

# OIVALLUS

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Interim report I

"NEW IDEAS ARE  
GENERATED AT  
INTERFACES —  
FUTURE CHALLENGES  
WILL BE RESOLVED  
IN LEARNING  
NETWORKS."

## SUMMARY

“Oivallus” – literally “Insight” – is a foresighting project launched by the Confederation of Finnish Industries EK. It explores the future competence needs generated by a networked economy.

The goal is to highlight the forward-looking perceptions of Finnish business and industry in decision-making regarding education policies. What will the working life be like in the 2020s? What competences and qualifications will the labour market need in the future?

This is the first interim report on the project that seeks to outline future operating environments and learning networks.

Waves of development, such as globalization, climate change and growing complexity shape the operating environment – how we work, what companies do, what industries produce, and what sort of housing conditions we will live in.

In many areas, the future remains a mystery; however, one trend is obvious: we will respond to the effects of these waves of development by networking with a range of other experts and actors. These networks are called learning networks.

## TIIVISTELMÄ

Oivallus on Elinkeinoelämän keskusliiton EK:n ennakointihanke. Hankkeessa tarkastellaan sitä, millaisia osaamistarpeita verkostomaisesti toimiva talous synnyttää.

Päämääränä on tuoda koulutuspoliittiseen päätöksentekoon elinkeinoelämän tulevaisuusnäkökulmia. Millainen on työelämä 2020-luvulla? Mitä osaamisia ja millaisia osaajia tulevaisuuden työelämä tarvitsee?

Käsillä oleva julkaisu on hankkeen ensimmäinen väliraportti. Se keskittyy kuvaamaan tulevaisuuden toimintaympäristöä ja oppivia verkostoja.

Kehitysaallot, kuten globalisaatio, ilmastonmuutos ja monimutkaistuminen, muovaavat toimintaympäristöämme, eli sitä, miten teemme työtämme, mitä yrityksemme tekevät, mitä teollisuutemme tuottaa ja miten asumme.

Tulevaisuus on aina monelta osin kysymysmerkki, mutta yksi suunta on ilmeinen: reagoimme kehitysaallojen vaikutuksiin verkostoitumalla eri osaajien ja toimijoiden kanssa. Nämä verkostot ovat oppivia verkostoja.





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Visit  
the Oivallus  
website!

All the publications and materials related to the project as well as information on the issues on its agenda are available at the Oivallus website. It also provides a summary of the data that have inspired the discussions on the future.

The website allows you to monitor the progress made between interim reports.

[www.ek.fi/oivallus/en](http://www.ek.fi/oivallus/en)

# Foreword

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The name of the project 'Oivallus', or 'Competence Needs of Learning Networks', conveys a message: in the future, business will increasingly be transacted in networks.

Networks are channels through which a company or an organization can access knowledge and skills that add to its own competencies. Networks will increasingly be created and used in response to specific circumstances. Networks help build bridges between competencies, actors, functions and fields of activity. There is a desire to do away with barriers and ravines.

You are reading the first interim report on Oivallus. It provides a summary of the views of the future held by those who participated in the project.

The extensive material was sifted through by Director Petri Vasara of Pöyry Forest Industry Consulting Ltd (Pöyry) together with consultants Hannele Lehtinen, Laura Peuhkuri, Jaakko Jokinen, Pia Nilsson and Jaakko Saarela. Pöyry has facilitated the Oivallus project in many ways. The report was finalized by Kirsi Juva, Oivallus Project Manager, in collaboration with the Communications Department of the Confederation of Finnish Industries EK. Responsibility for the communications concept and the visual appearance of the project rests with OK Do and Jonatan Eriksson.

Funding for the Oivallus project has been provided by the European Social Fund, the National Board of Education, and the Confederation of Finnish Industries EK.

Many thanks to all who have taken part in the work. Let us forge ahead!

Helsinki, 3 November 2009

Timo Kekkonen  
Chairman of the Steering Group

# 1. WHAT IS OIVALLUS?

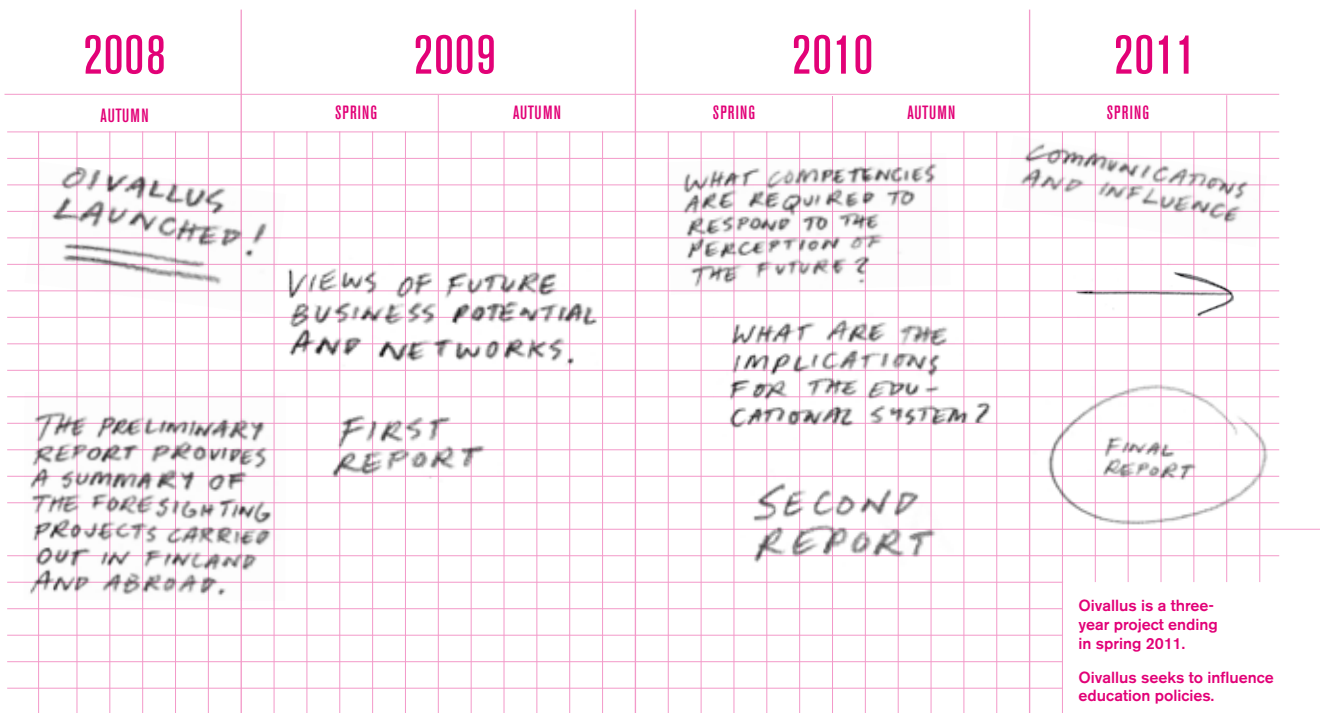
Oivallus - 'Competence Needs of Learning Networks' to use its full name - is a project based on the vision that business will increasingly be transacted in (global) networks comprising a wide range of actors.

Until now, the future of industry, construction and services has been evaluated in terms of individual sectors. Today, however, the sectors are networking to form close-knit clusters. At the same time, the public and private sectors are viewing each other as potential partners. Learning networks can be described as teams whose success depends on the synergy between the specific competence areas.

Oivallus is a continuation to the Services 2020 and Education Intelligence foresighting projects completed by the Confederation of Finnish Industries EK in 2006.

## What is it that Oivallus seeks to foresee?

A question central to the Oivallus project is: What competence needs will the network economy generate? The goal is to introduce the views of the future held by business and industry to education policy: What will work life be like in the 2020s? What competencies will be needed then? What will future professionals be like?



## How?

The Confederation of Finnish Industries EK invited a number of experts representing a range of sectors to participate in a foresighting project - to discuss the future. They met during the spring and early autumn 2009. The method applied was expert processing.

The discussions generated knowledge, visions, value-driven priorities and weak signals. The efforts of the working parties were greatly facilitated by Pöyry Forest Industry Consulting Ltd's (Pöyry) consultants.

## When?

Before the seminar, Pöyry's consultants had prepared a preliminary report providing a summary of future trends and Finnish reality as part of wider developments as presented in a total of 60 foresighting reports.

Three working groups were established to reflect on the themes selected for the Oivallus project. The names of the groups - Life Infra, Ubiquitous Services, New Business Areas - reflect the Oivallus philosophy - they do not represent any single sector but a coherent body of competencies.

During the spring and early autumn 2009, the groups met twice individually and twice all together. Although the groups were named differently, it was soon found that the subjects addressed had much in common. Among the topics discussed by all the three groups were the roles of man and the environment in the developments related to the area designated to each group.

This first interim report will provide a summary of the themes singled out in the expert processing.

## Why think about the future if you cannot predict it?

According to the EU FOR-LEARN Online Foresight Guide, foresighting has three inter-related roles:

- 1) thinking
- 2) debating
- 3) shaping the future.

The approach to foresighting adopted by business and industry is similar: foresighting is not about guessing but about making the future. It means the ability to respond to changes and influence the prerequisites for success.

Success today and tomorrow will depend on how efficiently we are able to make use of our strengths and improve upon our weaknesses.

The Insight participants underlined that foresighting is also dreaming: instead of the probable future, we should reflect upon the ideal future; what sort of future we want to strive for.

(<http://forlearn.jrc.ec.europa.eu/guide>)

Next, the Oivallus project will focus on how the ideas brought up in this report are reflected on future competence needs and the education system. These themes will be reviewed in a report in autumn 2010. The results of the three-year efforts will be presented in a final report due for completion in spring 2011 when the project ends.

"  
THE FUTURE IS  
ALREADY HERE -  
IT'S JUST UNEVENLY  
DISTRIBUTED."  
"

- Science fiction author William Gibson



Bits of the future  
are already here.

## 2. WAVES OF DEVELOPMENT MODIFY THE OPERATING ENVIRONMENT

Great waves of development, or mega trends, shape the operating environment - also Finland and Finnish work life. If we could see what our operating environment will be like in the 2020s, it would be very different from the situation in 2009.

Many mega trends have impacted on our circumstances for a long time. Initially, the trends are important to pioneers and only later to larger groups of people.

Many of the experts involved in the Oivallus project believed that even if we were able to identify mega trends and were aware of their effects, we would only know the tip of the iceberg as far as the actual trends were concerned. For example, climate change has been debated for a long time but actual efforts to ward it off are only just beginning.

A similar example is provided by networking: it is having a profound impact on corporate operations as we speak. Most likely, what we know about the significance of the Web 2.0 world and the culture of sharing is just a thin slice of the whole.

Aside from the best known mega trends, the Oivallus project participants discussed phenomena for which there are as yet no established concepts. What sort of trends are, for example, the culture of constant rush or increasing complexity and fast space, and related concerns about people's ability to cope? These phenomena are evaluated in the report side by side with the better known mega trends.

### GLOBALIZATION

The geography of economic growth and production is being redrawn, with the direction due east.

During the second wave of globalization, clusters will be split into ever-smaller parts that, in turn, will be divided globally. Products, services, business models and procurement channels will become increasingly less dependent on national borders.

### CLIMATE CHANGE, EARTH'S CAPACITY

Although awareness of the state of the world has grown, deeds are dramatically lagging behind the words.

"Climate change will compel us to create a sustainable built environment, a Life Infra. At present, Finland is far behind most western countries. Geographically, Finnish society is fragmented, the level of urbanisation low, the utilization rate of mass transport services limited, and low- and passive energy construction is only taking its first steps. If nothing else makes it happen, the transition to a low-carbon economy will be driven by necessity."

— Comment made in the Oivallus workshop.

At the same time, companies are on the brink of immense opportunities: the mitigation of climate change and the environment will offer major business potential.

Surveys suggest that young job-seekers, in particular, are paying special attention to corporate values and policies, such as the position on sustainable development.

### URBANIZATION

Cities are growing and rural areas are being depopulated also in Finland.

"However, as a Finn's idea of a good life has traditionally been associated with the countryside, this may be changing. Many people would like to slow down the pace. It may favour rural areas."

— Comment made in the Oivallus workshop.



How will we travel  
in the future?

### AGEING

It is predicted that in the 2030s, every fourth Finn will be over 65.

In developed countries, the demographic structure is being increasingly tilted towards older age groups. This offers business opportunities in products and services. At the same time, the shrinking supply of labour is a major challenge.

*“Why not retire in stages? It would be important to make better use of the tacit knowledge and experience possessed by pensioners. There should be a passion for working and doing things – at least to the extent that people do not want to give it up completely!”*

*– Comment made in the Oivallus workshop.*

*“Services should be able to unite generations. A central kitchen catering for the entire residential area could be one such service.”*

*– Comment made in the Oivallus workshop.*

### NETWORKING

Networking will profoundly transform operations in companies and entire lines of business.

*“Active efforts are also being made to seek innovations by networking directly with sectors or clusters at the far end of the value chain.”*

*– Pöyry's preliminary report in preparation for the Oivallus project*

The Web 2.0 world - or social media - has given a new dimension to networking, the underlying idea being information sharing. As a mode of operation, the culture of sharing will spread outside the Internet.

### TECHNOLOGICAL DEVELOPMENT

Among the features emphasized in future technologies will be interaction, intelligibility and user friendliness. User experience will be important.

### FAST PACE, COMPLEXITY, CONSTANT CHANGE

*“If you are not online, you are dead.”*

*– Non-fiction writer and reporter Kevin Kelly characterizing the 'new economy' at the end of the 1990s*

The operating environment becomes increasingly turbulent and the future a bigger and bigger question mark.

Although old tools have been replaced by new ones and the pace has quickened, interaction between people has changed very little over the past 20 years.

### MAN'S ABILITY TO COPE

A fast pace and constant change create an atmosphere of unrelenting rush.

*“For a long time now, I have been pondering the developments commented by Osmo Soininvaara, among others, namely that people are voluntarily cutting down on their working hours because they value their free time more and more. Certain signs of this are already in the air. This macro trend will certainly affect business life as well.”*

*– Comment made in the Oivallus workshop.*

### 3. WORK WILL CALL FOR GREATER CREATIVITY, PROFIT ALONE WILL NOT BE ENOUGH OF A MOTIVATION

When the discussions on the mega trends that affect the future were summarized in the Oivallus group, an idea was formed of how the development waves will shape work, industry, entrepreneurship, communities, and the public sector. Listed below are some participant views on the realities of the future that they also find worth pursuing:

#### WORK

... will require more thinking and creativity. Work will respect the worker's values. Work and free time can be reconciled more smoothly than today.

#### INDUSTRY

... will minimize energy use and material wastage. Tonnes and cubic metres will be replaced by some other unit as a measure of production capacity. "Industry is quickly moving towards the service business.

#### ENTREPRENEURSHIP

... will be based on sustainable development. Profit alone will not be enough of a motive. Entrepreneurial activity enables a good life.

#### ENTREPRENEURS

... will have the courage to take greater risks. The entrepreneur will work in close collaboration with other companies and entrepreneurs.

#### COMMUNITIES

... will offer people a common channel for having a say. The community will make it possible to give and receive support to run daily life across generation boundaries.

#### PUBLIC SECTOR

... will develop services more actively together with the citizens and companies. Administrative structures will become flexible.

#### CITIES

... will be highly functional and thriving living environments operating in social and ecological harmony with their surroundings.



Global networks will grow in importance in the everyday life of Finnish businesses.



" A NEW APPLICATION OR WAY OF USING SOMETHING IS JUST AS GOOD AN INNOVATION AS SOMETHING COMPLETELY NEW. APPLYING WHAT EXISTS IS IDEAL FOR A SMALL, CLOSELY NETWORKED NATION, SUCH AS FINLAND. "

– Comment made in the Oivallus workshop.



The chemist-chefs of the Luomo molecular cuisine in Helsinki combine ingredients innovatively and test new cooking methods.

## 4. IN THE FUTURE WORK WILL BE CARRIED OUT IN LEARNING NETWORKS

Subcontractor relations that became widespread in business in the 1970s are regarded as the first step in the networking process. Over the past 30 years, the range of networks has become clearly more diversified.

Networks are created to reap a multitude of benefits: improved cost efficiency, combinations of services and products and new business. There has been a shift from value chains to increasingly complex value networks, which has blurred boundaries between companies and even lines of business. Accordingly, networks are expected to play a key role in building the future.

Finnish business and industry are widely regarded as intensely networked. In particular, those in expert and executive positions are active in networking.

According to the Oivallus participants, the reality is not quite as rosy as this. Networking is a daily topic of discussion and fairly common as a way of working. Even so, people frequently encounter barriers and ravines. While there are some pioneers, we still tend to work more in isolated blocks rather than openly together learning from one another.

**"How to get rid of cliques once and for all. Similar people, same nationalities and people working in the same field seek shared networks."**

— Comment made in the Oivallus workshop.

### A learning network is the opposite of a silo

Learning networks can be described as teams whose success depends on the synergy between the specific competence areas. Different competencies mean,

for example, individual sectors, fields of science or orientation to work, such as doing, seeing and applying<sup>1</sup>. Another goal for learning networks is to promote bold networking between atypical actors.

Networks may be formed around organizations or actors, such as companies, research agencies and communities. Learning networking is also needed within organizations. For example, service and product development, operative activities and marketing and communications should form a coherent body that draws upon its component parts instead of being made up of isolated units.

**"Learning networks are based on both agreements and trust. The faster the innovation cycle, the greater the importance attached to trust!"**

— Comment made in the Oivallus workshop.

An important quality that a learning network must have is the ability to adapt. The change signals and pressures received from the operating environment shape the network automatically to fit the new circumstances. A learning network is willing to change both as a whole and in part. A network also undergoes change simply because it may encounter surprises - so called 'black swans' - <sup>2</sup> that make it necessary to chart a completely new course.

<sup>1</sup> - The division into Implementers, Seers and Appliers is based on the Education Intelligence project of the Confederation of Finnish Industries EK completed in 2006.

<sup>2</sup> - A black swan is a highly improbable event with a massive impact on the environment and the course of history. The Internet and 9/11 2001 can be characterized as typical black swans. The theory was originally introduced by Nassim Nicholas Taleb (The Black Swan, 2007).

**"In my mind, a learning network as a concept is full of hot air if we fail to define the purpose for which it is used. The network is not an end in itself or any final outcome - it is only a means to achieve something."**

— *Comment made in the Oivallus workshop.*

## Looking for a solution and creating something new motivate people to form networks

A key motive for creating a network is the need to find a solution to some problem. Another important reason is the push to create something new.

The vision of the world as a complex place was a theme that inspired the Oivallus debaters. As current challenges and problems appear increasingly complex, solutions call for the reconciliation of several viewpoints. What is essential in networking is problem solving - not the sector involved. As the innovation guru John Kao put it at the New Wave of Competence seminar organized by the Confederation of Finnish Industries EK in autumn 2009:

**"The most important global problems are wicked and require new innovation approaches. There is no mature toolbox for fixing these kinds of problems."**

Another reason why learning networks are vital is global competition. Intensifying competition and the ever-faster pace of change are compelling organizations to renew themselves.

This viewpoint further underlines the importance of cooperation between parties with different skills and qualifications in order to generate innovations.

## Alliances, guilds and agoras

In daily usage, networking is in Finnish referred to by two concepts that are thought to be synonymous. However, according to the official definition, one of the concepts is subordinated to the other. In Finnish, 'networked' refers mainly to technical implementation.

Networks are channels through which a company or an organization can access knowledge and skills that add to its own competencies. The form of networking is determined by the need that has to be satisfied at any given time.

According to the report prepared by Pöyry for the purposes of the Oivallus project, the forms of external networking can be classified by several sets of criteria. One is the division into alliances, guilds and agoras.

Alliances, for example, may be created through cooperation with another company or research institute. Guilds, in turn, are places for the exchange of information concerning the trade involved. As a rule, alliances focus on a specific objective while guilds concentrate on their own sector. Meetings between sectors that involve no commitments on anybody's part take place most naturally on agoras - in the form of chance meetings.

Many of the debaters in the Oivallus discussions pointed out that ‘new’ does not necessarily mean something fundamentally new. Often, the seeds of new business already exist. Anything new is based on something old, in one way or another.

**”A new application or way of using something is just as good an innovation as something completely new. Applying what exists is ideal for a small, closely networked nation.”**

— *Comment made in the Oivallus workshop.*

## The wellbeing of the environment and man calls for innovation

In the Oivallus project, the networks of the future are assessed from three standpoints: the built environment or life infra; ubiquitous services; and new business areas. All of them conveyed one clear message: in any future business, there will be pressures to focus on sustainable solutions.

The debaters were quick to remind that necessity always offers opportunities. The alarming state of the world will be one of the key drivers of innovation. Additionally, the genuine needs of people and the promotion of well-being are areas in which new and better solutions are sorely needed. User and customer orientation are surprisingly often overshadowed.

**”Innovation will be related to transport, raw material production and renewable energy - all areas that will be under tremendous pressures after 2020.”**

**”Environmental competence is already growing under its own momentum, also as an export product. It permeates all other sectors, such as media, trade, travel, transport, and logistics.”**

**”The need for services and products that support daily life is growing. They highlight user friendliness, i.e. intelligibility, operating experience and safety.”**

**Technology will also develop in this direction. Design may play a really big role in this.”**

— *Comment made in the Oivallus workshop.*

Another clear idea highlighted in the discussion was that our future strength will lie in the service business instead of manufacturing and products.

**”Even industry is quickly moving towards the service business. Online services are a central part of total solutions.”**

— *Comment made in the Oivallus workshop.*

But do we possess the competence to respond to future challenges or, conversely, to seize the opportunities held by the future? The participants in the Oivallus project think that unreserved cooperation with numerous experts or the switch from manufacturing and products to services will, above all, require a new way of thinking. It is a question of an entire operating culture that must increasingly reinforce its skills along with its knowledge.

## Diginatives accelerate networking but challenge service developers

**”There is no shortcut to a culture that transparently shares knowledge and skills. Change is accompanied by anxiety which may find expression as something quite other than transparency.”**

— *Comment made in the Oivallus workshop.*

When the participants explored the question of how to get rid of silo-like working methods, the role of diginatives was felt to be significant. Diginatives are people born in the digital technology age. Virtual networking, in particular, is a matter of course for this generation. The Internet has always existed

for them and they find it natural to move around in global networks. The distinction made between being online and offline seems artificial to them.<sup>3</sup>

However, operating in virtual networks has its downside. For example, there were concerns about the protection of privacy and the risk of being isolated from the real world. The debaters also wondered what sort of consumers the digital natives are.

**"Will it be possible to develop services if the technological adaptation of future users is of a completely different order of magnitude than that of the generations developing the services?"**

**"Preferences related to channels of communication evolve more quickly than we even notice. A case in point is a survey, just over a year old, indicating that seven out of ten teenagers prefer quick messaging to e-mail."**

— *Comment made in the Oivallus workshop.*

Despite the questions that remained unanswered, the debaters believed that the operating modes natural for virtual networks will also strongly shape procedures in the offline environment, such as daily life in schools and workplaces.

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<sup>3</sup> – For more information, see: John Palfrey & Urs Gasser: *Born Digital. Understanding the First Generation of Digital Natives.* [www.borndigitalbook.com](http://www.borndigitalbook.com)

## Innovations, innovations, innovations – why?

The learning network and innovation are inter-related concepts. It is widely believed that interfaces between competence areas generate fruitful platforms for innovation and that networking is a key tool for identifying such networks.

"Perhaps innovation could be defined as a combination of two elements into a single new one".

— *Comment made in the Oivallus workshop.*

**Basically, we gain a competitive advantage when**

**1) we make things at a lower price than others**

**2) we make things at the same price as others but better**

**3) we make something that nobody else makes and is able to make = innovation-based competition.**

"From Finland's point of view, competition based on principles 1 and 2 is becoming increasingly difficult. Thus, the only option left is to make something that others do not make, i.e., innovation-based competition. However, innovation will not remain a privilege enjoyed exclusively by the western countries.

— *Pekka Himanen (2007)*

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THERE IS NO LACK OF  
IDEAS BUT THEIR  
IMPLEMENTATION IS  
WANTING!"

– Comment made in the  
Oivallus workshop.



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AGE  
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VIEW

HROOKS

LAHTELAISTA  
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Pelago is a bicycle brand established by two brothers in Helsinki. The firm is actively involved in a close-knit network of local and European companies.

## 5. FINLAND NEEDS COURAGE AND A SPIRIT OF ENTREPRENEURSHIP

Entrepreneurship and a spirit of enterprise will play a vital role in the creation of learning networks – allowing different competencies to identify and draw on one another's resources. Entrepreneurship was one of the most keenly debated issues among the Oivallus participants.

### Current state of entrepreneurship bleak while the future holds a promise

When describing the current state of entrepreneurship in Finland, the experts were harsh in their comments. The same view is expressed in the 3/2009 issue of *The Economist*. More and more incentives are provided but culture resists change:

“If we learn anything from the history of economic development, it is that culture makes almost all the difference”, argues economic historian David Landes.

To explain the statement, the newspaper gives an example: “You can build as many incubators as you like, but if only 3% of the population want to be entrepreneurs, as in Finland, you will have trouble creating an entrepreneurial economy.”

Increasing entrepreneurial activity is one of the priorities discussed in the Oivallus workshop. Undoubtedly, entrepreneurship will be needed, no matter what the future proves to be! Entrepreneurship is the key to creating something new and commercializing new ideas.

Many of the debaters believed that this goal is not as unrealistic as suggested above. There is light at

the end of the tunnel: a clearly heightened interest in entrepreneurship may at least be regarded as a latent trend, a weak signal. Among the indications of increased interest are the growth of social entrepreneurship<sup>1</sup> and actors like Slush Helsinki and the Aalto Entrepreneurship Society (AES).

Both are grassroot-based communities that seek to promote entrepreneurship. The numbers speak for themselves: by September 2009, over 2,000 members had joined AES's Facebook group.

The underlying concept with AES is that entrepreneurship can be generated through enterprise – by doing and experimenting. Entrepreneurship is about selling one's own idea to others. A positive and convincing attitude is an important part of being an entrepreneur as it speaks volumes about the potential of the idea. AES urges future entrepreneurs to practise public speaking and presentation skills. Few people are able to use the four-minute presentation format in front of a jury evaluating the concept without any coaching. The community offers a platform for working together - if necessary, these resources may be used as voluntary workers.

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<sup>1</sup> – Social entrepreneurship is a rising global trend. A social enterprise seeks to respond to some social or environmental problem. Any profits generated by such an enterprise are used for furthering its goals.

The Finnish Institute in London has prepared a report on the social aims and responsibility of Finnish SMEs. According to the report, one third of them have objectives related to solving social problems.

The report is available at:  
[www.finnish-institute.org.uk/fi/arkisto/109](http://www.finnish-institute.org.uk/fi/arkisto/109)

## Put ideas to use!

A common debate in Finland is whether our Achilles' heel is the lack of ideas or their implementation.

All the discussions within the Oivallus framework concerning entrepreneurship and an entrepreneurial attitude can be summed up in a single sentence: There is no lack of ideas but their implementation is wanting! The same message is echoed by Pekka Himanen in his innovation report exploring Finland's future. Our problem is crystallized in how to convert idea creativity into business creativity. "The message to Finland is that it is not the best ideas that prevail, it is the best ideas put into service – business models, services and products."

Often, an entrepreneurial spirit is equated with concepts such as courage, boldness, creativity and persistence, a position also shared by Oivallus participants. It is about getting things done.

If an entrepreneurial approach is rare, does it also mean that we are lacking in these qualities? Why? One of the experts put it like this:

**"Why are we wondering, say, at the non-existing ability to take risks? We are systematically taught to give the right textbook answers to the right questions. As we know, questioning the questions does not give you straight A's."**

*– Comment made in the Oivallus workshop.*

# IN CONCLUSION

Kirsti Lonka, Professor of Educational Psychology who specializes in learning, says that in the future work will increasingly resemble jazz improvisation. Work will be carried out by project teams whose members keep changing. Every team will need solid basic expertise and a lot of determination to try something new. The metaphor finds support in the discussions conducted within Oivallus.

We argue that two competence areas in particular will be highlighted in the future: capacity for cooperation and the willingness to tackle problems head-on with entrepreneurial drive to find a solution. The types of skills that promote competence – inter-personal skills, communications skills, boldness, creativity and a range of meta skills – are already standard requirements in practically all areas of business and industry.

Next, the continuing Oivallus project will explore the competence needs of learning networks. More specifically, efforts will be made to determine how the competencies described in this report can be learnt. To identify practical examples, inspiration is sought from science fiction writer William Gibson:

"  
THE FUTURE IS  
ALREADY HERE -  
IT'S JUST UNEVENLY  
DISTRIBUTED. "

# Oivallus project

## participants

Three working groups were appointed to explore the themes of the Oivallus project: Life Infra, Ubiquitous Services, and New Business Areas. Instead of representing any specific field of activity, the working groups were designed to bring together a wide range of expertise. One of the questions the groups were asked to ponder was: What sort of networks would create the type of entities suggested by the group's assignment?

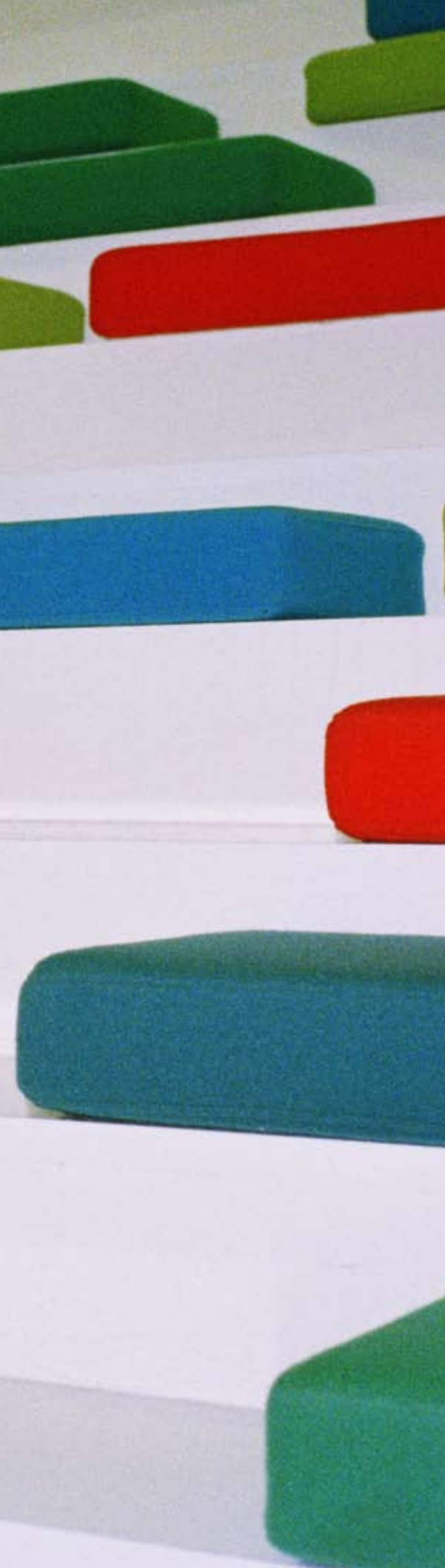
The working groups were allowed to discuss the future of their respective fields quite freely. As a result of this liberal latitude, the themes had a great deal in common despite the different approaches adopted by the groups. For example, all three groups discussed the role of man and the environment in the context of foreseen development.

During spring and autumn 2009, the groups met twice individually and twice all together. The latest meeting was also attended by experts from the working group on education and labour market issues of the Confederation of Finnish Industries EK.

STEERING GROUP	WORKING GROUPS		
	<i>Life Infra</i>	<i>Ubiquitous services</i>	<i>New business areas</i>
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[www.ek.fi](http://www.ek.fi)

**PUBLISHED ON THE INTERNET**

[www.ek.fi/oivallus/en](http://www.ek.fi/oivallus/en)

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OK Do and Jonatan Eriksson

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Kaarle Hurtig

*November 2009*



European Union  
European Social Fund

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the EU  
2007-2013

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