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University of Turku



# **FUTURES RESEARCH AND CORPORATE FORESIGHT- HOW TO USE THEM?**

**Strategic roadmapping for north East  
Sms's OCT 10 2011**

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**Finland**



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## **FINLAND FUTURES RESEARCH CENTRE** **University of Turku**

*Finland Futures Research Centre produces and develops visionary knowledge regarding alternative futures and the challenges and possibilities included in them.*

*The Centre also offers well researched futures-oriented information in interesting formats to back up both national and international decision-making.*



- Established in 1992 as an auxiliary unit of Turku School of Economics (1992–2009)
- Special Unit of University of Turku since 2010
- Offices in Turku, Helsinki and Tampere
- Centre for Responsible Business (CeReB), 1/2008
- Media Futures Network (MFN), 7/2010
- Personnel: 50-55
- Ongoing research, development and education projects: 70-80
- Turnover: 3,4 M€ (2010)
- Annual international conferences bring together major actors and experts from futures research as well as other interested parties

[www.futuresconference.fi](http://www.futuresconference.fi)

To be young! June 6-7 2012, Turku



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## WHY IN EARTH FUTURES RESEARCH AND FORESIGHT?

- **Human being is a future orientated creature: There is a natural desire in human mind to understand the world and scan one's own changes in its alternative future conditions.**
- **World is changing: the challenges and fears of social, cultural, economic and ecological change need attention.**



# WHY IN EARTH FUTURES RESEARCH AND FORESIGHT?

**Even though we cannot know nearly anything certain about the future, for the sake of life management we have to make assumptions about it.**

- According to social constructionism, we create the social structures in order to cope in fast moving world



**Orientation towards the future bears a value in itself.**



# Because of the change of the Era

1970

2020

More from  
less

More and  
better from  
less

More of a  
different kind  
and in a  
different way

**Operating principle**

Late-industrial  
transition

**Operating logic**

**Material  
intensive**

**Meaning-intensive**

**Current society is late-  
industrial transition  
between two epochs**

Industrial  
society

Information  
society

Conscious  
society

**Type of society**



**1. Industrial revolution 1750-1880**

- companies used knowledge to *produce tools and products*

**2. Production revolution 1880-1945**

- companies used knowledge to *improve labour processes*

**3. Management revolution 1945 –**

- companies use knowledge to *improve knowledge*

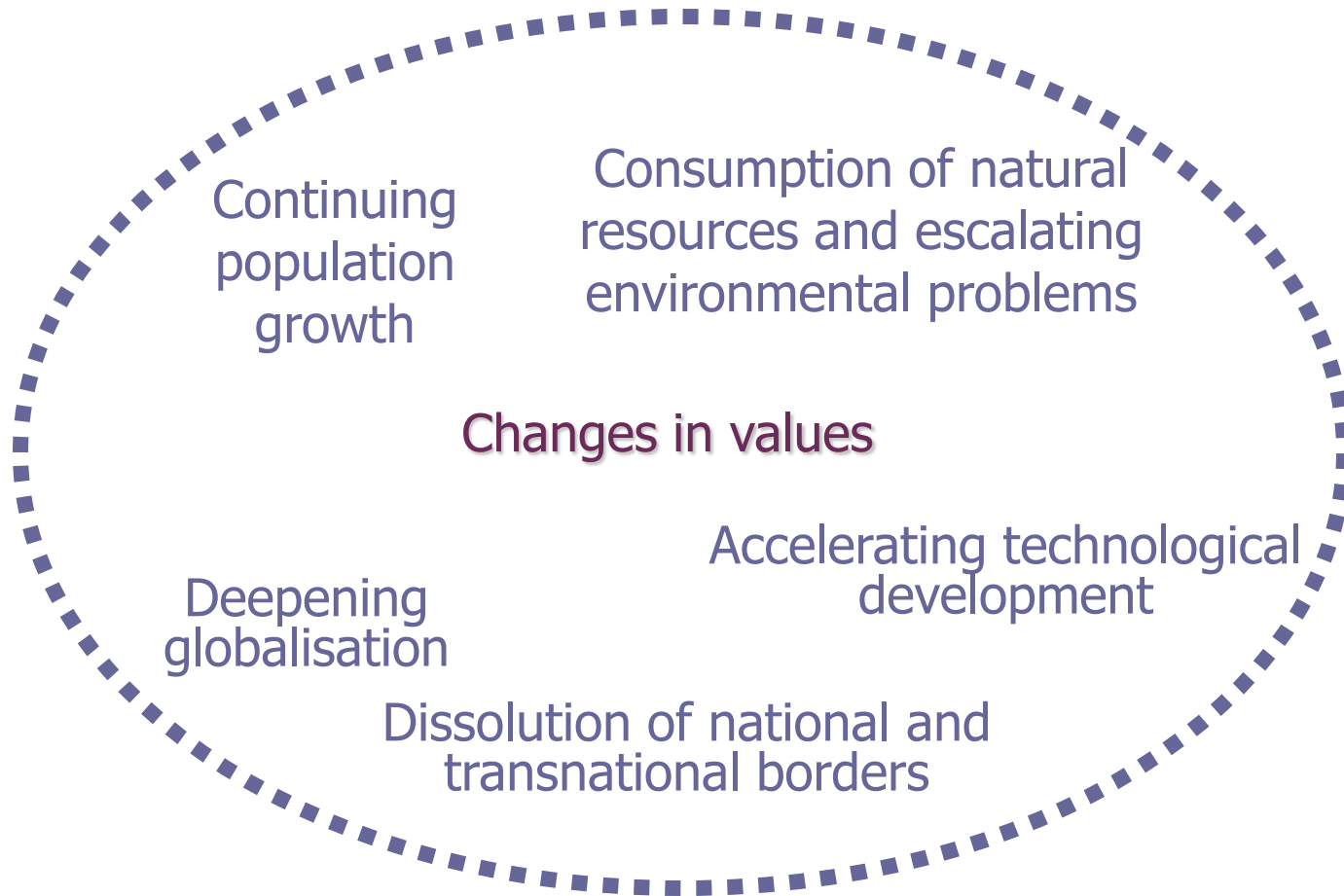
**3. Consciousness revolution 2000 –**

- companies use knowledge to *improve awareness*





# AFFECTING MEGATRENDS





## OUR ENVIRONMENT

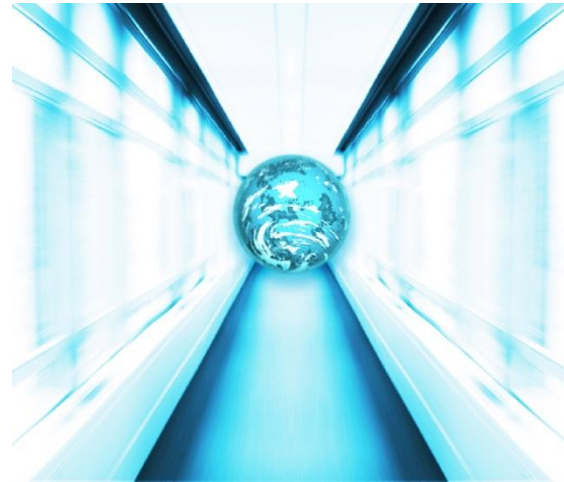
**Complexity**

**Connectivity**

**Globalization**

**Rapid change**

- E.g. in technology
- Different speed of change (e.g. technology versus human behavioral patterns)





# MAIN CHARACTERISTICS

## Futures research

- uses values as variables
- questions self-evident and common beliefs
- creates and uses images of the future as tools in the making of the future
- instead of one future concentrates on alternative futures and explores many possible futures





# MAIN CHARACTERISTICS

## Futures research

- uses and develops multi-scientific and cross-disciplinary methods and theories
- has the emphasis on combining scattered information and knowledge
- explores the present (scanning)
- understand the world as a systematic model in which the parts are always more than a sum of its components
- strives for the empowerment of the stakeholders



# ATTITUDES TOWARDS THE FUTURE

| Attitude               | Scenarios             | Chosen strategies |
|------------------------|-----------------------|-------------------|
| Passive                | Lacking               | Go with the flow  |
| Reactive, adaptive     | 'Business as usual'   | Adaptable         |
| Preactive, forecasting | Based on trends       | Deterrent         |
| Proactive, creative    | Possible alternatives | Innovative        |

Modified from: Godet 2001



## ATTITUDES TOWARDS THE FUTURE 2

|  | <b>From the adaptive,<br/>reactive attitude</b>                | <b>Towards the creative,<br/>proactive attitude</b>  |
|--|--|--|
| Questions on the nature of the future      | What will the world be like?                                   | What are the possible worlds?  |
| Questions of approaches towards the future | How do we adapt to the predicted future? How do we cope in it? | How do we influence the nature of the possible futures? How do we reach our goals in them? |
| Attitudes towards the future               | From going with flow to adaptability                           | From prevention of problems to innovativeness  |



# FORESIGHT

The term 'foresight' has been used increasingly in a specific way since the late 1980s. The term refers to approaches to informing decision-making, by improving inputs concerning the longer-term future and by drawing on wider social networks than has been the case in much 'futures studies' or long-range planning. (Handbook of Knowledge Society Foresight 2002)





# FORESIGHT

**Strategic Foresight can also be practiced at three different levels:**

- ***Pragmatic Foresight*** - *"Carrying out tomorrows' business better"* (Hamel 2000, Hamel and Prahalad 1994);
- ***Progressive Foresight*** - *"Going beyond conventional thinking and practices and reformulating processes, products, and services using quite different assumptions";* and
- ***Civilisational Foresight*** - *"Seeks to understand the aspects of the next civilisation - the one that lies beyond the current impasse, the prevailing hegemony of techno/industrial/capitalist interests"* (Slaughter 2004, 217).

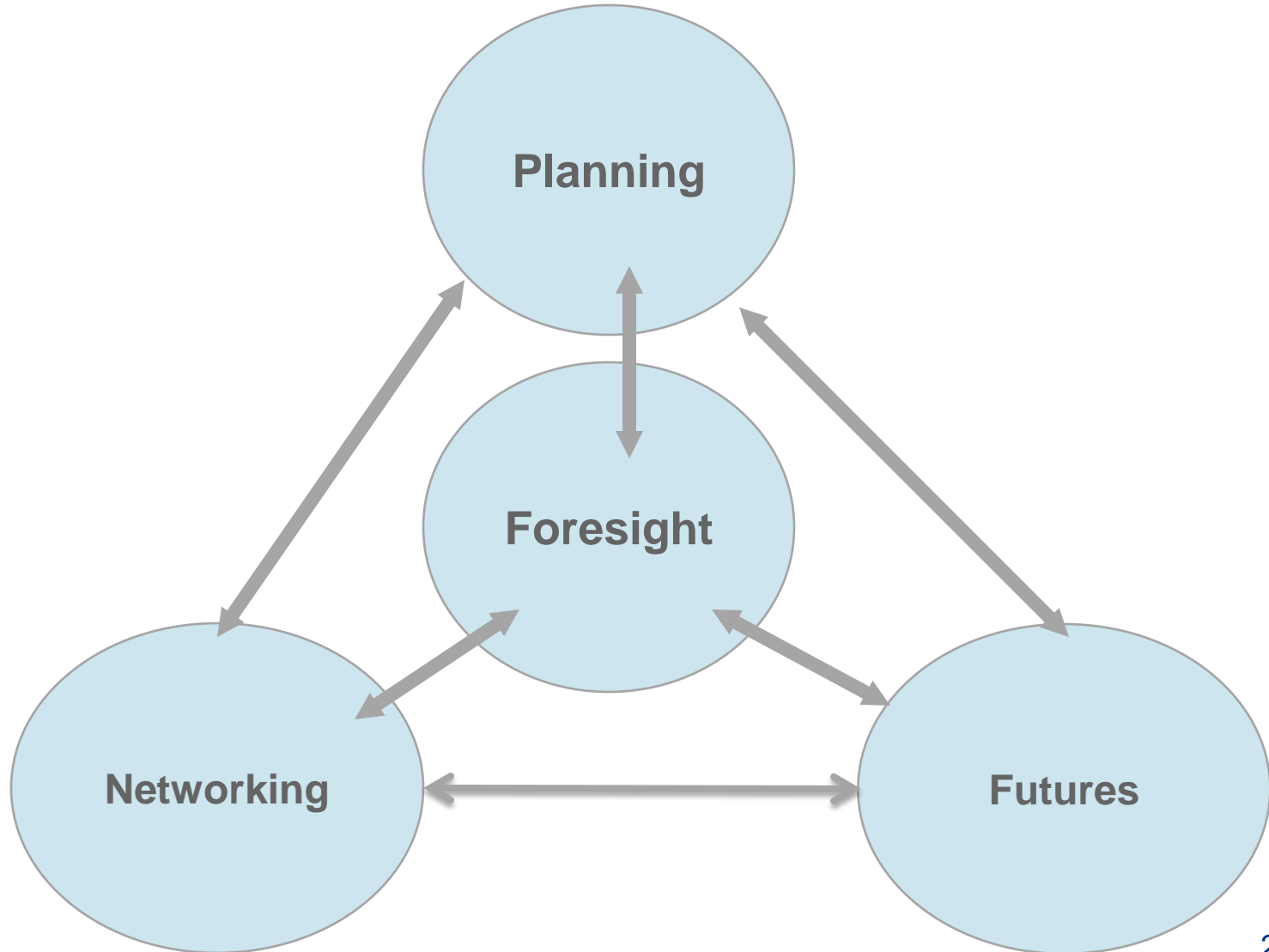


# Futures research and foresight





# ROLE OF FORESIGHT





## EXAMPLES OF METHODS

- **Environmental / Horizon Scanning**
- **Delphi**
- **Scenario working**
- **Trends and megatrends**
- **Future workshops**
- **Visionary management**
- **Soft system methodology**



## EXAMPLES OF METHODS

- **Causal models and simulations**
- **Future table**
- **Futures wheel**
- **Relevance tree**
- **SWOT**
- **Top Ten listing**
- **PESTEV / STEEP**
- **And so on....**

## Gary Hamel & G.K. Prahalad have noticed that successful companies:

- Have ambitious long-term goals
- See competition more as building up competencies than as a competition on market shares
- Put effort more on development on new competencies and skills than defending current ones.





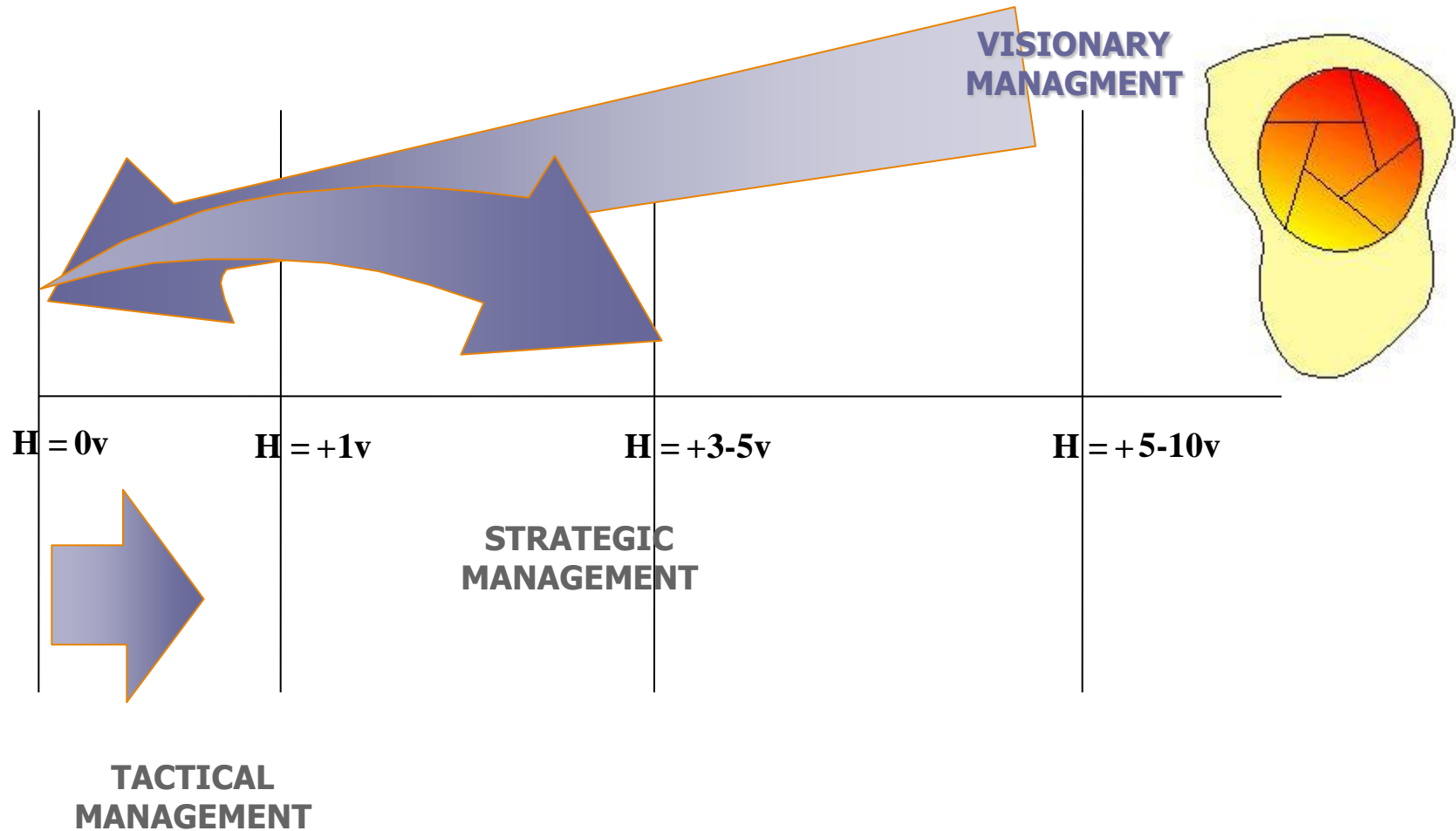
## STRATEGIC PLANNING

- **Future knowledge helps to map the future possibilities**
- **Visionary management combines the long-term goals to tactical and strategic management.**





# MANAGEMENT TIME-FRAMES





## ENVIRONMENTAL / HORIZON SCANNING

- **Concentrates on changes of our environment (broadly speaking).**
- **Environmental scanning of gathering and using information on events, trends, relationships outside of the organization. It help organizations to plan its future activities. (Choo 2001)**
- **Environmental scanning can include tracking, recognizing and analysing of megatrends, trends, weak signals and driving forces. Environment refers to socio-cultural, political, ecological and economical wholeness of an actor in which the actions take place.**





## **COMBINATION OF INNOVATION AND FORESIGHT**

- **Innovation process is by nature future orientated action. Its aim is to create something for the future and change the future.**
- **The link between foresight and innovation process is obvious.**
- **BUT it is useful to think the effects the innovation might have e.g. from ethical standpoint.**



## CONTEXT OF SME'S

- **Lack of time, money and interest in futures work**
- **Regional co-operation can help (e.g. futures clubs, clinics /laboratories)**
- **Joint efforts of public, private and third sector**





# CORPORATE FORESIGHT

**CF is future studies within businesses**  
**a systematic, continuous approach**  
**based on a variety of methods**  
**centres around medium to long-term oriented work on strategies and vision**  
**a participatory process (involving internal and external knowledge and competences)**

## **Main trends:**

- CF becomes more important and widespread
- diverse set of methods being used and developed
- diverse modes of organizing CF
- tendency to look beyond close environments (economy / technology)
- foresight methods becoming crucial for innovation processes



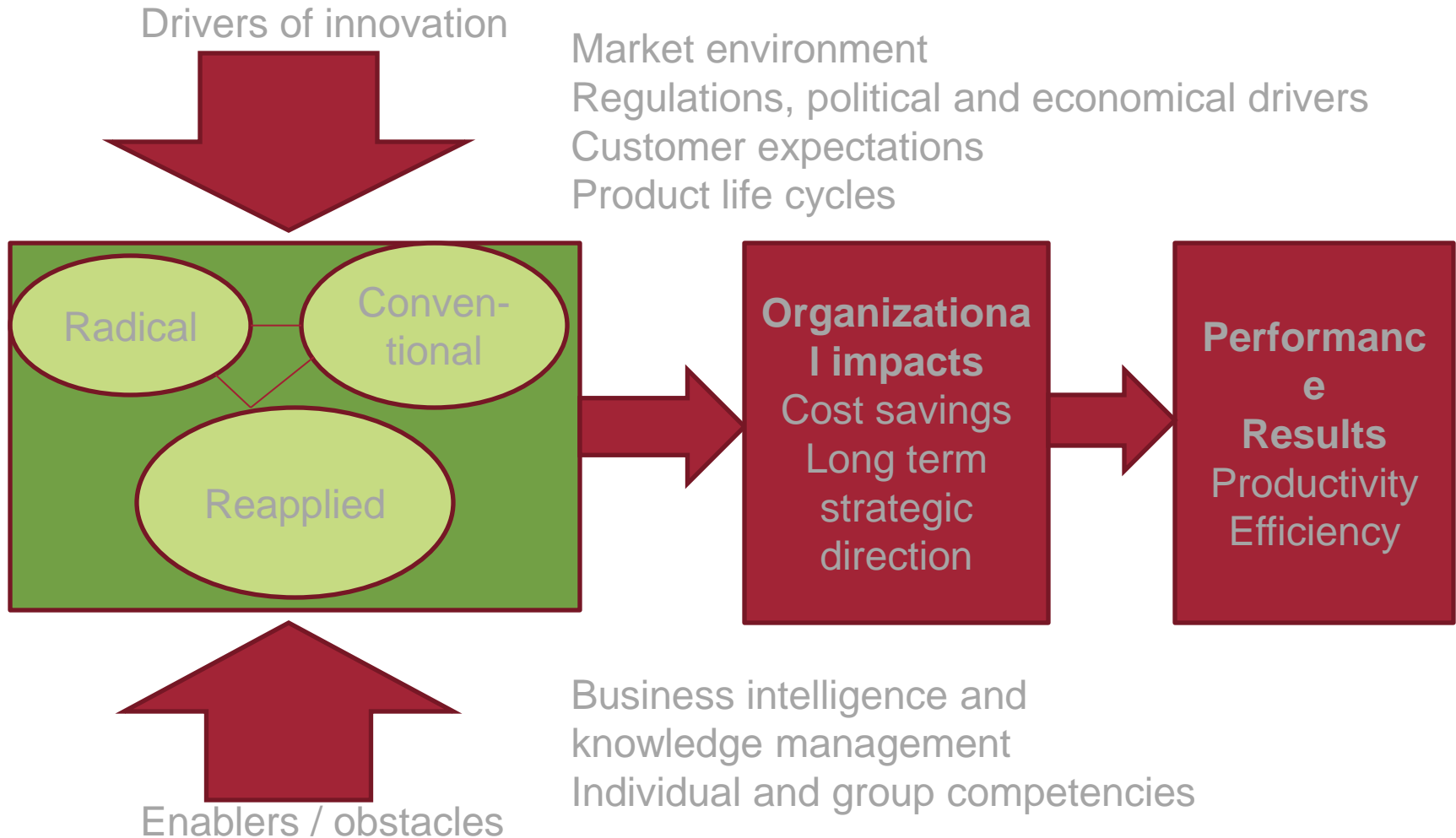
# FUNCTIONAL FORESIGHT ENVIRONMENT



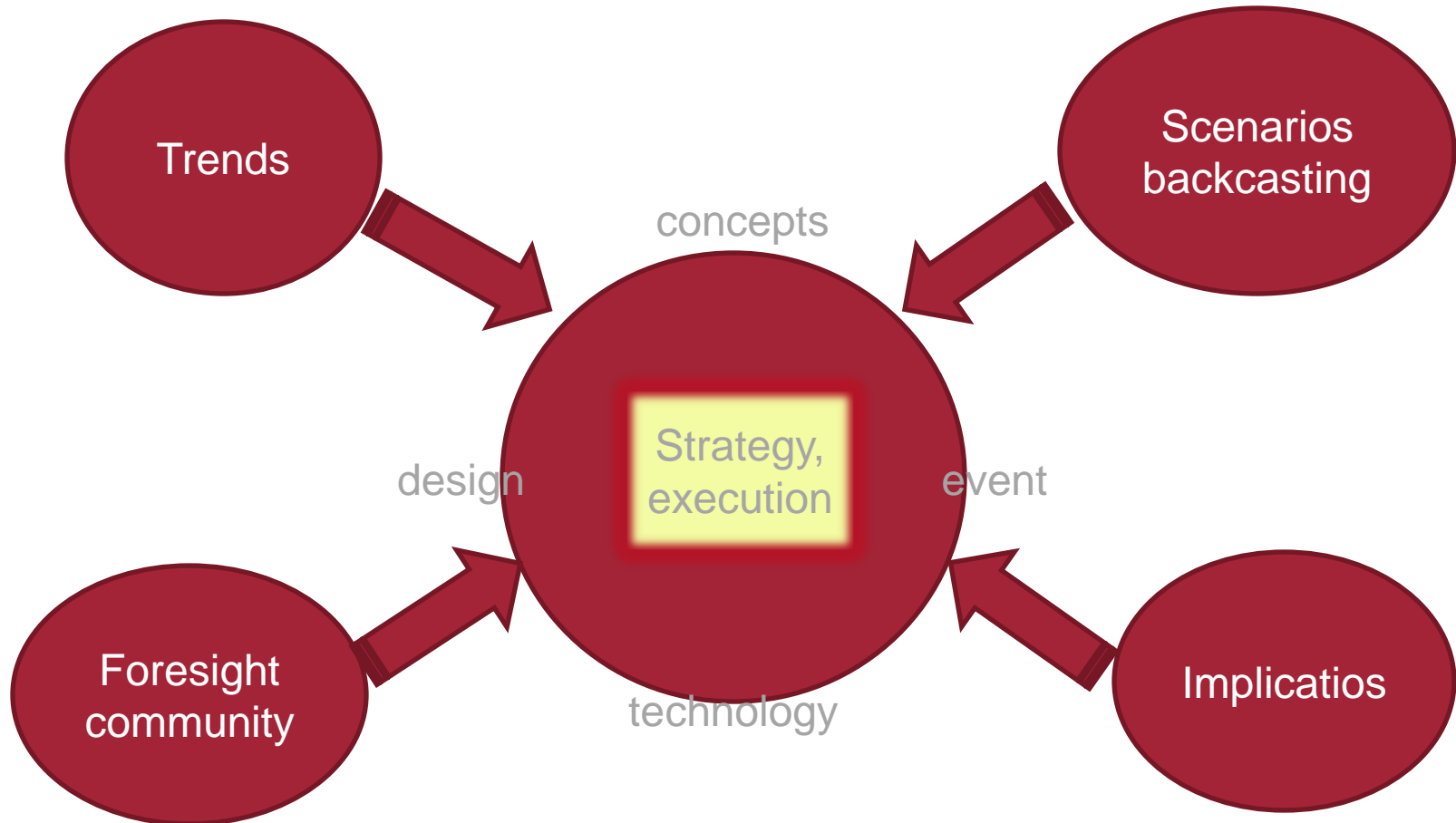
Create unexpected ideas, not only business as usual ideas and scenarios. Balance the facts to visionary thinking. Experiments are needed. Think alternatives. No risk, no



# INNOVATION FRAMEWORK



# FORESIGHT SYSTEM



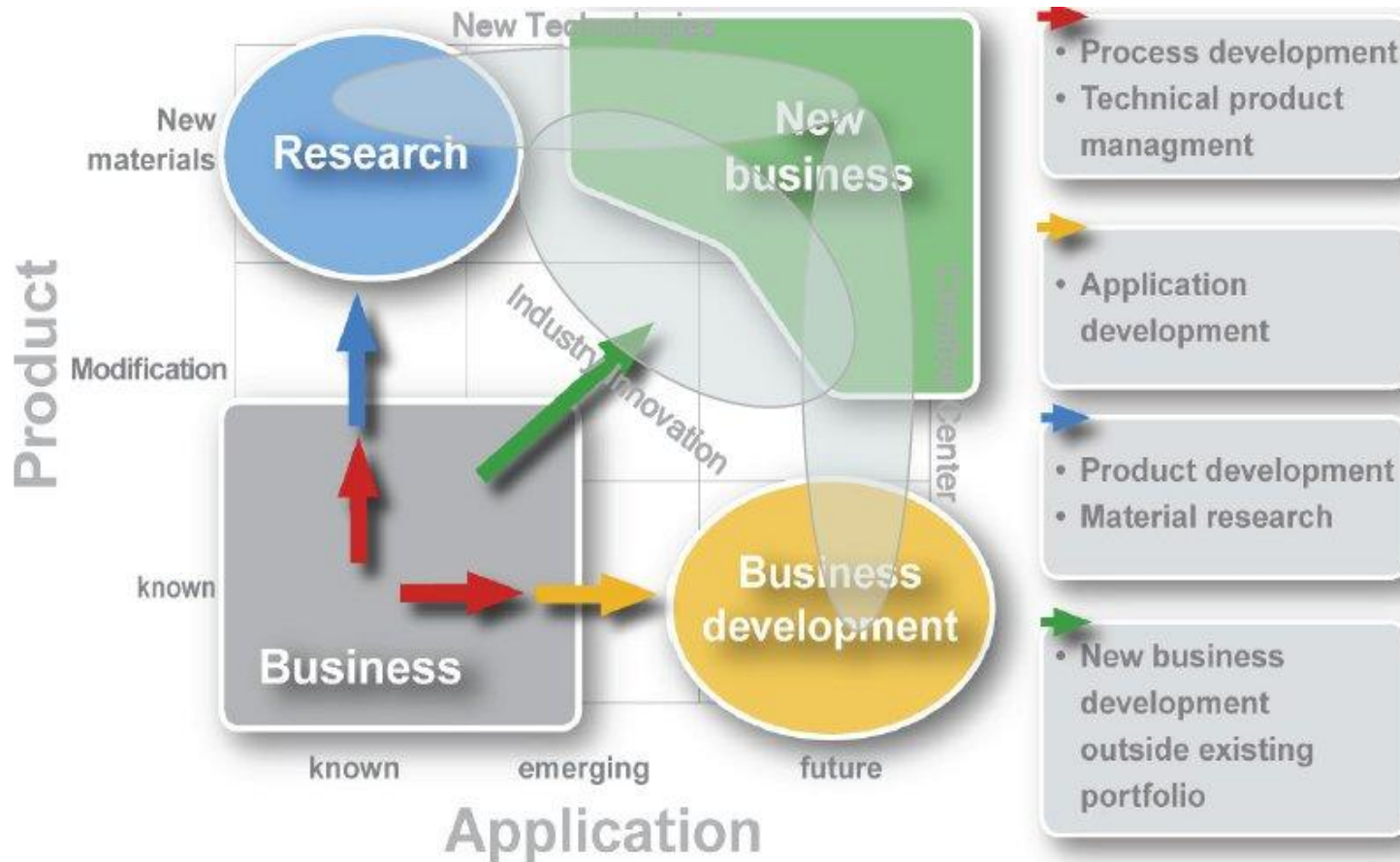


# CASE BAYER - IMPACTS OF MEGATRENDS





# CASE BAYER – INNOVATION SYSTEM

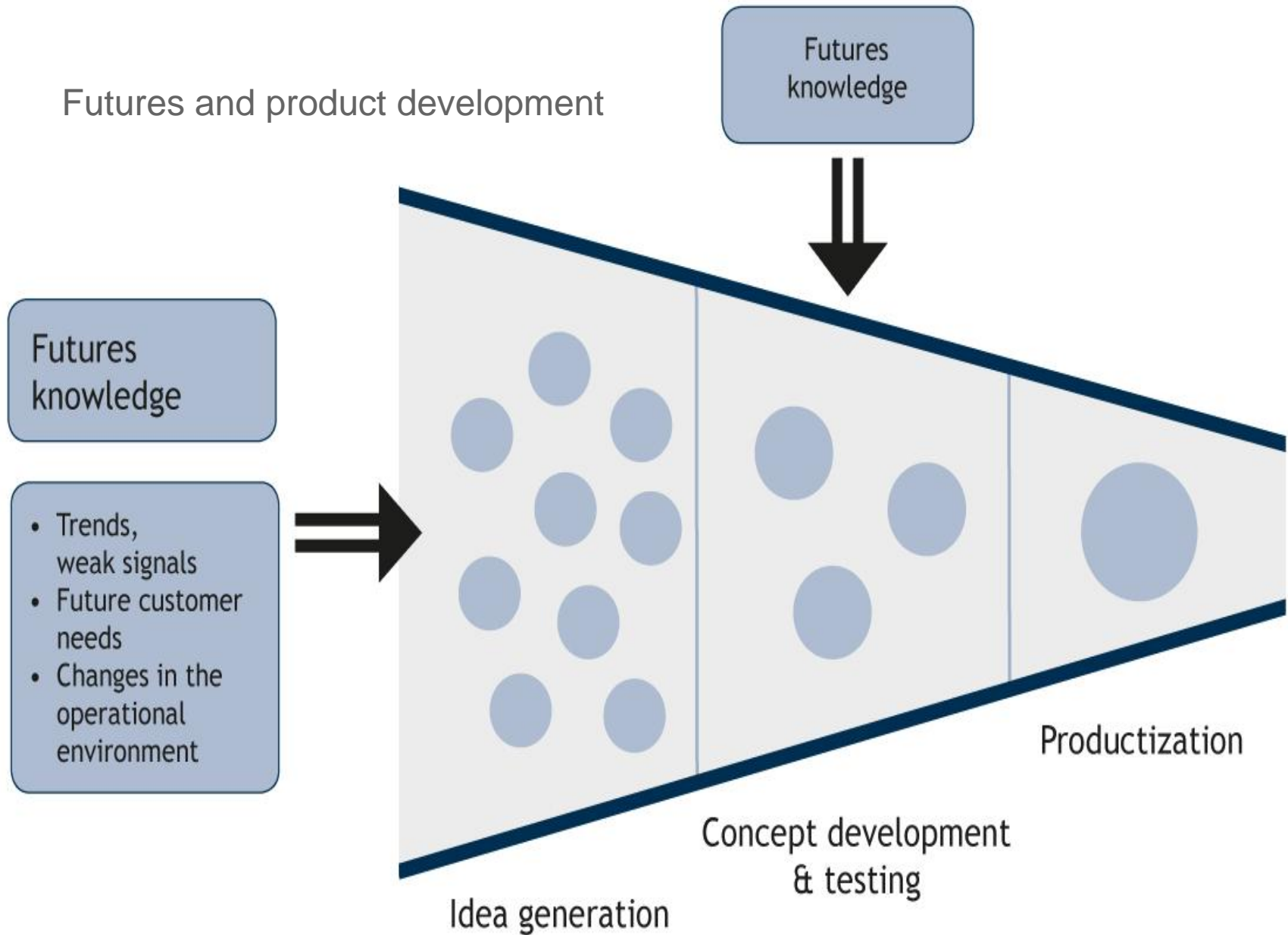




## D- FORCE

- **D-Force is a development project that combines design and media services. It includes support to entrepreneurship of design and media solutions and achieves to promote the networking of companies.**
- **In D-Force project the goals of Finnish Innovation strategy are met by creating co-operation between technological, production and creative economy industries.**
- **D-Force aims to reinforce R&D and production development skills of companies from the point of view of customer orientated and practical innovation processes in which futures knowledge has an important role.**

# Futures and product development





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**KANSAINVÄLISELLE MUOTI- JA VAATETEOLLISUUDESSA TOIMIVALLE YRITYKSELLE SUUNNITELTIIN UUDEN PÄÄKONTTORIN SISÄÄNTULOALA JA NÄYTTELYTILA. OHJAAVINA TEKIJÖINÄ SUUNNITTELUTYÖSSÄ OLI IDEOIDA JA VISUALISOIDA TILASITEN, ETTÄ SIINÄ TOTEUTUU TOIMINTOLÄHTÖISYYS SEKÄ ELÄMYKSELLISYYS, KÄYTTÄJÄYSTÄVÄLLISYYS JA AJATTOMUUS. SUUNNITTELURYHMÄ PYRKI LUOMAAN RATKAISUJA, JOTKA TUKEVAT SUUNNITELTAVIEN TILOJEN MUUNNELTAVUUTTA ERI TARPEISIIN ERI AIKOINA.**





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**KANSAINVÄLISILLE MARKKINOILLE SUUNTAUTUVALLE YRITYKSELLE LUOTIIN UUSI GRAAFINEN ILME JA UUDISTETTIIN MARKKINOINTIMATERIAALIN VÄRIMAAILMA. YRITYKSELLE SUUNNITELTIIN MYÖS UUSI LOGO SEKÄ MALLINNETTIIN TÄYSIN UUDENTYYPPINEN SAUNARAKENNERATKAISU MUUN MUASSA YRITYKSEN YHTEISTYÖKUMPPANINA OLEVAN NORJALAISYRITYKSEN MARKKINOINTITARPEISIIN. YRITYKSELLE TEHTIIN MYÖS 64-SIVUINEN KIRJA TUKEMAAN MARKKINOINTI- JA MYYNTITYÖTÄ NIIN KOTIMAISILLE KUIN ULKOMAISILLEKIN MARKKINOILLE.**





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**YRITYKSELLE TOTEUTETTIIN KOLMIVAIHEINEN TUOTEKEHITYSTYÖ, JOSSA MUOTOILU SIIRRETTIIN OSAKSI YRITYKSEN OMAA KYSYNTÄ- JA KÄYTTÄJÄLÄHTÖISTÄ TUOTEKEHITYSTYÖTÄ. KOLMEN KONSEPTITASON ESITYKSEN KAUTTA JATKOKEHITYKSEEN VALITTIIN YKSI LAITE. TUOTETTIIN SUUNNITELMAT VALITUN LAITTEEN YKSITYISKOHDISTA JA RAKENNETTIIN YHTEISTYÖSSÄ ASIAKKAAN KANSSA KOMPONENTEILLA JA OSILLA PROTOTYYPPIMALLI TESTATTAVAKSI KÄYTTÖÖN JA ESITTELYÄ VARTEN**





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PROJEKTISSA SUUNNITELTIIN LAHTELAISEN PIENPANIMOYRITYKSEN UUDEN TUOTTEEN PAKKAUKSEN RAKENTEELLINEN SEKÄ GRAAFINEN ULKOASU.

SUUNNITTELUYÖHÖN OSALLISTUNEET LAHDEN AMMATTIKORKEAKOULUN MUOTOILUINSTITUUTIN NUORET MUOTOILIJAT ETENIVÄT TAUSTAKARTOITUKSEN MYÖTÄ IDEOINTIVAIHEESEEN JA LOPULTA HAHMOMALLITYÖSKENTELYYN USEITA ERILAISIA VAIHTOEHTOJA TESTATEN.

KANSAINVÄLISILLE JA KOTIMAISILLE MARKKINOILLE SUUNNATTU UUSI PAKKAUS JA TUOTE LANSEERATTIIN JULKISUUTEEN 13. TAMMIKUUTA 2011 VALTAKUNNALLISESSA LEHDISTÖTILAISUUDESSA.





# Photosynthesis cluster/ bioeconomy business levels

**The lower kills the upper...**

1. Standing tree: services that can be provided without cutting down the tree. Carbon sinks, berries, game hunting, tourism...
2. Wood products, such as construction and furniture
3. Fiber and pulp products, such as chemical pulp, paper & cardboard, and products manufactured from these
4. Polymers and chemicals, such as xylitol, plant stanol ester, sitosterol, furfural, viscose, nanofibrils, ...
5. Bioenergy
6. **Selling all of these as skills and technology: global 3D ecosystem services**
7. **Water industry, agribusiness, ubi-tech, local,...**

... but, looking from top to bottom, Finnish forest industry business can be multiplied!

- **Every tree has to be sold a hundred times – and 10 times before even being cut down**
- **Wood must be expensive, but it must also be an inexpensive raw material for industry**



## EXSAMPLES

- **Food sector (scenarios, future od food and food consumption)**
- **Insurance (scanning, commitment, participation foresight environment)**
- **Wave energy (mapping the possibilities and potentials)**
- **Strategy for Finnish police**
- **Shipbuilding**
- **Regional networking for development policy**



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# **GROWTH FOR SUSTAINABLE DEVELOPMENT AND EMPLOYMENT**

**Olli Hietanen**

**Finland Futures Research Centre**

**June 2010**



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# VENTURING WORKSHOP IN 2010

Picturing 133 active participants from different sectors representing different geographical regions of Finland. Venturing Workshop held in April in Helsinki.



FUTURES LABORATORY 



*Growth for Sustainable Development and  
Employment in Finland*



TIME MACHINE 

|                           |  |
|---------------------------|--|
| ACTORS                    |  |
| CUSTOMERS                 |  |
| TRANSFORMATION<br>PROCESS |  |
| VALUES                    |  |
| OBSTACLES                 |  |
| DRIVERS                   |  |
|                           |  |






# SUMMARY OF POLICY AND OPERATIONAL PROPOSALS

**Courage and forward-looking approach**

**Policy programme for courageous development**

**Common vision and will for development based on a proactive planning process**

**R&D Society: from research and development to various prototypes**

**An Experimental Factory for demonstrations of prototypes**

**A new continuum from sectoral, regional and party politics to national policies**

**Productisation of public services and export of public services**

**Public sector innovations in municipalities**

**Active government policies for taxation and resource incentives**

**Well-being and experiences**

**Special services for senior people in society**

**Support for SME innovations**

**Creating and benefitting from new interfaces e.g. mini business clusters**

**Incentives for enterprising, financing emerging enterprise ideas with micro loans, and supporting of start-ups, new financial support instruments for risk-taking new business ventures, public support to other than industrial firms e.g. service sector start-ups, incentives for all new enterprises, sharing the ownership risks**

**The Finnish Funding Agency for Technology and Innovation 2.0**

**Elimination of obstacles e.g. bureaucracies, legislation, surveillance and control, total renovation of the structural model of labour force introducing the diversity and internationality of labour force**

**Digitalisation, The Immaterial Property Rights, Nanotechnology, Electric Cars, Forestry 2.0, Nature, Renewal of the old Infrastructure**

**Competence-based curricula, life-wide-learning, interaction between learning and real life of work**

**Creation and management of global networks of competencies**



## SEVEN PROPOSALS FOR POLICY PROGRAMME

- 1. Policy Programme for Courageous Venturing in Finland**
- 2. Innovation Challenges for the Public Sector**
- 3. Wellness and Experience**
- 4. Incentives for SME Innovations and support for Private Enterprising**
- 5. Finnish Funding Agency for Technology and Innovation TEKES 2.0**
- 6. Benefitting fully from the new Technology and renewing the old Infrastructure**
- 7. Developing the Finnish System of Expertise**



## DOUBLE CHALLENGE FOR THE GOVERNMENT

An increasing speed of change is predominant for the current operations where ever more frequently various crisis, conflicts and catastrophes are expected. This situation poses a double challenge for the Government:

1. **Core Functions for Competitiveness in a rapidly changing situation require that the competences include abilities to be proactive and apt to renew. From this point of view the Policy Programme for Courageous Venturing is essential for the creation and advancement of all enterprising. A flexible and dynamic Public Sector and Administration with a speedy and reliable decision-making system combined with a realistic risk-taking can create competitive advantages for all parties involved. On the contrary, a bureaucratic Public Sector and Administration form a barrier to all development. Growth in a bureaucracy based on deliberation and control can in the worst case be a "Fifth Plague of the World".**
2. **Simultaneously to factors such as the ever increasing speed of change, more insecure and complicated operational environment there is a need for standards and legislation as well as for global governance: national and international rules for the game. The long-term political decision-making can be the value anchor for continuity, stability and trust in a fluctuating situation, and enables investments when insecurities and risks are multiplying.**



# **POLICY PROGRAMME FOR COURAGEOUS VENTURING**

**The most important futures challenge is courageous venturing and a forward-looking approach e.g. the Policy Programme for Courageous Venturing.**

**Finland ought to become a society full of experiments where enterprising and innovative R& D, prototype testing etc. is easy and rewarding.**

**Attitudes and current operational models in Finland need to be profoundly revised as the Finns ought to move from security-seeking, risk-avoiding adaptation and down-sizing towards venturing and creating new growth.**

**Without brave venturing and future risk-taking Finns will not be able to keep-up with their internationally well-known brand of a path-finder and innovative nation.**



# PUBLIC INNOVATION CHALLENGES

**The Procedure Proposal for Public Innovations includes the following four parts:**

**The Public Administration has to transfer from the sectoral, regional and party politics towards National Policies. For this purpose a participatory national process is needed to create a vision for a common, national futures-oriented goal. The procedures emerging from the vision process ought to be operationalised and infiltrated as a continuum in the whole sector.**

**The Public Sector Services have to be packaged as products to become the engines for the Exports. For this purpose the Service Innovations are to be operational in the Municipalities. These are i.e. support for enterprising, development of and support for an innovation system for the Public Sector, packaging the Finnish competences in Services for Exports ( educational sector products, social sector products, health care products). Further Export Products can be developed from participatory decision-making processes, from National Productivity Programmes and "PARAS" project processes (The Project to Restructure Municipalities and Services and the Government Productivity Programme ).**

**Active Government supervision and guidance with taxation and resources as tools. These policies ought to be particularly long-term and thus trustworthy during turbulent times. Then the Public Decision-making can create security and stability in the transformation stages and thus decrease risk-taking in enterprising and investments. Taxation is an important instrument supporting and directing the desired development in Finland.**

**Elimination of the obstacles: bureaucracies, legislation, dismantling surveillance and control, and exploding the current structures of labour market (e.g. facing the facts of diversity and internationalization of labour market)**



# EXAMPLES 1(2)

## Wellness and Experience

- **New branches for excellence are Services for Wellness and Experiences, particularly specialized Services for Seniors**

**Growth for Sustainable Development and employment in Finland is based on enterprising and the potential of SMEs. Therefore Finland faces the following challenging needs:**

- **for Incentives and Support for SME**
- **Need for creating and benefitting from new Interfaces e.g. Mini Business Clusters**
- **Need for Incentives and encouragement for Private Enterprising**
- **Need for Special Support in sectors relevant to Sustainable Development e.g. Energy, Environmental Technology, Biotechnology**

**The current operations model and products are the worst obstacles for any new and innovative products and operations models. Finland therefore faces a real risk in these circumstances where the current Centres of Excellence and their development tools are founded based the old mode of production and are no longer capable for supporting novel thinking and innovations. The National Innovation System including its institutions of today (The Finnish Funding Agency for Technology and Innovation TEKES, The Finnish Innovation Fund SITRA, The Academy of Finland as well as the university sector and the school system) has to be re-invented.**



## EXAMPLES 2 (2)

**Finland as a country ought to be completely digitalized.**

**New openings will be found also in Development of Business markets such as International Immaterial Rights, Nanotechnology, Electric Cars, Forestry 2.0, Natural Resources, Renewal of the old Infrastructure**

**The Finnish Educational System of today ought to become an international Competence Creating System for tomorrow. Several times it is ranked number one (1) in the OECD Programme for International Students Assessment PISA for the futures but a true transformation is needed. It is time to up-grade the current Finnish Educational System to offer futures-oriented curricula for tomorrows competences. The need to establish a new excellent educational system starts with the definition of the competences of today and the requirements of tomorrow. A new Finnish system is to be build thereafter....**





W.W. Hua: Environment: The Sunlight of the Purple Vall



## MANY THANKS FOR YOUR ATTENTION!

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