

# BOOK OF METRICS



# FOREWORD

Before a company makes an investment, small or large, the return on investment, time to break even and a lot of other return metrics are calculated. This return is often based on direct financial returns, although indirect financial returns sometimes are part of more complex metrics. Parallel to this, we try to tackle moral as well as intellectual issues concerning the short-sightedness of management. We have compensation models that favor short-term results, which in turn benefits owners with short-term horizon of their holdings, as opposed to those who invest in building long-term value.

In a world where life cycles are becoming shorter and shorter, or better expressed, faster and faster, and also require parallel cycles of new products and services alongside the main cycle, the requirements for innovative capacity increase. It is not only the compressed life cycles that affect us. Also the absolute need for sustainable consumption and sustainable industrialism implies new requirements and opens up for new opportunities. How do we navigate amongst these foaming waves?

Society has in the past 50 years rapidly been weighted, relatively speaking, against the knowledge economy. How, then, should our workers treat and address their creativity and loyalty? Well, probably against the workplaces which offer best opportunities for personal development, which requires us to steer the creativity to areas where we can create an outlet for the results. The outlet is naturally where we create the greatest value in relation to the risk involved, while minimizing both time and cost in relation to the expected return. Again ROI. But, is this the right way to operate corporate activity? No, the companies withhold an innovative environment obviously have a functioning port-

folio-thinking in which strategic and tactical, direct and indirect initiatives share the resources. To balance this portfolio, it must be in line with the operational strategy.

Financial, strategic, tactical, direct and indirect results in a confusing mix. In addition, a concept which is available on a valuation level, but rarely is communicated consistently throughout the organization; Innovation. Have our managers today the opportunity to pursue innovation with the same excellence as other investments? Only if we agree on the definition of each organization, create targets and measure the processes, can we head for the results.

Innovation Pioneers International is an organization founded by around 20 networking innovation experts in our leading companies. The purpose is to aggregate, produce and distribute practical innovation knowledge and to run a continuous Innovation Agenda. One of the first projects to be pursued by Innovation Pioneers is project Metrics. Apart from this Book of Metrics, a tool for selecting metrics has been worked out. We hope that the reader of this publication finds guidance to practical measurement and management of the innovation process.

For Innovation Pioneers International,  
June 2009

**DARIUSH GHATAN**  
*Initiator of Innovation  
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# INTRO

# EXECUTIVE SUMMARY

The motivation behind this book on innovation metrics is the increasing importance of innovative thinking in competitive business environments, and the importance of creating more systematization around innovation in order to excel in this field. Even though most companies are aware of these challenges and are eager to improve upon ways of working, the term “innovation” is still often viewed upon as somewhat implicit and free-flowing. The purpose of this book is therefore to identify more structured methods of using metrics, in order to improve innovation management and hence innovation performance.

## THIS BOOK RESTS ON TWO MAIN PILLARS

The first pillar is a study performed by Google in collaboration with Stockholm School of Economics, on 26 of Sweden’s largest multinational corporations, and their ways of working with innovation metrics. This, together with a thorough collection of ideas stemming from previous experience, research and knowledge, has led to the creation of a twelve-window framework for innovation metrics. The framework illustrates three different stages and aspects of an innovation process, and identifies four key areas of where in the innovation sphere to measure. In addition it highlights four different types of metrics in terms of the results they show, and the types of behavior they steer. A comparison between this innovation metrics framework and the actual reality in these 26 Swedish multinationals’ work with innovation metrics shows that the practical ways of measuring innovation differ significantly the suggestions of the framework. Generally, innovation metrics are used in highly unbalanced ways and there is a ten-

dency for randomness and measuring what is »easy to measure«. As there are obvious ways for improvement, this analysis creates the foundation for the second pillar of this book.

The second pillar is a step-by-step guideline useful to work with during the process of implementing innovation metrics. The guideline is intended for application on several different business environments and industries. It suggests, through certain scenarios, the ways in which different types of companies can adjust the implementation and application of successful innovation metrics.

The book hopes to raise awareness of potential competitive improvements through the measuring of innovation, as well as to help companies measure the immeasurable.

*»You get what you measure« is true also for innovation. If you are serious about your innovation efforts, setting the right objectives and performance indicators are key. The innovation process can be seen as a funnel with the wide end towards the creative ideation phase and the narrow end pointing to the market. Quality and innovation level of the offerings that are put on the market requires quantity in the funnel opening - and good tools and processes in between. Measuring is therefore necessary in several steps through the whole process.*

**ROLAND GUDINGE**

*Senior Business Strategy Manager, Sony Mobile*



*Innovation is complex. You will need several measures to successfully capture the different dimensions of innovation. After deciding on a limited set of metrics, the challenge is to make them relevant and used in your organization to drive behaviors and performance.*

**MAGNUS P. KARLSSON**  
*Director New Business Development & Innovation, Ericsson*

# BLOCK 1

**A business environment with increased focus on innovation..**



A simple definition of innovation is »the introduction of something new«. To most established companies, innovation is what propels growth. In fact, this growth has become increasingly under pressure during the past decades, with the rapid change of the world's economic order. New market entrants, new technologies, shorter product life cycles, more empowered customers and a more globalized marketplace has posed new challenges, to all types of industries. The US Council on Competitiveness has declared that innovation will be the single most important factor in the 21<sup>st</sup> century in determining the success of the nation. The EU body for Enterprise & Industry Innovation has claimed that European companies cannot compete in the new global environment unless they become more innovative and respond more effectively to consumers' needs and preferences.

In fact, organizations today cannot expect to survive without innovation. The only question is whether slow innovators will be overrun by competitors who come up with successful innovations, or if they will slowly fall deeper as their competitors constantly push the competition. Therefore, what is needed is not just innovation, but sustained innovation – that is well balanced and long-term lasting. Companies need a continuous stable flow of different types of innovations.

Over the years, companies have indeed become increasingly aware of the need for innovation. Several have tried to tackle the issue by introducing innovation programs, innovation work flows, innovation processes and other structures in order to take control of an area which was previously thought of as something »free-flowing« and »uncontrollable«. In times of economical turmoil, it can be argued that one does not have the resources to focus on innovation initiatives. However, many argue that innovation should be on top of the agenda as the capture and

implementation of ideas from across the organization can allow for cost savings and improved efficiency.

## **..LEADS TO THE NEED FOR BETTER CONTROL AND MANAGE- MENT – AND MEASURE- MENT**

Old management aphorisms say that »you can't manage what you don't measure« and »what gets measured gets done«. This implies that it is vital to measure innovation in order to manage it. Only then can you diagnose the overall innovation performance over time. But innovation metrics is not only important in order to measure the current situation. It is also a vigorous tool for improving it. Only by measuring can management decide on strategic direction and identify where to allocate resources. Well-communicated metrics also steer behavior through the inherent identification of important innovation areas. It also plays an important role in enhancing long-run innovativeness. On top of this, measurable numbers are an easy way of sending credible signals of innovativeness to your shareholders.

In fact, it has been claimed that as soon as a leading company can demonstrate long-term advantage of its superior performance on innovation, this will change the rules on the market.

# HOWEVER, COMPANIES STRUGGLE WITH IDENTIFYING HOW AND WHAT TO MEASURE

In the companies where metrics do exist, they vary considerably and remain highly rudimentary according to two global studies, recently and separately performed by management consulting firms. One reason may be that companies are under the mistaken impression that innovation somehow is different from other business processes and that it cannot or should not be measured. Another reason may be that there still exist no generally agreed rules or criteria for measuring corporate innovation, leaving the companies without frameworks of practical use.

Finally, there is a global innovation metric for nations, called the »Global Innovation Index«

(GII), which builds on a holistic framework including five input metrics and three output metrics, all calculated by a number of sub-metrics. This index ranks the world's best and worst-performing economies in terms of innovation, although all countries differ and have individual attributes and needs in terms of innovation. Yet another reason may be that there is no general and official suggestion for measuring corporate innovation leaving managers without frameworks of practical use. We suggest there should be a Global Corporate Innovation Index (GCII).

## *Summary*

- Managing innovation is becoming increasingly important. Organizations today cannot expect to survive without innovation.
- Innovation is often regarded as somewhat free-flowing and unmanageable and few companies know how to actually control and measure it.
- Innovation is measured on a national level. Why can it then not be measured on a corporate level?

# BLOCK 2

## Definitions of innovation and metrics

# WHAT IS INNOVATION?

Innovation as a field of study has been discussed at least since the 19<sup>th</sup> century, by economist such as Say, Smith, Schumpeter, Keynes and Friedman. Schumpeter was the most prevalent debater of innovation, publishing several articles on the subject up until his death in 1950. His definition of corporate innovation could be divided into five different areas:

- New products
- New methods of production
- New sources of supply
- The exploitation of new markets
- New ways to organize businesses

However, other research articles on innovation were rare at this time, and most definitions of corporate innovation were narrow and highly technologically centered.

It was not until the 1960s that the topic attracted general attention. Since then a large amount of articles and academic material has been published, increasing especially rapidly during the past ten years. Today, we see as many definitions of innovation as there are authors who write on the subject. However, most have moved away from the technologically centered definition focused on product development. Today, innovation includes business model innovation, social innovation, national-level innovation and customer-driven innovation just to name a few.

One of the most important distinctions includes one between invention and innovation. Invention is basically the idea for a new product, process etc. Innovation on the other hand is the attempt to carry it out into practice; to commercialize or implement it. Furthermore, a change or improvement is

only an innovation when it is put into use and causes a social or commercial reorganization. In addition, innovation is to be seen as the result of a lengthy process rather than as a single incident.

## TYPES OF INNOVATIONS

Beyond this, there are several different types of innovations on a corporate level. Some of them include:

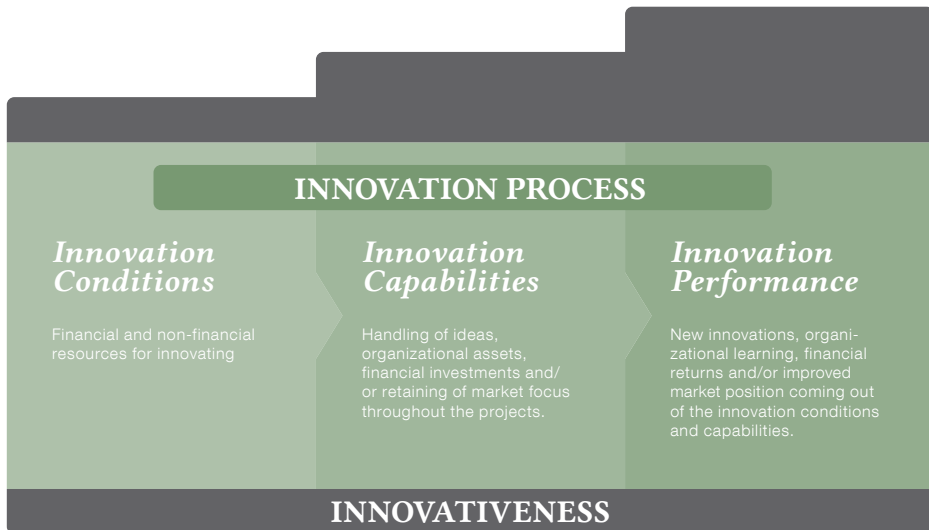
- Area/type of innovation: Product/service, Process, Business model, Social, Market-driven, Experiential, Marketing, Structural, Supply-chain, Technical vs. non-technical, etc.
- Type of novelty: New to the world, New to the company, Line extensions, Improvements or revisions, Product/Service/repositioning, Cost reductions, Disruptive, Incremental, etc.
- Type of strategy behind: Market penetration, Product development, Market development, Diversification, etc.

## TYPES OF DEFINITIONS OF INNOVATION

A corporate definition of innovation must of course be defined in a way that fit the specific company and its business model and strategies. Therefore the definition may vary between companies. Still, a general definition of innovation, which may be useful to start out with, is:

” *People creating and implementing ideas that create value.*

This definition includes several important parts of the later introduced framework of innovation metrics, where »creating« and »implementing« stresses the importance of both inputs and outputs. »People« and



Process showing the elements of innovation and innovativeness.

»ideas« refer to organizational and task level respectively. The use of the word »value«, without financial prefix or similar, indicates the use of value in broad terms, covering all parts of the framework and thereby all relevant stakeholders.

## TYPES OF ELEMENTS OF INNOVATION AND INNOVATIVENESS

From a company perspective, three main pillars of innovation should be highlighted:

- *Innovation conditions*: financial and non-financial resources for innovating.
- *Innovation capabilities*: handling of ideas, organizational assets, financial investments and/or retaining of market focus throughout the projects.
- *Innovation performance*: new innovations/organizational learning/financial returns and/or improved market position

coming out of the innovation conditions and capabilities.

These pillars create the innovation process which is the entire flow of innovations from conditions via capabilities to performance. They indicate the total innovativeness of the company, i.e. the success by which innovation conditions, capabilities and performance are combined.

## WHAT IS A METRIC?

A metric is a standard unit of measurement, used to assess, control or manage something. Metrics can be used on several different levels and areas, and are used to identify how successful something is at each of these levels and areas. In terms of innovation, an

innovation metrics is a unit of measure used to assess, control and manage innovation, on several different levels and areas, creating an understanding for the specific and total innovativeness of the company.

### ***Summary***

- Innovation has been a concept for over a hundred years now, but there is still no clear and universal definition.
- More and more however, innovation is regarded as applicable to several areas as well as performable by all different kinds of people.

- A definition of innovation should mirror the needs and requirements of the individual company.
- One suggestion by Innovation Pioneers for an inclusive definition of innovation however is »People creating and implementing ideas that create value«.
- »Innovativeness« is in essence the capacity to deal with the innovation process, which in turn consists of »Conditions«, »Capabilities« and »Performance«.
- A metric is a standard unit of measure, used to assess, control or manage something.



***Our company consists of many small units. (...) Regarding definition you can express something on group level, but there will always be people out in the organization with their own definitions.***

***Industrial manufacturing***

# BLOCK 3

## Why measure?

Measurements systems for innovation are created in order to give an overview of the company's current status of »innovativeness«. However, measurement systems do not always come with positive associations. Often, people think of:

- Monitoring
- Reporting
- Controlling
- Accountability
- Justifications
- Judgments

A measurement system which focuses only on the above areas however adds little value to the company who uses it. This static use may in fact even mean value destruction. Measurement systems should instead be seen and used as tools for creating systematization and structure. Based on this systematization and structure, dynamics can be allowed for and taken advantage of. Therefore, measurement systems should rather be coupled with and used for:

- Visibility
- Communication
- Feedback
- Understanding
- Prediction
- Learning
- Improvement

Only through the combination of static structures and dynamic application, is a measurement system used optimally for both management and personnel. After all, the purpose of metrics is not to collect data, but

to learn and develop from the data collected. With this as a basis, measurement systems can be used for a number of things. Through the different phases of innovation, it can for instance help to:

- Create an overview evaluation of how innovative the business is.
- Allocate resources between projects, teams, departments and even subsidiaries through measurement of current situation.
- Steer employee behavior in desired direction.
- Motivate staff, middle-managers and top-managers through the visibility of results, and the feedback of innovation efforts.
- Promote the company externally, based on what metrics are communicated.
- Promote innovation learning, in that innovation becomes more visible and tacit.

In the end, better handling of innovation through these parameters leads to improved financial business results.

## ***Summary***

- Measuring is not always experienced or considered as something positive.
- However, measuring innovation is important in order to create and communicate results and performance. Thus, improvement of innovation capability can be based on feedback, understanding, predictability and learning.