

Synergy

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# Innovation capabilities of Finnish companies

*Best practices and benchmarks in innovation*

**Final report, Finland**

October 28, 2013



Photo: Anton Fomkin

# Preface

Finland has a reputation for being an innovative country in many respects – whether it concerns new technologies, products and services, or innovation in the fields of education and health. An ability to innovate has always been one of Finland's strengths and was a vital factor in helping the country recover from crippling recession in the early 1990s.

This is supported by Finland's ranking on the European Commission 'Innovation Union Scoreboard' (Finland is fourth on the 2013 Scoreboard, within the group of four 'innovation leaders' together with Germany, Denmark and Sweden) and by Finland's ranking of third in the Global Competitiveness Report 2012-2013.

However, in April 2013, the European Commission concluded that Finland was experiencing macroeconomic imbalances, in particular as regards developments related to competitiveness (European Economy, Macroeconomic Imbalances Finland). One of the key issues behind such a conclusion was Finland's declining competitiveness related to a relatively low translation of R&D into marketable products, despite Europe's highest R&D spending of 3,8% of GDP in 2011 and a well-educated workforce.

This conclusion prompted us to delve more deeply into this issue, since innovation and product development has been one of Synergy's three focus areas during our 20 years of history and we have completed many assignments related to the conceptualization and design of products and services, the design of innovation and development processes, R&D portfolio management and R&D efficiency improvement for our clients in Finland and elsewhere in Europe.

This study focuses on innovation capabilities that are comparable across industries. We set out with two objectives: to create a thorough understanding of best practices and benchmarks for our current and future clients, and to foster a greater sense of purpose among Finnish companies in developing their innovation capabilities and thus improving the overall competitiveness of Finnish industry globally.

We sent a draft version of the report in the summer to the participating companies and got both very positive feedback as well as improvement suggestions and ideas we have tried to include in the final report.

We would like to thank all participating companies for the interviews and insights they have provided on the topic!

Bozorg Amiri, Christoffer Winquist, and Erik Ahnger

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## Executive Summary

Synergy conducted the innovation study April to June 2013 by interviewing 50 Finnish companies, all operating internationally but with significant development activities in Finland. The paper combines benchmark results from the Finnish research, benchmarks from a sample of 211 companies in an international study, public innovation research and Synergy's own 20 years of experience assisting clients in their innovation and product development activities.

Our key findings from the Finnish research are:

- **Companies don't invest enough in radical innovations.** Finnish companies tend to be risk averse and not to focus sufficiently on finding truly innovative products. Whereas incremental development projects renewing an established product line are, of course, needed, it is shortsighted to believe that sticking only to the 'tried and true' will bring competitive advantage in the long run. The risk is that these companies will be out-innovated by their competitors, instead of taking the lead themselves.
- **Good portfolio management is the key to successfully executing an innovation strategy.** Partly related to previous point is the role of portfolio management in implementing an innovation strategy. Today's product portfolio will need to be optimized in one to three years. Predicting the future is difficult, and the more innovative a development project is, the riskier it is. However, focused and effective portfolio management allows the critical factors to be weighed up: the available people vs. new projects, the division of products into different categories or segments, low-risk short-term projects vs. higher-risk longer-term projects, etc.
- **There is a lack of high-quality product ideas.** The study showed that many companies rely too much on internal resources when looking for new product or service ideas. They don't involve the customers enough in their efforts to gain a feel for what could be a successful product on the market. Nor do they sufficiently utilize partners or research. It was also apparent from the studied companies that, in practice, the generation of ideas is often limited to a small group of people instead of leveraging the whole personnel.
- **Professional project management is the foundation.** Surprisingly, even in companies where projects are normally well-managed with respect to resources, schedules, business cases, etc., there is no professional project management culture related to innovations. While this alone will not create successful innovations, it is a basic framework within which to work and learn, for example, why a project didn't turn out as planned.
- **Much can be learnt from startups concerning effective product development.** The more progressive companies use development techniques and philosophies originating from startups or small companies. 'Agile Development', 'Lean Startup' and the 'Business Model Canvas' are the best-known tools and have been internationally applied across industries in both large and small companies. In Finland, only the software industry has broadly applied agile development methods for many years.

# Background and definitions

In April-May 2013 Synergy Group Europe conducted an interview-based survey of Finnish companies, focusing on their innovation and product development practices and the results achieved. The purpose was to identify best practices and assess how well Finnish companies can create predictable business success from innovation.

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*“Innovation is a prerequisite for sustained growth. No other path to profitable growth can be sustained over time. Without continual innovation, markets stagnate, products become commodities and margins shrink.”*  
-- A.G. Lafley, Chairman and CEO of Procter & Gamble

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Innovation is critical to the success of most companies. Competition is getting tougher all the time – a trend that has become like a law of nature. The implication is that companies need to be more efficient, even though there is a limit on how much efficiency can be squeezed out of an operation. In many industries Finland cannot compete on even terms with low-cost countries. And if products are heavy, logistical costs even make it difficult to compete with local players in central Europe. Innovation enables companies to change the rules of the game and create something unique, or produce it in a radically more efficient way. It enables companies to charge a premium and make a different level of profit from the norm.

**Innovation in Finland.** Innovation is crucial for Finnish society. If Finnish companies cannot innovate and succeed, they will eventually go out of business, their products replaced, if possible, by equivalents developed and produced abroad. In this case Finland will be left with higher unemployment, rather than higher profits and capital investment. Even those services that need to be local are facing the threat of international competition from franchising chains that have invented something unique that makes them more competitive. Although this would still require a local workforce, the profits would flow abroad.

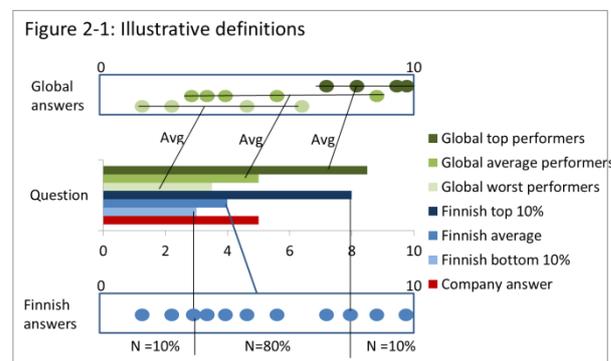
**Innovation vs invention.** The term ‘innovation’ is sometimes confused with ‘invention’. While an invention is a new idea or concept, an innovation is its first successful application. Inventions can, in some cases, be patented, but might never advance beyond

the documented idea. Innovations, on the other hand, are commercially successful new products or services.

*Invention = New product idea*  
*Innovation = Commercially successful innovative product*

## Sample

The study was based on a sample of 50 interviews held with companies primarily on the Talouselämä (Finnish business magazine) 100 list. The companies were mostly traditional ones providing physical products, but there were also a handful of companies primarily offering intangibles like software or services. Roughly 40% of the studied companies had over 100 R&D personnel, including a couple of really large Finnish R&D organizations. The Finnish study sample is based on interviews with 1-4 persons from each company. We are still open for interviews with companies wanting to benchmark their innovation capabilities.



In the data we present four numbers from the Finnish study: the company answer as given, the average of all Finnish answers, the Finnish bottom 10%, and the Finnish top 10%. The bottom and top 10% are presented to show the range of answers and to cut out the most extreme 10% of answers. (See Figure)

The global benchmark is from an international study conducted in 2011 in which the total number of companies interviewed was 211. For the global study there is a top 25% of performers and a bottom 25%. The definition here is different from the Finnish study. The value for the Global top 25% is defined as the average answer of companies in the top 25% of innovation performers. Companies in the group of top 25% innovation performers are selected on the basis

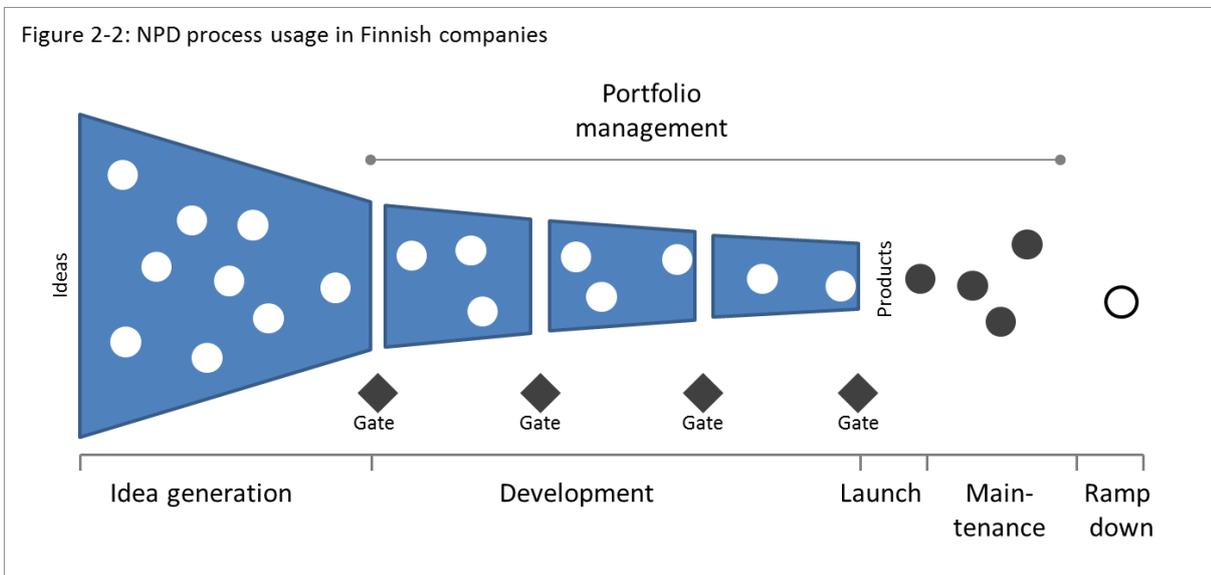
of three criteria measured over the last three years: 1) the profitability of the NPD program, 2) new products meeting the profitability objectives, and 3) new products meeting the sales objectives.

**Validity of the results.** The study was conducted across industries, and therefore even a good result compared to the benchmarks doesn't necessarily mean that the company is better than its closest competitors; it only means it is among the best compared to the benchmark. Another issue is individual bias. In general, the biases tend to even out compared to the benchmarks, but, regarding a specific company, the figures are one person's opinion. One should also note that the sample, although fairly broad in the Finnish context, doesn't statistically represent Finnish middle-sized and large companies.

## Definitions

A new product development (NPD) process (see Figure) can be split into different phases, starting with identifying and generating ideas for developing and launching products or services. Subsequently, there are ways to prioritize only the best product concepts so that they continue through decision gates having a specific set of criteria. In the early phases the criteria are focused on the business case and understanding the viability of the project, while the later gates are more focused on the maturity of partly developed products or services. It is important to remember that products must not only be developed, but also launched, maintained and ramped down systematically.

Figure 2-2: NPD process usage in Finnish companies



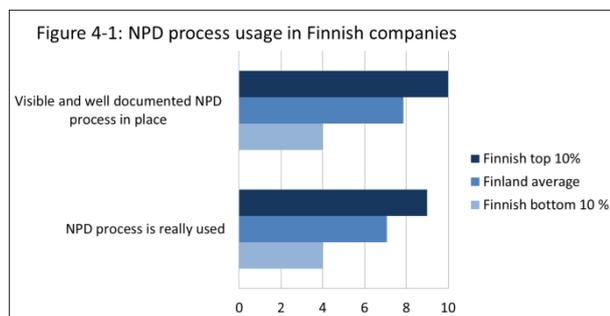
# Research findings on Finnish companies' innovation capabilities

## Introduction

In this section we will discuss what we learned from our interviews with almost 50 Finnish companies and what the results might suggest for Finnish industry in general. We believe the lessons are applicable to many Finnish companies

## Innovation process

The study found that most companies (about 80%) have a fairly well-defined process in place and they genuinely use it. However, almost all companies had some area within their innovation process that could be significantly improved.



## Idea generation and evaluation

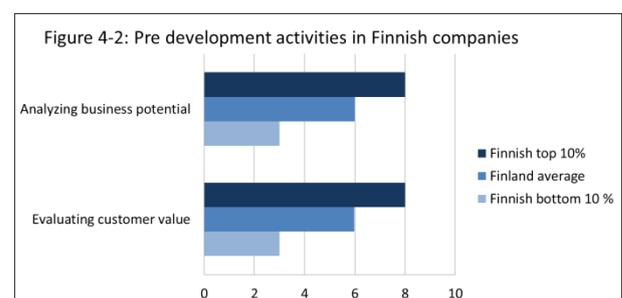
Two main issues were raised concerning the idea generation phase: 1) generating enough good ideas, and 2) understanding the potential value of the ideas.

**Generating enough good ideas.** A common issue is that there are not enough good ideas. Many of the surveyed organizations have idea collection processes, but they rarely worked well. Typical shortcomings included the lack of a well-understood idea input system, little or no feedback given to idea generators on what happened to the ideas they submitted, and a failure to encourage employees to generate ideas.

The survey found that those companies that handle idea generation well seemed to combine several characteristics. These included a clear, visible process for every employee on how to submit product ideas, the holding of internal workshops on idea generation, and close collaboration on product ideas with customers and partners (sales, suppliers or academia).

**Evaluating the potential of ideas.** In the survey, companies evaluated their own ability to estimate business potential and the customer value of ideas as fairly poor on average. More than half of the studied companies had significant development needs in this area. The issue most frequently discussed was that R&D doesn't interact enough with customers. The explanation was sometimes that the sales organization shields R&D from customer issues and sometimes that R&D and sales don't work well together. This was rooted in a lack of sufficient communication between the functions.

Companies that were more successful in evaluating ideas and taking them forward had a clear framework for turning ideas into project proposals. They also had a clear vision communicated by management on what is needed. The vision helped in distinguishing good innovative product ideas from incremental product improvements in product lines that were cash cows. A critical phase in the process of getting innovative products into the development pipeline is working actively and systematically with many raw ideas, quickly iterating and combining them into project proposals backed by champions. The typical problem in the early phase is not too many high-quality project proposals, but rather the quick distilling of raw ideas into product ideas that can be somewhat realistically evaluated.



**From products to business models.** The product is only one part of the value proposition. We found several companies thinking extensively about business model innovation as part of their innovation and product development process. In other words, innovation concerns not only product features, but also new delivery models and channels, completely

different pricing schemes (e.g. leasing vs. buying), and complementary offerings such as services, etc.

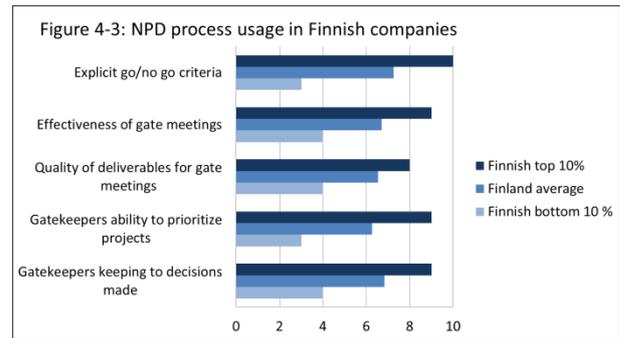
*Insight: Among Finnish companies there is often significant untapped potential in both the quality and quantity of ideas from both internal and external sources.*

## Development

In most of the surveyed companies the product/service development phase was typically a well-defined process that had somewhat clear criteria. The typical issues that came up in the study were:

- **Project prioritization.** Gatekeepers (decision makers) could improve their prioritization of projects before and during development (applies to more than 75% of the companies surveyed). Typically there was too much work and too many projects compared to the resources. “Biting off a little more than you can chew” makes the organization stretch and work harder, but totally unrealistic targets are simply examples of bad leadership and management. They promote an undesirable culture, with non-commitment to targets, slipping schedules and weak leadership that is unable to say “no”. Actions must be prioritized, not only at individual gate meetings, but concerning the whole portfolio of projects.
- **Quality of decisions.** A related issue is also the quality of decisions and especially resource allocation (for about half of the companies surveyed). In many cases, management made a decision to start a project but failed to resolve the resourcing, which indicates faulty management and structures. The problem might be, in practice, that the people making decisions on what should be developed don’t have the power to allocate resources, or that they don’t have updated information on the available resources.
- **Definitions of criteria and deliverables.** The gate criteria and deliverables were not well defined (about 35% of the companies surveyed). In some cases the criteria were too rigid, but more often the problem was a lack of well-thought-through gate criteria, and low-quality deliverables for gate decision meetings.
- **Definition of requirements.** Unclear product requirements make it difficult to manage the development process. And when requirements change without proper change management,

development tends to fall behind schedule and become uncontrolled.



On a positive note, the study also found that several large corporations were employing Agile Development methods and Lean Startup thinking in their innovation and development. In practice, they were striving for short product iterations, testing with customers to validate whether the product met customer needs and learning from each iteration in the development phase. Software products can be iterated in only days or weeks, whereas hardware iterations are more likely to be measured in weeks or months.

*Insight: Large early adopters employ Agile Development methods and Lean Startup thinking.*

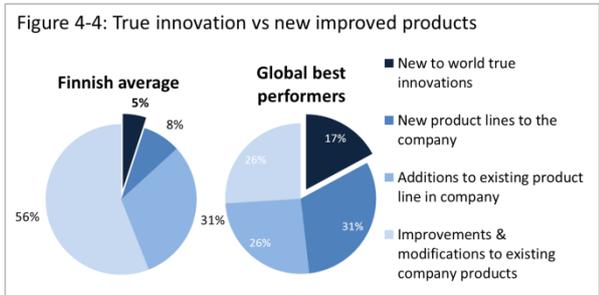
## Portfolio management

Project and product portfolio management seems to be a challenge for a significant percentage of companies (around 30% of the companies surveyed). Typically these companies have difficulties in planning their product portfolio. They don’t have strong development planning and execution practices in place in order to build a good product portfolio. In essence they lack the ability to systematically plan how their product portfolio will evolve in a year or two, and how the development projects they have in progress will fit in. They also have issues in clearly defining the areas where they need to find innovative ideas to fill the gaps in their portfolio. Having a vision, and an identified gap in which to focus innovation, is essential for idea generation.

Project portfolios are typically not very systematically managed (about 40% of the companies surveyed), with much work devoted to tracking resources per project, gate decisions, project schedules and status, etc. Companies don’t monitor where resources are spent. For some small R&D teams and organizations a too formal approach is overkill, but many larger R&D

organizations could clearly use more discipline in portfolio management and thus avoid bad decisions.

*Insight: Prioritization is a common issue across industries. Management is too optimistic about how many new projects can be started.*

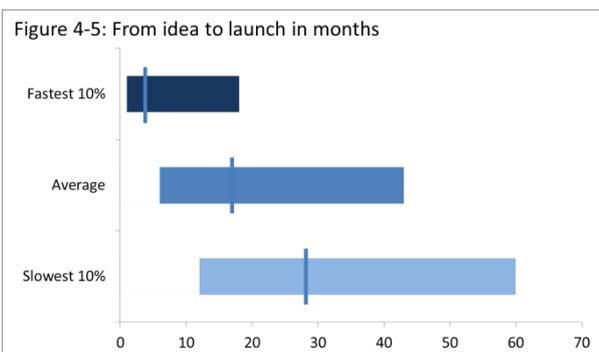


We found that product development often focuses too much on incremental development, at the expense of genuine innovation or even new product lines. The best performers in the global benchmark devoted 17% of their projects to genuine innovations, whereas only 6% of the surveyed Finnish companies were in this category. Indeed, several comments in the survey acknowledged a lack of prioritization for genuine innovations, as incremental projects were considered more urgent and consumed the available resources.

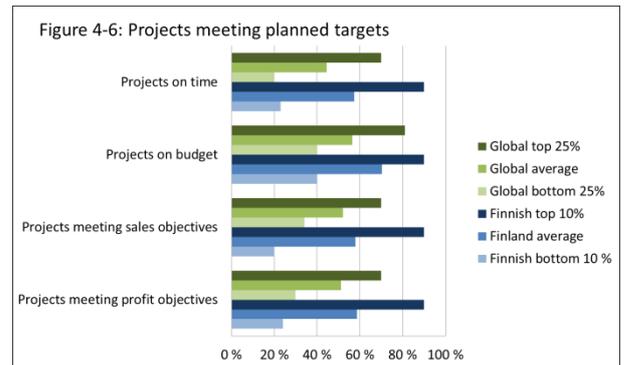
*Insight: Finnish companies underinvest in truly innovative (and risky) projects that could disrupt and create competitive advantage.*

## Development project results

Time-to-market is a big issue for most of the surveyed companies. But as they are from different industries the development cycles are not comparable. It is interesting to note, however, that while it takes 4 months on average for some companies to develop their products, others take more than 2 years.



There was a broad range of answers on how well companies actually succeed in managing their projects on time and on budget. On average, 60% of projects are on time, but in worse performing companies only 20% of projects are on time and in better performing companies in Finland more than 90% are on time. Most surveyed companies exhibited mediocre performance in planning their project schedules. Many of the surveyed companies are working on ways to shorten their development cycles.



Project budgets and the commercial success of projects are seldom followed up by the surveyed companies. Less than half of all companies had a proper budget or followed up the sales performance of the developed product in comparison to the business case. There were occasionally legitimate reasons for not following up individual projects, such as their minimal cost compared with the overall picture, or because of cost management through line organizations. However, many organizations didn't have this excuse, but just failed to install a proper framework for planning and following up their innovation costs or sales. Sales follow up is tricky. While most companies create business cases to argue for the viability of a development project, they seldom learn lessons from this. The majority of companies (over 50%) that followed up sales said that less than 60% of their projects met sales targets. From the interviews it is clear that measuring sales and profits is difficult, because the success of a product is dependent on so many factors and only some of them can be attributed to the development project.

Overall one can conclude that weak follow-up is an indication of an immature innovation process in which product choices are motivated by unrealistic business cases and few lessons are learnt at the management or project execution levels.

*Insight: Many companies still face major challenges in basic project management skills. The majority of their projects are late and fail to achieve the commercial targets.*

## Recommendations

Based on the study there are five generic recommendations that are applicable to most of the studied Finnish companies:

### 1. Make room for true innovation.

Finnish companies play too safe. This means that, in the long run, many will be overtaken by competitors who adopt radical innovations that create competitive advantage.

### 2. Build a working system for idea generation.

Involve externals such as customers and partners, and internally involve the whole personnel. Build a continuous system to gather

and evaluate ideas. Communicate, and create a culture of innovation.

### 3. Build a professional project management culture and practices.

Development is project work. Make sure that you are actually running your projects well, with realistic plans and a culture of performance.

### 4. Create and manage a well-balanced project and product portfolio.

Successful companies balance their future product portfolio through strategic roadmaps, and offset high-risk and high-reward projects with other safer ones. These companies are also effective in prioritizing, and ruthless in deciding which projects to invest in and which to kill off.

### 5. Learn development from startups.

Development practices such as Lean Startup and Agile Development also make sense for larger companies. Business Model Canvas is useful when innovating in a way that goes beyond only product functionality and can be recommended for all radical innovation.

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Synergy Group Europe SGE Ltd, founded in 1993, is a Helsinki-based, Finnish management consultancy, supporting its clients in innovation, strategy and operational topics.

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