summary of the
innovation master plan framework

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introduction

Is there any doubt in your mind about the importance of innovation?

Do you feel that innovation is vital to the future of your company? And perhaps to your own future?

Since you’re reading this, it’s reasonable to assume that you do. And of course I agree with you.

The problem is that innovation, the process of innovation, can be very difficult to manage. It’s risky and expensive, and entirely unpredictable. Einstein reportedly said, “It’s called “research” because we don’t know what we’re doing.” And even if we think we do know what we’re doing, the results frequently fail to live up to expectations.

Innovation is important and difficult; all of this is obvious. So now what?

Certainly we have to get better at it by applying tools and methods that will help to improve the process and the results. Even better would be to adopt a systematic approach that includes tools, but also goes beyond them to address the bigger pattern, the large scale risks and opportunities that your organization faces.

That’s the idea behind The Innovation Master Plan. It describes a system for innovation, and helps you design and implement your own Master Plan so you can make it happen.
mindset
the hidden problem of innovation

Most companies are not very good at innovation, which partly explains why the ones that are good at it stand out so prominently. For every Apple, Google, and P&G there are 1,000 or 10,000 companies that innovate poorly or not at all.

This raises two questions that seem to be worth exploring:

- Why are the good ones so good, and what do they do?
  This is the main subject of this white paper.

- Why are the others not so good?
  This is the topic we’ll explore briefly in this section.

In our experience, there are two main problems that burden the companies that lag at innovation. The first is the nature of today’s change, and the second is the mindset that their top managers bring to the problems of innovation.

Let me explain.

The first thing, about change, is that it’s different today. The growing power and impact of technology threatens every company because it makes it possible for new competition to enter nearly every market. Twenty or thirty years ago large companies were buffered by their size; but today this is hardly the case. The strategic vulnerability of all firms, large and small, is unprecedented.

But this is a reality that people have been slow to grasp, which brings us to the second issue, the problem of mindset. When the role of management is understood to be “managing the business,” then 99% (or more) of the energy goes to the here and now, to sustaining market share. To keep a large organization functioning smoothly and continuing to earn the profits that lubricate the entire system of business growth (and of executive compensation), is enormously difficult, not only because of the sheer enormity and complexity of today’s organizations, but also because the markets in which they compete today are so brutally competitive.

Hence, by their very nature organizations tend to seek and then reinforce an illusion of stability. This is not because of any shortcoming on the part of the people working in the organization, but simply because short term success is usually enhanced by operating factors including predictability and repetition. Consequently, these are the characteristics that managers are trained to favor. In the title of his recent book, Larry Bossidy, CEO of Honeywell, characterized this as “execution,” perfecting the art of getting the job done well. And the “job,” as usually visualized, is in reference to the day to day.

Trapped by intense short term pressures in the form of the need to grow revenue and generate a market-rate return on their organization’s capital, they choose the “sure things,” safe and predictable ideas which usually look a lot like incremental adjustments, land are less risky than bold innovation bets.
But given the unpredictable nature of technology-driven competition and the acceleration of change that technology has brought, the focus on profitability of existing operations inevitably leads to a dangerous trap: looking only at the day to day leaves an organization vulnerable to fundamental change introduced from the outside by competitors who do risk big, and who occasionally win big.

Hence, accelerating change becomes a mindset trap because so many managers don’t grasp the magnitude of the threat; they’re essentially looking at the wrong problem.

They do know it’s a mistake to focus so intently on the day to day, even as they repeatedly surrender to the pressure to do so. They also endure the enormous anxiety and stress that results from the tension between short and long term issues.

The risks from this behavior are large, and growing. A study by Richard Foster and Sarah Kaplan calculated the historical death rate for S&P companies and found that at the currently prevailing rate of mortality, a full 75% of today’s S&P 500 companies will disappear by 2020. That’s 375 out of 500 companies, which will disappear through merger, bankruptcy, acquisition, or being broken up and sold in pieces. Stated succinctly, if you happen to work for a company that is currently listed in the S&P 500, the chances are about 3 in 4 that your company will disappear before 2020.

And why? The vast majority will fail because they do not adapt to change, to accelerating change, which will render their products and services obsolete. In other words, they will be displaced by more innovative firms.

So the idea that there’s an either-or choice between short term incremental innovations and long term breakthroughs is also an entirely false concept. And while executives may tell you that they’re working on both types of innovations, if you observe what their companies actually do and the products and services they bring to market, you’ll see an overwhelming preference for the incremental and a shortage of breakthrough projects.

If you ask them about it, and I have asked a great many, they’ll readily admit that they are deficient in breakthroughs, and overloaded with incremental ideas of questionable value. They are desperately hoping that change doesn’t catch up with them and expose their innovation deficit. But three-quarters of them will come out on the wrong side of that bet.

Hence, the purpose of the innovation master plan is to effectively address the wide range of issues that obstruct success at innovation, and in the process to enable managers to overcome the mindset trap that modern business practice has placed them in. The principles and tools presented here are intended to show how the search for innovation does not conflict with the manager’s day to day responsibilities, but rather enhances them, and in so doing significantly enhances the short and long term prospects for success.
overview of the innovation master plan framework

Progress in any field requires the development of a framework, a way of organizing the key concepts and principles to make them useful for action. Law, government, science, technology, business, medicine, each is based on a framework, and each progresses as new insights emerge that improve the depth of understanding and the quality of practice.

Our understanding of innovation, however, hasn’t progressed as much as our understanding of law, to take just one from that list, because while the intuitively-driven practice of innovation is as old as humanity, the pursuit of innovation as a systematic, manageable discipline has been part of our thinking for only the last couple of hundred years. Systematic research and development was practiced by isolated individuals until it became standardized in the chemical industry in the 1850s, a mere 160 years ago.

Now that the economic change has accelerated and globalized (largely as a result of successful, systematic R&D), and as technology advances along with competition, there is a pervasive need for improved frameworks for systematic innovation.

Organizing the pursuit and creation of innovation through a framework that can be practiced by all types of organizations, large and small, public and private, requires us to address a very broad range of issues. At the same time, it’s best that the framework itself is as simple as possible. We’ve found that a powerful way to think about this, and to devise an Innovation Master Plan is through five simple questions, the five simplest imaginable:

Why?
What?
How?
Who?
Where?

The questions are indeed simple, but the answers, of course, are not so simple. In fact, they’re quite detailed. But I will nevertheless summarize it below: the Innovation Master Plan framework on a single page.
applying the innovation master plan framework: the 5 questions on a single page

We ask, “Why innovate,” and this quite simple question leads us to explore the strategic nature of innovation. We know that innovation is a strategic necessity, and the evidence shows that any organization that doesn’t innovate probably won’t stay in business. Further, the innovation process must be aligned with an organization’s strategy, as innovation will be a key part of how the strategy is going to be realized. This is the subject of Part 1, below.

We ask, “What to innovate,” and we realize that the unpredictable nature of change requires us to prepare many innovation options for a wide range of possible futures. These options constitute an investment portfolio. As with any portfolio, some projects will do well, while others will not. In the case of the innovation portfolio, the disparity between success and failure will be even greater because this portfolio is necessarily geared toward higher risk in order to successfully meet the onrush of change. This is the topic for Part 2.

We ask, “How to innovate” and we see that a rigorous innovation process is essential. The process must be driven by our strategic intent, the “why” of innovation, so in fact the process itself begins with strategy. The second step is the “what” of innovation, the design of the ideal innovation portfolio. And while many people consider that developing ideas is where innovation begins, we see that ideation is actually in the middle, fifth step of the process. Read the details in Part 3.

When we think about “Who innovates” we see that while everyone participates in a robust innovation culture, there are three distinct roles to be played in achieving broad and consistent results. These are Innovation Leaders, who set policy, expectations, goals, and the tone for the innovation culture; Innovation Geniuses, who come up with great ideas; and Innovation Champions, who organize the pursuit of innovation and support those who develop great ideas and turn them into business value. All three roles must be well played for innovation to flourish. This is the subject of Part 4.

The “where” of innovation is the tools and infrastructure that support the innovation process and the innovating people. The four major elements of this infrastructure are the principles of open innovation that engage the broader community in the innovation process; the virtual infrastructure that supports effective remote communication and collaboration; the physical infrastructure, the work place where people engage together face to face; and collaborative methods that bring forth the best ideas from all participants, inside and outside the organization. This is the subject of Part 5.

Together these are the five key elements of the Innovation Master Plan.

A last point before we continue is the sixth question, the one I didn’t mention: “When?” But it’s not worthy of a detailed discussion because you already know the answer: the “when” of innovation is obviously now. The market, which ruthlessly demands innovation, and your competitors, who are relentlessly creating innovations of their own, wait for no one. You’d better not wait either.
part 1

why innovate

The why of innovation is brutally simple: change is accelerating.

If things didn’t change then your company could keep on doing what it’s always done, and there would be no need for innovation. If markets were stable, if customers were predictable, if competitors didn’t come up with new products and services, and if technology stayed constant, then we could all just keep going as we did yesterday.

But things do change.

One of the key lessons from the meltdown in the financial sector in the fall of 2008 was the vulnerability of even large and well-established organizations and institutions to tumultuous change. Today, even the great ones are not assured to survive the current periods of heightened upheaval.

Technology is advancing relentlessly, and its bringing constant change to the rules of business in all the markets that it touches, which is of course every market. Due to the accumulation and acceleration of change, these markets are not stable, customers are completely fickle, and competitors are aggressively targeting your share of the pie.

Since the alternatives are either to “make change” or to “be changed,” and making change brings considerable advantages while being changed carries a huge load of negative consequences, then the choice isn’t really much of a choice at all. Innovation is a strategic imperative; both concepts, “strategy” and “innovation,” require careful definition and integration with one another.

defining “strategy”

According to the handy online dictionary (itself an innovation, and quite disruptive to the traditional business of printed dictionary publishers), “strategy” is “the plan of action that is designed to achieve our future goals.”

To be effective, then, strategists have to accurately anticipate and envision the future, which then enables them to give good advice in the present that will lead toward achieving those goals.

As the focus of strategy is on anticipating the future, and the goal of innovation is to create the future, innovation therefore is a critical instrument of strategy. And as a key driver of change from within, innovation is an essential creator of future value for every organization.

Innovation is also an operational necessity, because in the regular operations of every firm there has to be a consistent effort to achieve innovation in order to adapt to changes that come from outside.
From the strategic viewpoint, then, innovation is the means of gaining advantage, while from the operational viewpoint innovation is the means of survival; both are essential to the long term health of every organization.

**defining “innovation”**

We need to engage in innovation thoughtfully, but the word “innovation” can itself be confusing. It often means different things to different people, and since all these meanings lie at the very heart of the effective innovation framework, we need to define it carefully.

The first point is that the word “innovation” refers to three different things: Innovation is a *process*, and it is a *result*, and it is an *attribute*. No wonder people get confused.

Innovation the *process* happens in someone’s mind or in a dialog among two or more people, and in the work of organizations that develop ideas and turn them into valuable realities. The process may lead to *results* in the form of new products, new ways of working, new strategies, or perhaps new business models or new ventures.

We say, “Innovation produced the new thing,” and the term “innovation” also refers specifically to the *new thing itself*; we say, “That is an innovation.”

One of the qualities that distinguishes the new thing, as in its “innovativeness.” This *attribute* of innovativeness can refer to its distinctiveness, its originality, or its usefulness, and perhaps most importantly, the value it provides.

Because to be worthy of being called an “innovation” in business, the “thing” must yield value in the form of new or improved functionality, reduced cost, a price increase (good for the seller), a price decrease (good for the buyer), better margin for the seller, or some combination of these.

According to this definition, then, not every new or different idea qualifies as an innovation. In fact, only a very small percentage qualify, and they will probably not be raw ideas in their early form. Innovative ideas, by definition, are only those ideas that create value for their users (buyer and/or seller) and yield valuable competitive advantage for their owners, and thus they yield economic rewards. So innovation is not the ideas, but the finished results.

In the case of organizations whose goals are not commercial, innovation still plays a vital role. In government, in the world of non-profit organizations, in education and health care and social services and a great many other fields, innovation may not be measured by profit, but by an equally important criterion we might call “social value.” In a world of limited resources, doing more with less is as important for a government as for a company, and innovation has a critical role to play.

A further nuance to the definition of innovation is that there are different types. I mentioned this briefly above, and we will discuss it in more detail in the next section.
**four types of innovation**

It’s obvious that a fundamental breakthrough is an entirely different sort of innovation than a minor incremental improvement, even though both are properly understood to be innovations. Toyota’s hybrid Prius, an example of a breakthrough technology, required years of intensive engineering innovation and billions of dollars of patient capital; the same company comes out every year or two with a new color palette for its cars, and changes the shapes of hoods, trunks, and headlights, which are of course entirely incremental changes.

Two other types of innovation are also evident when we consider Toyota’s corporate management and its Lexus and Scion brands. (If you are outside of the USA then you may not know about Scion, as it only exists in North America. It’s a Toyota subsidiary that sells only entry-level cars, which places it at the opposite end of the market from luxury-oriented Lexus.) Lexus and Scion cars do include some breakthrough technologies as well as a great many incremental innovations, but more importantly they are also “new venture innovations,” entirely new companies that are intended to extend the Toyota Corporation into the future for many decades.

Further, Lexus and Scion are also attempting to be different kinds of car companies that provide a different sort of experience to their customers, and in this respect can be thought of as “new business model innovations” because they are pursuing new ways of earning profits.

This brief discussion of Toyota has shown how the company applies all four types of innovation:

- **Breakthrough innovations** are the foundation of new companies and new industries. We pursue breakthroughs to attain major competitive advantage.

- **Incremental innovations** are minor improvements to existing business structures, processes, and products. We invest in incremental innovation to maintain or improve market share.

- **New venture innovations** extend existing companies into new markets. We create new ventures to expand into new markets for long term benefit.

- And **new business models** are new ways of making money. We create new business models to transform the structure of a market by creating new and better customer experiences.

As we develop the innovation master plan, all four types of innovation will be relevant and important to our work because it takes all four to sustain success in the market.
designing and implementing the master plan

For each element of the master plan framework there are pertinent questions to ask, assessments to prepare, decisions to make, and actions to implement.

Each section of this white paper concludes with a few brief thoughts on implementation, because although this is a concise overview of the master plan framework, and consequently there’s not enough space to present a detailed conversation on each of the themes, the notion of a master plan is that you actually do think through the issue, make a plan, and then begin implementing it.

For the why of innovation, the meaningful questions relate to strategy, the rate and types of change that are occurring in your marketplace, the role and impact of new technologies, and the way the future is therefore unfolding. The assessments concern the fit between the firm’s strategy, its innovation practice, and current and future contents of the innovation portfolio (which is discussed below).

The decisions to be made focus on how best to prepare for future markets, and the actions relate to transforming the innovation mindset into meaningful work throughout the organization, work that results in the development of innovations that impact the market, and improve the position of the organization relative to its competitors. This means, finally, an organization-wide commitment to designing and implementing your version of the innovation master plan.
part 2

what to innovate
managing innovation portfolios

Innovation is inherently risky. You invest money and time, possibly a lot of both, to create, explore, and develop new ideas into innovations, but regardless of how good you are, many of the resulting outputs will never earn a dime.

Is that failure or success? It could be both. The degree of failure or success will be determined not by the fate of individual ideas and projects, but by the overall success of all projects taken together. Hence, the best way to manage the risk is to create an “innovation portfolio.”

Just as investors in all types of assets create portfolios to help them attain optimal returns while choosing the level of risk that is most appropriate for them, you’ll do the same for the innovation projects you’re working on (which we might also call “potential innovations” since they haven’t earned any money yet, and are not actually sure to become innovations at all).

So again, what do you do? You allocate capital across a range of investments to obtain the best return while reducing risk, and then you manage each project aggressively to make it work. (The “how” of managing innovation is the subject of the next section, The Innovation Process).

The underlying principle of portfolio management is that the degree of risk and the potential rewards have to be considered together. In a rapidly changing market, the nature of innovation risk is inherently different than in a slower-changing industry such as, say, road construction, because the faster the rate of change in a company’s markets, the bigger the strategic risks it faces. This will necessarily affect the composition of an innovation portfolio by inducing a company to take greater risks in innovation its efforts. Hence, the ideal innovation portfolio of each organization will necessarily be different: Apple, NASA, Genentech, Union Pacific, GE, and Starbucks are all innovative organizations, but when it comes to their innovation portfolios it’s obvious that they cannot be the same in content or style.

A further key to the dynamics of a successful portfolio is described in portfolio theory, which tells us that the components of a portfolio must be non-correlated, meaning that various investments need to perform differently under a given set of economic or business conditions. In the case of innovation, “non-correlated” means that every firm needs to be working on potential innovations that address a wide range of future market possibilities in order to assure that the available options – and here is the key point – will be useful under a wide variety of possible future conditions.

The need for broad diversity in the portfolio also reminds us we need to develop all four types of innovation, so what we’re really talking about are five
different portfolios. There will be a different portfolio for each type of innovation, and there will be a fifth portfolio that is an aggregate of all four.

We should also note that each different type of portfolio will be managed in a different process, by different people, who have different business goals, and who are measured and possibly rewarded differently. Hence metrics and rewards are inherent in the concept of the portfolio, and the master plan also calls for the design of the ideal metrics by which the portfolio should be measured. (A set of possible metrics will be discussed in the following discussion of the innovation process.)

And because we’re preparing for a variety of future conditions, it’s obvious that some of the projects will never actually become relevant to the market, and they will therefore never return value in and of themselves. But this does not mean that they are failures; it means that we prepared for a wide range of eventualities, and some of those futures never appeared, but we were nevertheless wise to prepare in this way. This sort of “failure” is a positive enhancement of our likelihood of our survival and ultimate success, so it’s not failure in a negative sense at all. By analogy, I carry a space tire in my car, but it is not a failure if I never have occasion to use it.

Therefore, the process of creating and managing innovation portfolios cannot be managed by the CFO’s office as a purely financial matter. Instead, the finance office and innovation managers are partners in the process of innovation development. Hence, innovation portfolio management is like venture capital investing, early stage investing where it’s impossible to precisely predict the winners, but nevertheless a few great successes more than make up for the many failures.

And the CFO will also have to accept the idea that the mandatory investments in innovation mean investing in learning. During the early stages of the development of an idea, its future value is almost entirely a matter of speculation. As work is done to refine ideas in pursuit of business value, the key to success is learning, as the learning shapes the myriad design decisions that are inevitably needed. The innovation process as a whole therefore seeks to optimize the learning that is achieved, and to capture what has been learned for the benefit of the overall innovation process as well as the portfolio management process. This costs money, which cannot and should not be avoided.

As the projects that constitute an innovation portfolio mature and develop, they provide senior executives and board level directors with increasingly attractive new investment options. By managing their portfolios over time, a team of executives can significantly improve the portfolio’s performance; as they engage this type of thinking they get more in sync with the evolving market, and better at identifying and supporting the projects that have greatest potential.

Still, many will fail. In fact, a healthy percentage of projects should fail, because failure is an indication that we are pushing the limits of our current understanding hard enough to be sure that we are extracting every last bit of value from every situation, and at the same time preparing for a broad range of unanticipated futures.
designing and implementing the master plan

The process we have developed for preparing and managing Innovation Portfolios consists of these 5 steps.

Step 1: Model the Key Strategic Factors in your industry.

It’s imperative that you understand the factors that are driving change, and assess how they are likely to impact your organization in the future.

Step 2: Define the characteristics or criteria to be considered.

Once you have a sense of how things are changing, then you can decide what factors to emphasize in the design of the innovation portfolio and the selection of individual projects.

Step 3: Define the weighting of the characteristics and score for attractiveness.

Some characteristics are much more important than others, so weighting the various factors puts emphasis on the most critical ones.

Step 4: Risk-Reward assessment and the ideal Innovation Portfolio.

The ideal portfolio will be specific to your company and your industry. The strength of your balance sheet will be a factor, as will your appetite for risk, and your confidence in the innovation process to produce the needed results (although over time the process should improve and your confidence should increase). As you integrate all these factors together in your thinking, an ideal portfolio will take shape.

Step 5: Assess proposed new projects using the Risk-Reward assessment tool.

Projects can now be assessed, and the most attractive ones will gain your support and become projects to be managed through the innovation process. And over time, as you manage toward that ideal portfolio, your ability to assess individual projects will improve, and your capacity to create value through the entire process will improve as well.
part 3
how to innovate
the innovation process

While the purpose of innovation is “simply” to create business value (simply is in quotes because it’s obviously not so easy to do), the value itself can take many different forms. As we noted above, it can be incremental improvements to existing products, the creation of breakthroughs such as entirely new products and services, cost reductions, efficiency improvements, new business models, new ventures, and countless other forms as well.

The method of creating innovation is to discover, create, and develop ideas, to refine them into useful forms, and to use them to earn profits, increase efficiency, and/or reduce costs. Here we focus on how to do that, the process of innovation.

In the quest for innovation it’s obvious that many ideas at the input stage become a few completed, useful innovations, so people readily visualize the innovation process as a funnel: lots of ideas come in the wide end on the left, and a few finished innovations come to market from the narrow end at the right. The trick to making it work is knowing what’s supposed happen inside the funnel.

So naturally you want to start by creating a whole bunch of ideas, right? Actually, no.

Ideas are indeed the seeds of innovation, just as ore taken from the ground is the raw material of steel, or waving fields of wheat provide the raw material for bread. But it takes a lot of work to mine the raw ore and transform it into steel, or to prepare the fields to grow the wheat long before it becomes bread. It’s the same with innovation; we don’t start by collecting raw ideas. Instead, we know that innovation is a core element of our organizations’ strategy, so we have to start the innovation process itself with strategic thinking to assure that the outputs of innovation are fully aligned with our strategic intent.

Step 1 is therefore Strategic Thinking. The innovation process begins with the goal to create strategic advantage in the marketplace, so in this stage we think specifically about is innovation going to add value to your strategic intents, and we target the areas where innovation has the greatest potential to provide strategic advantage.

Step 2 is Portfolio Management & Metrics. As we discovered in the previous section, one of the important underlying facts of innovation management is the necessity of failure. We are by definition trying to do something new, and as we proceed on the innovation journey we do not in fact know if we are going to succeed. We have confidence that we’ll succeed eventually, but along the way we know that there will be many wrong turns,
and many attempts that will never come to fruition. So we manage innovation portfolios aggressively to balance the inherent risks of the unknown with the targeted rewards of success, and balancing our pursuit of the ideal with the realities of learning, risking, failing in order to ultimately succeed.

Steps 1 and 2 together provide a platform and context for everything that follows, and so they constitute the ‘Input’ stages of the funnel, and so that the activities in Stages 3 - 8 have the best chance to achieve the best results.

**Step 3 is Research.** An output of Stage 2 is an ideal innovation portfolio, which is what we believe, as of today, is the right mixture of short and long term projects across all four types of innovation. As we understand the ideal, we can compare our current knowledge and discern the gaps. Filling these gaps, then, is the purpose of research. Through research we will master a wide range of unknowns, including emerging technologies, societal change, and customer values, and in the process we will expose significant new opportunities for innovation.

**Step 4 is Ideation.** Strategic thinking has clarified for us how the world is changing and what our customers may value, and this stimulates new questions that our research has answered. The research findings provoke a broad range of new ideas across a wide range of internal and external topics. This is the abundant raw material, and it is already and automatically aligned with our strategic intent because it came about as a result of a direct connection between strategy, portfolio design, and research.

**Step 5 is Insights.** In the insights stage we explore ideas, and refine and combine them together to define new possibilities and new projects. In the course of these explorations, the light bulb occasionally illuminates, and we grasp the very best ways address a future possibility. Eureka! The innovation and the target and mutually clarified; we understand what the right value proposition is for the right customer.

While many people think of this moment of insight as the beginning of the innovation process, as you can see, in the well managed innovation effort we expect insight to come about as the result of the preceding processes and activities, not at random. Hence, the innovation process described here is specifically contrasted with random idea generation; insight is the *result* of a dedicated process of examination and development. It doesn’t occur because someone had a good idea in the shower, but because individuals and teams of people were looking diligently and persistently for it.

**Step 6 is Innovation Development,** the process of design, engineering, prototyping, and testing that results in finished product, service, and business designs. Manufacturing, distribution, branding, marketing, and sales are also designed at this step in an integrated, multi-disciplinary process.

**Step 7 is Market Development,** the universal business planning process that begins with brand identification and development, continues through the preparation of customers to understand and choose this innovation and leads to rapid sales growth.
Step 8 is Selling. Now we earn the financial return by successfully selling the new products and services. In the case of process improvement innovations directed internally, we now reap the benefit of increased efficiency and productivity.

It’s easy to visualize these eight steps as a sequence from 1 to 8, especially since that’s how I wrote it.

In some respects it does make sense to think about this process in this linear fashion, and projects will typically move from step to step. But we also know that the human mind is not at all linear in its way of thinking and learning. Hence, we may make new discoveries, important ones, during the stage labeled “research” that could have fundamental impact on “strategy” or on “market development,” or on any other part of the process.

So we know that strong feedback loops should in fact connect each step with every other step; learning (and failing) is the pervasive and underlying modality of innovation, and is therefore essential to the innovation process itself. The connectedness of the steps assures that we obtain the maximum benefit from any and all lessons learned.

designing and implementing the master plan

Like everything in businesses that involves the investment of capital and time, innovation has to be measured.

But unlike most other forms of business measurement, innovation metrics present problems for the process that is to be measured. We might call this “innovation uncertainty principle,” as many of the ways that we might think to measure innovation can significantly impede the innovation process itself. This is because innovation involves a venture into the unknown, and if we try to pin these unknowns down too early we may make them harder to recognize and realize. We can also undermine the spirit of learning, discovery, and intelligent risk-taking that the innovation process requires if we attempt to measure the wrong things at the wrong time.

Innovation metrics are also complicated by the fact that the process itself involves many steps and many aspects of the business, there’s a lot to measure. In exploring the measurement of innovation we found that across the 8 stages there are at least 84 different metrics, both quantitative and
qualitative, that could be applied. But 84 is of course far too many for any company to actually use.

If I tried to explain all 84 of them then this summary document wouldn’t be a summary any more, so below I’ll mention the 12 metrics that many of our clients have found most useful.

If you’re interested in the other 72, I invite you to take a look at the white paper “Innovation Metrics” at http://www.innovationlabs.com/publications/innovation-metrics/

(And if you do so you’ll notice that I’ve simplified my concept of the ideal process since that paper was published. The paper will soon be revised to reflect this.)

12 key innovation metrics

How do you know that your efforts are succeeding? Here are 12 ways to measure the innovation process and its results.

External Metrics: Impact on Brand and Image

1. The innovation system significantly enhances the brand. It accelerates the acquisition of new customers, contracts, and/or clients, as measured by the “rate of new customer acquisition.” This is evident in new sales to new customers.

2. The opinion that customers have of the company, as indicated through brand image surveys, customer feedback, and analyst rankings, improves significantly.

External Metrics: Impact on Ecosystem

3. The innovation system engages a large and growing set of external partners, customers, suppliers, and others, creating a broad and comprehensive open innovation ecosystem.

Internal Metrics: Impact on Growth and Revenue

4. The innovation system results in a significant increase in the number of attractive new, internally-sourced investment opportunities that are available to senior managers and the board of directors.

5. Valuation of the total innovation portfolio increases significantly compared to prior period, year over year. Financial valuation methods would include NPV, asset valuation, and/or option value. Incremental innovation metrics would include percent of products/services revenue attributable to innovation within existing product/services lines.
6. The net portfolio valuation increase is at least 5x to 10x greater than the capital invested. Financial valuation methods would include NPV, asset valuation, and /or option value.

7. The number and percentage of projects that are in the innovation pipeline that are judged to be high quality increases steadily.

8. The percent of projects in the pipeline that are not incremental projects (i.e., these are breakthroughs and new business model innovations), increases significantly year over year.

9. The number of non-incremental projects delivered to market increases significantly year over year.

People Metrics: Impact on Culture

10. Speed of innovation project completion increases year over year.

11. The number of people who are participating in innovation efforts increases significantly year over year.

12. The quality of the contribution of each person increases steadily, and over time more people are contributing more valuable ideas and efforts in the innovation process.

In summary, therefore, your company’s overall capability in innovation is steadily increasing, and the results are getting better and better.

Remember, at root the innovation process is a learning process, so improvement over time is not only expected as you invest time and effort in improving the process itself, it’s mandatory.
part 4

who innovates

creating the innovation culture with geniuses, champions, and leaders

Organizations that are successful at innovation naturally develop a strong innovation culture. Such a culture is recognized by people in the marketplace, who say that the company is a genuine innovator, and it’s also known among the people inside the organization as a dynamic and innovation-friendly place to be.

But supposing an innovation culture doesn’t yet exist in your organization. Then how can you nurture it? How do organizations develop an innovation culture? Who should be involved in the innovation process? And what roles should they play?

Every culture is an expression of behaviors and attitudes, and every organization’s culture reflects the beliefs and actions of its people, as well as the history that shaped them. The innovation culture, of course, is likewise an expression of people, their past, and their current beliefs, ideas, behaviors, and actions about innovation.

We have found that the innovation culture comes into being when people throughout the organization actively engage in promoting and supporting innovation, implementing rigorous innovation methods, and filling three essential roles: Creative Geniuses, Innovation Champions, and Innovation Leaders.

innovation’s creative geniuses

Who comes up with the critical ideas that are the beginnings of innovation, and then turns these ideas into insights, and insights into innovations? They are Creative Geniuses, and they work everywhere, inside and outside.

If it seems like a stretch to label these people as “geniuses,” let me explain the rationale. No one can innovate if they accept things the way they are today, so making innovations requires that we are willing to see things differently. We have to overcome institutional and bureaucratic inertia that may burden our thinking process, and challenge ourselves to see beyond conventional viewpoints. This fits perfectly with the dictionary definition of genius, which is “exceptional natural capacity shown in creative and original work.”

The key enabler of creative genius in the innovation process is the ability and willingness to ask questions that enable one to see things not only for what they are, but for what they could be. The longing to bring to reality that which is imagined or envisioned, and to work with dedication and persistence to
overcome the obstacles they may encounter along the way, is the hallmark of the creative genius.

innovation champions

An Innovation Champion is an individual or a team of people who promote, encourage, prod, support, and drive innovation in their organizations. They do this in spontaneous moments of insight, in ad-hoc initiatives, as well as in highly structured innovation programs.

Innovation champions build the practical means for effective, systematic innovation. They take direct responsibility for finding creative thinkers and encouraging them to see and work in new ways; they help people seek new experiences that may spark new ideas; and they create a regular operations context in which sharing and developing new ideas is the norm.

While they may work anywhere in the organization, including in senior management positions, line management roles, staff, or front line operations roles, the specific nature of the Innovation Champion’s role is to function in the middle, to provide the bridge between the strategic decisions of senior managers and the day to day focus of front line workers.

If we were to choose a single word to describe what Innovation Champions do, that word would be “practice.” Innovation Champions implement the practical tools to foster innovation through effective interaction, helpful attitudes, and practical means.

innovation leaders

An Innovation Leader is someone who shapes or influences the core structures and the basic operations of an organization, all with a clear focus on supporting innovation.

Core structures include the design of the organization itself, as well as its policies and their underlying principles. Metrics and rewards can also be core structures.

None of these factors are absolute givens, and all of them can be changed, and that’s the point: they are all subject to design, to thoughtful choice about what is best. It’s generally within the power of senior managers to change them, and when they impede innovation they should be changed to favor it.

The actions and attitudes of senior managers are based, ultimately, on their philosophies about management, on their mindset, which we explored earlier in this document. Innovation leaders set expectations, define priorities, celebrate and reward successes, and deal with failures, and all of these factors can be done in a way that makes innovation easier or more difficult, because each can be arranged to favor the status quo or to favor useful and effective change.
Do leaders believe in a win-win model, or win-lose? Win-lose organizations usually are not trusting environments, and because trust is so important to innovation, when it’s missing innovation suffers.

Leaders also set goals, and they don’t need to be modest; in fact they can be outright aggressive. By setting ambitious goals, managers emphasize the linkage between an organization’s strategy and the pursuit of innovation, elevating innovation to a strategic concern where it properly belongs. Conversely, if innovation is not expressed as a specific goal of top management then it probably won’t be a goal of anyone else, either; and if policies are restrictive and make it difficult to test new ideas, then there won’t be many new ideas.

Hence, innovation leaders are typically, although not exclusively, senior managers who feel a compelling need to bring innovation to their organizations. This enables them to reduce or even eliminate obstacles that inhibit innovation performance, and it’s the overlap between commitment and authority that makes the innovation leader’s role unique as well as indispensable.

**designing and implementing the master plan**

There are many occasions when ideas and idea creators need support; there are times when policies are needed to enhance and enable innovation efforts; there are situations when we desperately need new ways to look at our problems to find new ideas. How well are these three roles understood and applied in your organization?

And what is the prevailing attitude toward innovation of the people in your organization? Do they embrace it enthusiastically? Or do they avoid it like a head cold?

Innovation doesn’t happen without leaders who embrace it, nor can it happen without people who have ideas and are willing to risk failure to experiment with them. Nor does it happen without champions to bridge between the strategic and operations questions and the individuals who have ideas and want to explore them.

And of course it happens best, and fastest, when all three roles are consciously implemented and mutually supporting. This does not mean that each individual can play only one of these roles; many people are geniuses, and leaders, and champions, and at various times we play all of these roles.

So what is important is not that we classify people into the various categories; in fact, we should avoid doing that. We just need make sure that all three roles are being played, and played well, so that defining, developing, and implementing ideas that become innovations becomes the norm.
part 5
where to innovate
the innovation infrastructure

This section focuses on a critical aspect of the robust innovation practice, the infrastructure that supports individuals, teams, and projects engaged in the quest for innovation.

For organizations to consistently deliver innovation requires that their employees have the skills to effectively explore, understand, diagnose, analyze, model, create, invent, solve, communicate, and implement concepts, ideas, and insights. These are all attributes that we might consider facets of “learning,” and naturally enough any organization that thrives in a rapidly changing environment necessarily has developed the capability to learn and to apply that learning to keep up with external changes.

Clearly the link between learning and innovation is a strong one, and clearly speed matters. The faster people in a company can learn, the faster they can apply that learning to create the next product, service and business model. By creating a positive and self-reinforcing feedback loop of accelerated learning to create innovation, organizations then obtain more learning, leading to more innovation. The results are manifold: shorter product life cycles, which leads to quicker learning, yet shorter product life cycles, better profits, etc., all contributing to competitive advantage.

Involving more people in this process is also desirable. Alan Mulally, formerly a senior manager of Boeing and now CEO of Ford put it this way when he described the development of the company’s new 777 aircraft: “We can’t make a better airplane unless we can figure how to get everybody’s knowledge included in the design.”

To support the acceleration of learning and innovation we have found that the proper infrastructure tools make a big difference. The four key infrastructure elements are open innovation, effective collaboration, the virtual workplace, and the design of the physical work place.

open innovation

While in the past many organizations kept the innovation process closely guarded in house, these same companies have found that seeking new product ideas from outside can significantly improve the flow of new ideas. Applying the principles of open innovation can significantly accelerate the pace of innovation, as well as its effectiveness. Open innovation means

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expanding the pool of participants in the innovation process to all types of outsiders, including customers, suppliers, partners, and community members, tapping into ideas, critical thinking, and advice.

Hence, P&G’s CEO Alan Laffley is famous for insisting that 50% of P&G’s new product ideas should come from outsiders, and then putting the systems in place to make it happen. It’s the systems that make the intent into reality. Similarly, a broad range of companies from Dell to BMW to Shell Oil, as well as Lego, Electrolux, Kraft, and many others seek customer input to innovation through the internet. 3 The South Korean cosmetics maker Missha has taken this thinking even further by engaging 1.8 million customers as members of its innovation team in three important roles: as a source of new ideas, as participants in product development and testing, and as evangelists for the brand.

collaboration

I have worked with hundreds of people across the many years I’ve been in the field of innovation, and everyone agrees that collaboration is vital to success at innovation. A comment from GSK chemist Dan Sternbach reinforces this idea with a practical example: “Nothing replaces two people standing at the board together and drawing diagrams, which is the way we communicate a lot. It’s an interactive situation where when somebody’s drawing the other guy says, ‘Well that reminds me of this thing,’ and the conversation grows. When you try to do that by email it takes more time; the same conversation would probably happen in a day versus 20 minutes because of the powerful give and take that goes on when you’re face to face.”

Mastering and applying the principles of effective collaboration, not only for pairs and small groups, but also for groups of tens or even hundreds of people requires facilitation skills to help nurture new ideas and turn them into effective innovation, and the benefits can be significant.

the virtual work place

As we spend more and more time working and collaborating on line with our internal colleagues and with outside partners, customers, and vendors, the quality of our tools and our skill in using them can make a significant difference in the productivity of our innovation efforts.

And we cannot accept as a given that the IT department has chosen this or that tool for us to use, as the stakes are too high to delegate the choice to someone who may not fully understand our needs. Active engagement in the selection and adoption of the right tools is a simple but fundamental rule to follow.

3 To get a sense of the vast scope of open innovation examples, try http://www.openinnovators.net/list-open-innovation-crowdsourcing-examples/
the physical work place

The work place is the container for everything that doesn’t happen in the virtual world. And actually in some sense it’s even the container for that too, because in the end all virtual work involves a person at a computer or on a phone, clicking, reading, writing, talking and drawing, and that person is sitting in some room, somewhere.

As MIT Professor Tom Allen puts it in the lively book he co-authored with architect Gunter Henn, “Most managers will likely acknowledge the critical role played by organizational structure in the innovation process, but few understand that physical space is equally important. It has tremendous influence on how and where communication takes place, on the quality of that communication, and on the movements - and hence, all interactions - of people within an organization. In fact, some of the most prevalent design elements of buildings nearly shut down the opportunities for the organizations that work within their walls to thrive and innovate. Hence, the implications of physical space for the innovation process are profound.”

The essentials for effective innovation are thinking, creating, problem-solving, and collaborating, and we know that the work place that best supports them is not a traditional conference room. In fact, conference rooms are proven creativity killers, so instead of using rigid, deadly dull, and inflexible meeting spaces, astute innovation leaders and champions develop innovation centers and idea rooms that offer stimulating settings for the important work of collaboration, design, and creation … which are of course key elements of the innovation process.

designing and implementing the master plan

When they’re combined effectively, these four elements can make a significant difference by helping individuals and teams achieve better results, and faster results.

If you frame the question as an alternative between implementing the right infrastructure or not implementing it, then the answer is a non-choice; it’s obvious that thoughtful investments in infrastructure are the right thing to do.

Defining the specifics of the designs that are right for your organization is where the real work begins, and a good first step is to assess the current status of your infrastructure through surveys, interviews, and discussions with the people who would be the end users. Then you must experiment, and learn by doing, and scale up the elements that add the most value. Refining your infrastructure is a process that happens progressively over time.

**Conclusion**

The innovation system described in the Innovation Master Plan framework is intended as a comprehensive approach to a difficult, challenging, and very important problem. In our work at InnovationLabs we have introduced this framework to many organizations around the world, and we’re helping a lot of them to implement it through systematic programs and projects that are based on these principles.

My goal in this white paper has been to present a concise overview of the framework, and I hope you indeed found it concise, interesting, and most of all useful.

By way of conclusion, here are a few key points that I think are worth highlighting. First and foremost is the idea mentioned in the introduction that innovation is a mindset problem. Meaningful progress can be made when leaders adopt the mindset that their organizations must and will innovate, and they also understand how to go about doing it.

So the second major idea is that the framework described in this white paper, and in the forthcoming book, is intended to define a concrete and specific pathway, a methodology, for going about it. This is not a simple or easy thing to accomplish, but it is certainly the necessary and right thing to do.

In this regard, it is useful to note that there is an important difference between luck and methodology when it comes to innovation.

“Methodology” is when you apply a systematic approach to address a fundamental business issue or problem, and innovation is certainly fundamental.

“Luck,” on the other hand, is when you rely on the hope that people will come up with good ideas to drive the innovation process forward.

If we frame your alternatives as methodology vs. luck, and I do, then as with infrastructure and all the other elements of the master plan, the choice becomes no choice at all. Once this context is established then no manager could possibly rely on luck, and certainly no board member would consider waiting for luck to be adequate in fulfilling their fiduciary duties.

So a sound innovation methodology, then, is not an option, but a requirement. We have found that the framework described here is a useful and powerful tool for designing and managing innovation, and we hope you find it to be as well.