

How Top Innovators Get Innovation Right: Results from Arthur D. Little's Third Innovation Excellence Survey

Georg Beyer, Jasper Boessenkool, Anders Johansson, Per I. Nilsson and Frederik van Oene

Improving innovation ability is today the most important lever for increasing profitability and growth. But success is mixed. In just about all industry sectors the 25 percent most innovative companies have 2.5 times as many new products and get 10 times better returns on their innovation investment than the least innovative ones. In 2004 Arthur D. Little conducted its third Global Innovation Excellence Survey on innovation management. In this article Beyer, Boessenkool, Johansson, Nilsson and van Oene present the key findings and show how companies can benefit from them.

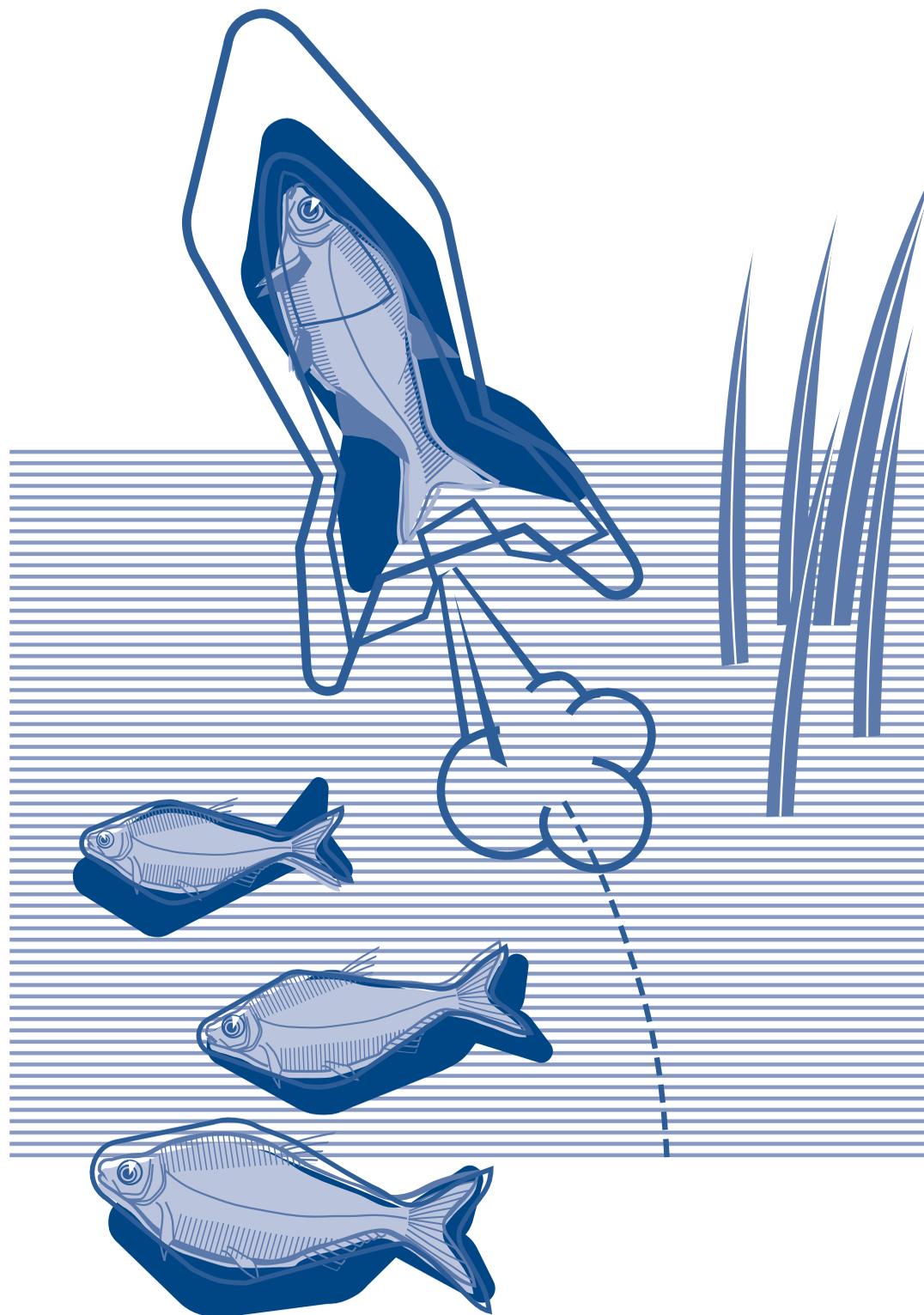
After years of cost reduction, restructuring and downsizing, innovation now tops the corporate agenda for growth. Many companies strive for it but few get it right. The ones that do get it right, however, are the corporate success stories. Not only do they have more and better products, but they also convince with much better results from their investment in innovation. We wanted to understand:

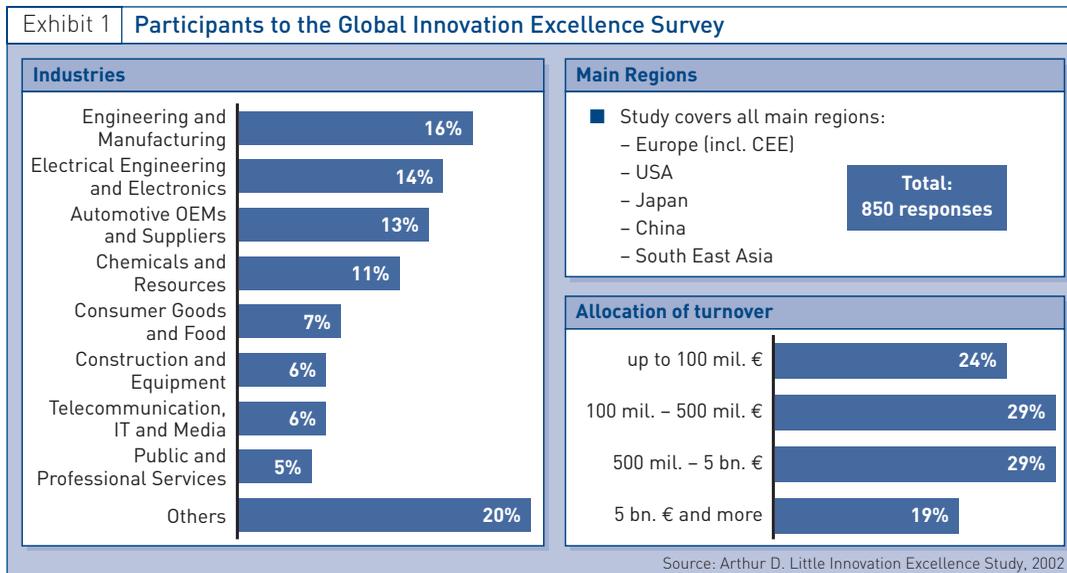
- How much better the really good innovators are; and
- What they focus on to get these improved results.

To this end Arthur D. Little conducted its third Global Innovation Excellence Survey in 2004 and early 2005. More than 800 companies from across the globe provided their insights on innovation excellence in a broad range of industries.

Innovation management is an intricate management process: it is multi-functional, multi-faceted (companies have to get many parts right before the process works well), there are no or few prizes for coming second, it involves a partially conflicting mixture of creativity and serendipity, and it requires a well oiled approach to turn good ideas into new value - be it in the form of new products, new services, better processes or even whole new business concepts.

Over the past decades companies have learnt a lot about creating the conditions to foster good ideas and to turn them into value. Yet many companies are deeply dissatisfied with their innovation performance. The untapped potential to improve profits through better innovation management is huge. The participants to our survey indicated that, if their innovation management were best-in-class, their Earnings Before Interest and Tax (EBIT) margin would go up by a staggering 4 percentage points from an average of about 15 percent.





We know that there is a big spread among companies in different industry sectors regarding their investments in innovation and the share of new products in their sales. Some industries, like utilities and logistics, spend only a few percent of their sales revenue on R&D, while others, like pharmaceuticals and aerospace, spend 10 percent or more. Some industries, like chemicals, typically replace about 5 percent of their product line per year, while in sub sectors of the electronics industry the figure is closer to 50 percent.

We also tried to shed light on how much better results the very good innovators in a sector obtain relative to the less good ones. So participants in each industry were segmented into four groups, indicating how well they performed in innovation management, defined as the ratio between the share of sales generated by new products and services launched in the last five years and the share of sales invested in R&D.

What really struck us was that in just about all industries the top innovators (defined as the best 25 percent of the survey participants) perform dramatically better than the weakest 25 percent. Top performers, on average, have 2.5

times more new products, and get a 10 times higher return on their innovation investment expressed as the ratio between the share of sales generated by products launched in the last five years and share of R&D budget relative to total sales.

This article provides an evaluation of the untapped potential of improving profitability and growth through better innovation management. We also try to answer the question of what companies do and can do to exploit this potential. The article makes four main points:

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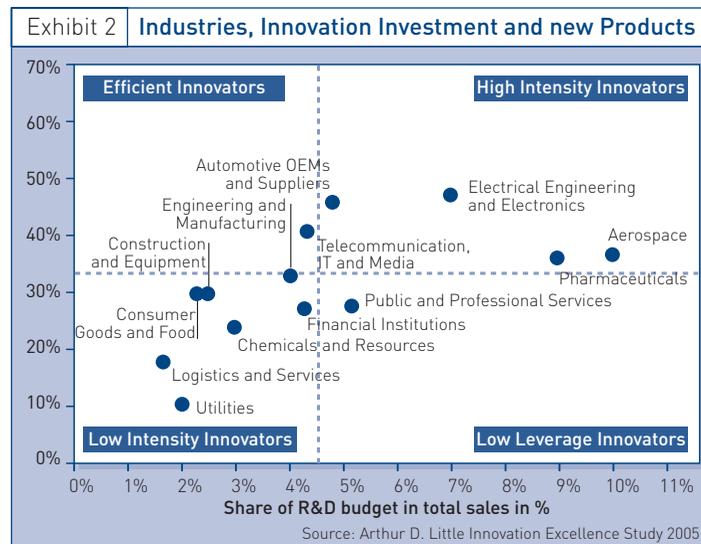
1. Innovation-based profit growth tops the corporate growth agenda again;
2. Innovation excellence can boost EBIT margins by 4 percentage points from 15 percent to 19 percent;
3. Top innovators get more than 10 times higher returns from their innovation investments;
4. Top innovators focus on customers, clarity of purpose and great people and get the highest impact from idea, technology and resource management.

1. Innovation-based Growth Tops the Corporate Growth Agenda Again

On average our survey participants invest 4.5 percent of their sales revenues in R&D. This gives them new products (on average, 35 percent of the sales of our survey participants come from products not available five years ago), new services, better processes, new business and valuable intellectual property.

As exhibit 2 shows, there are fundamental differences between industries with regard to innovation investment and the share of new products.

In spite of these differences, however, companies across most industry sectors and regions believe that improving their innovation ability is at present the most important



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lever for enhancing profitability and growth, followed by cost-cutting, growing existing products and growing via acquisitions. It is noteworthy that this is also the case among the more than 100 Chinese companies that participated. They indicate that on top of a very competitive cost structure, they are quickly building their innovation capability and plan to become very strong competitors at the global level.

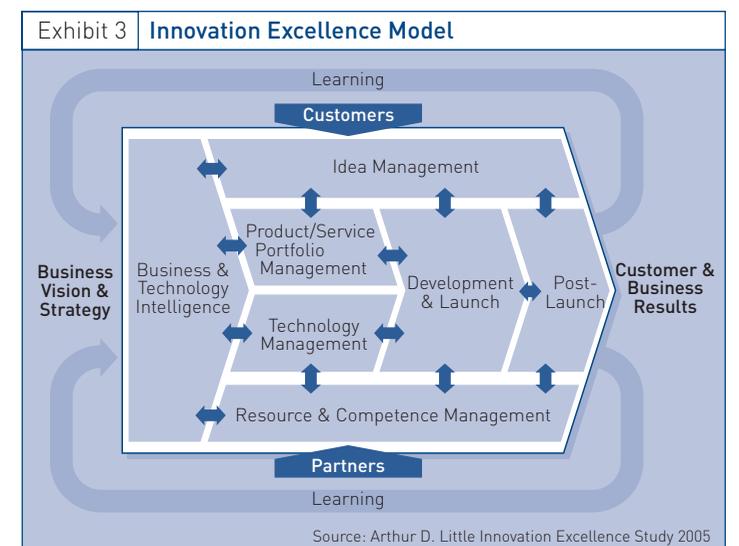
2. Innovation Excellence can Boost EBIT Margins by 4 Percentage Points from 15 Percent to 19 Percent

For decades the business world has been working hard to improve innovation management. Important improvement areas include:

- Improved understanding and involvement of customers;
- Systematic technology scouting;
- Developing roadmaps of customer needs, technologies and product features;
- The development and use of structured idea generation;

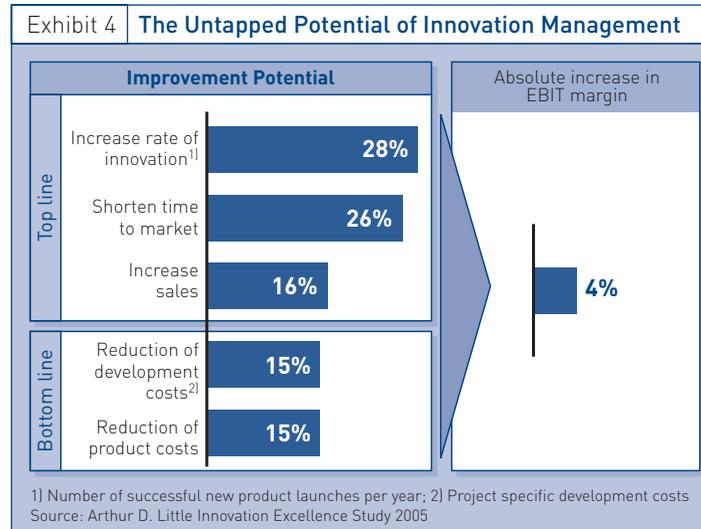
- The use of portfolio management;
- Stage-gate-based project management;
- The increasing use of partners from outside the company in the innovation process (“open innovation”);
- Globalisation and outsourcing of innovation;
- The use of IT to support the innovation process.

Exhibit 3 (Arthur D. Little's model of innovation excellence management) shows the main areas of progress and provides a convenient framework for continuous improvement of the innovation capability of a company.



In spite of decades of work on innovation management, the survey participants indicate that they still see a huge untapped important potential of no less than 4 percentage points of EBIT.

One interesting finding of the study is the apparent contradiction that, in spite of decades of work on innovation management, the survey participants indicate that they still see a huge untapped important potential of no less than 4 percentage points of EBIT. Exhibit 4 shows the impact of better innovation management on the top and bottom line.

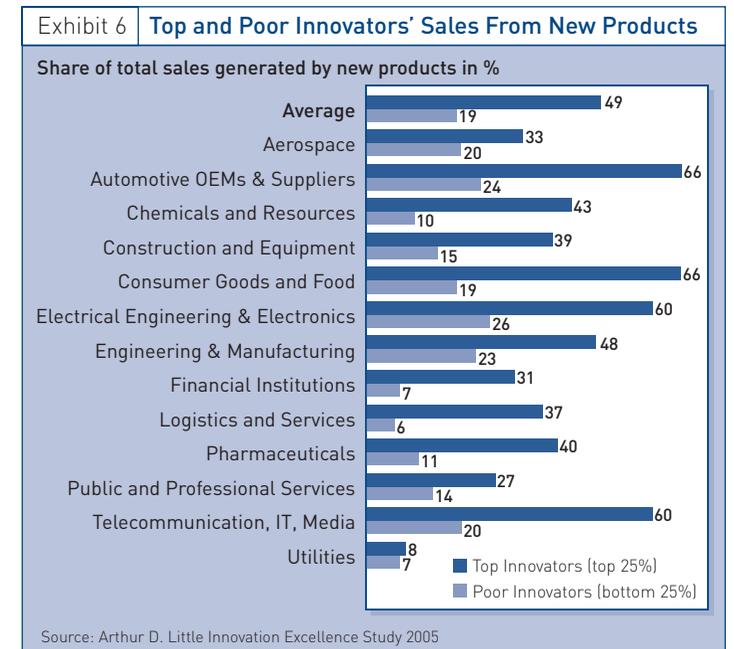
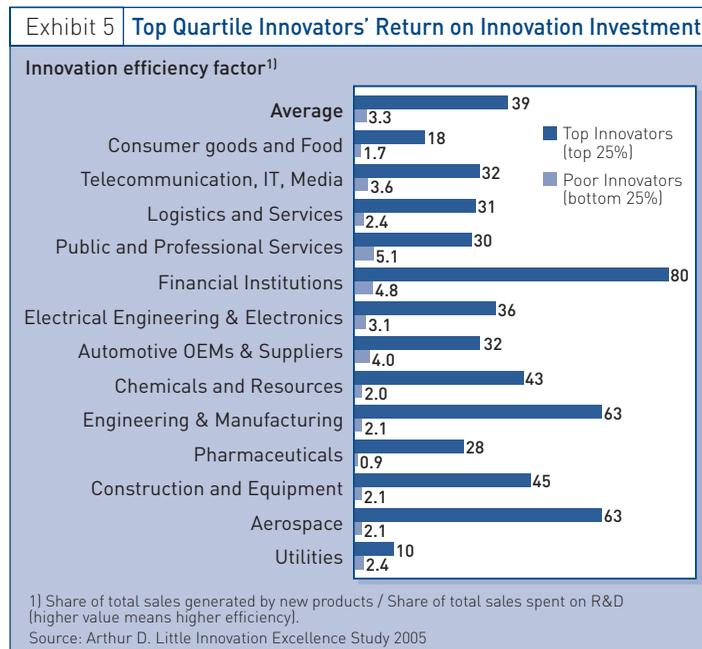


3. Top Innovators Get more than 10 Times Higher Returns from their Innovation Investments

Although all companies stress the importance of good innovation management, there are dramatic differences between the performance of strong and weak innovators. As stated in the introduction, four groups were defined in

each industry, each representing 25 percent of the survey participants in terms of their innovation performance (defined as the ratio between the share of sales generated by products launched in the last five years and the share of their sales they invest in R&D).

Exhibit 5 shows the performance of the best and the worst 25 percent in the main industry sectors and reveals that the performance differences are very large, with a factor of 10 or more in most industries.



So top innovators are more effective and much more efficient in how they innovate than poor innovators, an interesting fact that applies across the board in all industries. The question remains as to why this is so and what we can learn from a better understanding of what characterises the top innovators.

4. Top Innovators Focus on Customers, Clarity of Purpose and Great People and Get the Highest Impact from Idea, Technology and Resource Management

To understand better what goes on among the top innovators, we reviewed in more detail:

- Their innovation goals;
- The activities from which they get the best impact on their innovation performance;
- The key success factors that they target with priority.

Top innovators are mostly driven by meeting the needs of their customers (exhibit 7).

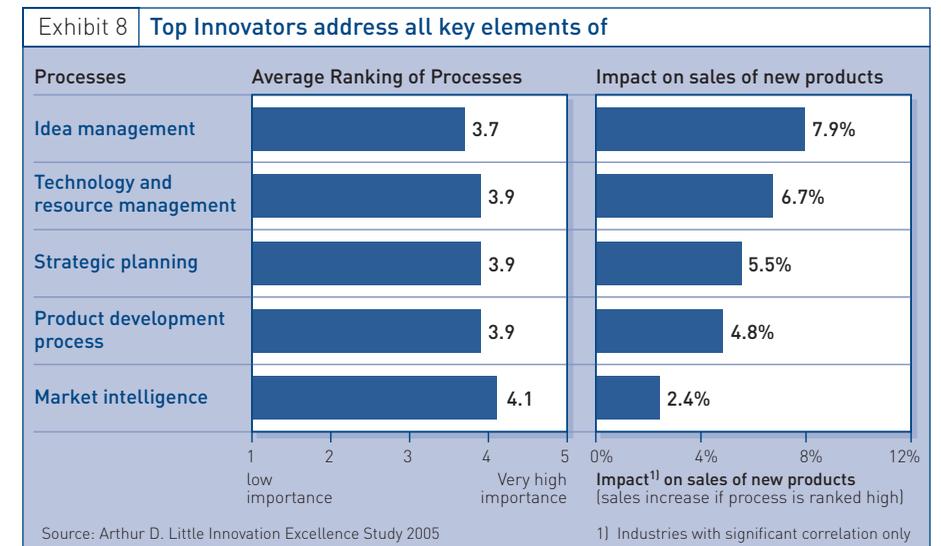


Top innovators simultaneously address all the key elements of innovation ability.

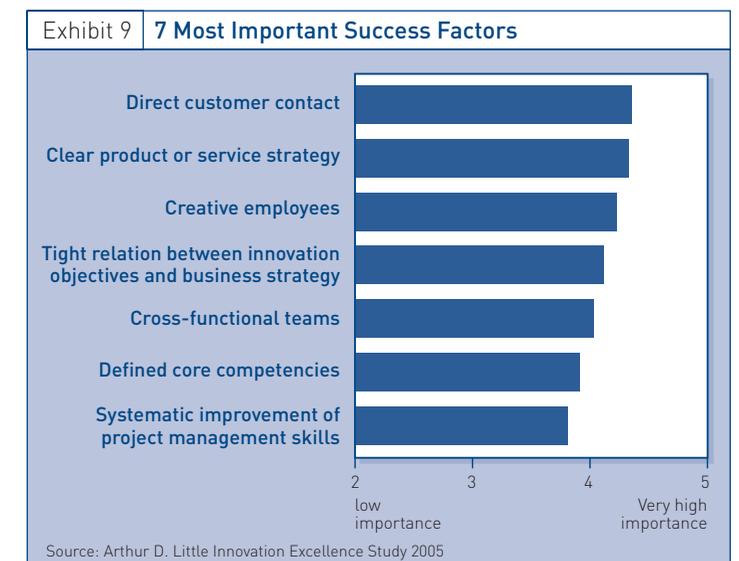
Even more interesting is that top innovators simultaneously address all the key elements of innovation ability (exhibit 8), including market intelligence, strategic planning, idea management, good product development process and technology and resource management. They seem to realise that the strengths of a company's innovation capability can be compared to a chain, where the overall strength is determined by the weakest link.

When we look at the correlation between these different elements of innovation ability and share of new products, we see that focus on idea management gives the highest contribution.

When we look at the bottom quartile, we also see that companies in that group express their belief that all elements of innovation ability have to be in good shape. The additional element that matters is the quality of execution among top innovators, which produces much better performance.



The last point scrutinised in the study was the question of what top innovators consider to be the most important key success factors (exhibit 9).



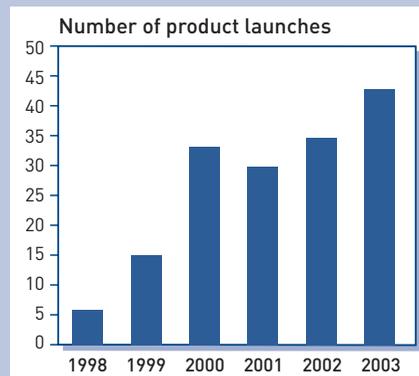
The way in which Tetra Pak went about improving its innovation ability reinforces this point.



Several years ago, Tetra Pak, a world-leading packaging company, faced tougher market situations and decided to strengthen its innovation capability. They took a holistic approach and started a systematic journey to build leadership in innovation, focusing on three priority initiatives: structure, process and measurements and tools.

- **Structure**
Appointed corporate Chief Technology Official (CTO) and an Innovation Process Board to lead the improvement activities; introduced a number of other organisational bodies, e.g. technology strategy council, centres of expertise.
- **Process**
Worked to refine and implement processes for all the sub-processes of the innovation process, e.g. product development, idea management, business intelligence.
- **Measurements & tools**
Introduced a balanced scorecard including innovation measurements in managers' scorecards; introduced a web-based interactive tool to support implementation of processes and execution of projects.

Impressive results have been reached so far, but Tetra Pak considers these changes part of a never-ending journey of improvement.



Creative employees in direct contact with the customers get the highest ratings. How 3M Medical is involving lead users is a good example of this success factor in action.



To develop a new family of antimicrobial draping products, 3M observed and interviewed lead users from their target market (battlefield surgeons) as well as lead users from analogue markets (make-up artists). Combining the knowledge from the first (speed is premium) and the latter (new ways to attach things to the skin) group, 3M was able to introduce a radically new approach for patient infection control and to set up a long-term growth strategy for their Medical-Surgical department. The success from lead-user projects at 3M (average sales of \$ 146 mil. per year, eight times higher than annual sales of conventionally developed products) underlines again the importance of integrating customer knowledge into the innovation process and therefore meeting customer needs effectively.

To get a clear and efficient link between technical objectives and overall strategy, leading innovators increasingly use the platform concept, i.e. an area of related activities or components where good opportunities for innovative cross-fertilisation exist. Using platforms builds critical mass, stimulates spin-offs and reduces complexity. Toyota illustrates one aspect of this concept.



During the 1990s a common problem among automotive manufacturers became evident at Toyota: How to build highly differentiated products (car models) with less differentiating parts (components/platforms). Toyota realised that the solution could be found in the cooperation of the design division, usually emphasising the product's uniqueness and the product planning division, usually trying to maximise component sharing. With the introduction of the C21 platform strategy this conflict has ended and both divisions now work together on a lean design. Through this advanced technology management Toyota was able to increase the number of models per platform and boost production and revenues.

Top innovators find it “normal” to look at their competences across the boundaries of their company. Open innovation - innovating together with partners from outside your company - is rapidly growing in importance. The cooperation between BMW and ZF is a good illustration.



BMW and ZF, in cooperation with a small electronics company, were able to develop a completely new approach towards car steering by using the tight German network of metal and electrical companies. Active steering abolishes the fixed proportion between steering wheel turning and wheel turning, allowing the steering to combine agility, track stability, comfort and safety. The innovative development approach and the technological solution enhanced the partners' innovative image, won an innovation prize in 2004 and is highly demanded by customers (40 percent of all new BMW 5 series are ordered with the new steering).

Another company, one of the leading energy and chemicals producers, makes the point of the importance of outside sources even more dramatically by giving R&D the informal second definition of “Rob & Deploy”.

Insights for the Executive - How your Company can Benefit from the Survey Results

If you want to further improve the innovation performance of your company, Arthur D. Little has a few suggestions to make:

- a) Review your performance relative to your industry peers and global “best in class”, using, amongst others, the detailed results of our survey. It is important to know how good your company really is. As an example, we saw how a good diagnostic in the Tetra Pak case really inspired the organisation.
- b) Cover all the links in the innovation management chain. The survey results clearly show that a comprehensive innovation approach is the key to success covering:

- First-class business intelligence;
- Clear innovation objectives linked to strategy;
- Milestone-based idea generation and implementation process;
- Use of resource platforms and modularisation;
- Measurement of/feedback on innovation performance;
- Wise use of partnerships.

- c) Go for continuous improvement of quality.

Although improving innovation management capability is hard work, we hope that the results of our survey provide you with inspiration and insight to better make the next steps on the road to innovation excellence. It is a long and busy road, with increasingly knowledgeable travellers from all regions of the world. But the results are well worth the effort.

For more details on the Third Global Innovation Excellence Survey; please visit our website.

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