

A STRATEGIC RULES ENGINE TO POWER THE FRONT END OF ORGANIC AND ACQUISITION INNOVATION

*How Advanced Companies Will Supercharge Their Operational Models
For High-Growth Organic And Acquisition Strategy Execution*

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OVERVIEW: Good high growth organic and acquisition strategies have not been enough alone to break the vicious cycle of low returns on these efforts. Recent “productivity” gains have been made in the Basic Research, Product Development and Commercialization and Integration (in the case of Acquisition) stages of the innovation process thanks to scientific method-based mind sets, methods and technologies. However the middle stages of the front end of innovation, namely the Applied or Acquisition Research work of sourcing, screening and shaping of high growth organic and acquisition strategies remains stuck in mind sets and methods that are not disciplined – in short not scientific method-based. Superlab has developed a solution that promises companies (even those advanced in their innovation practices) that their high growth organic and acquisition strategies, especially ones dependent on semi-radical or radical types of innovation, (where assumptions are high and knowledge low) can now be executed during Applied or Acquisition Research with a robust scientific method-based research/design/validation system. This kind of system will increase the “acceleration” (3x) and “accuracy” (3x) of high growth organic and acquisition strategy front end execution efforts. Superlab’s solution is a strategic rules engine called the Core Strategy Framework that becomes the “prediction based on a theory” module for a design and decision-support system. The front end operational systems responsible for creating and executing on high growth strategies during Applied or Acquisition Research may include unique forms of incubation/innovation hubs or corporate venture capital units. Superlab’s Core Strategy Framework enables these specialized execution units to become “smarter”, “faster” and more “synergistic” with a company’s strategic business units (SBUs) and the separate development or acquisition teams that create and begin commercializing or integrating these high growth organic and acquisition strategies before they are absorbed by an SBU or kept as a separate company. Finally, Superlab’s Core Strategy Framework enables advanced companies to separate the management of commitments to high growth organic and acquisition strategies currently in the operational pipeline from the C-suite’s management of longer term strategic uncertainty through a highly reliable strategic-scenario-option-creation-and-monitoring system.

Recent surveys indicate C-suite executives are “bullish” on their growth strategy making but “bearish” on their operational models and execution capabilities.⁽¹⁾ In one of these surveys, conducted by PRTM in 2009, the following findings were made:

“Creating the operational model that fits the growth strategy and driving implementation with discipline was the number one challenge facing executives.”

“The surveyed companies reported they did not believe they have a “silver bullet” execution solution or feel confident that they have the “secret sauce” required to deliver the results from their growth strategy.”

This white paper will showcase a strategic rules framework Superlab has developed and the design/decision support system this strategic rules framework enables. This is the “silver bullet” and “secret sauce” these surveyed companies say they are looking for to enable their operational models to catch up with their high growth strategy making.

Superlab’s solution is called the Core Strategy Framework and it promises to increase the “acceleration” (3x) and “accuracy” (3x) of front end innovation efforts.

What is a Growth Strategy

Let’s start with the meaning of a “growth strategy”. Growth strategies are established by the C-suite and represent high level theories about how a company and/or its strategic business units (SBU’s) intend to reach their growth goals. Figure 1 represents a portfolio of growth strategies, and a footnote dimension compliments of PRTM partner Robert Shelton’s book *Making Innovation Work*.⁽²⁾

Obviously just creating a growth strategy and executing it with conventional mind sets and methods has not been enough for companies.⁽³⁾ The aforementioned PRTM survey confirms this conclusion. Another confirmation is the long

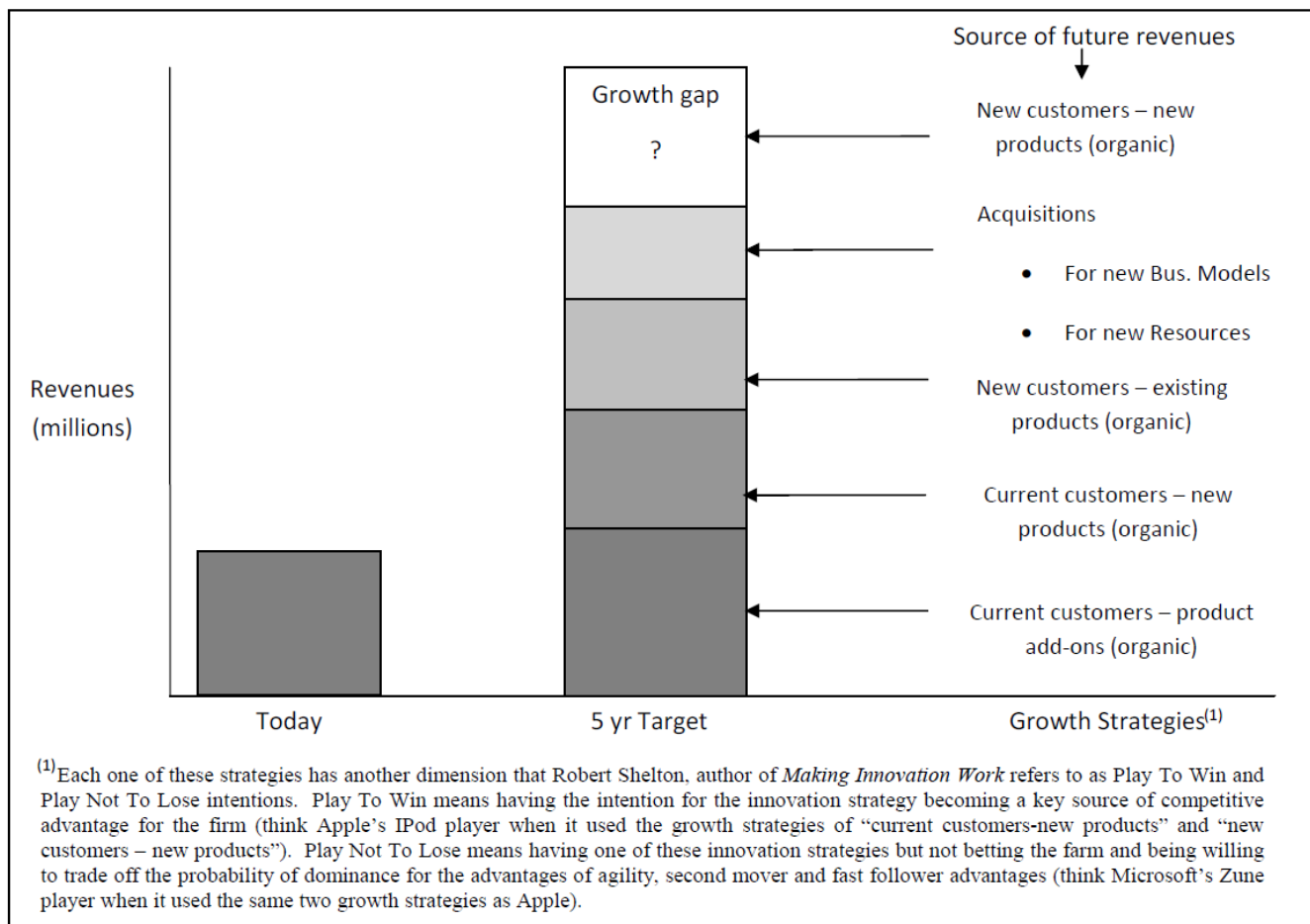


Figure 1 – Growth Strategies To Close Growth Gaps

track record of companies missing by wide margins both their growth goals and return on assets (“ROA”) from their growth initiatives.⁽⁴⁾ This long and low performance record certainly explains the “distrust for operational and organizational models and the low confidence in execution capabilities” reported in the recent surveys. Just because C-suite executives are happy enough with their high growth organic and acquisition strategy making, is this strategy making done very well in the first place? This white paper will not take up this topic although we feel it deserves a very hard look. How to fix the operations model and execution capabilities is our agenda here. We have made a bold promise that Superlab has developed for companies their “silver bullet” and “secret sauce”. To explain “why” Superlab’s strategic rules engine is important, “what” it is and “how” it enables a super fast and super smart design and decision support system requires the context offered by the following four topics:

- The Innovation Funnel Process
- The 90-10 Process Law
- Incubation/Innovation Hubs and Corporate Venture Capital services

- The Front End Should be Managed with a Scientific Method and Mind Set-Based Platform

The Innovation Funnel Process

The innovation process model everyone is familiar with is the generic funnel framework illustrated in Figure 2. This process model calls out the six highest level jobs needing done during an innovation effort. Note that jobs 1-4 are iterative as indicated by the directional arrows. Jobs 5 and 6 require a company to make an irrevocable allocation of commitment and resources. Jobs 2-4 are typically associated with the “front end of innovation” operations. Job 1 – “selecting the growth strategy” is often left out of the front end of operations by the C-suite. Strangely and mysteriously growth strategy making is considered outside operations. This conventional C-suite mind-set has a lot to do with why the front end of innovation’s reputation has evolved into the “fuzzy front end”. We offer a straightforward hypothesis– once the C-suite considers their job of “selecting the growth strategy” within the Innovation Funnel, thus an operational matter like the other stages in the funnel, the beginning of the end of the “fuzzy front end” is at hand. So much for this

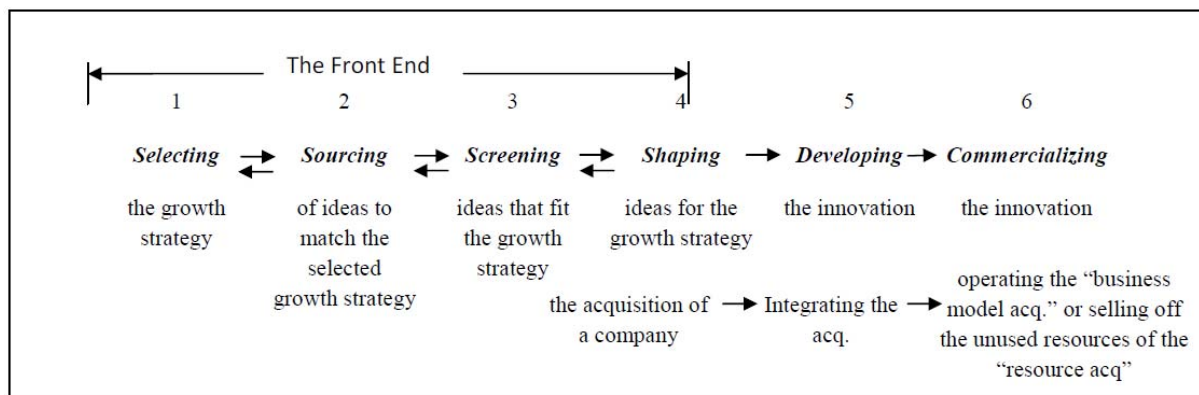


Figure 2. The Innovation Funnel Process

prescription – let’s move on. Anyway beating this drum only puts the C-suite in a defensive posture. What we can say in wrapping up this description of the Innovation Funnel is that long term strategic risk management responsibilities do start and end in the C-suite. And lastly, we believe over time the C-suite will integrate the Core Strategy Framework into their organic and acquisition growth strategy making process and conversations. When this happens the “front end” of the “front end of innovation” will be transformed.

The 90-10 Process Law

The 90-10 process law is one recognized by process pros since TQM’s halcyon days of the last half of the last century. (5) It hypothesizes that the first 10% of a process determines 90% of the entire processes’ outcome. Right away we get a glimpse just why the front end execution of an innovation strategy is so crucial. If 90% of the outcome from a growth strategy effort is dependent on what happens in the front end (first 10% of the whole process) and this front end is inherently “fuzzy” no wonder the odds are against the successful execution of a growth strategy. How great the odds are also depends on what “type of innovation” effort is called for by the growth strategy in play. The innovation community has categorized innovation types many ways. For our purposes here let’s stay with a high level distinction commonly used:

- Incremental innovation → small changes
- Semi-radical innovation → either significant business model changes or significant technology changes
- Radical innovation → Significant changes to both business model and technologies

The history of innovation shows that big growth strategies line up in a predictable way:

- Incremental innovations → Small growth potential in the short term
- Semi-radical innovations → Larger growth potential over near term
- Radical innovation → Largest growth potential over long term

Let’s review. The Selecting, Sourcing, Screening and Shaping stages’ of the front end of innovation are part of a “fuzzy” process and yet 90% of the Product Development and Commercialization stages’ outcomes for a growth strategy is dependent on what happens during these first four stages. This suggests then that the low performance from growth strategies can be fixed if the front end is fixed. These first four stages of the Innovation Funnel are the weak links in a firm’s operational model that need the “secret sauce” and “silver bullet” solution we are recommending in this white paper.

Incubation/Innovation Hubs and Corporate Venture Capital Services

For the last 15 years large enterprises have relied on resources generated from incubation/innovation hubs and corporate venture capital units. Whatever it is called these formalized units have supported high growth strategy (primarily organic strategies) front end execution at stages 2-4, namely Sourcing, Screening and Shaping stages of the front end. The C-suite still generates the growth strategies. Companies have learned, especially when semi-radical and radical innovations are necessary to execute on a high level growth strategy, that development teams need a war chest of support, resources and contacts inside and outside the company. It is the job of these formalized incubation/innovation hubs and corporate venture capital units to provide the front end operational support these newly created, ad hoc and highly experimentation-based development teams need.

With or without the support of formalized incubation/innovation hubs or corporate venture capital units, the next agenda becomes the start of the prescription to increase the “acceleration” and “accuracy”

of the front end of innovation. The recommendations that follow apply equally for growth strategy development/acquisition teams and, if they are lucky, to any incubation/innovation hubs or corporate venture capital units, the development/acquisition teams have access to.

The Front End Should Be Managed with a Scientific Method and Mind Set-Based Platform

The labels given to stages 1-4 of the Innovation Funnel (the front end), namely Selecting, Sourcing, Screening and Shaping are highly descriptive of the jobs that have to get done. These simplistic labels however mask the true “nature” of the work. For a long time these four stages of work have escaped the same rigor and discipline that Basic Research, stage 5 (Product Development) and stage 6 (Commercialization) have been subjected to. There is no accident that stages 1-4 have been called the “fuzzy” front end. Hip shooting characterizes the conventional approaches for stages 1-4. The 90-10 process law however, promises that if these stages can improve, the consequences are profound for the end game – high growth innovations. The antidote to hip shooting and the prescription for capitalizing on the promises of the 90-10 Process Law is a front end system built and managed with a scientific method-based design and decision support platform. In order to review this prescription carefully the following three topics provide a good context:

The Nature of Front End Work is Both High Creativity and Experimental Learning. Front end work of high growth organic and acquisition strategy execution is unlike the everyday work of an established SBU. SBU creativity/planning/execution is a process loaded with incrementalism, data and explicit knowledge. In sharp contrast front end high growth strategy execution is loaded with high creativity, assumptions and tacit knowledge. This kind of front end work is not to deliver a proven result; it must be to discover what is possible, that is, create breakthroughs and then to learn, by converting assumptions into knowledge as quickly and inexpensively as possible. In short the front end of innovation needs to incorporate the best known design and learning system for the challenge – designing and experimental learning the scientific method way. ⁽⁶⁾

Companies Are No Strangers to the Scientific Method. Companies have used the scientific method for some time. For example Basic Research – one of the great “sourcing” tactics for ideas/technologies at stage 2 of the Innovation Funnel operates within the protocols and traditions of the scientific method. This scientific method has also brought advances to the Product Development (stage 5) and Commercialization (stage 6) stages of the innovation process. Notwithstanding these advances at

the Sourcing, Product Development, and Commercialization stages, the execution of growth strategies underperforms expectations 75 % of the time. Here is an excerpt from a Product Development and Management Association (PDMA) study verifying this dilemma.

“For new-to-the world products cycle time was reduced from 41.7 months in 1995 to 24 months in 2004. The dramatic decrease in cycle time shows the impact of scientific method-based product development processes, practices and technologies- but it is interesting to note that reducing cycle time in product development time did not improve the profitability of products.” ⁽⁷⁾

Obviously something between stages 1 and 5 is the Achilles heel in the Innovation Funnel. That would be, as we are suggesting, the lack of the scientific method.

The Scientific Method Gets Tricky in the Front End. The tricky part of the scientific method for the Selecting, Sourcing, Screening and Shaping stages is the fact that these four stages include more than just “natural science” and “scientists”. Selecting, Sourcing, Screening and Shaping swallows in the “design science of the artificial” and people from business, finance, marketing, lead users, consultants and vendors. These people are not, as a rule, using the scientific method every day in their own domains and certainly not as a group when thrown together to operate a front end innovation effort. In short, Selecting, Sourcing, Screening and Shaping specific growth strategies is every bit as complex and challenging (maybe more) as the lab and bench work of Basic Research. Logic helps us here. If the scientific method is the learning protocol of choice for Basic Research and Selecting, Sourcing, Screening and Shaping is every bit as challenging or more so, then wouldn’t an even better or more disciplined use of the scientific method be called for during the front end? Fortunately this scientific method can be customized for stages 1-4 of the Innovation Funnel. One who agrees with these prescriptions is Vijay Govindarajan (VG) the first Professor in Residence and Chief Innovation Consultant for General Electric. Together with co-author Chris Trimble, a faculty member with VG at Tuck School of Business at Dartmouth College, VG and Trimble in their 2005 book “*The Ten Rules for Strategic Innovators*” provide this diagnosis:

“The scientific method has a natural home in research and development just as it does in the marketing of new products. In conducting our research (of front end practices), however, we did not observe a healthy practice of the scientific method...can managers of strategic experiments apply the scientific method? They can and they

must. Granted, their learning environment is far from ideal. But there is no alternative”. (8)

THE SCIENTIFIC METHOD’S SECRET SAUCE

To customize this scientific method for the front end of innovation is our task now. Describing this will reveal the “secret sauce” and “silver bullet” solutions executives say they want for their operational models. Here are the generic elements of the scientific method.

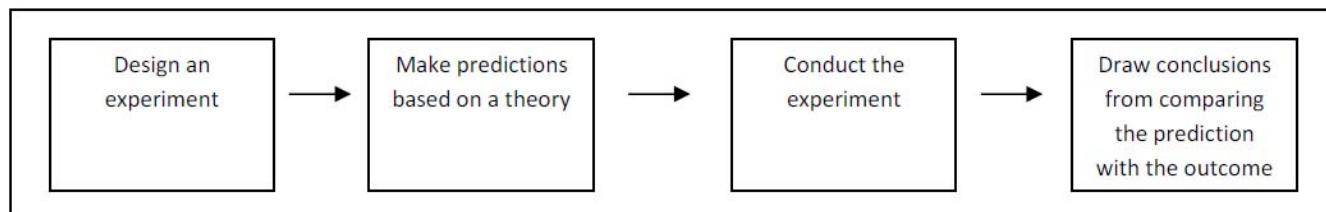


Figure 3. The Scientific Method

To customize this scientific method let’s start where the operations team starts its work. This would be when the operations team takes the hand off with the C-suite’s selected growth strategies. So the operations team begins its work at stage 2 – Sourcing. But let’s dig deeper. What is the operations team really handed from the C-suite? Understanding this reveals the “secret sauce” and “silver bullet” the C-suite officers, in the PRTM survey, said they wanted to have.

The Growth Strategy is a Theory. When a high growth strategy is made at stage 1 the C-suite has actually designed a “prediction of performance on the basis of a theory”. The C-suite may not call their growth strategy a theory. In fact the C-suite may consider the jobs they get done are anything but theoretical based. However the reality is executives are the world’s most voracious consumers of theory. Every “plan” an executive makes is based on some implicit understanding of what causes “what” and “why”. Let’s describe the C-suite’s growth strategy within this context. Their high level plan for growth – the growth strategy (see Figure 1 again for some typical growth strategies) is a “plan” (theory) that if the company does X with Y (the assumptions) that the targeted premium position or cost cutting in the case of acquisition of resources (think Cisco’s acquisition of Cerent and Netfit) or the targeted growth in the case of acquisition of another’s business model (think EMC’s acquisition of VMware) (the predictions) will come about. This “plan” is a prediction of performance and is made based on a whole cadre of assumptions. Unfortunately the track record of C-suite growth strategy making reflects a pervasive habit of making high level “directional”, “white space” or “trendy” plans. In its

worst form, C-suite growth strategies are reactionary (think Microsoft’s mobile Zune player reacting to Apple’s proactive iPod player moves). For example just because the C-suite’s growth strategy may be for example – new customers – new products, this does not tell anyone “why” and “how” this organic growth strategy will succeed. It is the operations team’s job to take the C-suite’s high level “prediction based on a theory” (however “fuzzy” it is) and turn it into a reliable and fabulous plan

suitable for funding, Product Development, Commercialization or integration. Stages 2-4 involve the kind of work necessary to accomplish this. Sourcing (stage 2) looks for technology and business model ideas that fit the growth strategy. Screening (stage 3) vets the best technology and business model ideas. Shaping (stage 4) validates the assumptions behind the best plans to determine if finally a growth strategy’s “plan” is suitable for Product Development funding. All this may seem routine. But this conventional approach has not been rigorous and disciplined enough to pass scientific method muster. Here’s why. The growth strategy the operations team has to work with is almost always missing a reliable and explicit enough “theory” to set up the requisite “scope” and “scale” of assumptions that a robust theory should have. Without this robust theory and its assumptions both the design and the validation/learning process that stage 4 (Shaping) focuses on just doesn’t have a chance. Listen to the recommendations (in the case of organic strategies) offered by VG and Trimble in their 2010 book *“The Other Side of Innovation: Solving the Execution Challenge”*:

“In managing ongoing operations, companies strive for performance discipline. For innovation initiatives, however, they ought to strive for discipline of a different form: disciplined experimentation. As a result, the companies that win are not the ones with the best initial plan: it is the one that learns the fastest.”

“Quick learning is most likely when there is a clear and reliable hypothesis (theory) of record that everyone involved in evaluating the initiative shares

and uses as a frame of reference in any discussion of the initiative's progress"

"The hypothesis of record is composed of a framework about cause and effect relationships (theory) between actions, outcomes and subsequent outcomes".⁽⁹⁾

So the "theory of success" underlying an organic or acquisition growth strategy is crucial. Said another way – every organic or acquisition growth strategy needs a strategy. It is the "secret sauce" missing today in the front end of innovation. This "secret sauce" – the "strategy for a growth strategy" becomes the "silver bullet" executives want for their front end operational models, when every stage of the front end of innovation is touched by the "secret sauce". This is the lubricant that enables the front end work to increase its "acceleration" and "accuracy" of performance. It is this lubricant that Superlab has developed. This lubricant is a strategic framework that offers a variety of strategic theories that predict what a company must "do" and "have" given the organic or acquisition growth strategy the company has made and the external circumstances the company faces. The future is hard to predict but reliable strategic theories or models

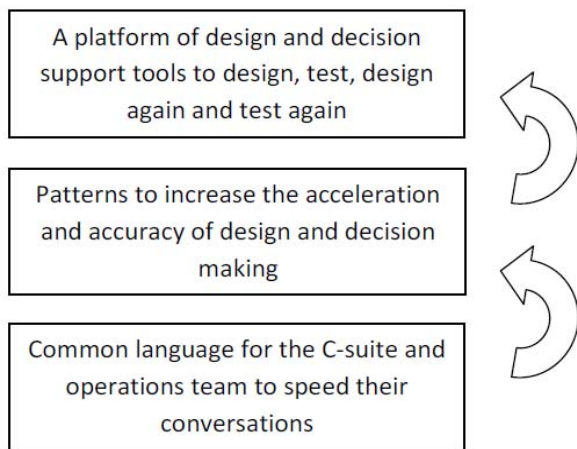


Figure 4. Benefits of Strategic Theories ⁽¹⁰⁾

give new ventures the following benefits. (Figure 4). Having reliable strategic theories is a major *resource* for any enterprise. After all our Innovation Economy demands "learning organizations." And as W. Edwards Deming, the father of process management, noted fifty years ago: "No theory – no learning." Adrian Slywotzky, a renowned authority on business design, says it this way:

The quest for predictability in an endeavor as complex as innovation is not quixotic. What brings

predictability to any field is a body of well-researched theory-contingent statements of what causes what and why.⁽¹¹⁾

Every Growth Strategy Needs a Core Strategy. We have tried to make the case that the C-suite normally hands off to an operational team, at best, a half-baked "prediction based on theory" growth strategy. For the operational team to have any chance of improving its front end performance it has to embed in its process a reliable strategic theoretical framework or designing and decision making within the scientific method just hasn't got a chance. Superlab has invented the necessary theoretical framework – the Core Strategy Framework. Now every organic and acquisition high growth strategy, especially the ones that can only be executed with semi-radical or radical-based innovations, can be embedded with a "theory of success". In short every growth strategy needs a Core Strategy – cause and effect based theory of success model. This Core Strategy framework offers stages 1-4 a plug and play "prediction based on a theory" module for the scientific method design and decision support system that should power the front end of innovation. Superlab's co-founder, Mark Long's newest book *Core Strategy: A Framework for Planning and Predicting High Growth Ventures* (380 pages) details this module.

What is Core Strategy? As the word "core" implies, a core strategy is the key or enabling framework of plans – the blueprint or theory for the success of a high growth new product or the basis of success for a targeted company considered for acquisition on the basis of growth through its new (to the acquirer) business model. There are four Core Strategies. See Exhibit B for definitions. Each Core Strategy is an objective and normative based theory that calls out, on a case-by-case basis, the following:

- Category (marketplace) circumstances of customers, competitors, complementors and technology/innovation trajectories that are optimal for a product/acquisition to succeed and succeed big based on the growth strategy selected by the C-suite.
- Production and product system and sub-system scope and scale requirements at detail levels on business model and technology dimensions called out by the particular Core Strategy being used.
- Organizational requirements including philosophical, finance, and team and integration issues in the case of acquisitions.

Exhibit A provides a comparison between conventional subjective domain expert theory making with the

objective systemic theory making approach like the Core Strategy Framework. Exhibit C provides an architectural view of the Core Strategy Assessment System that is built off the Core Strategy Framework. This architecture includes a disclosure about the number of “requirements” at major and sub-levels of the assessment system and the number of “points of information” needed to perform

assessment/validation work on assumptions.

This Core Strategy Assessment system has been tested and rigorously monitored in blind, back-dated tests. Figure 5 is a summary of one such set of tests involving ten different assessments on new venture launches (not acquisitions).

Figure 5. The Silicon Valley Stress Tests

In mid-2009, after hundreds of alpha and beta trials and many assessments for hire Superlab accepted the challenge to perform a back-testing blind validation test on the Core Strategy Assessor. Our challengers were three prestigious national firms. The lead challenger was the law firm of Wilson Sonsini Goodrich & Rosati (Palo Alto and San Diego offices). The other challengers were Hitachi Consulting (Orange County office) and the Financial Services and Exchange (FSX) investment banking association (Orange County office). These three firms, with WSGR as the lead, conducted and monitored this blind validation test. Superlab assessed the original business plans for ten venture-backed companies launched between 2000-2003. These redacted business plans were provided from the archives of Wilson Sonsini and FSX. The steering committee’s evaluation criterion was simple – *will the assessed company generate within seven years any kind of high ROI liquidity event (sale or IPO) for its investors.* The steering committee wanted a full report on each company. These reports had to explain the reasons behind the assessment system scores. Superlab’s only requirement was that every business had to be a venture capital/angel backed though each company’s start-up, A-Round, or B-Round financing. The reason for this condition was simple – Superlab did not want any company to justify any possible failure on lack of financing. Superlab wanted companies to face their markets and succeed or fail on the basis of their technology, product, and competitor positioning. The steering committee provided ten companies that raised collectively over \$430 million during their first seven years of operations. The protocol was established by the steering committee and consisted of the following:

5-10 Hours Per Assessment. Superlab devoted on average 5-10 hours of work per assessment. Six of the assessments were actually done in the office of WSGR. A full report was provided at the end of each day to the steering committee headquartered in Palo Alto.

Redacted Business Plans. Redacted business plans were provided by steering committee members who knew the companies being assessed and their performance record to date. The name of the company, its principal’s names, and product names were redacted as well.

No Information Beyond the Date of the Business Plan. Superlab was not allowed access to any information beyond the date of a company’s business plan. Further, Superlab was not allowed to contact any customers, vendors, or management team members. In order to help satisfy the requirements of no information beyond the business plan date, the principals and staff of Superlab provided the steering committee affidavits of honest performance.

The Results – a Perfect Score. The steering committee concluded that Superlab’s Core Strategy Assessor System precisely forecasted the seven-year business and investment performance for ten out of the ten companies assessed. Of seven of the companies, our system forecasted four companies would go out of business and three would be sold. Of the three sold, Superlab predicted one company would be sold for an acceptable profit and two companies would generate little ROI, if any, from their sale. Three companies remained in business as forecasted by Superlab’s system and as forecasted did not generate a liquidity even or come close to meeting revenue projections in the seven-year time frame. The steering committee judges acknowledged not only the pinpoint accuracy of Superlab’s system’s assessments, but the keen insights that buttressed assessment conclusions. The steering committee acknowledged the profound implication of this validation test is straightforward. *First, \$350 million of venture capital could have been saved if Superlab’s Core Assessor System had been available in 2000-2003.* Second, even if these heavily financed start-ups had the best management teams executing their strategy, nine were doomed from the get-go, as Superlab’s system predicted, because they had the wrong core strategy for the circumstances they were in when they launched.

Like any body of knowledge and rules framework, its value is based on what it enables companies to do that they can't do already. The Core Strategy Framework promises to increase the “acceleration” (3x) and “accuracy” (3x) of front end innovation work on organic and acquisition high growth strategies. Our task now is to describe the design and decision support system the Core Strategy Framework enables. This description and its illustrations will showcase why Core Strategy is like an operating system to this front end design and decision support system.

THE SILVER BULLET – A CORE STRATEGY ENABLED DESIGN AND DECISION SUPPORT SYSTEM FOR THE FRONT END OF INNOVATION

Let's set a context first. The operations team for a high growth strategy will usually start off as a loose, ad hoc group of 2 or 3 people. Some may even be part time. Maybe a consultant is added. This lucky group has seen fit to take the hand off of the growth strategy de jour from the C-suite. Let's also assume that the company has enough organizational structure, culture, policies and practices in place that measure up to incremental, semi-radical and radical innovation/integration best principles and practices for either organic or acquisition growth strategies. This hypothetical company may also have in place a resource-full incubation/innovation hub and/or corporate venture capital unit. In short, the company has taken seriously its innovation efforts, so much so, that the company can easily be characterized and rated as a first class disciplined innovator. Now this company simply wants to increase the “acceleration” (3x) and “accuracy” (3x) of its front end innovation efforts. The following “to-do” list will do the trick:

- Convert the Innovation Funnel stages' work flow description (Figure 2) into a scientific method work flow (Figure 3) and integrate the Core Strategy Framework (Exhibit C)
- Integrate the applications/tools driven by the Core Strategy Framework into the scientific method workflow of stages 2-4. Today these applications/tools are a hybrid of manual and automated modules. At this current hybrid level these applications/tools are properly classified as a design and decision-support platform.

Figure 6 depicts how this “to-do” list lays out. Note the seven innovation rules modules layered in just above the middleware/app/tools layer. These rules modules are in place to be consistent with the hypothetical company in our context, namely a company already characterized and

rated a disciplined innovator. Also note that the six Core Strategy Framework apps/tools have their own specific roles assigned to the various Innovation Funnel stages.

PROFILE OF THE CORE STRATEGY FRAMEWORK'S APPS/TOOLS

Training. The Core Strategy body of knowledge is an excellent recipe for both the C-suite and the operations team. Once there is understanding of the Core Strategy models the resulting “common language” about the “strategy for the growth strategy” is possible. Using these models will enable the C-suite to select their growth strategies faster and smarter. This alone will increase the “acceleration” and “accuracy” of front end work. Developing this discipline of learning the Core Strategy models is all part of the discipline of managing mental models-surfacing, testing, and improving our internal pictures of how the world works. Peter Senge has noted this to be a major breakthrough for building learning organizations. Models, our assumptions of how things work, are always useful because at their worst they give us a point of reference to learn; and at their best they may be very accurate, ensuring an innovation strategy's success.

Scenario Mapping Tool. The Core Strategy Framework enables a well versed C-suite to create future industry scenario maps. These maps can be either fully integrated socio/econo/techno/industry scenarios or the scenario maps can be smaller scale but focused on one element at a time. These scenario mapping tools forecast the future through the lens of the category mapping process – one of the Core Strategy Frameworks key components. These scenario maps become for the C-suite their secret sauce for strategic risk management based on weak signal research and option creating principles and practices (see later review).

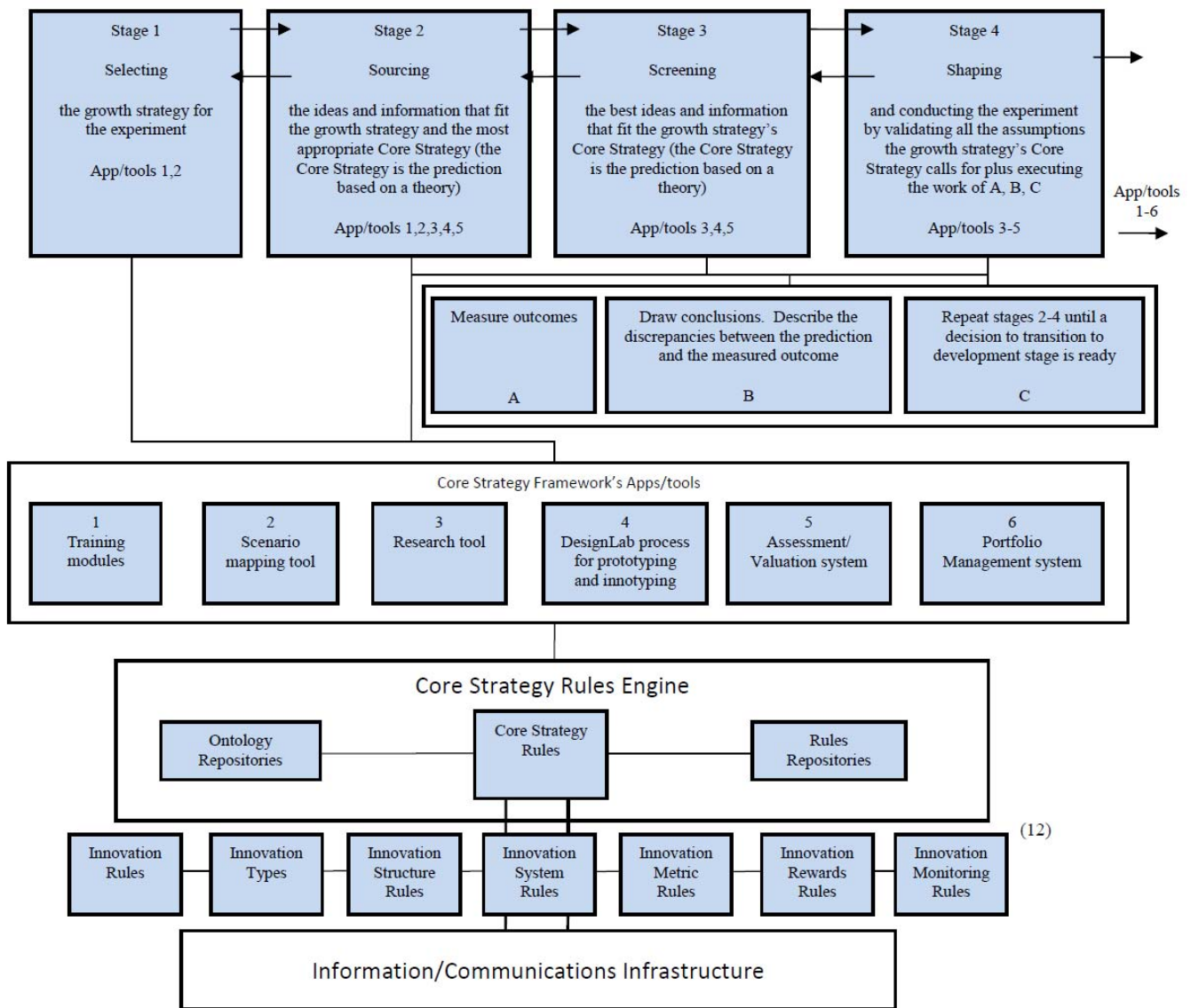
Research Tool. The Core Strategy Framework sets up, in advance, any Sourcing of ideas/information for any stage's work. The Framework first calls out the most relevant marketplace circumstances that have to be examined including technology and incumbent innovation trajectories. In addition, the specific scope and scale requirements for the growth strategy's production and product systems are called out. This narrows the “critical unknowns” and the invention, valuation and integration (in the case of acquisition) issues for the technology and business model challenges. Where “acceleration” and “accuracy” first gets supercharged is during stage 2 when the operations team is first scanning for organic or acquisition ideas inside and outside the corporate walls. The Core Strategy Framework research tools complement perfectly all the recent innovation management software (also called social business software – think Jive and

Spigit). Now the operations team can connect the queries the Core Strategy Framework calls out, with the “invention ideas” or “acquisition targets” captured and “bucket-listed” by the new SBS and BI systems.

DesignLab Process. Anytime a collaborative design or any kind of “brainstorm” or “ideation” event/process is triggered, the Core Strategy Framework becomes the “secret sauce” that prevents “garbage in-garbage out” creativity/design. The history of Superlab’s development reveals that the Core Strategy Framework was inspired by and developed only after Superlab acquired a license to use one of the most powerful design processes – Group

Genius™, from the MG Taylor Corporation. Superlab learned quickly that the only way to ensure against “garbage in-garbage out” design (think doctors’ diagnostics before operating/prescribing) was through a reliable strategic theoretical framework – thus the search for the Core Strategy Framework began. The mainstream design and innovation sectors still remain in the dark about the crucial role of strategic theoretical frameworks to increase the “acceleration” and “accuracy” of their work. Superlab provided, a few years ago, early demos of its Core Strategy Assessor to some of the very top creative and industrial design and consultancy firms. The Core Strategy Assessor has been routinely dismissed

Figure 6. Core Strategy Design and Decision Support System



under the rationale of “oh we don’t advise our client if their product should be built – we don’t play God – we leave that to the client”. Superlab believes what is really in play is the organizational anti-bodies that attack innovations like the Core Strategy Framework and its assessment capabilities. The “not invented here”, “arrogance” or “this disrupts our business/delivery model” symptoms are alive and well, even with creativity/innovation shops. It is a strange irony that the innovation community suffers from these symptoms. The bottom line is simply this. Whenever the operations team fires up any design or acquisition efforts (on-line or off-line) with any group of stakeholders the Core Strategy Framework enables facilitators and participants to quickly mobilize the “right agendas” to work on, the “right information” to work with, the “right goals” to pursue, the “right priority” of work to follow, the “right measurement standards” and the “right assumptions to be validated” after the design or targeted acquisition is done. And this brings us to the next app/tool – the assessment system.

Assessment/Valuation System. This white paper has previously described the powerful predictability of Superlab’s Core Strategy Assessment system. No attempt to repeat this description will be made. The long and short versions of Superlab’s Core Strategy Assessment system enable any kind of decision making (including the “go” and “no-go” variety) during stages 1-4 in the Innovation Funnel to become faster and smarter. The amount of time and money that can be saved through better design and decision making during the Selecting, Sourcing, Screening and Shaping stages is only limited by the commitment to excellence and rigor of the C-suite and operations team. The Core Strategy Framework provides reliable theory and multiple apps/tools but they have to be used.

Portfolio Management System. There are two roles for this module. One role is for the on-going monitoring and measuring of the commitments made to any growth strategy effort and the relevant Core Strategy driving either an organic effort’s Product Development and Commercialization or in the case of an acquired company its continued growth. The Core Strategy in use provides the critical items needing measuring and monitoring.

The second role is for the management of long term strategic uncertainty. In this latter role the scenario previously described mapping application becomes critically important. The C-suite can utilize this application to generate and update constantly a portfolio of future “what if” scenarios. This becomes the “options basket” for the company to use when it should change course. The research and assessment modules, since they are embedded with semantic search technologies, allow for 24/7 “relevant” structured and unstructured

information to be captured and analyzed by the Core Strategy rules engine. In short a weak signal detection system is in play.

NEXT GENERATION – A DESIGN AND DECISION MANAGEMENT SYSTEM

The current design and decision support platform the Core Strategy Framework now enables will, within a short time, become fully automated and qualify as a “design and decision management system”. This automation will happen parallel with and at the same pace as advances in pattern recognition (AI), TRIZ and semantic search technologies. When the fully automated version appears, these powerful components, when integrated into the current Core Strategy Rules engine will truly become a design and decision management system. At this “state” the C-suite will simply rely on its Chief Innovation Officer’s department to first select the innovation strategies that its innovation management systems reliably select. Next the CIO’s office will invent the new products or select the targeted acquisition that drives the selected growth strategy. This invention or acquisition process will access the full automated Sourcing, Screening and Shaping capabilities of the system. Once invented, the CIO will skip stages 2-4 of the conventional Innovation Funnel and will go assemble the right operations team at the same time a request for Product Development or acquisition funding is made. Finally the CIO will use the system to perform portfolio management over newco or the acquired company through the sharing of a balanced scorecard/dashboard with the rest of the C-suite and the portfolio newco or acquired company. Is this vision a pipedream? Is it far off? Listen to Eric Schmidt, CEO of Google weigh in:

“2010-2020 will be a period known as the third decade of the web (Web 3.0). Experts agree that the missing piece in the Web 3.0 infrastructure will be the rules engine that enable BI, AI, semantic search, recommendation agents and machine learning and collaboration technologies to finally have a chance to deliver on their long awaited promises.” ⁽¹³⁾

EPILOGUE – MIND-SET SHIFT

Strangely too many players in Applied and Acquisition Research remain intoxicated with their fuzzy front end mind set and methods. This has proven lethal. Here’s why. It excuses everyone. After all, how does any process that is perceived as inherently “fuzzy” and “artsy” produce over and over again output that needs to be “precise” and “predictable” within the time frames demanded today? And so this negative fuzzy front end thinking actualizes negative results. Ironically, but unfortunately along the way it has actually embolden the

lives of consultants, CEOs, managers and venture/private equity capitalists. Their raison d'être has hinged on their clients or stakeholders accepting the fact that shaping ideas for high growth ventures during Applied or Acquisition Research is a slot machine process. Gary Loveman, Chairman of the Board and CEO of Harrah's Entertainment describes this conventional wisdom associated with people in powerful positions.

“Decision making, especially at high levels, not only fails to demand rigor and dispassionate analysis, but often champions the opposite as the scarce talent that identifies CEO’s and visionaries from otherwise smart but less inspired people.”⁽¹³⁾

Conventional Applied and Acquisition Research mind sets and methods continue to waste resources and its always justified as “the cost of doing business” or the “cost of being innovative”. But now the game is changing. Casinoeconomics does not have to characterize Applied or Acquisition Research. The “fuzzy front end” can become the “fabulous front end”.

FOOTNOTES

(1) *Caught in the Cross Fire*, PRTM Executive Survey on Trends in Managing Innovation; 2009

(2) Robert Shelton, *Making Innovation Work* (Upper Saddle Ridge: Wharton School Publishing, 2006)

(3) Mark Long, *Core Strategy: A Framework For Planning and Predicting High-Growth Ventures* (San Diego: Superlab, 2011)

(4) Booz Allen Hamilton 2005 Innovation Study

(5) W. Edwards Deming, *Out of the Crisis* (Cambridge University Press, 1998)

(6) Vijay Govindarajan and Chris Trimble, *10 Rules For Strategic Innovations* (Boston: Harvard Business School Press, 2005)

(7) PDMA Foundation's 2004 Comparative Performance Assessment Study

(8) Govindarajan and Trimble, *10 Rules For Strategic Innovations*

(9) Vijay Govindarajan and Chris Trimble, *The Other Side of Innovation: Solving the Execution Challenge* (Boston: Harvard Business Review Press, 2010)

(10) This list of benefits was taken from *Strategy and Innovation*, a publication of Innosight Consulting

(11) Adrian Slywotzky, *The Profit Zone* (New York: Time Business/Random House, 1997)

(12) This 7 element framework is described by Robert Shelton in *Making Innovation Work* (see footnote 2)

(13) Quote by Eric Schmidt in a speech in Silicon Valley as picked up by a wire service

(14) Thomas Davenport and Jeanne Harris, *Competing on Analytics* (Boston: Harvard Business School Press, 2007)

ABOUT THE AUTHOR

Mark Long is a practicing attorney having served as securities counsel on over 700 investment ventures. He founded SuperLab in 1998. He is former House Counsel to Ventana Global Funds and former National Marketing Director for the Kemper Insurance Company's direct investment division. Mark has syndicated as general partner 52 investment programs. He has authored 5 books and taught his seminars to over 15,000 executives in 5 countries. In 2000 his book *Financing The New Venture* was one of Amazon.com's top 3 new venture finance books. His newest book *Core Strategy: A Framework for Planning and Predicting High Growth Ventures* is set for publishing in 2011. SuperLab serves stakeholders of high growth new ventures. SuperLab accelerates the accuracy and adjustment of their Core Strategy – the keystone resource dictating the requirements and application for the science/technology and marketing/sales/resources. See www.mysuperlab.com. mark@mysuperlab.com

Exhibit A

Systemic Objective Strategy Making vs. Expert Subjective Strategy Making

Superlab’s Core Strategy framework is an example of a well researched and tested systemic objective-based rules set. This is the opposite approach most C-suite executives take in their strategy making. The conventional approach is subjective and usually domain expert based. Expert subjective-based strategic theory is the assumptions, images, stories, strategies – in short, the theories of the experts, their slices of reality. These slices of reality we call personal knowledge. However, it is really just a subjective model – a representation of the expert’s reality. The expert’s mental model is, as Jay Forrester, MIT’s father of system dynamics, observes:

Fuzzy and incomplete. It is imprecisely stated. Furthermore, within one individual, a mental model changes with time and even during the flow of a single conversation.

An expert’s subjective strategic theory thrives in a culture where everyone mistakes the expert’s subjective personal model for reality. The expert’s strategic theory becomes, by default, the course of action. So, in this kind of culture where individual genius is either revered or tolerated, everyone operates in a system closed in by the expert’s personal model. Faith is more than a virtue in these circumstances – it is too often an unchallenged protocol.

Opposite of expert subjective-based new-venture strategic theory is systemic objective-based strategic theories like Superlab’s Core Strategy Framework. This paradigm couldn’t be any more different than domain expert, subjective-based new-venture strategic theory making. This new paradigm is exactly what all the experts in the fields of systems, complexity, and networks are predicting will characterize the way we work in the future. The following table summarizes the differences between the two paradigms of strategic theory making.

Characteristic	Systemic objective-based strategy	Domain expert subjective-based strategy
Open or closed system	Open	Closed
Symbol-based	Yes	No
Semantic rich	Yes	No
Rules-based	Yes	No
Addresses risks and unknowns	Coherently and thoroughly	Incoherently and piecemeal
Easily taught	Yes	No
Style of leadership	Collaborative	Command/control
Kind of planning suited for	Deliberate and emergent	Deliberate only
Embodied in	Archetypes and models	Expert’s brain
Capable of being automated	Yes (expert systems and intelligent machines)	No
Capable of increasing returns	Yes	Yes
Capable of accelerating returns	Yes	No
Capable of optimizing a dumb network	Yes	Marginally
Capable of optimizing collective intelligence through the web	Yes	No

Table 1. Systemic Objective Strategy Making vs. Expert Subjective Strategy Making

Exhibit B

Glossary

These definitions are compliments of Mark Long's book "*Core Strategy: A Framework for Planning and Predicting High-Growth Ventures.*"

THE THEORY OF SUSTAINING INNOVATION

The Theory. When incremental or radical innovations accelerate the rate of closing any one of the five performance dimensions (utilities, reliability, convenience, low price, free) for a particular tier of end user that the incumbent providers highly value (the *circumstances*), incumbents usually win over entrants (the *consequences*). Incumbents win because they have enough *motivation* and *means* to win (the *cause* of the *consequence*).

The following Core Strategies are exceptions to the general principle of Sustaining Innovation:

THE CORE STRATEGY OF SUBSTITUTE INNOVATION

The Theory. When an entrant introduces a product that becomes a substitute or alternative way to address a situation needing a job done (SNJD) for a particular tier and segment of end-users valued by incumbents (the *circumstance*) the entrant can win substantial market share (the *consequence*) if the Substitute Innovation closes end-user undershoot and the incumbents do not have enough *motivation* and/or *means* to fight successfully (the *causes* of the *consequence*).

Ideal SI Circumstances

Timing is everything. This adage is never so true when it comes to Substitute Innovation. Our batch of case study companies demonstrates when horizontal circumstances signal entrants have their best chance with SI's. These ideal circumstances are:

- End users' trajectory of expectation undershoot on utilities is high and long and the market is growing. (The Big Gap/Growing Market)
- Incumbents' trajectory of innovation is low and long.
- Existing enabling infrastructure is in place and it's in a state of modularity.
- Incumbent providers do not *own* or *control* the category's lower level infrastructure.
- There will not be any negative extreme emerging risk events like regulatory changes, technological shifts, business model shifts, social upheavals, acts of God or financial market meltdowns that would negatively and directly impact the entrant.

THE CORE STRATEGY OF DISRUPTIVE INNOVATION

The Theory. When an entrant provider introduces a product to a category's low-end and/or non-consumer tier with *good enough* performance to close end user undershoot on basic and/or ancillary utilities/reliability and is convenient and affordable (the *initial circumstance*) the entrant can win substantial business (the *initial consequence* if the incumbent providers in the high end, low end and non consumer user tiers of the category are not motivated and/or have the means to fight (the *initial causes* of the *initial consequence*). After winning its initial business the entrant disruptor moves its product up-market by improving its product to ensure its *good enough* for more and more segments of the high end tiers. While moving up market the entrant maintains its initial production model and if this model remains asymmetrical to the high end incumbent providers (*next cause*) the disruptor can win even more business (the *next consequence*).

Ideal Category Circumstances

Like so many endeavors good timing helps. Disruptive Innovation is no exception. Our case study companies entered their categories at the right time-some had better timing than others. The following ideal circumstances enable DI entrants to launch, grow and eventually overtake incumbents in the high end.

- The high end, low end and non consumer tiers are all large and growing.
- The high end users' trajectory of expectations on utilities is high and long (Big Gap/Growing Market) and incumbent providers' trajectory of innovation is low and long enough.
- Existing enabling infrastructure is in place and high end incumbents do not own or control this infrastructure.
- The high end incumbents may eventually overshoot the utilities and reliability expectations of many high end user segments but many high end users segments remain with utility/reliability undershoots for incumbents to keep chasing.
- There are no negative external emerging risk events that would directly impact the entrant.

THE CORE STRATEGY OF COMPLEMENTARY ASSETS FOR SALE

The Theory. When an entrant invents a CA for the category's entrant or incumbent providers (or lead suppliers) that the providers *got-to-have* for their product systems *not* production systems (the *circumstance*), the entrant can win substantial business as a supplier (the *consequence*) if the providers are in a *buy* and not a *make* or *steal* mode (the *cause* of the *consequence*).

Ideal Category Circumstances

Like so many endeavors good timing helps. CAS innovation by entrants is no exception. Our case study companies, by luck or design, had this key factor in their favor. Determining the right time to launch with a Core Strategy of CAS requires the entrant to actually know more about the external environment than SI or DI-based start ups have to know. The CAS entrant has to understand the needs of end users and the providers themselves. The CAS entrant can't begin to predict or understand how a provider will react to its CAS unless the world the provider deals with is understood first. In short the CAS entrant has to understand the current and future forces affecting providers in the category. With this as our goal we can provide relatively easy-to-follow guidelines for how the CAS entrant reads the tea leaves. This framework is set on ideal circumstances. Less than ideal circumstances does not mean a CAS entrant cannot succeed but the odds for success are longer. The following ideal circumstances enable CAS entrants to launch and grow in the high end.

- A big and growing market is necessary for BIG opportunities.
- A big utilities expectation gap and providers whole product is complex for the biggest opportunities.
- When providers next innovation agendas mean providers may be shifting their core vs. context product component decisions.
- The category has an existing lower level enabling infrastructure in place and other incumbent suppliers do not *own* or *control* it.
- There will not be any negative external emerging risk events like regulatory changes, technological shifts, business model shifts, social/political upheavals, act of God or financial market meltdown.

THE CORE STRATEGY OF COMPLEMENTARY ASSETS TO FLIP

The Theory. When an entrant invents or discovers an asset to complement a core component of one provider or supplier's product or production system (the *circumstance*), the entrant can make a fast and substantial profit as an inventor (the *consequence*) if the buyer is in a *got-to-have one-time* purchase and not *make or steal* mode (the *cause* of the *consequence*).

Ideal Category Circumstances

Good timing is not a *nice-to-have* for the CAF entrant – it is a *must have*. Our case study companies obviously were at the right place, at the right time inventing the right thing, because the stakeholders in most of the companies generated 10X or better financial returns within 24 months.

The good news for CAF entrants is this – entrant and incumbent companies are purchasing core assets all the time during the evolution of a category. With this as our context and promise there is a framework for CAF entrants to understand when and where the best-of-times can occur. Doing so the worst-of-times circumstances can be identified as well – these can be avoided. The following ideal category circumstances make up this archetype:

- A big and growing market is necessary for biggest opportunities.
- A big performance gap on the expectation de jour is necessary for biggest opportunities.
- When companies next innovation agendas mean companies may be buying core assets instead of making core assets.
- The category has an existing lower level enabling infrastructure in place and other inventors do not *own* or *control* it.
- There are external emerging risk events affecting incumbents that give rise to entrant opportunities.