



Future Innovations in Europe

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The World and (in) Transitions

- **Economy**Circular, Shared, Digital
- Technology
 3D, Nano, DNA, Big Data
- Society
 Horizontal, Community
- Power
 Glocal, Small and Big, Horizontal





A few European Issues

- Too big variety of Economic "Health" of different European countries.
- Radicalization creates gap between local interest and European goals.
- The European competitive position in the global economy is slowing down.
- The innovation power is slowing down.
- The need for increasing productivity in service industries.





European Challenges



- We should use the (inner) European diversity much better: looking for differences and not for the "average".
- To strengthen the productivity we need innovations across industries and a multi disciplinary approach with a sustainable societal impact.
- Increased productivity will lead to economic growth, lower costs of social services / support.
- There is a need to demonstrate the European relevance (public opinion); people
 do not accept nice stories anymore; they want to see and to experience results.



What does this mean for Innovation in Europe?

- It should break traditional paradoxes: cheaper and better and sustainable and profitable (transition of business models).
- It should direct be related to society: a system approach towards business innovation and societal progress (transitions in society).
- It should stimulate the traditional European competitive position of the continent of the global premium "brands".
- It should attract the future talents as experts and leaders in the world.





European Transitions powered by innovation

Technological transitions

- Better, cheaper and sustainable
- The key to a profit and prosperity

Social transitions

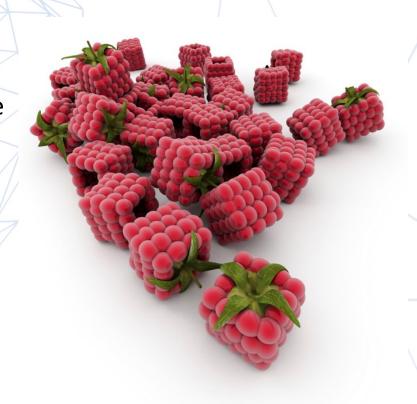
- Different need in society
- Changing roles and responsibilities
- Supported by Technology (Digital Economy)





Transition 1: Agro - Food

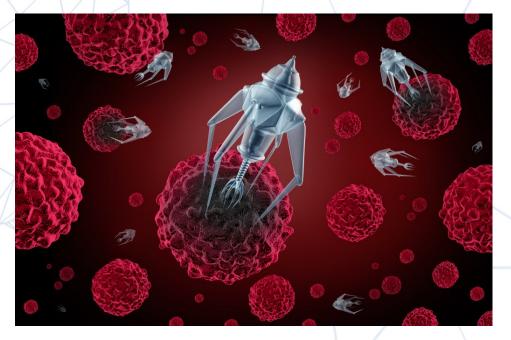
- Innovation of products, also technological
- Trend to more healthy: nutrition as preventive medicine
- Sustainable and lower foodprint
- Supply chain approach
 - Effective
 - Partnerships
 - Safe
 - High value and profits





Transition 2: Health Care and Technology

- NANO Technology for better and effective treatment.
- DNA for prevention.
- 57% increase of chronic diseases in next five years: research and business models!
- Global pandemics (speed of infections): business models and complexity theory.
- Many entries of new companies and new solutions.





Transition 3: Energy

- Increase of renewables
- Energy grids and how to optimize need, capacity and delivery (grids and complexity)
- Impact on global power of countries and companies
- Trends in consumer behavior: Horizon 2020 projects about sustainability
- Power of communities





Transition 4: Smart Cities

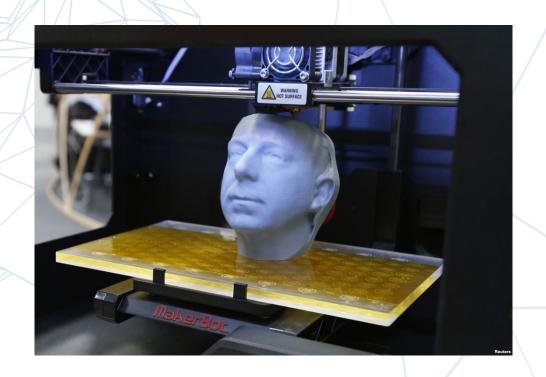
- Smart Living
 - Lower footprint (materials, biomimicry)
- Smart Mobility
 - The productivity of a city
- Smart Energy
 - Flexibility in technology and optimizing need, capacity and delivery
- Smart Economy





Transition 5: Manufacturing

- High tech materials and systems
- 3D printing in infancy stage
- Data driven factories
- Internet of things
- Robotics (China from 75,000 150,000 in 2015-2018)
- Augmented Reality



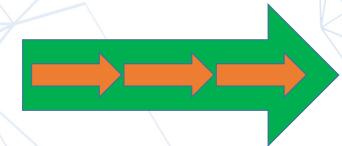


Value Creation and Value Systems

Company related innovation



- Value chain related innovation: Value driven and reducing costs
 - Sharing
 - Trust







Leadership = Change

Traditional Leadership

- Change is temporarely
- Looking for stability in "no change"
- Change feels unsafe

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• Leadership in Transitions

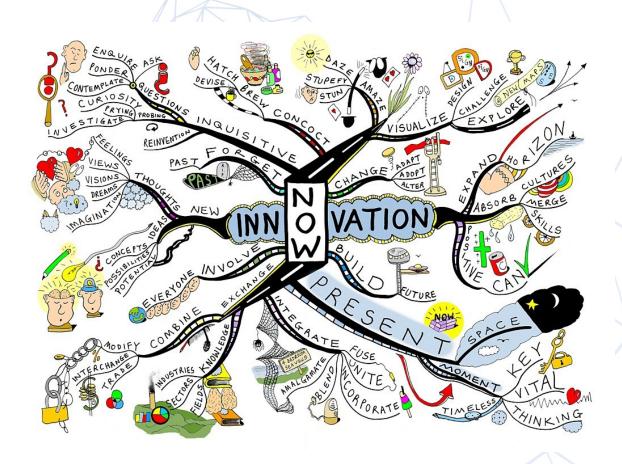
- Change is business as usual
- No top-down leadership anymore
- Leaders create conditions
- Higher level of Self Organized





Knowledge productivity

- Intellectual assets
- Knowledge management
- Knowledge productivity
- Conditions to support knowledge productivity





Leadership and innovation, The Growing Start-UP

Strong Entrepreneurial Top Management

Limited Knowledge Productivity

Potential Innovations



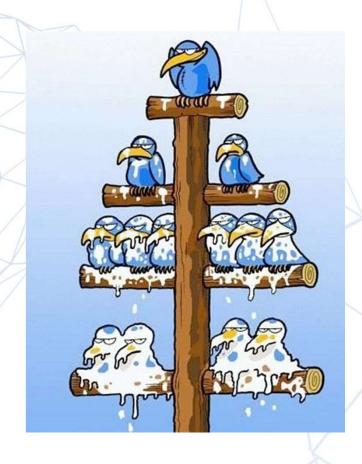


Leadership and innovation, The Traditional Firm

Vertical leadership; top down Management

> Very Little Knowledge Productivity

Potential Innovations





Leadership and innovation, The Innovative Enterprise

Top Management Creates Conditions

High Level
Of Knowledge
Productivity

Potential Innovations





Conclusion: Many opportunities for European Countries

Relevant innovations:

- -Related to general trends in technology and society
- -Related to sector or industry specific trends (influenced by the general trends)
- -Products, Services, Systems and Business Models

Make innovations work:

- How do you lead your company?
- What's your future business model?
- What does knowledge productivity for you?
- Find the unknown