

Making Informed Investment Choices – The Need for Prudent Selection

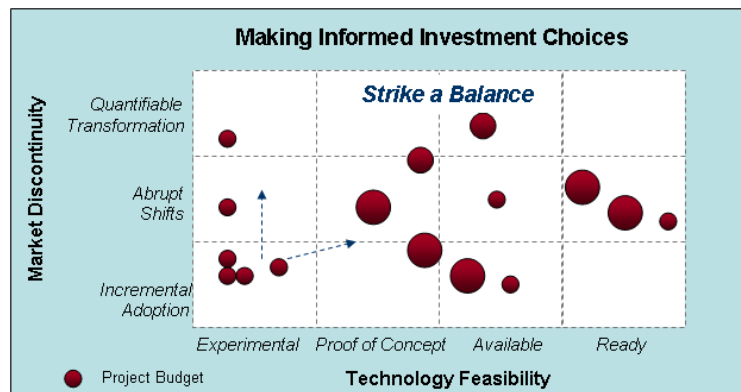
Increasing budget and market pressures caused by today’s tough economic climate re-emphasize the need to get it right the first time – to judiciously select new product or acquisition investments that offer the highest probability of success.

The firms that can do this in a repeatable fashion will quickly increase market share by rapidly introducing the right new products and making the right strategic acquisitions. If your competitors cannot quickly and correctly assess a new product’s potential, they will be frozen in place, lost in a long and often unstructured process that will not be tolerated in this bear market.

Our clients continue to ask us for a perspective when trying to balance the need to fund creative initiatives while addressing the constant pressures of producing immediate business results. Bottom line, our clients want to know if they are advancing the right initiatives.

We evaluate initiatives on the basis of Market Discontinuity and Technology Readiness—an effective framework and critical first step to assess investment choices.

BIC Framework: Market Discontinuity vs. Technology Readiness



Market Discontinuity Drivers

Incremental Adoption: Providers, consumers, regulators, and payers assume a conservative approach

Abrupt Shifts: Dynamic changes brought about by changes in payer policies or the introduction of a breakthrough technology.

Quantifiable Transformation: Looming disruptions that will prompt market innovation and infrastructure transformation to meet unmet needs and maintain standard of care.

The Two Key Questions

To assess these two key variables, we ask our clients two primary questions:

Does investing in the initiative create a market discontinuity or address one? A market discontinuity is defined as a fundamental shift in consumer and business purchasing patterns. Purchasing patterns are altered by events that include technology advancements, regulatory developments, industry concentration adjustments, plus a number of other factors that change the basis of competition.

The introduction of the iPod is a good example of market discontinuity. It singlehandedly created the mp3 player market and then innovated to dominate the growing market via iTunes.

Insights
Doing More with Less

As we look to the future, we see prospective cuts in Medicare reimbursement to likely drive increases in patient volumes for Primary Care Physicians, give rise to Emergency Room visits, and increase use of Convenient Care Clinics. Be mindful of trends like this because they will largely dictate whether your new product will create a market discontinuity or address one.

Is the technology ready or is it likely a “science project”? Readiness is a measure of a particular technology’s feasibility and timeliness for insertion into the contemplated product offering. This is a key indicator of the level of effort required to bring disruptive products to market. Unlike technology S Curves which address technology maturity and are widely used in the formulation of technology strategy, technology readiness evaluations provide a crisp view of time to market and investment realities.

A particular technology may work well in one product form but not another. Finding and inserting “Technology Gems,” those universal applications that transcend product function is the ultimate goal considering the time, expense, and complexity involved in vetting various solutions.

We ask our clients to address technology readiness on the basis of the following definitions:

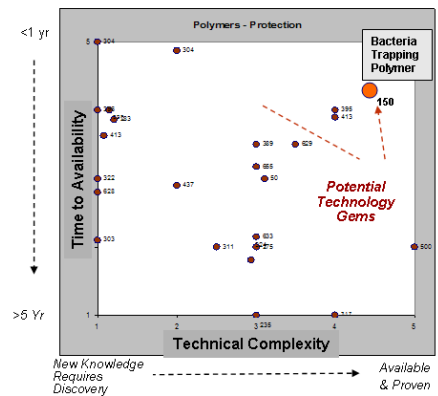
Experimental—Typically highly embryonic technologies which require discovery before it can be incorporated in a given product form.

Proof of Concept—Technologies that have been proven in other product forms and other fields but still require significant development to be incorporated into the contemplated product.

Available—Technologies that hold high promise but must still undergo additional testing.

Ready—Technologies that are proven and available for insertion into the contemplated product form.

Time to Availability & Technical Complexity



Putting it all Together

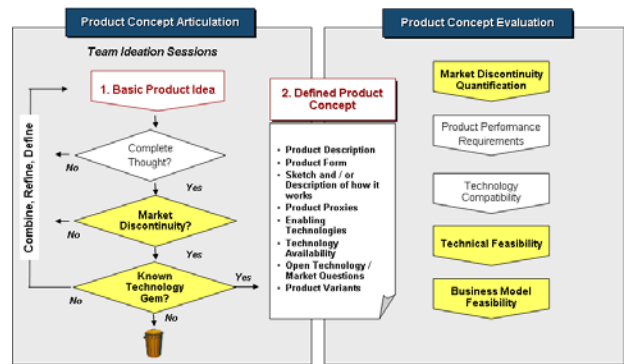
Employing the market discontinuity and technology readiness framework is quite effective no matter the investment context:

Idea Triage—Many of us have participated in ideation sessions where creative product ideas have been generated; walking away invigorated with insightful product possibilities. Then the real work starts: When asked to screen ideas, there is usually a fair amount of “Blue Sky” that neglects technology realities. We suggest our clients follow this three step process:

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Insights
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- Screen raw product ideas on the basis of market discontinuity and known technology gems.
- Draft a defined product concept for raw ideas.
- Evaluate product concepts by quantifying the market discontinuity, technical feasibility, and business model realities.

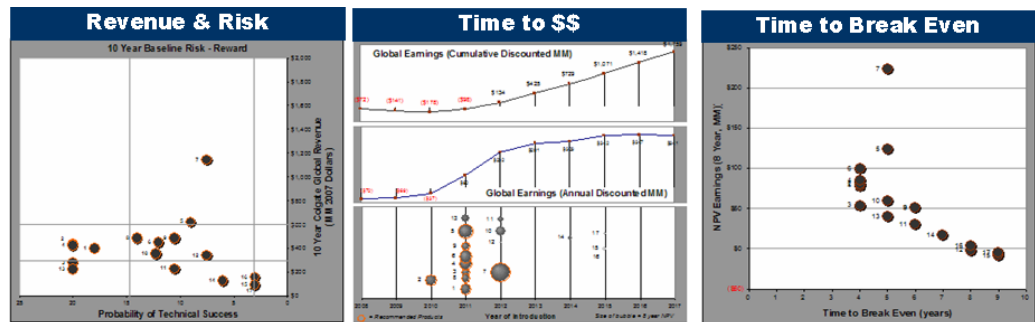


Top to Bottom Pipeline Reviews—Initiatives directed to pipeline reviews are very serious analyses. Employing the market discontinuity / technology feasibility framework reveals obvious winners and over-resourced projects with a low likelihood of success.

Determining whether or not a market discontinuity exists is the first step. If a discontinuity does not exist, then these projects are an obvious drain on resources. For those projects that survive the screen, revenue and technology risk trade-offs will require quantification.

With business potential and risk known, the analysis, while cumbersome, is relatively straightforward. Obvious winners will typically rise to the top on the time to break-even curve. Outlier investments, those that hold lower technical risk but enormous upside potential, can then be selectively supported.

Pipeline Reviews: Obtaining Multiple Views on Business Impact



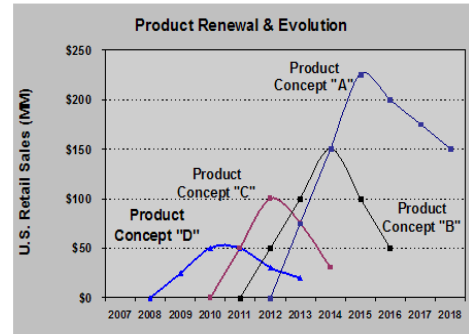
Product Strategy Formulation—Technology trade-offs always influence product penetration. Marketers want maximum penetration for products whose technology readiness is not quite there. The Market Discontinuity / Technology Readiness framework sets expectations and a way for marketers and technology professionals to agree on priorities and plan outcomes accordingly.

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Can Business / Technology Trade-offs be Characterized?

Product Alternatives	Product Concept "A"	Product Concept "B"	Product Concept "C"	Product Concept "D"
Market Penetration Potential (use occasions)	> 100mm	50 – 100mm	25 – 50mm	<25 mm
Annual Revenue Potential	\$200mm	\$150 mm	\$100mm	\$50mm
Technology Gem Developmental Status	Experimental	Proof of Concept	Available	Ready
Technology Cost	Low	Low	Medium	High
Technology Risk	M-H	M	L-M	L
Developmental Resources	M-H	M-H	M	L
Time to Money	3 – 5 yrs	2-4 yrs	1 – 2 yrs	< 1yr

Can Product Evolution be Plotted?



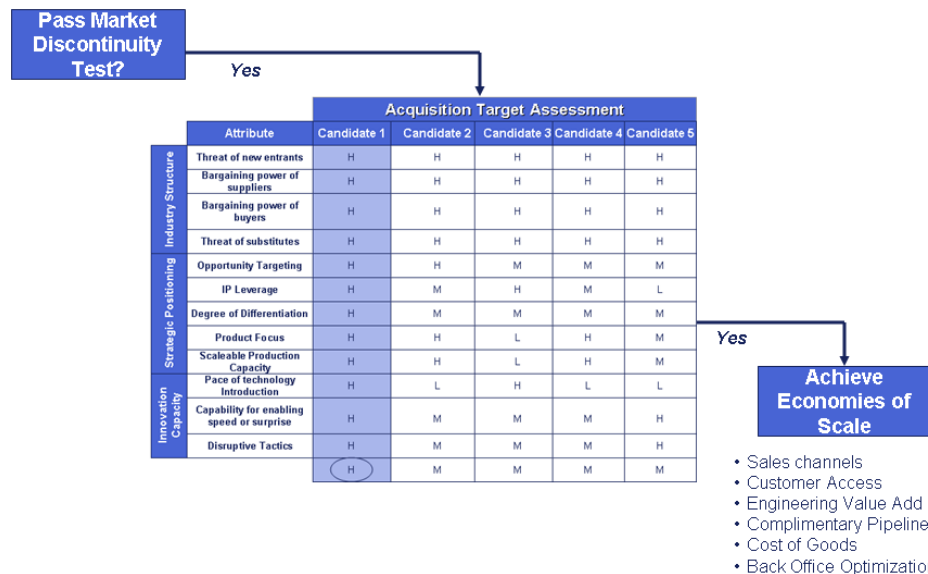
If one can see through product possibilities, and there are indeed underlying technologies that hold promise, it is likely a good bet to direct resources to projects that are sequenced in terms of their product lifecycle. Again, market discontinuity is the first screen.

Strategic Acquisitions—BIC advocates three key principles, as outlined in the graphic below, to guide this tricky process:

- Do acquisition candidates pass the Market Discontinuity Test?
- If so, can we acquire the necessary insights on each candidate to assess potential on the basis of (1) the industry structure in which the candidate participates in, (2) their strategic business position, and (3) their *Innovation Capacity*.
- Finally, one has to address economies of scale. Many companies view acquisitions as an opportunity to leverage engineering and scientific competencies to new applications while concurrently addressing the potential for streamlining back-office functions and to access or provide new sales channels.

The message: make sure the acquisition candidate passes the Market Discontinuity test first. Then move on to technology feasibility in ways that are similar to how one conducts a pipeline review.

Evaluating Strategic Acquisitions: Do They Pass the Market Discontinuity Test First?

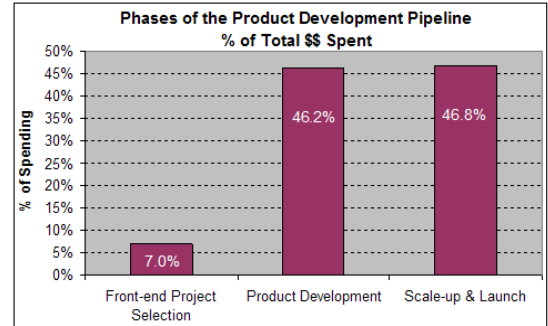


The Focus: Populate the Pipeline with Technically Feasible Projects

In our work, Business Innovation Consulting continues to see the continuance of a disturbing trend:

- More than 50% of all product development efforts fail. Companies can avoid this trap by looking at the market discontinuity question first, then determining whether or not feasible technologies warrant investigation. There is a lot to be said for the “heat of the deal”—too much invested thus far to walk away.

The Under-resourced Front-end

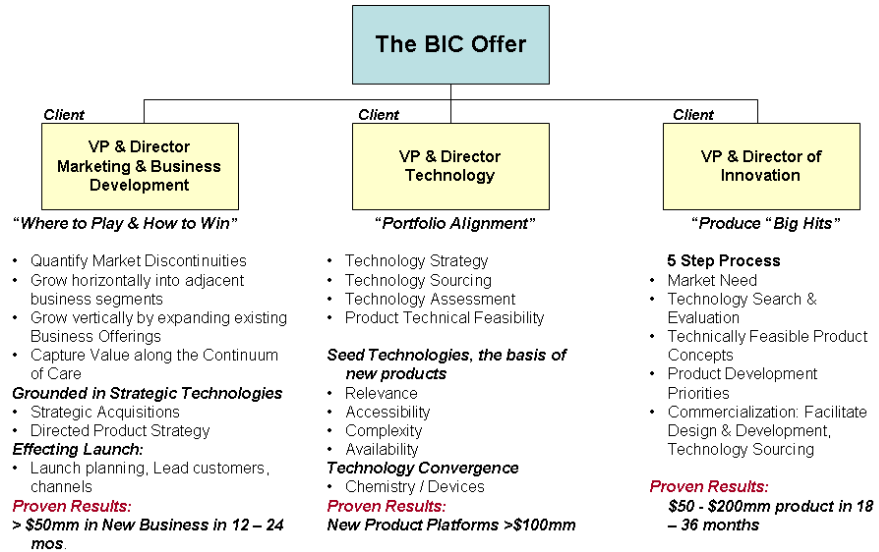


- The front-end of the product development pipeline (pre-stage gate) is too often neglected. Bring on board an honest mediator to remove bias. Center on a process that advances the best few initiatives.
- The product pipeline itself is populated with way too many projects that are not technically feasible – resulting in the dilution of internal talent and too much time spent on projects with low probabilities for success. Experimental projects are good; but don’t be afraid to shut them down when you can’t see your way through a product evolution.

Companies do not want to curb creativity, but few have unlimited budgets and most have to translate their investments into business results quickly. By the same token, technical professionals will argue true innovation can tend to be serendipitous.

Having a common language that removes ambiguity and sets expectations accordingly is a key component to manage the constant struggle between efficiency and creativity. Viewing initiatives considering Market Discontinuity and Technology Readiness is a good start.

The BIC Approach



Assignments performed by senior business and technology professionals with a focused on consumer products & health care – and, a technology network providing access to more than 19,000 scientists & engineers.