Leadership for smart specialization

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Bringing School Leadership Together
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What is Smart Specialization?

? a new platform for massive discussion of political and bureaucratic elites

? a new platform for rethinking the future

The goal is pretty high?
What is smart and what is specialization?

To exploit territorial potential through innovation

1. Evidence based decisions
2. Bottom up partnership approach – not top down decision
3. Global perspective on actions, potential advantages and cooperation
4. Source in knowledge, services, technologies, talents and investors
5. Make region more visible to investors

1. Priority setting in time of scare resources
2. Excellence in something specific
3. Accumulation “critical mass” of resources
4. Cross sectorial approach – not necessarily focus on single sector
5. Response to economic and societal challenges

Source http://www.earto.eu/fileadmin/content/01_Seminars___Conferences/AC_2013/2013_PRESENTATIONS/
What is the key?

Enterprise Sector

Science, Knowledge and Creative Sector

Government Sector

ICT
Design
Research
Acad. training
Agencies
Reg Governments
Natl Governments
EU
SMEs
Clusters
Leading Enterprises
MNCs

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European regions for smart specialization
Short-term/long term problem
Regional governments’/authorities’ culture: partnerships with universities may be seen as risky due to unclear benefits of the outcomes and/or due to the long-term nature of the investment that the partnership requires.

shorter-term periods/cycles of governments

long-term
What does the smart specialization thinking means?

Short-term
How to connect three pillars into effective system?

http://randompoliticalmusings.blogspot.com/2012/06/working-model-of-american-social.html

A working Model of American Social Innovation
What does the smart specialization thinking means?

Short-term
How to mobilize science and innovation in order to create more jobs and employments?

Short-term → Long term

The term innovation means a new way of doing something.

The meaning of invention is a "the act of finding out or construction of that which has not existed yet."

Source: http://resources.talcie.org/topi... Cooger et al. (1990).
What does the smart specialization thinking means?

**Short-term**

How to efficiently use factors of productivity and employment of the 20th century?

What does the smart specialization thinking mean?

Long-term

What are the factors of productivity and employment in the 21st century?

What does the smart specialization thinking mean?

Short-term

What are 20th century jobs?

What does the smart specialization thinking means?

**Short-term**

What are 20\textsuperscript{th} century jobs?

![America’s top 10 disappearing jobs](http://wingwams.blogspot.com/)
What does the smart specialization thinking means?

Long-term

What are the 21st century jobs?

![America's top 10 emerging jobs]

<table>
<thead>
<tr>
<th>Job</th>
<th>Change</th>
<th>2012</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin care specialists</td>
<td>16,230</td>
<td>31,810</td>
<td>+104%</td>
</tr>
<tr>
<td>Personal care aides</td>
<td>534,190</td>
<td>985,230</td>
<td>+118%</td>
</tr>
<tr>
<td>Personal financial advisors</td>
<td>98,460</td>
<td>175,470</td>
<td>+128%</td>
</tr>
<tr>
<td>Coaches and scouts</td>
<td>114,080</td>
<td>201,800</td>
<td>+130%</td>
</tr>
<tr>
<td>Human resources specialists</td>
<td>225,830</td>
<td>394,380</td>
<td>+134%</td>
</tr>
<tr>
<td>Massage therapists</td>
<td>43,880</td>
<td>71,040</td>
<td>+162%</td>
</tr>
<tr>
<td>Interpreters and translators</td>
<td>31,720</td>
<td>50,320</td>
<td>+171%</td>
</tr>
<tr>
<td>Music directors and composers</td>
<td>15,960</td>
<td>24,940</td>
<td>+178%</td>
</tr>
<tr>
<td>Petroleum engineers</td>
<td>25,280</td>
<td>36,410</td>
<td>+227%</td>
</tr>
<tr>
<td>Operators, oil, gas and mining</td>
<td>44,870</td>
<td>57,180</td>
<td>+365%</td>
</tr>
</tbody>
</table>

http://wingwams.blogspot.com/
21st century competencies

Skills
- Collaborate
- Communicate
- Connect
- Create

Literacy
- Basic literacy
- Media literacy
- Information literacy
- Network literacy
- Global literacy
- Digital citizenship literacy

Fluency
- Media fluency
- Information fluency
- Creativity fluency
- Collaboration fluency
- Solution fluency
- Digital citizenship fluency
Emerging Tech jobs with great futures

Chief Digital Officer
The CDO converts analog operations to digital ones, and is a leading influencer on mobility, social media, virtual goods, and Web-based information management and marketing.

Video and Web Content Manager
This manager is responsible for the organization’s online presence, writing, editing, and proofreading site content, and working closely with the tech team to maintain site standards.

Cloud Computing Architect
The architect provides technical leadership and direction in implementing virtualized architectural projects, and works through the prioritization process with appropriate groups.

Chief Mobile Officer
The CMO oversees the direction of all things mobile, including IT apps, voice/data communications and computing services.

ERP Project Manager
The project manager directs database systems, transaction processing, and other ERP matters, such as transaction processing security, resource monitoring and reporting, and software issues.

Manager of Vendor Management
This person is IT’s liaison with suppliers of hardware, software and services. He or she also provides purchasing guidance for the technology department.

BYOD Support Supervisor
This person is in charge of the overall coordination, control and maintenance of personal mobile devices in the company to ensure compatibility and integration with enterprise strategies.

Metrics Manager
The metrics manager focuses on the development of digital analytics capabilities and best practices.

Audio-Visual Technician
Today’s AV technicians operate, schedule and maintain audio-visual services, including the AV aspects of a company’s external presence, such as Websites and blogs.
What does the smart specialization thinking means?

**Short-term**

What is the 20\textsuperscript{th} century mode of operation within the society?
What does the smart specialization thinking means?

Long-term

What is the 21\textsuperscript{th} century mode of innovation?

A new era of social innovation

- **Mainframe**
  - Mini
  - PC
  - Internet
  - Social

- **Networked PCs**
  - 70's
  - 80's
  - 90's
  - 00's

- **eRetail**
  - 10's

- **Mobile Web**
  - 20's

**Tech innovation**

**Marketing innovation**

**Social innovation**


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What does the smart specialization thinking means?

Long-term

What is the 21\textsuperscript{th} century mode of operation within the society?

Social network for diffusion of ....
knowledge
innovation
social values ....

and also ....

smart specialization
Networks have in recent years emerged as an invaluable tool for describing and quantifying complex systems in many branches of science.

Hierarchical structure and the prediction of missing links in networks

.... and in the business
Currently, networks are weak, small and underdeveloped

http://timkastelle.org/blog/2009/06/mapping-innovation-networks/
For example, networks within an university


http://www.quora.com/What-is-graph-density
Education and training systems are almost un-networked
Network for smart specialization should be much bigger and more complex
What is required for construction of an efficient innovation network?

**Short-term**

To understand principles of the diffusion of innovation within the social group and within the entire society

There is no segregation of “real world” and “digital world”

http://www.core-ed.org/thought-leadership/articles/digital-citizenship-school-and-home
What is required for construction of an efficient innovation network?

**Short-term**
To understand principles of the diffusion of innovation within the social group and within the entire society

Process of learning is much faster
What is required for diffusion of innovation?

Diffusion of innovation (knowledge)

- Innovators
- Early majority (pragmatists)
- Late majority (conservatives)
- Laggards (skeptics)

- Creators
- Critics & collectors
- Joiners & spectators
- Inactives

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What is required for diffusion of innovation?

What is required for construction of an efficient innovation network?

**Short-term**

To understand principles of the diffusion of innovation within the social group and within the entire society

[Diagram showing different types of adopters: Innovators, Early Adopters, Early Majority, Late Majority, Laggards.]

http://www.reply-mc.com/people/evrett-rogers/
What is required for construction of an efficient innovation network?

Short-term

To understand principles of the diffusion of innovation within the social group and within the entire society

http://www.reply-mc.com/people/evrett-rogers/
What is required for construction of an efficient innovation network?

Long-term

To understand components of the network that are required for diffusion of innovation within the social group and within the entire society.

What is required for construction of an efficient innovation network?

Long-term

To understand the influence landscape in the 21st century

Mass media

Social media

Personal interaction

Influence mechanisms

Influence networks

Driving forces

Influencers

Influence aggregators

- Democratization of media
- Mass media fragmentation
- Social media aggregation
- Peer trust
- Decline of advertising impact
- Celebrities
- Analysts
- Everyone
- Experts
- Journalists
- Bloggers/Twitterers
- E-mail
- Radio
- TV
- Print
- Phone
- Twitter
- Social networking
- Meeting
- Network density
- Cascade windows
- Transmission rations
- Influence agents

Impact on how people think, behave and spend


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What is required for construction of an efficient innovation network?

Long-term
Positive selection within a social group.
What is required for construction of an efficient innovation network?

**Long-term**

Training of leaders for construction of social networks for diffusion of innovations
The role of leaders

Construction of the network

http://www.innovationmanagement.se/2012/11/27/creating-networks-of-interest/
The role of leaders

Establishment of the hierarchy in the network
The role of leaders

Coalescence of networks

http://www.quora.com/What-is-graph-density
The role of leaders

Managing the change over time and through resistance – fixing the broken windows

http://www.reply-mc.com/people/evrett-rogers/
Managing the change over time and through resistance

Open leadership
(Charlene Li, 2010)

Open leadership theory – while using social technology, it “can transform the way you lead”.

“the biggest indicator of success has been open mindset – the ability of leaders to let go of control at the right time, in the right place and in the right amount”

Li defines leadership as follows: “having the confidence and humanity to give the need to be in control while inspiring commitment from people to accomplish goals”
### Science 2.0

#### Current model
- Research done privately; then submitted to journals; then peer-reviewed by gatekeepers in major journals; published
- Scientific literature behind paywalls online
- Credit established by journal name or journal impact factor.
- Data is private until publication
- Papers generally protected by copyright
- Publishers raise funds by charging for access to content
- Journal article summaries available online after publication

#### Emerging model
- Research data shared during discovery stages; ideas shared; scientists collaborate; then findings are disseminated online
- Scientific discoveries free online
- Credit established by citation count, number of views or downloads.
- Data is shared before publication
- Many different licenses possible: copyright, public domain, Creative Commons 3.0, etc.
- Publishers seek alternative funding models
- Share methods, data, findings via blogs, social networking sites, wikis, computer networking, Internet, video journals
What is required for construction of an efficient innovation network?

**Short-term**

Development and implementation of policies for construction of social networks for diffusion of innovations

Investment in the development of social networks for diffusion of innovations = investment in the infrastructure for 21\textsuperscript{st} century
What is required for construction of an efficient innovation network?

**Long-term**

Training of people for construction of social networks and efficient participation in social networks for diffusion of innovations and smart specialization.

- lifelong learners
- primary school pupils
- secondary school students
- tertiary students
- teachers
- educators
- trainers
- leaders
- school principals
- HE leaders
How to construct the social network for smart specialization?

Structured (planned) investment in people

**Structured**
- Formal education – shaping
  - Universities – 5 yrs
  - Secondary schools – 10 yrs
  - Elementary schools – 15 yrs
- Non-formal education - tuning
- Public sector - tuning
- Political organizations - tuning
- Media - tuning

**Non-structured**
- Social media - shaping
- Civil society organizations - tuning

**Power**
- High
- Low
- Rear look
- Narrow minded

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Resistance to change

Majority of teachers
Majority of researchers at leading positions
Majority of administrative leaders and managers
Majority of political players (local and national governments) that are in charge

Solution: replace them or include them through the social network for diffusion of innovation.
Regional imbalance of the knowledge-diffusion capacities

2000 - 2012
Where are the highly educated?
Where are the people with research competencies?
Adaptation is essential for survival

It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to changes

- Charles Darwin
Everyone should adapt - evolution

Every morning in Africa, a gazelle wakes up. It knows it must outrun the fastest lion or it will be killed.

Every morning in Africa, a lion wakes up. It knows that it must run faster than the slowest gazelle or it will starve.
We should also run - evolution

It doesn’t matter whether you’re a lion or a gazelle - when the sun comes up, you’d better be running.
Everyone thinks of changing the world, but no one thinks of changing himself.

(Leo Tolstoy)
Thank you for your attention!

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