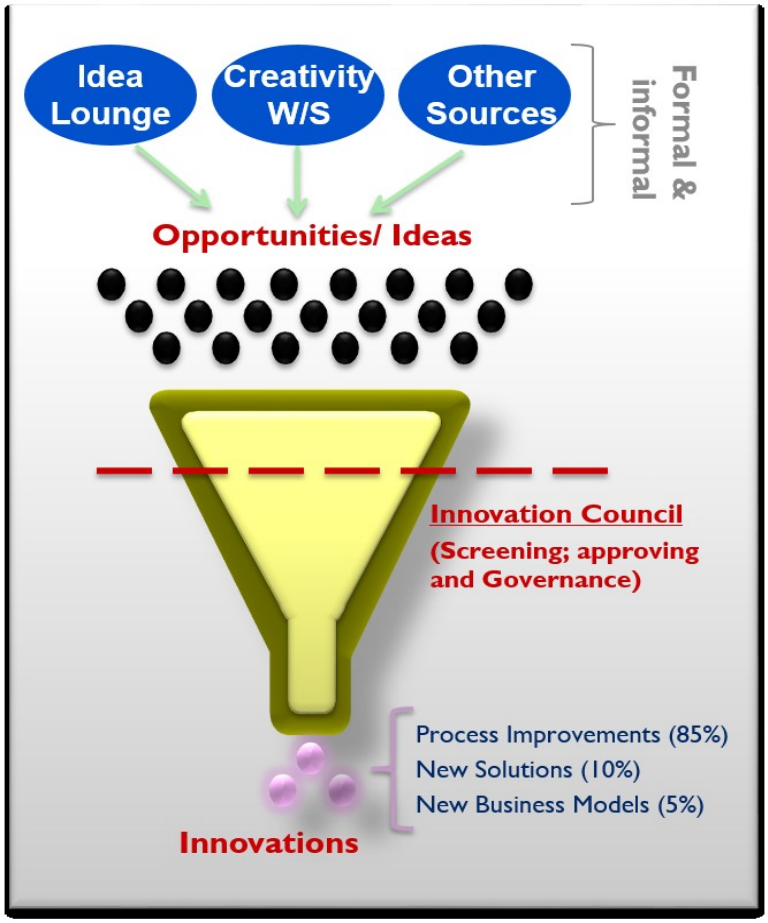

Innovation on a dime

MAKE INNOVATION WORK WITHOUT BREAKING THE BANK

IMPESTRA
Strategy & Performance

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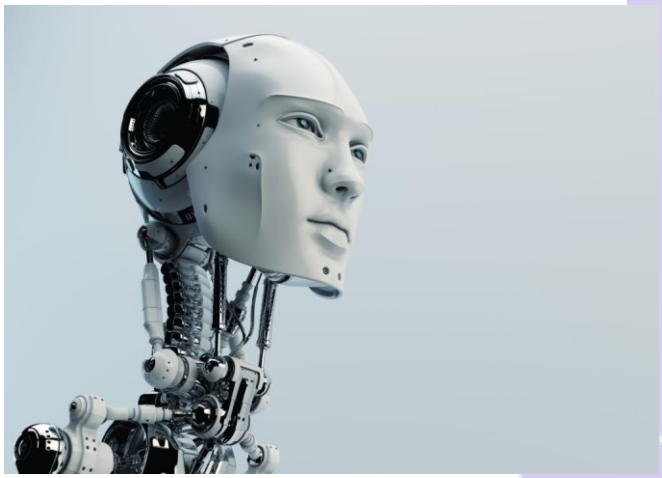
Innovation is what the doctor said

Innovation: you cannot open a magazine or scan a web forum these days without stumbling upon a mention of innovation. Customers, business leaders and oracles together demand innovation focus or attention. In spite of the frequency and volume of mentions, confusion remains on what an entrepreneur or leader can do, especially without the budget of a pharmaceutical conglomerate.

A definition of innovation can be: bringing something new (idea, product, device, process) or / and the new object itself. Invention can be a category of innovation, but improvements or aggregation of existing parts into a new construct can be innovations. In many cases, business leaders are seeking more than just one innovative artifact, and are trying to create an innovation process, from ideation to deployment, that can provide continuous new ideas or products for a business or organization.

The reason for such push into uncharted territories from usually reasonable people is the potential value of the innovation. Angles are multiple and are often working in conjunction with each other: new revenue, costs savings, cycle time improvement, defect reduction, customer satisfaction, brand equity and competitive differentiation (or equalizer) amongst the most frequent.

The simple question of competitive differentiation would suffice to justify innovation investments, for leveling of the gap against another competitor (competitive equalizer) or for creating this very gap against less fortunate competitors. At the top of the differentiation ladder is the Blue Ocean launch of a product or service that creates its own market. All three dimensions have been at play in the last decade changes to the smart phone market: created by Apple with the iPhone, than leveled with new Samsung devices, and then others jumping into the fray.



Innovation can be the result of a structured, methodical research with labs and equipment, but can also be the outcome of informal initiatives taken by employees, customers providing feedback or just a casual opportunity for a change. The formality and intensity of the innovation process is mostly based on the expectations and drivers, directly related to culture and leadership.

Because customers, employees and investors both expect a business to be sufficiently innovative, there is considerable pressure on organizations to “make” innovation. This paper might help preparing and managing innovation without breaking the bank.

Innovation as a Competitive Differentiator

Every business wants to be perceived as different from others in a good way, offering added value or special features to delight customers. There is only so much that marketing geniuses can do to make a product or service attractive, and the market is expecting periodic updates to keep a product current and “in”. Eventually, a business will have to work at keeping a continuous flow of small and larger novel features, new packaging of existing ones, or other traits that will keep the differentiation alive.

The perception of being an innovative provider is a fundamental builder of brand equity, as customers want to acquire one of the latest versions, offering something others do not, or catching up rapidly when competitors launch new features. A good example of this mindset would be the never ending battle between smart phone suppliers which in most cases is raging about inconsequential features such as music synchronization between phones, when heavier differences such as the number of market desirable mobile applications is not even mentioned. Keeping up with the Jones has definitely some appeal, and a whole fringe of customers want to be the "first" to adopt new features.

But there is a deeper rationale, in particular in the business to business space (less sensitive to passing fades) to buying from a provider always at the top of the game, and taking advantage of even tiny changes to keep a step ahead of the competition. Even at the cost of trying things which will not take hold (remember the multi-screen plasma terminal?), being at the top of the game is not just a mindset but often an absolute requirement to stay in business. An early cloud adopter in the software industry will take a risk of seeing products not being adopted fast enough to match revenue and profitability targets. But once the market is picking up, they will reap the brand and market share benefits offering a novel and compelling solution which has been field tested already, at an affordable price. The market competitive differentiation that such company snatches is priceless.

To be an innovation leader in the market, a business needs to continuously invest in research and listen carefully to market dynamics and emerging trends.

A well-established belief associates innovation with pure, fundamental research and development efforts, ignoring the internal, continuous strive for excellence through novel ways that characterize many successful companies. The de-consideration of the innovation that does not happen in the lab is not only inaccurate but also detrimental of an enterprise wide focus on novelties (provided they pass the litmus test of viability). Competitive performance is a key driver of sustainable success for any business, and it is also an enterprise-wide effort that combines small and big changes altogether. Enterprise-wide innovation requires all minds to be focused on creating new ways, including both the white coats and all other members of the organizations; in some cases, companies have called in some of their providers and partners to contribute to the innovation effort.

Looking at competitive differentiation as an innovation focus means defining a few precise performance indicators, and setting up a target value for them or at least an acceptable range of improvement. Let's imagine a retailer trying to optimize its Inventory Turnover ratio. To catch a broad range of ideas, the retailer proposes to focus on Inventory Turnover, which is the cost of goods sold by the Average Inventory (beginning minus end inventories by two). Some employees might work on finding ways to reduce the holding costs of the inventory, while others focus on moving things off the shelves faster. The combination of both will have an exponential impact of the profitability and the Inventory Turnover. Letting each team work on their chosen scope generates the deepest analysis of the organization's operational process, while having someone facilitates the process allows picking disparate elements to make them work in tandem. If relevant, there might even be value in getting the two teams together to address the end-to-end performance issues, based on their partial resolution ideas.

Using a framework to facilitate or challenge the conventional thinking on performances ("we cannot do better without massive investments and a miracle") can unlock new thinking unhindered by past

conventions. Innovative companies did not get there following others' conventions, did they? A good example (and a very practical one) is the Theory of Constraints developed by Eli Goldratt, where the analysis is fundamentally about throughput and how to simplify the problem to find the one or few hindering factors holding back the optimal performance. Using Goldratt's deceptively simplistic model to zoom in on the rock holding back the flow, a set of practical life scenarios exploring what it would take to make the organization engine work at full throttle can set the stage for a healthy self-examination and the creating of the new ways that will lead to higher performance achievements.

Competitive performance being a complex set of mechanisms with subtle tuning, a smart way to tackle it is to mandate the actual operating structure of an organization with innovation goals as part of their base charter. Spreading the charter across the entire organization creates many small ideas to be generated, a few larger ones and may be a handful of big, bold disruptive ideas which together make the most likely highest potential performance improvement.

Coming from the inside, the improvements are probably be feasible with minimum cultural or other resistance, and will carry with them a natural support from the staff on the field, as this was their idea in the first place.

Its starts at home

A first step in establishing a drive for innovative ideas is to set up overall goals for excellence. There is a need for everybody to perceive a higher achievement as a company goal, where their possible contribution becomes a step on the way. What motivates someone to find out a streamlined way of doing things, or to create a new feature for an existing product, includes that fact that the business will run better (higher performance from process optimization) or increase revenue (through incremental sales). In both cases, a goal of higher order (the "Greater Good") fuels the search for a new way.

Would such goals be established and promoted across the entire organization, and a culture of high performance and high expectations is emerging.

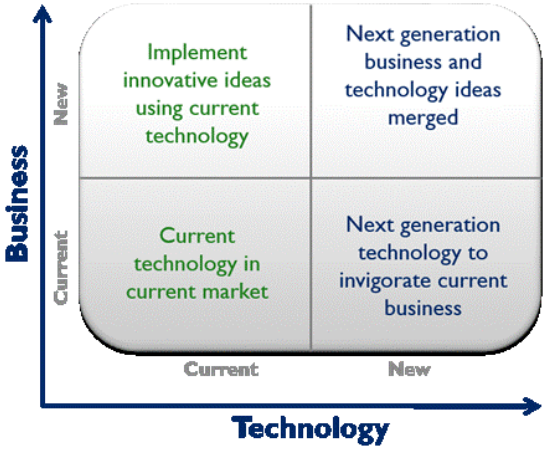
The flip side of the coin is that people who devote time, energy and passion, possibly some of their own money into hours of deep thinking, trial and error before they come up with an innovation nugget would expect their find to bring them recognition and other rewards. Although such recognition can happen on a case by case basis, the institutionalization of the practice will create a tangible, trivial reward mechanism for those coming up with usable ideas. Many people wants their fifteen minutes of fame, but everybody can use a nice check in return for over and beyond efforts that benefit the company.

The recognition and reward system has to be fair and independent from political or hierarchical pressure, guaranteeing the innovators that their new idea or object will not be high jacked by some line manager or obscure executive power that be, stripping them from their place on the podium. In the same time, a fair system to evaluate the potential value of a new idea is the kindest way to both provide feedback to authors and to nip any suspicion that someone in the hierarchical chain 'stole" their concept. The feedback can be tough to take, but made individually and with direct, blunt but non-judgmental rationale, people usually get over it quick and get back to their search for another idea. Rationales such as not sufficient market differentiation appeal, cost of development higher than potential returns over a 10 year period or lacking capabilities or technology to produce on commercial scale for instance, are statements that both carry the message that the idea was examined, and that a

reasonable evaluation of fitness was made, concluding with a negative fitness score. If anything, it might incite people to renew their efforts to find an even better way, which makes everybody win.

The dual pull-and-push model of creating a desire for innovation and counting on a fair reward system can be strong motivators; moreover, they establish the foundation for a durable, resilient culture of innovation.

It seems ill-advised to invest such intensity into the review and analysis of new ideas which in many cases, boil down to upgrading the packaging of a product or provide a minor improvement for a micro-process step. But amongst the hay might be a hidden gem in the rough, making the whole process worthy of all time and effort to date. The question is how to filter out the "innovative white noise" in a way that does not detract future submissions to be funneled. Providing all personnel with a guideline on what makes up the value-score in ideas can help establish the bases of a scientific-minded evaluation. Throwing in some targets carrying extra value to the company, such as a yearly focus on new features to a product passing the maturity apex, or a quarterly goal to reduce a production process cycle time by 12% are typically going to generate highly focused innovative suggestions.



Just like a proposal coming out of a Research and Development lab, each idea needs to be assessed against a rigorous and repeatable process, scoring the viability of the idea against its feasibility, potential business / net value, the length and complexity of its potential deployment, along with its alignment with the long term and shorter focused strategic goals for the company. This example describes a simple 2x2 chart to evaluate ideas against a standard Business / Technology mapping.

In the process, a portfolio of ideas is generated, which by itself is a practical way to monitor and guide through moderate interventions the entire process of ideation through business proposal. Would a number of regular idea-producers stop presenting new ideas, or would a department or business unit massively contribute to a focus goal designed for their own progress, are good indicators of how well a recent change to the recognition program, or how aligned people in a department are with their own strategic goals.

Considering the overall ideation as a R&D lookalike process suggests that some funding is set aside to allow early maturing and vetting of ideas, as well as the occasions where maturing the idea would require some time or resources dedication. Provided that such budget is within reasonable boundaries and remains administered by a knowledgeable authority (ideally a central budget granted to specific ideas), idea generators would know that if their idea requires some moderate incubation or to build a sketched out prototype, they would be able to gain access to such funding.

Ideation as an R&D process provides another tangible benefit to a business in the simple fact that it ties all efforts and their collateralized results into an enterprise-owned knowledge base. This collection of Intellectual Property assets will rapidly build in return a repository of ideas that did not make it to "production", accessible to all. Would-be creators could then use this knowledge base to dismiss early ideas already presented, regardless their eventual success, redirecting their thinking to true novel ideas. It also helps revisit ideas that were abandoned earlier for a reason which is no longer valid, such as an idea requiring mobile applications to be readily available to the end-users, which might not

have been a valid assumption a few years ago. The value of this treasure trove can even be expanded with the chartering of cross-enterprise and independent teams to mine and recast some past ideas that could find a new life using a new angle or scope.

Leveraging innovation to improve internal and external performance would become in such context as simple as setting up a few crisp innovation focused goals and letting everybody take a shot at them. With a vetting process allowing to sift rapidly through the material and find immediately usable concepts, maybe adding a few operational veterans be available for spot consultations, a flow of new ideas will likely occur, with direct benefits (fresh ideas to optimize performances) and indirect benefits (everybody in the organization looking at opportunities to optimize performances everywhere at all times). The latter might even exceeds the vetted ideas in their overall contributions!

Just a few of such focused goals can help an organization develop a hard-core culture of innovation that will eventually permeates in every department and business unit.

Research Department Versus culture of innovation

As seen earlier, a business needs a combination of white coat innovation and field-driven fresh ideas and needs. A healthy innovation process would even consider moving the most adequate ideas to the laboratories (if any exists) or to a composite senior research team, to be further explored and framed. The combined skills and point-of-views are a naturally born crossover team that many companies are relentlessly trying to create with top-down charters; the difference is that in this case, it happens naturally and is chartered by the need and the idea itself, giving it a much higher chance of success.

Over time such composite teams, created and disbanded based on the actual life-cycle of individual ideas, are seeding the new innovative culture through the broadening of the thinking and the visible attention paid by the leadership to new ideas and their authors. Crossover team will become more familiar over time, to the point where some might just congregate without management impulse; this is one solid indicator that the organization is now well established into a sustained culture of innovation.

A consistent issue with the emergence of new ideas is the capacity to incubate the idea and eventually try it with a life-size model. Many organizations look at both incubation and prototyping as expensive advanced research mechanisms that they do not want or cannot afford. It might not always be true.

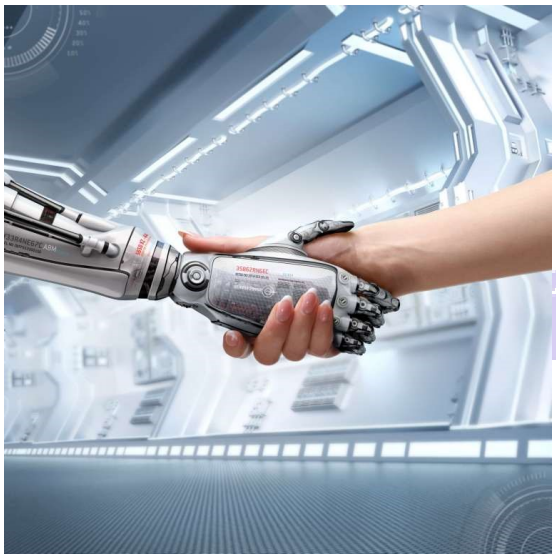
The incubation of a new concept or product is primarily driven by a group of people, who are put in a situation where they are encouraged to explore, debate and exchange ways to evolve and mature the idea. Leveraging neuroscience and other tools to create conditions that favor intuitive and crossover exchanges, members of an incubation group have the only charter to stretch the boundaries of the use of the target service or product, finding out limitations or new possibilities altogether.

The outcome of their findings being processed can be reversed into new parameters for the incubator, triggering another wave of exchanges. Some of the factors helping a successful incubation include the dual focus and break approach. Focus times are when the members of the group work individually and in group venues to explore and exchange feedback; break times are times where the active incubation is suspended, allowing members to digest the latest findings and to take the time to think about it on their own terms without the incubator's pressure to create results.
A group of individuals at various levels of seniority and skills working for an insurance carrier can for instance be set up in an incubator focusing on maturing the idea of applying for an insurance policy through a mobile, smart phone application. The group performing the incubation will require a whole range of profiles, from potential customers to actuaries to underwriters, agents and technology

experts. Some are existing employees, others are experts and potential customers, actual outsiders. Together, they would have sessions to explore together the nature of the idea and the original boundaries, then either build a paper or actual model prototype to play with. They would spend time working with scenarios illustrating the use of the mobile application, and then others exploring other applications either complementary or completely distinct. At other times, they would be mandated to be in a silent thinking mode, without mandated interaction with other members. Over time, an optimal profile for the application would emerge, with optimal use-cases to drive the future development of the application would the idea be retained, as well as a trove of derived ideas and concepts which in turn would go through the ideation vetting process.

The actual cost of such incubator is in fact not very high, mostly based on the potential cost of external parties and the internal loss of productivity and cost of internal resources based on the time spent. As long as this incubation cost is bearable to the organization through absorption or minor investment budget, the incubation can run its course until its natural plateau, when not much is being generated any longer. A counterpart of the time spent working with the incubation team versus on regular productive activities would be at least partially offset with the acquiring knowledge and understanding of the company's business and opportunities for improvement. An added cost containment measure is to break down the incubation into phases (the Option model) and decide at each step whether to pursue or drop the research, based on the most current findings.

A next step or collateral need for incubators is the need to use an actual prototype, in order to validate hypotheses and explore new paths of use. What would in many cases be a major investment can happen at a minor cost, with the simple leveraging of existing resources. Most companies have a combination of marketing, science or technology testing equipment and framework in place. At minimum, marketing has a structured way to explore market dynamics through surveys and profiling, as well as some level of analytics. Technology is hopefully equipped with duplicate environments allowing to prepare and validate new systems and equipment before they are deployed into production.



Creating a special test environment that replicates the operating environment is mostly a minor cost to Technology, using a logical slice of the routine QA or Pre-Production environment. Throwing in the marketing profiling and the latest known market dynamics would not cause a major shift of resources or cost to the newly crafted environment; it would actually provide precious insights on building the use cases to be tested later on. The only thing missing would be a software, device or system that is the actual object to be analyzed. Purchasing or borrowing such equipment or system is at its worst a minor cost (most vendors would gladly provide temporary equipment as well as help), and an internally developed prototype would be washed into the cost of development (or avoiding it), the risk avoidance alone making it a sound sunk cost for any project.

Voila. You just got yourself a fully operational prototype / incubator on a dime! Assign people to play with this environment, with the added benefit that would they break it, repairing or rebuilding it would be easy, and the incubator is live with a real-life prototype… In a self-fulfilling mode, the decomposition

of the prototyping idea shows that in many case, all that is need is already existing, with the exception of the very device or system that needs to be tested, which in likely a marginal cost.

You can establish incubation and prototyping as standard practices within the organization, at a marginal cost; it implies that the ideation process can be extended and further vetted in a standard process, across the entire company. The cross-team fertilization initiated during incubation joint meetings can be expanded to life-size prototyping, accelerating the generation of new limits and the prompt dismissal of not-viable parameters. Becoming a standard practice will also create standardized processes and discipline around the entire ideation process and the vetting of ideas, in the same time it provides a unique tool to foster all energies and creative thinking on a single innovative purpose.

The generation of new ideas, coming from all walks of the enterprise, needs to be associated with proper feedback mechanisms and reward system. Because most ideas are originating at the business unit or department level, this is where the most impactful recognition and reward system would play, both at the individual level and at the organization level.

Providing direct and substantiated feedback to all ideas enables the continuous flow of new ideas. Recognizing key authors for their contributions, as well as their own department by association provides an important signal that innovation matters, and that successful ideas get recognized wherever they originate. Is there a better way to motive all others in the department to get back to work thinking of how they could generate their own value-driven idea? The actual reward should be commensurate to the value of the result, and to a lesser extent to the effort required to create the concept.

An easy method would be to use a royalty equivalence calculation, such as based on the Intellectual Property Rates, factoring the market revenue value of the idea and its useful lifetime, as well as other resources and investments made to achieve a mature, usable idea (e.g.: incubator or prototype). It can be easy to neglect or under-value this internal intellectual property rate equivalent, for business are not naturally inclined to paying people for things done during normal work hours. But most of the ideation work takes place after hours, and if someone had brought the idea to the business, then the company would have gladly paid royalties or some other value in exchange for the rights.

Providing financial or other tangible reward to employees coming up with a viable and lucrative idea is the best way to see more great ideas be generated later on. It is not only an investment into future innovation quality, but it represents a mere fraction of the total profit or value created by this idea. Who cannot afford to invest of fraction of unplanned (exceptional) benefits in order to get more of them?

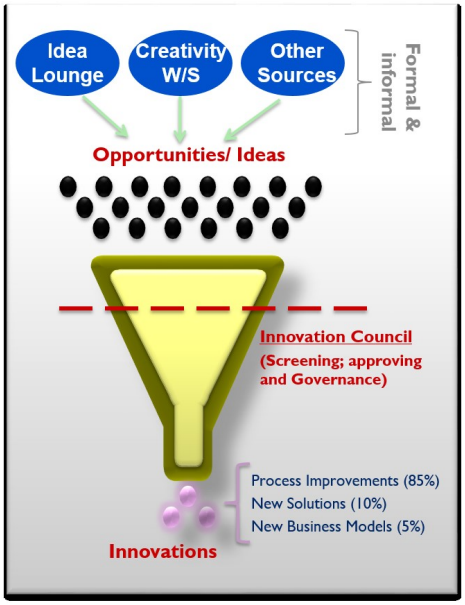
Expanding the concept of augmenting the network of employees as innovators with strategic partners and providers can trigger the forward thought of using the emerging crowd-sourcing model for generating innovation. Although social media and modern communication tools and capabilities offer a vast network of people accessible at all times. Leveraging this network to participate in a way or another to an innovation process offers many compelling features such as testing various markets at once, sourcing ideation a scale several orders of magnitude larger, or finding needle in the haystack experiences otherwise not accessible.

In a similar fashion, leveraging an innovation edge into projects and strategic initiatives in order to create a crisper, more unique solution can both add value to already vetted initiatives, while increasing the cultural leverage of the solutions and their deployments.

All the examples above have in common that they can be practical solutions to most companies and businesses, at a low or marginal cost, and create a culture of innovation which is self-sustained with the continuous cycle or new posts calling creating new value which in turn generate new rewards.

Enterprise Innovation Framework

Building an enterprise level Innovation framework makes innovation a common, trivialized (in a good way) process. With the reward mechanism in place, ideas will soon start to flow. Below is an illustration (from a retail manufacturer) of how ideas go through a funnel of maturation before they can be promoted to full scale initiatives:



A hidden gem into this framework is the capacity to bring teams from various origins together in a collaborative manner, naturally. This is not an executive mandate to work with strangers any longer, but a desirable part of the ideation process to exchange ideas and proposals in a cross-disciplinary, informal manner. From there, it is a simple step forward to explore cross-competency challenges or to solve multi-disciplinary problems with ad' hoc teams combining internal and external resources with in common that they are relevant to the problem under scrutiny.

It can sound strange to seek external help to achieve internal innovation, but a healthy dose of fresh thinking can actually break conventional lethargy and create new paths to explore. An unused source for such endeavors is the network of partners, providers and alliances that most businesses have built over time. Each of the external partners have their own business, views and idiosyncrasies, just like we all do. How about inviting them in, and instead of forcing them to think along our own terms, giving them a carte blanche to rethink anything in their own way? Once again, it might create some innovative white noise, but could also generate some precious nuggets. After all, not only are they successful at their business, but they also have an intimate knowledge of the business, the competition, the drivers and their favorite partner's strengths and weaknesses.

To top this strong profile, strategic partners and providers have a vested interest in growing the business of their partner, as it will increase their own business in the same time! Of course they will have a bias towards self-serving solutions, but is this tendency sufficient to justify ignoring or discounting their potential contributions? It seems difficult to find a better candidate for adding value to the innovative process, although companies seem often reluctant to tap into this raw reservoir of knowledge and goodwill. Should we call it reverse bias?

How much should an organization spend on innovation? How to evaluate the returns or monetization of innovative ideas? On the first topic, there is no secret sauce that fits all organizations and situations. Any investment in innovation should be driven by the capacity of an organization to invest, its idea of a return and the clout of its management to stay the course or pull the plug on the efforts under way.

Like any business investment, innovation carries risks, the highest being distracting key personnel from their primary mission. An organization has to set boundaries around the acceptable intensity of

the innovation effort, in particular on the absolute requirement to sustain operational performance all along the effort. Without keeping up with the regular business or the company, there is no innovation that is worth going bankrupt or losing the portfolio of customers.

There are however some rules of thumb economics of innovation that can help structure the effort and set proper expectations. First and foremost is the evaluation of the true value of the return expected off an idea, as well as the return expected off an enterprise innovation discipline. Most investments can use a standard Net Present value calculation to determine if the investment is worth the time and funds dedicated to it. Since the investment on innovation is typically over time, the two NPV formulas are first the Focused NPV for the idea itself and its short term value and impact to the P&L; the second one is the Innovation effort across the organization. Both use similar formulae, with a few differences.

The initial cost part (C0) of the NPV calculation for an idea being generated is the sum of the ideation maturation costs from the point where the idea is being evaluated (earlier costs are de facto sunk costs at this point) and the cost of executing the idea, including any cash flow or investment required to make it work, such as acquiring equipment or services. With C0 = (Ci + Cm), the remainder of the formula can carry the operating costs of the operation only. The formula then resumes to the classic model that follows, assuming a 3 years period of reference:

$$-(Ci + Cm) + \frac{C1}{1 + r} + \frac{C2}{(1 + r)^2} + \frac{C3}{(1 + r)^3}$$

"C" represents the net recognized value of the idea, for each of the 3 years of its deployment or execution plan.

The innovation itself is where the costs of the ideation, maturation and potential incubation and prototyping are recognized, with the economics that to be worth the investment, the innovation must generate sufficient ideas with a positive return (NPV) that the base investment in such endeavor is justified. Otherwise the organization might be better off investing these funds into raw material or sales forces to get a predictable return on invested capital.

The formula for the innovation returns is based on the following:

$$-(Ci + Cpi) + \frac{C1i}{1 + r} + \frac{C2i}{(1 + r)^2} + \ldots + \frac{C5i}{(1 + r)^5}$$

The original investment C0 became the sum of all ideation (Ci) and management of the portfolio of ideas (Cpi) costs required to get the innovation process going. The C value for each year after that is the calculation of operationalization of each idea (born by Innovation process) and net present value of the idea over 3 years (period of reference for the idea).

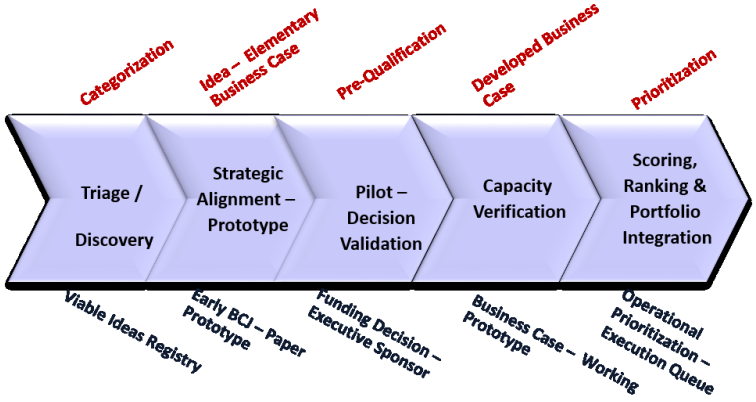
Various elements must be factored in to adequately measure the Present Value of an idea, including the direct benefits, measurable in revenue, cash flow or other tangible flow of value, and the indirect benefits such as market position, reputational difference and their impact onto the revenue and profitability. This would be a discussion too long for these pages, but which details provide a crisp sense of what makes the value of an idea and why indirect benefits often match the direct benefits in value. To paraphrase a famous commercial, getting direct returns is great, but getting indirect returns is priceless!

Managing Ideas as an Investment Portfolio

Building an innovation process in an organization is a long term effort, which pays off along the way, but requires continuous attention, leadership and executive support. In most cases it will involve

personnel across the organization, which brings an additional need for visibly and effectively supporting and rewarding the authors and the ideas created and selected.

A typical Innovation process looks like the graphic below, allowing each idea to be gradually matured into a full scale initiative, with a business unit or executive taking it under its wing to ensure its successful completion in the most appropriate context. This is actually a good thing, and causes sometimes the authors to resent seeing their puppy of an idea being hosted into a new home. But a part of the innovative culture includes the fact that ideas once they enter the process, have a life of their own, driven solely by the potential value to the organization.



Grouping all ideas and their maturation process into a portfolio construct allows to monitor progress, volume and quality of entries, as well as calculating continuously the value of the entire portfolio and its expected returns.

The combination of a rigorous process, solid decision framework and the management of ideation as a portfolio of R&D together brings the concept of innovation to a place where it becomes a competitive and possibly strategic differentiator.

With limited investments, a large potential of returns, and a natural alignment with the business and strategy, investing in internal innovation no longer seems like throwing money out of the windows. As a strategic tool, it should be measured against its returns and value to the organization, like all investments should be.

Now, let's go back to the office and create some darn good new ideas…