Industrial Innovation: Managing the Ecosystem

Session organised by the Industrial Innovation in Transition Consortium

http://www.iit-project.eu/
European Union’s Horizon2020 grant agreement No 64935

Manchester 2016
Opening Remarks

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Improve the innovation performance of European countries and the effectiveness of innovation policy instruments to generate new growth and high quality jobs in Europe (Europe 2020 Growth Strategy)

Assess current innovation policy and practice
Examine common and best practice
Examine use of policy and practice support

Assess innovation policy tools (national and EU)
Innovation policy implications arising from company innovation practices
Assess innovation policy in the light of Europe 2020 strategy

Toolbox for states and EC to bridge innovation gaps
Toolbox for replicating the study and adding to data
Figure 1. Innovation Ecosystems

Innovation Ecosystem

Policy instruments / institutions

High-level Management

- Monitoring external
- Business strategy
- Inno Strategy
- Inno Mgmt
- Strategy / marketing / foresight
- Unit A
- Unit B
- R&D

Other Companies

Research Institutes

Innovation agencies

Customers

Industry Networks

Innovation Ecosystems
**Overarching methodology:** multi-method approach for data triangulation:
• exploratory, theory building qualitative methods (interviews and case studies), and
• theory testing and generalising quantitative methods (web-survey and policy analysis).

**Semi-structured interviews with:** Chief Technology Officers, or equivalent managers.
**Target:** 800 interviews (1/company) across 11 countries and 5 industrial sectors: Agrofood, Biopharma, Clean Technology, ICT and Manufacturing.

**The interview questionnaire contains five sections:**
1) Business environment and company strategy,
2) Mapping the environment,
3) **Innovation ecosystems**
4) Innovation management and practice, and
5) Public policy.
Innovation ecosystems – an embedded approach?

Figure 2. Change in relevance of innovation ecosystems in the last 5-10 years

Figure 3. Roles in innovation ecosystems
Structures of Ecosystems: actors, interaction and strategy

Figure 4. Actor(s) with the greatest influence in your innovation ecosystem
n = 380 (some interviewees stated multiple stakeholders)
Structures of Ecosystems: actors, interaction and strategy

Quality driven
Developing new technology
Developing alliances (e.g. industry association)
Influencing policy (e.g. regulation; standards)
Other
Improving publicity
Engaging in merger/acquisition
No strategy
Cost/price driven
Raise the capabilities of stakeholders in the IES
Networking

Figure 5. Means of maintaining position in ecosystem
n = 407 (interviewees can express multiple means)
Structures of Ecosystems: actors, interaction and strategy

Figure 6. Most important elements of the innovation ecosystem
n = 296 (interviewees could indicate multiple elements)
Managing Innovation in Ecosystems

Figure 7. Factors creating ecosystem change

- Influence of specific actors (not focal company)
- Ecosystem becoming more integrated
- Internationalisation of system actors
- New sectoral actors or processes
- Change of demand signals (regulation)
- Focal company's capacities to drive change
- Solidification of specific relationships
- Increase in focal company's external focus
- Ecosystem becoming more integrated
- System complexity
Managing Innovation in Ecosystems

Figure 8. Responding to changes in innovation ecosystem

- Integrate with demand side
- Integrate with supply side
- Improve company processes
- Improve company products/services
- Outsource R&D/OI
- Monitor external environment
- Influence/lead other actors
- Create boundaries
- Diversify strategy
- Diversify products and services
- Increase interactions
Next steps

1. **Draw implications for innovation policy** by analysing innovation practices synthesised from interview data and policy framework, identify gaps, make recommendations, and attempt to create ‘ideal’ innovation policy goals based on needs and practices of industry.

2. **Develop categories, variables and hypotheses** for analysing innovation practices of companies in relation to their reported growth, profitability and employment.

3. **Resource for case studies** that will deepen knowledge of relationship between practices and policy.

4. **Develop hypotheses to be tested using the web-survey** to be sent to
   - Stakeholders.
   - Companies.
   - Policy experts at national, regional and EU level.
Panel Debate

- What is ‘best practice’ in innovation management now?
- Can companies that still approach innovation as a linear process continue to be competitive?
- Does open innovation support competitive partnerships and alliances?
- How do firms manage overlapping regional, national and global policy agendas? What is the role of different policy in innovation ecosystems?

Chair: Professor Erkki Ormala, Aalto University

Panellists:
- Peter Dröll, Head of Industrial Technologies, Directorate-General for Research and Innovation, European Commission.
- Dr Bernd Korves, Head of Visioning and Scouting, Siemens Corporate Technology.
- Dr Lisa Dale-Clough, University of Manchester.
Open innovation

Do you use open innovation?  n = 119

- Agro-food: 33.6%
- Biopharma: 19.3%
- Cleantech: 16.8%
- ICT: 9.2%
- Manufacturing: 21.0%