

THOUGHT LEADERSHIP FORUM

PRODUCTIVITY - TAILOR OR FAILURE 4TH MARCH 2003

OOO FIRST TUESDAY ZURICH

GDI for economic and social studies



Results and Findings

Think Tank > Panel & Discussion > White Paper

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Foreword

An introduction to the Thought Leadership Forum and Topic

Thought Leaders

The 21 leading experts who brainstormed about Productivity and select Interviews

Thought Starter

Commissioned research providing industry background information

White Paper

Results of the Productivity Thought Leadership Forum

Keynote

“The Networked Virtual Organization: A roadmap for enhancing productivity”

Evening Keynote Speech by Marc de Simone, Vice President Technology Solutions and Corporate Marketing, Cisco Systems

Producers

The producers behind the Thought Leadership Forum

Presenting Partner:



Knowledge Partner:



Forum Partners:



Media Partner:



Foreword

■ Foreword

The Thought Leadership Forum is more than just a conference. It is a learning process, which includes preliminary research, a structured software-supported brainstorming session bringing together a relatively small group of Thought Leaders, an evening presentation and discussions with a larger audience and finally the publication of the key findings in a White Paper.

■ The Question

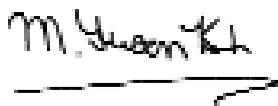
Faster, cheaper, better has become a dead end – it seems. Michael Porter still believes that “the only meaningful concept of competitiveness is productivity”. But how can you measure productivity when in today’s information society the main factor of production is knowledge? What other factors carry the greatest potential for increasing productivity? Capital? People? What about all the new technologies? Did they really keep their promise of increasing productivity? How do you measure and increase the productivity of whole supply chains?

These and other questions were debated during the Thought Leadership Forum and you can find the key results in this White Paper.

■ Thanks

A very special thanks to our Presenting Partner Cisco Systems, our Knowledge Partner PricewaterhouseCoopers, our Forum Partners Microsoft and T-Systems. Many thanks as well to our Software Partner groupVision and our Media Partner Financial Times.

We would like to extend our thanks to the Thought Leaders, the staff of First Tuesday Zurich and the GDI and the evening attendees for their attendance and contribution.

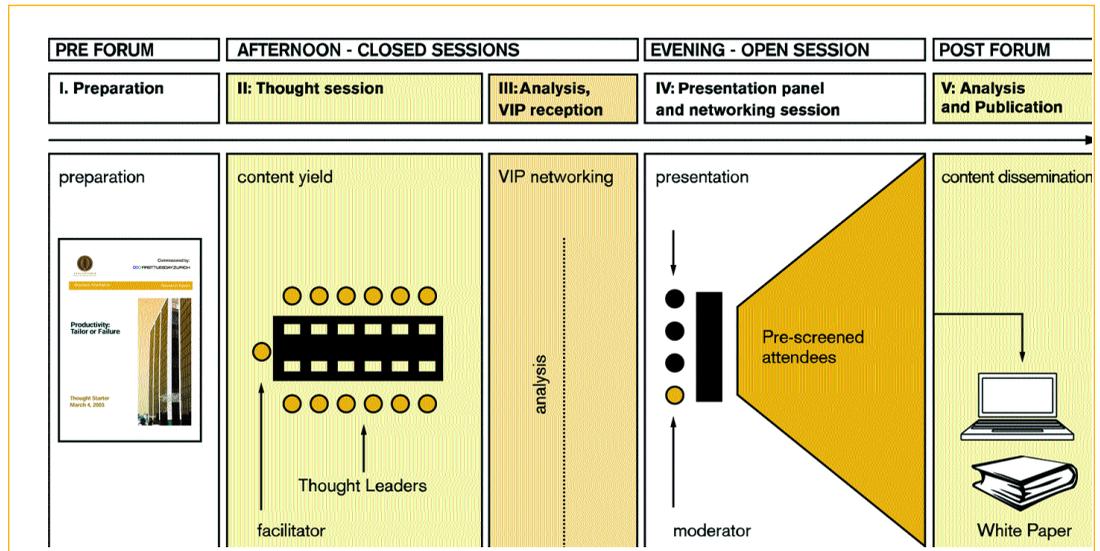


Susan Kish
First Tuesday Zurich



Samuel Dubno
Gottlieb Duttweiler Institute

Foreword



■ The Format

Prior to the Thought Leadership Forum, a Thought Starter report providing background information on the topic is commissioned and distributed to the participants.

The Forum begins with a structured brainstorming session bringing together a relatively small group of Thought Leaders focusing on the topic in the afternoon. Decision-makers from various sectors, backgrounds and with differing perspectives are gathered to accelerate the development of new and meaningful insights and ideas.

Following the Forum, the results are analysed for the first time.

These results are presented and discussed with a larger evening audience.

A second round of analyses, including the evening discussion and feedbacks, is performed and the results are published in a white paper.

■ The Results

Included in the results from the Forum are the following papers:

Thought Starter: The purpose of this paper is to provide background research about the topic and current trends. It was commissioned by First Tuesday Zurich and the GDI, and written by Evalueserve.

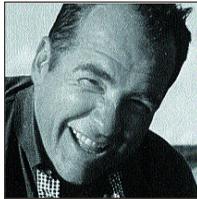
White Paper: Key analysis of the results of the think tank among the Thought Leaders and the input of the evening VIP audience.

Interviews: Personal views expressed by select Thought Leaders on the topic.

Keynote: Transcript of the keynote address from Mark de Simone, VP Technology Solutions & Corporate Marketing EMEA, Cisco Systems.

Thought Leaders – Interviews

Productivity focus: Nils Hagander, Co-Founder, a-connect ag



In spring of 2002 Nils Hagander co-founded a-connect, which proved to be rapidly successful at providing talent “management resources” on a temporary basis to corporations. His background provided the foundation: after four years at Citibank, he worked for McKinsey & Company in Zürich, rising to senior partner level and operating as Leader of Client Service Teams in Switzerland and abroad, primarily focused on financial institutions. Nils is also a Board member of the travel company Kuoni (chairman of nomination and compensation committee).

Does the nature of your business, which involves matching companies with freelance talent, mean that you can’t measure productivity in the classic way?

I think there is always a common point in any measure of productivity: it has to be grounded in your value proposition as a company. In our case, that proposition is to help companies get the right talent to do the task at hand. So what’s important to us is the skill of the people we have, the cost of finding them, developing them, keeping them in the pool. On the client side, what we measure will be the quality of the work and the number of renewed contracts.

Today during the forum, we saw very little discussion of the classic productivity model as it’s used in industrial manufacturing. In general, do you think people’s vision of what “productivity” means has changed?

The good thing today was the broad consensus to focus upon output in assessing productiveness, but I think the discussion showed that we still need to work on viewing this as a dynamic system. We had a very intense discussion about whether you should be judging productivity against your competition. I firmly believe that you should, because that is the only way to build and improve.

You don’t think productivity can be judged without competition?

Absolutely. If you have a business that creates excess value, it will eventually attract competitors. Otherwise, it’s not a good business. So you have to take a dynamic perspective toward judging productivity, by analyzing two aspects. One is the level of productivity within the sector; the mistake many companies make is that they look backwards and they say, “We improved by 10 percent,” without realizing that in their market sector other companies improved by 20 percent. The second aspect is determining the core of the business. If you had measured the productivity of a pharmaceutical company 10 years ago, you would have focused on R & D productivity; today you would look at marketing productivity. Only your competitive position will tell you what the relevant metric is.

Unless, of course, the whole industry is wrong - in the past you had linear changes within sectors, but today we can see transformative moments where whole industries shift. How often do you think people need to re-examine their metrics for productivity?

I don’t have one answer. But in all the industries that I am familiar with, change is only accelerating. You thought you were on course to beat the competition, yet suddenly you find yourself competing on something new. In this way, today’s productivity issue is more a strategy problem than a measurement problem. Because if you always derive your productivity measure from your competitive situation, you will adapt it according to the market dynamics.

Thought Leaders – Interviews

In the 8 months you've been in business, have you already had to alter your vision of what productivity means?

We started with the idea that succeeding was a pure demand problem, because the market is down right now. So we measured ourselves on how much demand we could create. But then we very quickly found that even in today's market, the supply side is very important. So we shifted our entire focus to the quality of people we could recruit: at the beginning it was very unsystematic and now it's very systematic in terms of screening our talent pool. That change in focus was totally counter intuitive to us.

Now we are considering that perhaps the most important factor is the knowledge that we can provide to corporations. Because our clients want people with a tool kit and industry experience. So now we need to focus on developing knowledge systems among our pool and we need to measure the productivity of the investments in developing new knowledge.

So after 8 months, you're starting to see your third shift in what productivity means?

I think in startups, that's not uncommon. The good startups were always the ones that were sticking to their long-term business plan, but taking loads of tactical turns. When I look at my clients and at Kuoni, where I'm on the board, they spent the bulk of their time doing 2- and 3-year business plans. That's exactly the wrong approach. They should be spending a lot of time on a 5-year vision and a lot of time on monthly and quarterly performance management. And the rest...hey, whatever - it's too unpredictable an environment to make accurate mid-range plans.

But if you are a startup and you're shifting how you measure your productivity every six months, doesn't that create a certain amount of insecurity among investors?

If I was an investor, I'd be much more nervous about a company that wasn't changing its productivity metrics. I think the good VCs understand this dynamic strategy very well. Fortunately for us, we are not capital-intensive. If we had a lot of external capital - especially if it was not intelligent capital - it might be harder to make those shifts.

Productivity focus: M. Patrice Müller, Partner, Ipolitit & Hubertus SA, Geneva



Patrice Müller is an expert on the watch & jewelry industry. He started in the Swiss watch industry and learned the key industrial concepts at Richemont Group, then spent six years as consultant with PricewaterhouseCoopers.. Since 1999, Mr Müller has been a Professor at l'ESSEC University in Paris, for the MBA program in International Luxury Brand Management. Presently he is a partner at Ipolitit & Hubertus SA - an independent M&A and strategy firm specialized in the luxury goods industry - advising several international brands.

At the Forum today, you were one of the few people involved in an industry where there are actual physical products. I would imagine that for you productivity is defined in a different way than for most of the other participants.

My first definition of productivity comes from my work with watch parts. I always think of it from a systemic point of view. You have the process, which is a black box. You have the input - it could be raw materials, it could be semi-finished products. And you have an output, which could be finished parts, or semi-finished products.

In that black box, there is transformation, requiring resources - that could be human resources, machines or technology. So we can define the concept of raising productivity as enhancing the process from input base to the output base, taking into account all the elements required to decrease costs, reduce delay, increase quality, increase quantity and enhance the image.

Thought Leaders – Interviews

Two issues you raised several times during the Forum were creativity and perception, and obviously these are elements that are not measurable in classic quantitative ways.

To me it seems there's a lot of confusion between competitiveness and productivity. By "productivity," I mean measuring your company from the client's standpoint and from the internal side, and by "competitiveness" I mean measuring yourself against other companies. To me, competitiveness involves creativity, which is not always a part of productivity. In luxury goods, the added value is not made by reducing the production costs. For example, Patek Philippe sells watches for 10,000 CHF. Their client is willing to pay a price to have access to a unique product. - the issue is creating the market. Creativity is an important part of that, but costs are not a key driver.

In any industry – it could be fashion or automobiles or banking - you have companies that are at the top of the pyramid, and they can charge a premium because they are in that position. So to judge the productivity of these types of companies you need to measure the capacity for creating added value, in terms of the return on investment or by market capitalization. I'll give you an example: DeBeers was just a mining company extracting and producing diamonds, until they decided to start retailing their own branded diamonds so they could capture the huge margins in that sector. Their market cap increased dramatically once they were perceived as a luxury group, not a mining company. Likewise for Hermes, 90 percent of the market value comes from goodwill and intellectual property.

It's a different definition of productivity, based not on cost concepts, but on more intangible concepts like the brand and the design. For example, if you take Versace, the added value of Gianni Versace was his design and the mix of his colors, which you could spot from far away. With Dior today, you recognize the touch of Galliano, which is a mix of vivid colors. This has nothing to do with classic examples of productivity, because with haute couture you only produce one of such a product and it's already sold before you present it.

But if you are a manager at a company like Dior or Patek Philippe, how would you judge whether or not you are productive?

This is very delicate, because we are speaking about intangibles. The concept of quality or productivity is not the same as with steel production. You bring added value by launching a new product or changing the designer. Image is a concept that is very hard to measure. But if you're someone like Rolex or Louis Vuitton, producing high volumes, then the concept of traditional productivity is also present, just like in the car industry or any other manufacturing industry.

What struck you today in the Forum?

The emphasis on how information flows through an organization. Because in the manufacturing of luxury goods, we also have a flow of information that parallels the production process. In the watch industry we have a huge potential to develop before becoming as modern as the car industry or the pharma industry. The problem is that the watch industry is dominated by small companies, often with less than 10 people; they're not familiar with the internet or advanced administration techniques. I've seen many cases where consultants tried to re-engineer production cycles and they had real trouble with getting any acceptance by the employees.

Again, at the high end of the luxury-goods industry you can't play too much on classic productivity. For a small watchmaker like Breguet, where it might take a year to produce a watch mechanism, productivity is irrelevant - the customer has already paid and will get his watch once it's finished. Actually, classic productivity is the opposite of what you want: if you produce a highly standardized product in high volumes you start killing your image. Because if everyone has access, then it's not a luxury brand, right?

Thought Leaders – Interviews

Productivity focus: Krishna Nathan, Director, Zurich Research Laboratory IBM



After ten years of working for IBM, Dr. Krishna Nathan came to Switzerland in 2002 to direct the Nobel prize-winning Zurich Research Laboratory. Prior to that, from 1999 to 2001, Dr. Nathan was director for consumer voice systems in the software group, where he was responsible for world-wide sales, marketing and development of IBM's consumer line of speech products.

At the Ruschlikon research labs, you're dealing with work that involves the production of ideas, not the production of physical objects. In some cases, with basic research, people might work on something for 7 years and then suddenly a breakthrough happens - or doesn't happen. How do you measure productivity in such an environment?

Being a research lab in a large corporation, we measure our productivity using many of the factors that you would expect, like the number of patents issued, the number of publications by researchers, the external honors that we receive. To us, if someone wins a Nobel prize then it's a definite sign of productivity, even though a traditional economist might not recognize it that way. But that Nobel prize winner here can attract more good people, which then means, in the future, better work is produced overall.

We also have another factor that is very measurable, which is our contribution to IBM's business. Although we are a lab, we have a portfolio of work that's fairly evenly distributed from near-term tactical projects to long-term basic research. So one way I measure what the lab does is to sit down at the end of the year with the heads of the business units. There we get feedback that says, "The guy running servers achieved fantastically, because without him we could never have shipped this particular project in time." Or maybe it's the opposite: "We were waiting for this breakthrough that research promised us for six months and it never came, and that meant we had to shelve a whole project." That sort of feedback is a very important measure, because our lab's value is ultimately related to what we bring to the corporation.

So, on far-horizon projects you're looking at patents and papers, while for short-horizon projects you're looking at value derived from bringing things to market. But what about the research that falls in the middle?

It's a little of both. Often what we're trying to do there is establish mindshare for something that IBM views as strategic. It could be a particular standard or a particular technology. Even if the work going on is still secret, you still have to prepare the terrain for it, which means they have to publish externally. So for these guys I'm looking at how they're doing in convincing the rest of the industry. It's also important to assess how much they've been able to convince the rest of IBM to adopt the standard, by making the case that there's a measurable improvement being developed here. For example, it could be something in security - let's say an intrusion-detection scheme - and we want to prove that with this method you would need only four operators and not eight. You can't deploy a prototype across 100,000 people, so you try to deploy it across 30 people to prove its worth. But I also have tons of projects in that middle ground that can be measured by patents. Because our patent portfolio gives us freedom of action in the marketplace, we're equally maniacal about inventing, whether it's long-term or middle-term area.

So ultimately, measuring productivity is very project-dependent: if it's services engagement, then pilot projects are key; if it's a software engagement, then maybe it's scalability that's key.

Thought Leaders – Interviews

In a classic productivity equation, failure is always bad. But with the far-horizon projects, many projects will fail. How do you weigh that?

I do not expect every project to come to fruition, and we definitely take the approach that failure is part of the equation. But I think the key is to act quickly and early, as opposed to letting it drag on. Knowing when to pull the plug reflects upon your productivity, because it directly impacts how you distribute your resources. So if something doesn't work out, in terms of judging our work we have to ask ourselves whether there was some wishful thinking involved and if we should have pulled the plug earlier.

As a manager, how hard a change was it for you to come to the Ruschlikon labs, in terms of dealing with productivity?

I think it's a definite adjustment, because the metrics are very different. When you're managing a classic business division in some sense it's very simple - essentially, you have a profit-and-loss statement, and your goal is to squeeze the most profit from your revenue by not exceeding your expense budget.

Now, at the lab I certainly have a budget that I'm expected to live within, but the focus is not on the quarterly number; it's on working the right projects. The question I ask myself every day is, "Are we relevant to the IBM Corporation?" And my second question is, "How do I increase that?" So if I think we're not very well-engaged with one division, I start asking if we have skills in their area and should be trying more to get that division interested.

We judge a project's success primarily based on its impact to IBM, not on its pure research value. If we come up with a wonderful technological breakthrough that can't be commercialized, then it has much less value for us. Not that we're stifling research; we know some things take 10 years to develop. But it's part of my job to make sure - once these technologies are ready - to turn them into products. It has to be that way, because otherwise, you get this mentality of developing stuff in research and then just throwing it over the fence to the rest of the company to let them figure it out. And that's the death of any 21st-century research organization. To be truly productive, research has to be active in the technology-transfer process.

Thought Leaders

Name	Company Name & Title
Beat Arnet	SUVA, Director of E-Business, SW-Engineer
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Markus Fischer	FHZ-IWI / HSW Lucerne, Lecturer for e-Economy & e-Society
Nils Hagander	a-Connect, Co-founder & Partner
Albert Hofmeister	Swiss Ministry of Defence, Civil Protection and Sports, Chief Inspector and Head of Internal Audit
Jakob Knüsel	Fed. of Migros Cooperatives, Executive Industry Director, Member of the Executive Board
Ernst Messmer	Lombard Odier Darier Hentsch & Cie., Executive Vice President Information Technology
Pierre Muckly	Canon (Switzerland) AG, CEO
Patrice Müller	Ipolitix & Hubertus SA, Partner
Krishna Nathan	Zurich Research Laboratory IBM, Director
Artur P. Schmidt	Blue Planet Team Network, Writer, Futurist, Management Consultant, Keynote Speaker
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Alexander Stüger	Microsoft, General Manager
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Facilitator:	
Paul de Ligny Boudreau	GigaGroup, Chief Research Officer
Keynote:	
Mark de Simone	Cisco, VP Technology Solutions & Corporate Marketing EMEA
Moderator:	
Susan Kish	First Tuesday Zurich, CEO
Executive Producer:	
Maria Finders	Independent Advisor, First Tuesday Zurich

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Evalueserve Research Expert: **PRODUCTIVITY - TAILOR OR FAILURE**
Business Information – Market Overview 04/03/03 – Research Expert

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Thought Starter

EXECUTIVE SUMMARY

The rapid pace of globalisation and the forces driving it have created new market conditions. Productivity is going to be a determinant of success. However, the changing nature of business and its organisation, as well as the changing nature of the markets, require new concept of productivity, its improvement and management.

Many considerations are possible in terms of defining and measuring productivity. This Thought Starter proposes a conceptual framework that is quite different from existing approaches. It makes the case for looking at productivity along two very different dimensions: Efficiency and Effectiveness.

While efficiency reflects the existing definition of 'productivity', i.e. an input/output relationship, 'effectiveness' widens the concept to reflect discontinuities such as new business models, disruptive products and technologies and the like. The importance of 'Effectiveness' has increased strongly due to the increase in speed of innovation.

Especially in the knowledge economy, the intangible factors such as knowledge, information, motivation, creativity and innovation play an important role in managing 'effectiveness'.

Companies need to address efficiency and effectiveness concurrently, but a large part of managers may not have the necessary skills in such a dynamic environment.

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OVERVIEW

The report covers the following:

- THE CONCEPT OF PRODUCTIVITY
- INVESTING FOR PRODUCTIVITY
- LEARNING FROM EXISTING EXAMPLES
- FUTURE TRENDS

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■ THE CONCEPT OF PRODUCTIVITY

No matter how you define or measure it, productivity is key to management effectiveness. It could be said, that without productivity objectives (short to long-term strategies), a business does not have direction. Thus without productivity measurements, it does not have control. There are many alternative, equally valid but different, approaches to view productivity. In this Thought Starter, we have chosen to consider the following:

Productivity technically is the rate of output per unit of input

A simple way to look at productivity could be to say that it is the quantitative relation between input and output of the production process, while economic viability means the relation between expenses and return. Productivity is:

$$\frac{\text{Output of combined factors (goods, services, knowledge)}}{\text{Input of production factors}}$$

As it is practically impossible to measure productivity on a company level, it is usually measured for single production factors, for instance:

Table 1: Examples of productivity measurement

Labour productivity	Machine productivity	Area productivity (Retailers)
$\frac{\text{Amount of products}}{\text{man hours}}$	$\frac{\text{Amount of mfr goods}}{\text{machine hours}}$	$\frac{\text{Turnover}}{\text{SQM}}$

Essentially, it describes the ‘efficiency’ with which inputs are converted into outputs.

While this concept works well to describe ‘incremental’ productivity gains, e.g. 3% productivity improvement in a steel plant due to multiple technical changes, it is not well suited to measure discontinuities in productivity, e.g. a new business model rendering an existing one obsolete. This is particularly true in the knowledge economy. To illustrate this further: a company may produce a product very, very efficiently, however the product itself may be obsolete. Therefore the company may have been efficient, but not effective.

Productivity is a function of effectiveness and efficiency

Another more comprehensive way to look at productivity incorporates both efficiency (use of resources) and effectiveness (effective accomplishment of goals). It means how much and how well the organisations produce from the resources used.

The case could be made that in today’s information-based economy, the second approach is more relevant because of the following:

- **Intangible inputs/outputs:** In the information-based or knowledge economy, both the input and output are intangible, and hence are difficult to measure. In this context, the better way to look at the productivity of a company could be to consider it in terms of effectiveness and efficiency
- **Focus on customer need:** The output/input approach takes into account the value addition to the end products. However, productivity at the organisation level is a measure of how well the company satisfies the customer’s needs. For example, a company may be productive in terms of converting inputs to outputs, but may not be effective in meeting the requirements of its customers

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Productivity gains in countries and industries

Analysing productivity gains in OECD countries shows that there is an increasing gap between so-called ‘productivity gains’ as shown by public statistics (defined as ‘efficiency gains’) and growth rates in the economies. The US has consistently outperformed the EU during the last two decades in growth of the economy (US 80’s: 2.9%, 90’s: 2.5%; Europe 80’s: 2.4%, 90’s:1.9%), while it has lagged Europe on average ‘productivity’ gains (US 80’s: 1.1%, 90’s: 1.2%; Europe 80’s: 1.9%, 90’s:1.5%). This gap could be explained by many factors of macroeconomics. Let us suggest a slightly provocative statement: The gap could also be explained by the higher gains in ‘effectiveness’ by the US economy. It is a fact that the US economy has produced more patents and more new business models than Europe, where structures are far more set and established by unions, labour law, lack of VC financing, etc.

Similar effects can be found when comparing various industries. Asset-heavy industries have naturally a very ‘efficiency-driven’ model, e.g. basic materials or engineering. However, knowledge-driven companies have a far more effectiveness-driven approach. Let us look at Pharmaceuticals. An invention by very few people can produce a blockbuster drug that makes all existing drugs at least partly obsolete. The question of efficiency in production or sales is certainly still important, however, it is probably an order of magnitude less important than having found and patented the drug in the first place. In the case of Lipitor, a lipid-lowering drug produced by Pfizer, a single licensing decision, produced a blockbuster for Pfizer.

Productivity tree

In light of the above, we propose the following framework for productivity, which continues to evolve, but still captures the most relevant factors of productivity better than a pure ‘efficiency-driven’ definition of productivity.



■ INVESTING FOR PRODUCTIVITY

For a firm, productivity is crucial for competitive survival under global competition. Firms constantly strive to achieve productivity improvements through investments in areas such as technology, training, etc.

Only companies that manage both aspects of productivity will succeed in the long-run, especially in knowledge-driven industries. In the following, we have tried to give good and bad examples of productivity management to illustrate the points.

Successful examples of productivity increases

Improving both efficiency and effectiveness can bring about an obvious impact on productivity.

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Improving efficiency

Table 2 below shows examples of investments that have successfully led to productivity improvements through improving efficiency.

Table 2: Investments to improve efficiency

FOCUS OF INVESTMENT	ORGANISATION	INVESTMENT DETAILS	RESULTS
Technology	InteSys Technologies, a custom-injection moulding company	<ul style="list-style-type: none"> Automation: Replacement of manual operators by a robot 	<ul style="list-style-type: none"> Cycle time reduced to 40 seconds from 50 seconds
Technology	Yorkshire Water, a water management company	<ul style="list-style-type: none"> Integration of IT systems Implementation of B2B procurement software 	<ul style="list-style-type: none"> Improved customer service due to faster response times Improved decision making
Technology	Atlantic Air Survey, a geographic information technology company	<ul style="list-style-type: none"> Use of new software for editing images and quality control 	<ul style="list-style-type: none"> 20% efficiency gains in data editing and collection
New management control and reporting system	Heineken, a brewery	<ul style="list-style-type: none"> New system enabled daily interaction between management and shop floor Improved maintenance management system 	<ul style="list-style-type: none"> Operational Equipment Efficiency increase of 20% across nine packaging lines Change towards a self-managed team based organisation
Enabling management processes with technology	Cisco Systems, a networking technology provider	<ul style="list-style-type: none"> Shift to e-learning to train 300,000 channel partner employees and 40,000 Cisco employees 	<ul style="list-style-type: none"> Cost savings of \$4,000 per student Faster time to market of new products by provision of 'Just-in-time' training
New management tools	Honsel, a lightmetal processing company	<ul style="list-style-type: none"> Application of Six Sigma tools and methods Integrated Management Control and Reporting System to increase transparency 	<ul style="list-style-type: none"> Internal rejects reduced by 21% Product returns reduced by 40% Availability of production equipment increased by 7.5%
Optimisation of business process	Thomas Cook UK, a travel company	<ul style="list-style-type: none"> Co-sourcing (shared management) of finance, IT, and Human Resource functions 	<ul style="list-style-type: none"> Streamlined operations Reduction in cost Increased profitability

These examples of improvement can be bucketed into the following categories:

- **Technology & Operations:** Re-designed supply chains e.g. through B2B sourcing platforms, 'marginal' and 'continuous' improvements in technology e.g. through automation, process redesigns
- **Front-end improvements:** CRM, Sales Force Support & Management Systems, improved marketing
- **New organisational structures:** Core Process-focused organisations, Outsourcing, Offshoring and global arbitrage, freelance networks
- **HR policies:** Faster and better communications, remote working models, better transparency and management, training and e-learning, etc.

Improving effectiveness

Table 3 below shows examples of investments that lead to productivity improvements through improving effectiveness.

Thought Starter

Table 3: Investments to improve effectiveness

FOCUS OF INVESTMENT	ORGANISATION	INVESTMENT DETAILS	RESULTS
New operating systems	Sony Broadcast and Professional Europe, a supplier of audio, video equipment and systems	<ul style="list-style-type: none"> Supply chain integration of Japanese factories with European sales organisations using ERP software Change in production model from "supply push" to "demand pull" 	<ul style="list-style-type: none"> Cost savings due to inventory reduction Better demand planning and customer service
Acquisition of relevant skill set	Infosys Technologies, a software company	<ul style="list-style-type: none"> Outsourcing of skill-sets not possessed by the company 	<ul style="list-style-type: none"> Flexibility in bidding for projects Lower fixed costs by not maintaining a 'strategic bench' of employees with all possible skills
Utilisation of new technology combined with a novel operating method	Dell Computer, a computer vendor	<ul style="list-style-type: none"> Direct sales to customers of build-to-order computer systems Online transactions including technical support 	<ul style="list-style-type: none"> Dell became one of the top five computer systems makers worldwide Revenues of \$40 million of online sales per day

There is an increasing speed of change of business systems and product churn. The average life cycle of existing business systems and products has decreased significantly. In some knowledge-driven industries life cycles of products are as low as six months.

Again successful examples can be bucketed into the following categories:

- **Business systems:** Category killers in retail or DELL with its new distribution system; breakthrough improvements with great customer value, e.g. 1-hr photo, eGovernment;
- **Technology:** Break-through in R&D for Optical Switches rendering 'electronics' obsolete in switching
- **(True) Knowledge Management:** Cross-functional sharing of knowledge (not just an IT system with lots of data)
- **Organisational models:** Ability to attract the best innovators (it can be shown that the R&D productivity of researchers can vary by a factor of 100); organising around core processes enabling much faster time to market, e.g. reducing development times in Pharma from 12 years to less than 7 years; access to 'remote skill' creating very high customer value, e.g. 'remote surgeons'

Unsuccessful examples of attempted productivity improvements

Table 4 below shows examples of investments of doubtful impact on productivity.

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Table 4: Investments leading to non-obvious productivity increases

INVESTMENT AREA	SHORT-TERM CONCERNS	POTENTIAL PAY-OFFS
E-commerce	<ul style="list-style-type: none"> • Extra expense of setting up an e-commerce web site • No value-added to the products sold online 	<ul style="list-style-type: none"> • Added convenience to customers • Global presence to attract potential customers • Lower processing costs
Allfinance	<ul style="list-style-type: none"> • Very high complexity in sales and operations • Limited customer benefit at least for now 	<ul style="list-style-type: none"> • ‘Allfinance’ and package for customers • one stop shopping • effective leveraging of cross –sales opportunity
Pharmacogenomics	<ul style="list-style-type: none"> • Smaller patient groups targeted, which may lead to lower revenues • Higher costs 	<ul style="list-style-type: none"> • Faster approval • Higher efficacy • Fewer side effects of developed drugs

■ LEARNING FROM EXISTING EXAMPLES

Organisations across different industries have learned that conscious efforts can bring about dramatic one-time productivity improvements as well as very substantial annual productivity increases. They have also realised that productivity must be planned. It must be built into all management systems and practices. Successful companies manage a mix of improvements in effectiveness and efficiency.

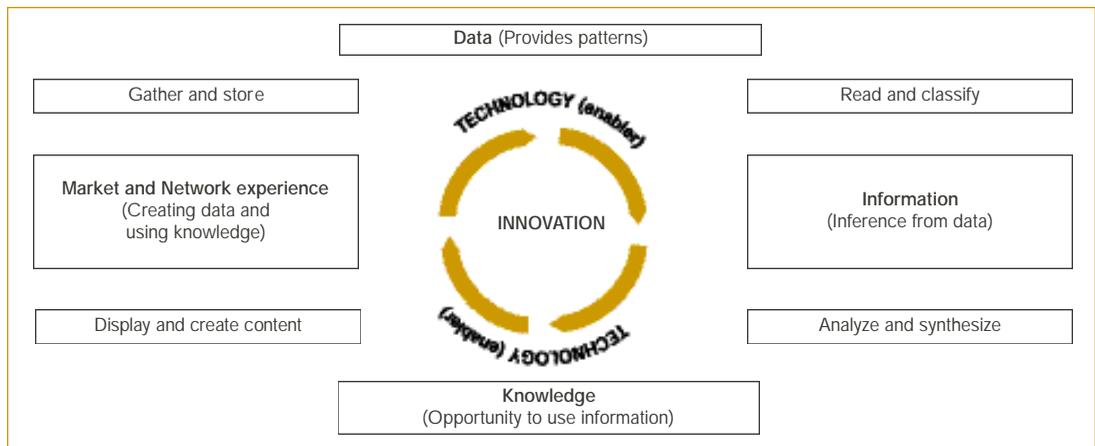
Key factors in managing productivity

Based on learning from productivity improvements the following are some of the key factors for managing productivity:

- **Innovation is the key for a sustainable productivity increase and long-term survival of the firm:** Innovation leads to a new system that confers competitive advantage until it becomes the industry norm. Thus, companies have to follow a constant cycle of innovation in order to have sustainable increases in productivity.

Figure 3 below illustrates the innovation cycle in the knowledge economy

Figure 3: Innovation cycle in the knowledge economy

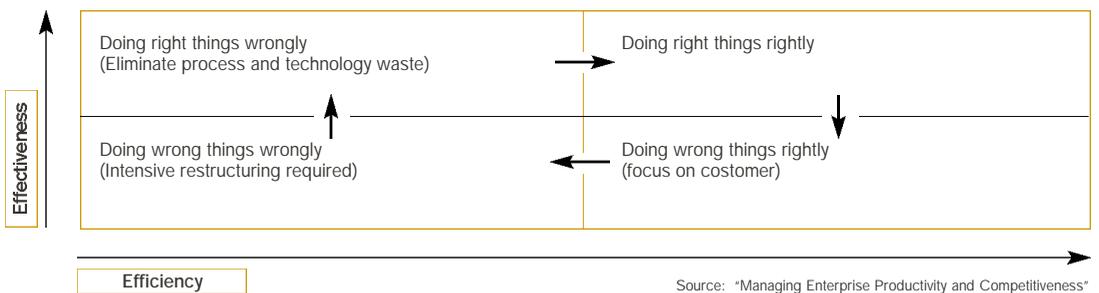


Source: "Limitations of Knowledge Management", EVS Analysis

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- **Both effectiveness and efficiency are crucial in managing the productivity of an organisation:**
As shown in the productivity square (Figure 4) below, maximum productivity gains by a firm can be obtained by being both effective as well as efficient

Figure 4: Productivity square



- **Intangible factors of production have become more important:**
In the knowledge economy, the intangible factors such as knowledge, information, motivation, creativity and innovation play an important role in managing organisational productivity
- **The approach to productivity management must be constantly re-invented to make it relevant to the present context:** A firm requires different approaches to productivity at different times because of the changing environment
- **Agility is crucial to realise productivity gains:** As the challenges to sustain productivity are changing fast, firms not only need to quickly adapt to new technology, but also utilise it in an effective way to reap productivity gains
- **'Cash is King':** Successful companies monitor the payback from productivity investments very carefully. Anything with a payback beyond five years will hardly produce productivity gains anymore apart from a few special cases
- **An organisation-wide productivity focus is essential:** In order to be effective, the focus of a productivity improvement strategy should expand to encompass the organisation and not be limited to the individual. Employees can be very productive individually, but unless their efforts are aligned towards the goal of the firm, no gains would accrue
- **Organisational productivity strategy has to integrate the firm's goals with those of the employees:** Productivity improvements are initiated by managers and sustained by satisfied employees. Therefore, an effective partnership between management and employees is necessary for productivity growth
- **Human resource practices are strategic in managing productivity:** Human resource practices focus on the 'human factor', which is the key to any productivity improvement.

Barriers and challenges to productivity growth

Managing productivity is not a simple task. The majority of managers take a very short-sighted and fragmented view of productivity. Some of the main barriers to productivity growth are:

- **Resistance to change:** Avoiding or resisting change within an organisation hinders the growth of productivity. For example, management stifling innovation to preserve the status quo; workers opposing implementation of a new technology because of their fear of redundancy
- **Lack of skilled manpower:** Inability to train existing employees or find suitable qualified manpower to serve increasingly complex processes is a key challenge to sustaining productivity growth
- **Unrealistic expectations:** Expectation of a quantum jump in productivity improvement actually prevents productivity gains. For example, projects being scrapped before significant benefits accrue; mega-projects, which are difficult to co-ordinate and ultimately, end in costly failure

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- **Focus on short-term profits:** Focus on short-term profits leads to optimisation of existing systems and stifling of innovation. In the long-term, innovation through creating better systems, increases productivity
- **Lack of awareness of productivity improvement processes and techniques:** Lack of awareness of recent challenges to productivity growth and the processes and techniques required for the same, act as barriers to productivity growth for many organisations
- **Distorted view of technology:** Considering a new technology as a panacea may lead to misguided investments. For example, in the area of Information Technology (IT), a survey by KPMG International found that worldwide, 56% of the companies had failed IT projects in the past one year. The largest failure cost £133 million with an average of £8 million per failed project

■ FUTURE TRENDS

Productivity gains through improving efficiency

While the classic sources of efficiency improvements will continue to exist, we expect an increased activity in the following domains:

- **Increased outsourcing of non-core activities:** More companies are outsourcing their non-core activities as a result of a greater focus on core processes, falling communication costs, and the use of standardised technology. It has been estimated that firms can save 10-20% of their costs by onshore outsourcing. Offshore outsourcing to third world countries can lead to savings of 30-35%. As a result of increased offshore outsourcing, the Business Process Outsourcing (BPO) market worldwide is expected to double from \$208 billion in 1999 to \$543 billion in 2004. While this offshoring has existed in physical production for several decades, this concept is being pushed into the services domain. Since a large part of the economy is services-driven, the impact will be very high in areas where face-to-face contact is not necessary. This may affect up to 20% of the GDP of any country
- **Improved CRM and Sales Support:** While some companies have started leveraging 'true' CRM and sales support tools there is still a wide scope for improvement
- **Emergence of a flexible work organisation:** Driven by technology and employee preference, organisations are adopting the concept of a flexible work organisation. Flexibility in the work organisation leads to greater work efficiency by achieving higher employee satisfaction and motivation

Productivity gains through improving effectiveness

Future productivity gains through an improvement in effectiveness would come from the following:

- **Emergence of specialised companies:** Across industries, there is a trend away from large, vertically integrated firms towards specialist firms. These firms focus on an individual stage of the value chain (e.g., semiconductors). Specialist firms are more responsive to customer demands because of their greater focus. Specialisation also aids innovation
- **Increasing trend towards strategic alliances:** Increasingly complex technologies and processes have encouraged alliances. For example, in the pharmaceutical sector, small, R&D focused, biotech companies have entered into alliances with financially stronger pharma companies, in order to commercialise a drug
- **Emergence of a network of small and medium-sized firms:** Networks of small and medium-sized firms are going to emerge as they offer the dual benefits of flexibility and economies-of-scale. E.g. biotechnology clusters

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- **Increasing ability to access skilled manpower:** With increasing globalisation, the labour pool will expand as technology enables firms to tap worker's skills across national boundaries. For example, sub-contracting saves firms the cost of developing skills in-house
- **Emergence of customised products and services:** The shift towards mass customisation (the Build to Order (BTO) concept), reduces inventory wastage, resulting in greater productivity

Implications for today's managers

These trends will have a very strong impact on manager's skill profiles. We would assert that less than half of today's managers have the necessary skills to operate in such an environment. The breaking up of value chains and the increasing 'fuzziness' and 'openness' of business systems requires a whole set of new skills.

Managing effectiveness and efficiency in ever-faster cycles will stress the manager's abilities.

The following are the key implications for today's managers:

- **Expertise in creating and managing knowledge and knowledge-carriers:** In future, the manager must not only facilitate innovation but also utilise available knowledge to improve efficiency of processes. Even more importantly they must be able to attract and manage knowledge-carriers
- **Global business skills:** As firms expand across borders, managers require global business skills to maintain a competitive edge
- **Working in 'open architecture' environments:** With the increasing importance of networks among companies the skills for working in such complex environments will increase even further.

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White Paper

Productivity – Tailor or Failure

Summary, results and quotes

■ Introduction

On March 4, 2003, a group of "Thought Leaders"- 21 men and women drawn from fields as diverse as manufacturing, information technology, private banking, government and academia - gathered at the Gottlieb Duttweiler Institute to discuss a constant obsession in today's hyper-competitive economy: Productivity. Indeed, a survey conducted beforehand among the participants revealed that 74 percent of them judged productivity to be the single most important competitive factor in business.

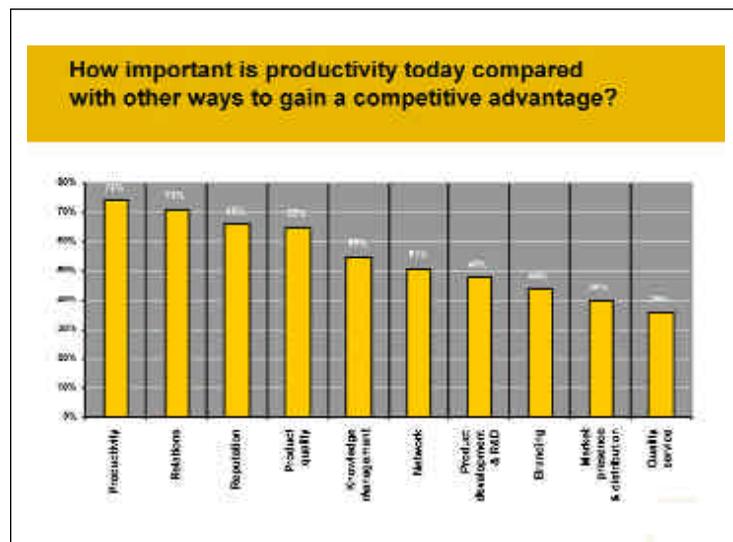


figure 01

While letting productivity become a company's *idée fixe* can raise the risk of its missing the big picture, few companies survive without devoting serious time and energy to the topic. Productivity has been closely studied for centuries, but during the Thought Leadership Forum it became clear that the classic "output per unit of input" definition has been severely strained by recent changes in how we work. A host of complicated issues were raised by the Thought Leaders such as the progressive transition from more easily quantifiable physical production to the more abstractly defined knowledge work and services delivery. These changes leave analysts struggling to find metrics for measuring input and output in areas full of intangibles such as brand perception, knowledge bases, creativity, etc. Likewise, the rapid, radical shifts within sectors and broader economies, often due to technological innovations such as e-commerce, broadband or wireless working, mean that input, output and productivity metrics are often instantly outdated.

Paul de Ligny Boudreau, Chief Research Officer of GigaGroup, directed the Forum's activities for the day, and pointed out early on that innovation and productivity often exhibit an uneasy

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co-existence. He cited a famous quote from Nicholas Negroponte: "Innovation is inefficient. More often than not, it is undisciplined, contrarian and iconoclastic and it nourishes itself with confusion and contradiction... And innovative people are a pain in the ass." In an age when more and more companies look to innovation as their main driver for productivity, this tension between the two can prove an especially thorny issue.

Defining Productivity

The first session of the Forum focused upon defining productivity. It quickly became apparent that no single definition is possible, except in most abstract terms, because a corporation, an NGO or a government agency all have fundamentally different priorities. In this case, where you stand on productivity depends on where you sit, i.e. your role and the nature of your company. Asked to define the term "productivity," two workgroups came back with quite different statements:



- "The ability of a system to enhance the output from a defined input, within a process regarding the key drivers - which are cost, delay, quality, quantity, and image."
- "Delivering your Value Proposition ahead of your competitors efficiently and effectively."

The third group, asked for a definition applicable in 2010, developed the idea that productivity in the future will hinge upon the company's ability to understand the environment within which it functions and rapidly adapt to that system's changes. The production-line concept of productivity, they suggested, is dying a lingering death.

Productivity vs. Competitiveness

When the Thought Leaders returned from their workgroups and tried to synthesize their results, a heated debate erupted. The crucial question was this: "How does productivity relate to competitiveness?" On one side, some Thought Leaders held that productivity is primarily an internal measure, judged by assessing changes over time and in relation to the company's goal

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and culture. As one participant pointed out, "Every company has its own DNA. So what works in terms of productivity for Volkswagen would never work for Daimler-Benz."

The other camp swore that unless a company's productivity is benchmarked against that of others, any metric is useless. "Productivity needs to be measured against the current value proposition in the sector," said one participant. But others counter-argued that there are exceptions, like government agencies or monopolies, who cannot use such measures because they have no clear competitors. The counter-counter argument: That at some level, there's always competition, be it in the form of wider competition for capital, or for the disposable income and mindshare of customers.

Productivity, a moving target

There was almost universal agreement on the idea that any specific productivity measure can only be temporarily useful, for several reasons. As pointed out before, sectors change rapidly due to technology and economic factors, which means that productivity measures need to be constantly re-thought. "The ability to adapt to the environment is crucial," said one participant. "Look at nature and how microbes survive in a crisis, because they lose the proteins that strictly define their behavior."

Just as importantly, as companies change, the metrics of productivity must also be tweaked: What works for a startup, does not for an established corporation. "In the beginning, the productivity question is: Can we make money?" said one participant. "Later it becomes: How are we doing against the competition?"

Likewise, the legal and political framework within which a company operates can change rapidly; for example, new fossil-fuel emission laws have dramatically changed economic competition for manufacturing plants, as carbon credits become both a tradable commodity and a necessary asset. (Looking forward toward a dwindling-resources environment, one Thought Leader suggested a future metric for productivity, based upon how few finite resources were used up in production.) Finally, the more complex the structure is for creating an intangible product, the harder it is to generate any measure of productivity for each input factor.

Productivity metrics

Measuring productivity is just as complex as defining it. The metrics applicable for a startup and a mega-corporation are completely different. Likewise, manufacturing and knowledge-based businesses must use completely different benchmarks. In line with the earlier "Productivity vs. Competitiveness" debate, some Thought Leaders focused on internal measures like return on investment and efficiency, while others focused on more debatable external measures such as customer satisfaction, market share, and return clients.

The Future of productivity

Asked to look forward and judge the factors most critical to their productivity, four main currents emerged among the Thought Leaders:

- focusing on developing and retaining talent
- focusing on the ability to change rapidly
- enabling effective experimentation
- creating a collective sense of mission within units and organizations

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The role of Technology

Technology is commonly portrayed as a strong driver of productivity, and the Thought Leaders experience supported that idea. In the pre-forum survey, they ranked "acquisition of new technology" as the third most important factor in driving productivity both in the past and in the future. But technology is no panacea. As Paul de Ligny Boudreau pointed out, "Technology is a potential source of productivity, but often it's not very well implemented. Is the IT the problem or is it the humans?"

For many Thought Leaders, the answer was clear: Blame the humans. As one participant said, "We've seen a lot of investment in 'productivity,' and lot of it has been done stupidly, with no clear payback."

Which IT works - and which doesn't

In terms of specific technologies, Thought Leaders judged the most successful ones to be:

- electronic procurement and fulfillment
- e-learning
- online time reporting
- electronic supply-chain management
- product auctions

The least helpful in their opinion were:

- e-commerce portals
- knowledge-sharing platforms
- online financial reporting
- online customer support
- internet company chat

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Man and machine

Not surprisingly, the Thought Leaders decided that the human/technology interface remained a key issue in terms of technology's value as a future productivity driver. After discussing the issue extensively, the Thought Leaders voted on a list of issues that will play a major role in how much technology will help. Of the ten highest-rated, six were tied more to soft factors than to hardware.

table 01

Top 10 Voted List

01. Synchronize managed processes with all relevant partners
02. Flexibility of tools, people and organizations
03. Integration
04. Mobile working and connectivity
05. Improve learning processes
06. Transparency and trust
07. Networks / Intranet / Internet
08. New rules, new ethics
09. Mobility-pervasive access
10. Knowledge management-data mining
11. New investments
12. Information access-retrieval
13. CRM
14. Training to maximize benefits from IT
15. Involvement of users, citizens, NGOs
16. Data mining + warehouse
17. National and international networking
18. Web-based systems
19. Hardware (Chip Technology)
20. Workflow systems
21. Manufacturing
22. Multi cultural, disciplinary, everything...
23. Faire savoir et savoir faire
24. Management reporting
25. ERP
26. Office package - Software
27. Sales force automation
28. Video communication

The Role of Human Factors

In the pre-Forum survey, Thought Leaders declared that raising productivity ultimately lies in the hands of the people most closely connected to individual projects and products. Asked to rank various factors in future productivity advances, 80% of the Thought Leaders put managers first while employees follow close behind at 76%. In a separate question, employee resistance to change and lack of knowledge were ranked as the two highest threats to productivity, while the biggest potential advances were judged to come from empowering employees with information.

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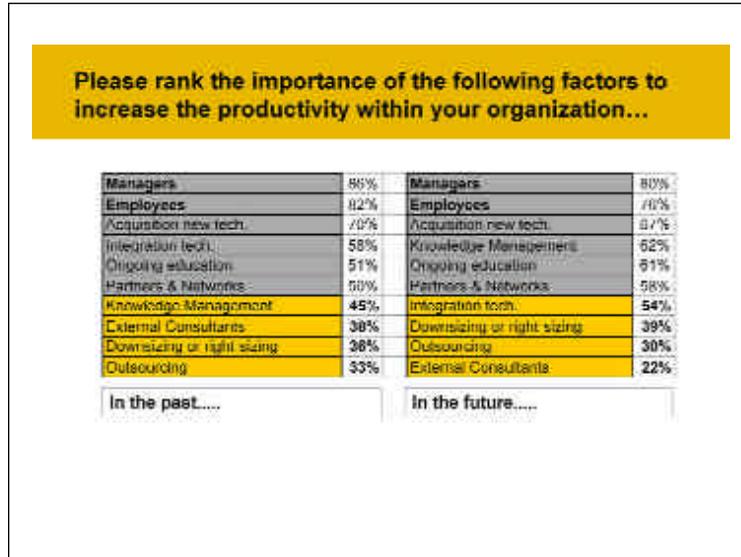


figure 02

Management and employees: The terrain shifts?

Within the smaller work groups, there was a huge emphasis on the shifting relationship between management and employees, including the ever-more diverse workforce - which in this case referred to working mothers and foreigners. And let us not forget the generation gap: Describing the strikingly different problem-solving tactics and work habits of "MTV Generation" workers, one Thought Leader remarked, "They don't sit down to make a detailed plan - they just start doing the work. How can we measure the productivity of people who don't work in systematic ways?" A power shift towards the workers became clear, with Thought Leaders stressing issues such as empowering employees, creating transparent reward systems and demanding higher management accountability. There was a general agreement that sharing knowledge and power with employees was critical. "You can't motivate people," noted one thought leader. "They have to motivate themselves." Likewise, they agreed that one prerequisite for such employee initiatives is creating a smooth information flow within the organization. That requires a certain transparency, but also the active seeking and sharing of information by management. Just as importantly, the Thought Leaders stressed the risk of a workforce feeling disturbed or threatened by change.

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table 02

Top 10 Voted List

01. Higher accountability of management (E)
02. More freedom (E)
03. Creating a culture which fosters productivity
04. Communication infrastructure
05. Force management to dialogue with employees (E)
06. Better Internal communications
07. Build collaborative spaces
08. Flexibility of working models
09. Project management as role of organization
10. Training + Life long learning
11. Openness to extended enterprise
12. Redesign reward models
13. Leasing talents
14. Ensure "line of sight"
15. Reasonable gender solutions (E)
16. Ensure implementation
17. Focus initiatives
18. Headcount optimization Chart No 4 Top ten list

Fear: a productivity killer?

One recurrent theme involved transforming companies into an environment for allowing and encouraging in-house entrepreneurship within middle management. Not that this will come easily. "We say we want innovation and risk-taking, but what I see here in Switzerland is people being systematically 'killed' for taking of risks," remarked one participant. "We need to accept that failure is part of the innovation process."



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Is consensus productive?

While most of the Thought Leaders agreed in principle to the idea of sharing more power and information with employees, some felt this hierarchical shift could go too far. When one executive suggested that companies should be run much more by consensus, it triggered an uproar. "You can do a lot with sharing power, but managing by consensus will never work," riposted another executive. "Companies are not democracies." Then again, countered a third Thought Leader, the examples of Swissair and other fiascoes hardly make the case for more autocratic leadership.

Conclusion

To the extent that productivity clearly is a moving target, it is hard to extract actionable maxims from the Thought Leadership Forum. Rather, there are questions that any company must ask itself about its productivity: How is our industry shifting? How is our company changing? Do the metrics we track relate to our current situation? If not, do we need to start measuring more intangibles?

Clearly, in almost every industry adaptability and flexibility will play major roles in driving productivity. Just as clearly, communication - within the company and with clients - is critical to successfully making such adaptations. And technology can play a huge role in terms of enhancing that sort of information flow. But ultimately, employees are the critical factors to increase productivity, which means that they must both be empowered as productivity drivers and rewarded for productivity gains.

Keynote

“The Networked Virtual Organization: A roadmap for enhancing productivity”

by Mark de Simone

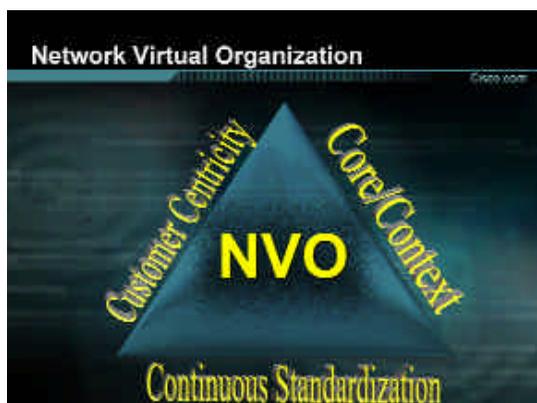
I would like to talk about an example of what happened at Cisco not as a theoretical exercise, but as a pragmatic, practical one of a company, which either by design or by luck, leveraged a little bit of technology to change the model of their business. We have a concept called ‘Networked Virtual Organisation’ which is a way to call how we do things. Interestingly, we got there from a random walk perspective: I think that element of the random walk (and its discovery) is something which is, now, a key element of productivity.

It is time now, in this moment of hesitation in the market place, to actually make some bold moves and move ahead to really leverage the hesitation that others are having, to gain a competitive advantage: this is a fantastic time to move ahead.

I want to ask an esoteric question: What if you could react to changes in the market faster than anybody else? Don’t forget that Cisco was reacting very well when it was going up, but interestingly, it reacted very well when it was going down, when the market was changing.

We are now much more profitable than when the market was booming. How do you capture that? Think about this: Cisco (20-30 thousand people), leverages an ecosystem of a million people. How do you move a million people when the market changes are fairly dramatic? How

could you capture the cost reduction of outsourcing while retaining control of the processes?



There are three elements to this. First, is having a customer-centric view of the world. The customer was typically added to the first list and wasn’t there initially. To empathise and really understand how your customer, and their customer, are looking at the market place. Then make the decision: what is core to your activities and what is context (you should not focus on how somebody could take your

context and make it their core). All of a sudden, if you dynamically decide what is core versus context, you’re optimising your DNA, your skill sets, your people, and your information. And then, at the bottom of this, continues standardisation. As you learn from your experiences with

Keynote

customers, through a good partnership with your partners, you bring the learning into systems and systemise. If you look at nature, at bacteria, and how it behaves - take a petri dish, throw in the worst of the worst changes, cataclysmic changes (eg. antibiotics); what do they do? how do they react? They actually leave the DNA strands that have kept them alive because they know they've got to change. So again, a networked virtual organization, or NVO, a continuing level of improving performance.

I'm going to leave you a testimonial of exactly what we did, and again it's about simultaneity of customer-centricity, core versus context, and continuous standardisation. Here are the examples: Think about customer-centricity and I'll give two examples. The first is in the services and support area. In fiscal 02, which ended in July, by having our customers able to interact with us in a more direct way through many interfaces (including the web), and being able to serve themselves information about solving their technical problems, we had a cost avoidance of \$455 million. Our revenues are in the \$25-30 billion range - that's a significant amount of money. If you think about that, we have not done that at the expense of our customer - quite the contrary. The customer was part of our value chain, of our extended family. So actually, customer satisfaction went up. Accessibility at Cisco, meaning knowledge, went up - cost went down. Is that a proxy for productivity? I would say so, because you're doing two things: making your customer happier, your value chain happier, and, you are saving money.

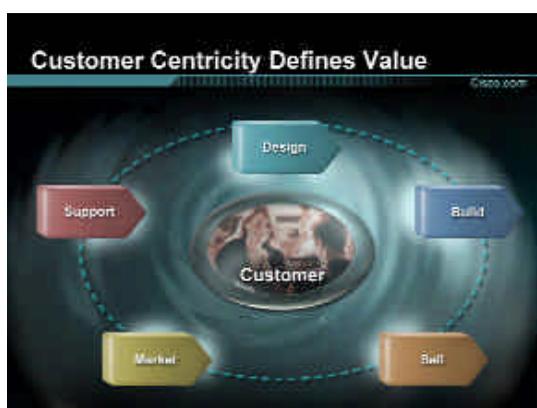
The other example: everything is online. It doesn't mean that we're just taking all the orders online - it means that every one of our customers can have a relationship with us, continuously, through the web, through our partners, our telephones etc. - but it's always there. If our customer wants to know: 'Did I get my shipment?', 'Where's my bill?' we're always there. That intimacy, which can really only be achieved through technology, uses a process that is an amazing win; that means, we have a pretty intimate relationship with our customer.



This is an example of what we do: we talk to our customers about how to do certain things. Charles Schwab. They looked at what we did with the relationship with our customers (CRM - customer relationship management). They said they wanted to do the same thing. And Charles Schwab, in the last fiscal year, added almost a million accounts because of this: that really leveraged about \$74 billion in new assets. They had a better, more intimate customer relationship through the use of technology. These are an example of customer-centricity

Keynote

Now, why is this important? When the world was different, simpler, there was this huge mass market and fundamentally, the value chains were fairly integrated. I want to make sure in a world of Tailorism everything is well articulated - there is design, build, market - these are completely different functions and yet it's a mass market. And, they were optimising (ERP-enterprise resource planning) that the thing is working for the generic customer.



However, we're going to a level of fragmentation where customers are really different, and they want to be markets of one - they want to be a billion markets of one. How do you solve that equation with a limited amount of resources? How do you create different value chains that address, dynamically, a different set of customer segments? Then, in the final analysis: How do you make sure that the functions of design, support, market, sell etc., are dynamically recomposing one another to serve the customer?

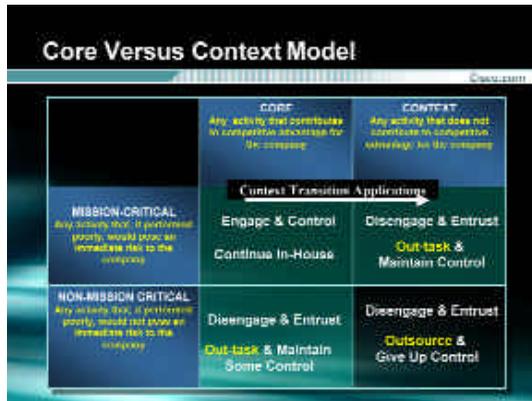


For example, what if you take out half the cycle time of a mechanical design process - let's say a car. What if Daimler-Chrysler could design a car in a year and a half instead of three? Think how much cash gets generated in that system and what it would take to get that company to generate a one and a half year improvement. What if you could apply that to ABB? What if you could take half the cycle time to do a new product (you can only do this if you're not orchestrating with hard wires) - if you're orchestrating all this value chain, all these

millions of people that work indirectly for you to solve the customer problems?

The second chapter is the core versus context. We talk about "out-tasking": What's the difference between „out-sourcing“ and „out-tasking“? There is one fundamental one: if you make a decision about what you do inside, and what others do better than you, you don't delegate the processes. The process remains your process. Remember when all the markets were going straight up, and then all of a sudden there was a big blip and the markets disappeared? What happened was, if you're in a value chain and you're not seeing the leading indicators of that change happening across the distributors, and then the system integrators, and then the company, and then the suppliers—if you don't link them through a process which is common, you cannot react.

Keynote



What Cisco did was to react very fast to the changes in the market place. If you are at the bottom of the food chain (where you are the last supplier in the food chain), how do you know that the leading indicator of customer consumption behavior is changing? How do you make sure your inventory levels, your decision levels-are appropriate for the new situation?

Take e-learning. How do you “out-task” the e-learning process to make sure you have an infrastructure that is leveraging your content

and the content-not only of your employees-but also the employees of your partners? This is what we do in manufacturing – I am sharing this as best practice.



We produce several billion dollars of revenue- we don't make one piece of it internally. We have zero manufacturing facilities. We don't actually produce anything, but we are a virtual manufacturer because we've got the factories of the other companies whose core responsibility is our context, and we link them together as a system. When we design things we can actually-virtually-together test the design and test the manufacturing process. Actually, we can do virtual quality control up front by making sure that these processes are

integrated. That's a view of productivity.

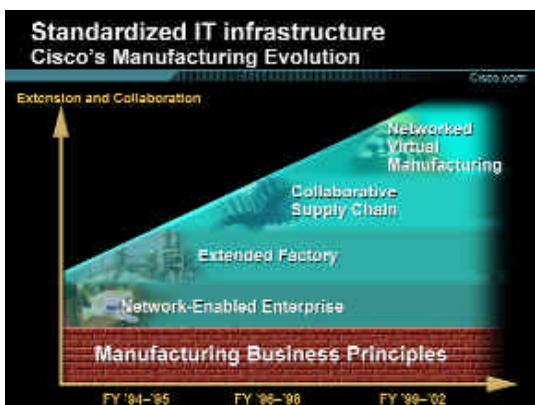
Manufacturing companies need to make sure that the systems, the processes, are well integrated and very flexible to be able to respond to market needs. Billions of components and millions of people that work around the Cisco ecosystem (and Cisco is only a thousand people in the centre) - that's leveraging the ecosystem. For example, British Petroleum (BP), in more or less the same area, again out-tasking, took the human resource benefits function out - but they retain control of the system. It's not somebody else's system-it's BP. The people that work in the process, even though they might be part of another company, are part of the BP HR process.

Cut costs 20%, saving of \$100 million a year and better customer satisfaction. We do the same thing internally. Every employee at Cisco has a huge amount of access to information about himself; about the staff that works for him; about other employees-and it's not about the leader

Keynote

(the manager) - everyone is a leader. All the way down, they know they can navigate the HR systems (which are often out-tasked to other companies in terms of specialisation, eg. payroll).

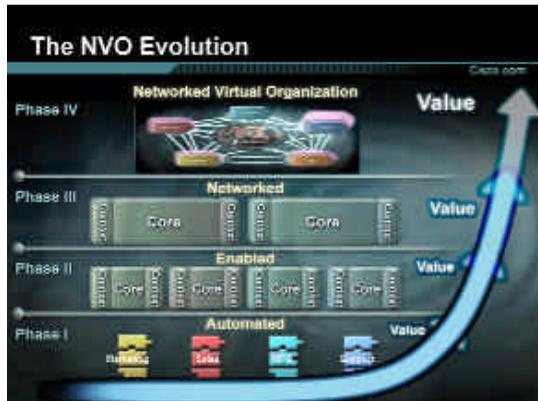
This is another very important point about core versus context. We talked about core versus context and then we talked about mission-critical activities and non-mission-critical. The suggestion we have, based on experience, is to focus on what is core and what is mission-critical. This is your core competence. This can change over time, but that's the area you really need to focus on. If it's core and it's non-mission critical you can entrust others and out-task, but maintain control. Similarly, if it's context and mission-critical you can disengage and entrust. If things are in context and non-mission critical: forget about it. You can obviously out-source and out-task easily and you don't need to retain a huge amount of control. For example, for a company of our size we can close our books every day, we can close our balance sheets and cash flow every day. We don't really care about the financial year because every day can be a financial year. Think about the competitive advantage we have in the market place just to be able to do that. And again this is another sense of productivity, the ability to know exactly where you are, and not just you, but your partners and suppliers.



Sales outstanding are in the order of 18-20 days. Why? Because we have a process that works seamlessly from the last supplier to the last seller. And, we think we can go negative on day sales outstanding. Think about the cash implication of that process. People like Wal-Mart are doing exactly the same thing in a very different area. At Wal-Mart, by doing this virtualisation of the back office and by understanding what's core and context, the sales for employee are \$175,000 per employee (they have a million employees). The

inventory turnover is 7.6 times (an industry average is 6.4). At the base of this though it's simplification. You have to understand the infrastructure of your company – the different architectures, the different legacy systems. You have a phone system and a data system. It's an integrated infrastructure because if you don't simplify that, you don't get to do all the other things. In the final analysis, the end user (the customer, the citizen, the employee) doesn't care how you do it; they don't want to see all this network world integrated- they don't care. That is just technology. What they want to see is this: one factory.

Keynote



So how do you evolve to a networked virtual organisation? First, you look at your existing processes and try to bring them together. Then you start thinking about your existing processes in different phases by saying what's core and what's context, and you simplify them. Next, you aggregate larger processes, on the front end - the customer life cycle management, and on the back end - the supply chain. Eventually you get to Nirvana: networked virtual organisation (which by design, its value always changes and you have

to continuously re-engineer your processes).

Suggestion: define your processes in an increasingly broader way than marketing - sales - logistics. Think about an end to an end process. Standardise these processes, think about scale and then look at the innovation from a customer perspective. Make sure you have enough experimentation going on so that you can learn and then evolve the model further. Call it NVO, or whatever. You've got to outperform your competitors, but you have to do that by responding more quickly to the „c“ word –customers. It's important to be more productive than the other guy, but you've got to be focusing on the customers and then the other „c“ word, collaboration. By collaborating better with partners, you're a piece of a value chain (not the end-to-end system), and then standardise fully as you learn.

We got here either by design or chance, and now it's an engine. We can't control how this is going to go, because the market for productivity is infinite, and therefore, we have a company that's acting with it's DNA where productivity is part of its core values.

Producers

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