (1991), 71-87, and further elaborated in D. Levinthal and J. March, “The Myopia of Learning,” *Strategic Management Journal*, 14 (1993), 95-112).

¹⁰ M. J. Benner and M. L. Tushman, “Exploitation, Exploration and Process Management: the Productivity Dilemma Revisited,” *Academy of Management Review*, 28 (2003), 238-256. Evidence that exploitation crowds out exploration is provided in M. J. Benner and M. L. Tushman, “Process Management and Technological Innovation: A Longitudinal Study of the Photography and Paint Industries,” *Administrative Science Quarterly*, 47 (2002) 676-706.

¹¹ These estimates of risk are similar to these reported by G. C. Hartmann and M. B. Myers, “Technical Risk, Product Specifications, and Market Risk,” in R. Branscomb and P. E. Averswald, *Taking Technical Risks*, Cambridge MA: The MIT Press, 2001. See also C. R. Davis, “Calculated Risk: A Framework for Evaluating Product Development,” *MIT Sloan Management Review*, (Summer 2002), 71-77.

¹² D. Brady. “The Immelt Revolution: He’s Turning GE’s Culture Upside Down, Demanding Far More Risk and Innovation,” *Business Week* (March 28, 2005), 64-73.

¹³ These ideas are developed in M. Tushman and C. A. O’Reilly III, *Winning Through Innovation: A Practical Guide to Leading Organizational Change and Renewal*, Boston MA: Harvard Business School Press, 2002, and M.L. Tushman and C. A. O’Reilly, “Ambidextrous Organizations: Managing Evolutionary and Revolutionary Change,” *California Management Review*, 38 (1996), 8.

¹⁴ The contribution of a strong market orientation to innovation performance is demonstrated in K. Kyriakopoulos and C. Moorman, “Tradeoffs in Marketing Exploitation and Exploration Strategies: The Overlooked Role of Market Orientation,” *International Journal of Research in Marketing* 21(2004), 219-240, and J. C. Narver, S. F. Slater and D. L. MacLachlan, “Responsive and Proactive Market Orientation and New Product Success,” *Journal of Product Innovation Management*, 21 (2004) 334-347.

¹⁵ S. Sanderude, “Growth From Harvesting the Sky: The \$200 million Challenge,” presentation to the MSI Trustees meeting, (April 2005)

¹⁶ This is an adaptation of the sources of revenue statement described by M. Treacey and J. Sims, “Take Command of Your Growth,” *Harvard Business Review*, (April 2004), 127-133.

¹⁷ See also: C.M. Christensen and M. E. Raynor, *The Innovator’s Solution*, Boston: Harvard Business School Press, 2003; C. Zook, *Beyond the Core: Expand Your Market Without Abandoning Your Roots*, Boston: Harvard Business School Press, 2004; A. Slywotzky and R. Wise, *How to Grow When Markets Don’t*, New York: Warner, 2003, and R. G. McGrath and I. C. MacMillan, “MarketBusting: Strategies for Exceptional Business Growth,” *Harvard Business Review*, 83 (March, 2005), 80-91; and M. Sawhney, R. C. Wolcott and I. Arronz, “The 12 Different Ways for Companies to Innovate,” *MIT Sloan Management Review*, (Spring 2006), 75-81.

¹⁸ See G. S. Day, “Creating a Superior Customer Relating Capability” *Sloan Management Review* (Spring 2003).

¹⁹ C. Zook, *Beyond the Core*, *op.cit.*

²⁰ G. S. Day, “Charting New Directions: Match Your Growth Path to Your Growth Strategy” *Harvard Business Review*, (May 2005) and G. A. Moore, *Dealing with Darwin: How Great Companies Innovate at Every Phase of Their Evolution*, New York: Portfolio, 2005.

²¹ For further discussion of explorations beyond adjacencies, when discontinuities are involved see, E. Danneels, (editor), “Dialogue on the Effects of Disruptive Technology on Firms and Industries,” *Journal of Product Innovation Management*, 23 (January 2006), 2-55.

²² The basic sequential Real-Win-Worth It framework for new product evaluation is attributed to Schrello Associates, and has since been adapted by many companies.

²³ See the “reserving the right to play” strategy by H. Courtney, J. Kirkland and P. Viguierie, “Strategy under Uncertainty” *Harvard Business Review*, (November – December, 1997), 67-79, and H. Courtney, *20:20 Foresight*, Harvard Business School Press, 2001.

²⁴ See L. Huston and N. Sakkab, “Connect and Develop: Inside Procter & Gamble’s New Model for Innovation,” *Harvard Business Review*, (March 2006), 58-66: and H. Chesbrough, *Open Innovation: The New Imperative for Creating and Profiting from Technology*; Cambridge MA: Harvard Business School Press, 2003.

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