Policy strategies to support service innovation

- KNOWINNO second expert meeting on R&D and innovation in services (INNOSERV) -

Dr. Dirk Meissner
Deputy Head and Research Professor
Research Laboratory for Science and Technology Studies
Higher School of Economics - National Research University
Institute for Statistical Studies and Economics of Knowledge
Markets for services – Operations and Maintenance Offshore windpower

• Currently 2.396 GW Offshore Windpower capacity is installed in Europe
• 440 MW will be connected to the grid during second half 2010 increasing total capacity installed to 2.836 GW
• For 2020 40GW and 2030 150GW are forecasted
• Modest estimates calculate 20,000€ O&M cost per installed MW
• Estimates consider decrease of O&M cost per MW installed

By 2020 O&M expenditure will be more than 1 bn EUROs with 40GW capacity installed offshore

Remarks:
1) Assuming installed capacity by 2020 is 40 GW, by 2030 150GW
2) O&M cost in base case 40,000€/MW installed, best case 20,000€/MW installed, worst case 60,000€/MW installed
Markets for services – offshore windpower

Who profits from O&M spending?

- OEMs are currently the main service contractors
- Siemens and Vestas clearly dominate the current market
- Uncertainty prevails over the coming years – competitors from US, Europe and Asia are entering the race
- Third parties independent from OEMs are beginning to grow
- Overall a lucrative market is emerging

Remarks:
1) Assuming that OEM is service contractor after installation
2) Figures relate to capacity currently connected to grid
3) Long-term effects (learning rates and technological progress) are considered
Most maintenance work is done by external contractors

- OEMs dominate the maintenance contractor market
- Most wind farms are still under OEM warranty agreements
- Shortage of reliable experienced non OEM contractors
- Learning curve effects can be assumed – around 5-7% decrease with each doubling of installed capacity

**split of maintenance staff**
- external staff 90%
- internal staff 10%
- operator 10%

**share of maintenance work done**
- external by 3rd party (non OEM) 10%
- internal 10%
- external by OEM 80%
### Importance of KIBS - Russia

<table>
<thead>
<tr>
<th>Industry</th>
<th>Share of Sales of Innovative Products of Total Sales, per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining and quarrying</td>
<td>3.0</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>6.6</td>
</tr>
<tr>
<td>high tech</td>
<td>8.3</td>
</tr>
<tr>
<td>medium high tech</td>
<td>13.7</td>
</tr>
<tr>
<td>medium low tech</td>
<td>4.3</td>
</tr>
<tr>
<td>low tech</td>
<td>3.9</td>
</tr>
<tr>
<td>Electricity, gas and water supply</td>
<td>0.6</td>
</tr>
<tr>
<td>Services</td>
<td>3.3</td>
</tr>
<tr>
<td>KIBS</td>
<td>9.2</td>
</tr>
</tbody>
</table>

Higher School of Economics, Moscow 2012
## Frequency of supplying service innovation generated with co-creation

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>AD</td>
</tr>
<tr>
<td>Often</td>
<td>9.3</td>
<td>10.4</td>
</tr>
<tr>
<td>Sometimes</td>
<td>25.6</td>
<td>23.4</td>
</tr>
<tr>
<td>Rarely</td>
<td>23.6</td>
<td>22.1</td>
</tr>
<tr>
<td>Never</td>
<td>41.5</td>
<td>44.2</td>
</tr>
</tbody>
</table>

AD = Advertising; MKT = Marketing services; ADT = Audit; IT = Information technology services; REC = Recruitment services; ENG = Engineering services; FIN = Financial advice services; LEG = Legal advice services; DVP = Property development services; DSGN = Business design

Source: Indicators of Innovation Activities (2010)
### Level and efficiency of co-production of failed innovation

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The clients failed to understand why we need co-production</td>
<td>9.9</td>
</tr>
<tr>
<td>The clients understand their role in co-production, but insufficient qualification of their staff makes them poor co-producers</td>
<td>30.8</td>
</tr>
<tr>
<td>The clients do not want to co-produce for resource-saving reasons: they do not want to spare their employees’ time on these activities</td>
<td>18.7</td>
</tr>
<tr>
<td>The clients are too arrogant for co-production – “We pay - you work”</td>
<td>31.9</td>
</tr>
<tr>
<td>The clients evade co-production for the sake of confidentiality</td>
<td>8.8</td>
</tr>
<tr>
<td>Per cent</td>
<td>Total</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Providers</td>
<td>47.0</td>
</tr>
<tr>
<td>Consumers</td>
<td>56.2</td>
</tr>
</tbody>
</table>

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## Main reasons for imperfect service absorption

<table>
<thead>
<tr>
<th>Per cent</th>
<th>Total</th>
<th>AD</th>
<th>MKT</th>
<th>ADT</th>
<th>IT</th>
<th>REC</th>
<th>ENG</th>
<th>FIN</th>
<th>LEG</th>
<th>DVP</th>
<th>DSGN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor quality</td>
<td>11.1</td>
<td>10.0</td>
<td>8.1</td>
<td>0.0</td>
<td>0.0</td>
<td>9.1</td>
<td>0.0</td>
<td>0.0</td>
<td>8.3</td>
<td>0.0</td>
<td>9.1</td>
</tr>
<tr>
<td>Service does not match the needs of the customer</td>
<td>19.4/ 40.5</td>
<td>16.7/ 45.0</td>
<td>21.1/ 56.8</td>
<td>0.0/ 61.5</td>
<td>20.0/ 42.9</td>
<td>25.0/ 36.4</td>
<td>23.1/ 80.0</td>
<td>41.7/ 25.0</td>
<td>20.0/ 33.3</td>
<td>9.1/ 16.7</td>
<td>10.0/ 10.0</td>
</tr>
<tr>
<td>There was no real need in this service</td>
<td>35.8/ 22.8</td>
<td>33.3/ 15.0</td>
<td>31.6/ 10.8</td>
<td>9.1/ 0.0</td>
<td>40.0/ 57.1</td>
<td>20.0/ 27.3</td>
<td>38.5/ 37.5</td>
<td>41.7/ 0.0</td>
<td>60.0/ 27.3</td>
<td>72.7/ 33.3</td>
<td>40.0/ 20.0</td>
</tr>
<tr>
<td>Poor qualification of the customer</td>
<td>19.4/ 15.7</td>
<td>27.8/ 20.0</td>
<td>21.1/ 18.9</td>
<td>27.3/ 23.1</td>
<td>20.0/ 0.0</td>
<td>25.0/ 0.0</td>
<td>23.1/ 25.0</td>
<td>8.3/ 16.7</td>
<td>0.0/ 0.0</td>
<td>9.1/ 30.0</td>
<td>10.0/ 30.0</td>
</tr>
<tr>
<td>Insufficient control</td>
<td>17.2/ 9.8</td>
<td>5.6/ 10.0</td>
<td>15.8/ 15.4</td>
<td>54.5/ 0.0</td>
<td>13.3/ 20.0</td>
<td>25.0/ 20.0</td>
<td>7.7/ 12.5</td>
<td>8.3/ 16.7</td>
<td>20.0/ 0.0</td>
<td>0.0/ 20.0</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>8.2/-</td>
<td>16.7/-</td>
<td>10.5/-</td>
<td>9.1/-</td>
<td>6.7/-</td>
<td>5.0/-</td>
<td>7.7/-</td>
<td>0.0/-</td>
<td>0.0/-</td>
<td>9.1/-</td>
<td>10.0/-</td>
</tr>
</tbody>
</table>

For each suggested answer the table shows the percentage of respondents in the form \(x/y\) where upper figure \(x\) represents the answers of service providers, lower figure \(y\) represents the answers of the consumers; "-/-" = option not offered as a possible answer.

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**Service Innovation Policies**

**Issue**

- Service innovation is essentially like manufacturing innovation – but has been neglected in policies and innovation infrastructure.
- Access is the issue.
- Service innovation has features very different from manufacturing innovation – overlooked in standard innovation indicators, instruments and tools.

**Policy relevance**

- Include service firms in R&D and innovation surveys and support programmes – may require some new formulation and networking.
- Develop infrastructure and innovation systems to support service industries.
- Support services (esp SMEs) in innovation management and entrepreneurship, develop relevant training, etc.
- Specific R&D and engineering programmes for service firms & public sector.
- Awareness raising
- Adapt R&D definitions as applied in practice.

Source: adapted from Miles 2011
Service Innovation Policies (ctd)

**issue**

- Need to address specific features of innovation (intangible, customer-interface and interaction, experience/content issues) management.
- All sectors liable to display multiple forms of innovation, combining technological, organisational, and business model innovation.
- Service activities as elements in and beneficiaries of innovation systems.
- Services as part of service systems, including those constructed to confront grand challenges.

**Policy relevance**

- Service innovation programmes and centres, with more emphasis on user-driven innovation, etc.
- New tools, techniques, communities of practice to be supported, beyond R&D. Best practice and role models.
- IP and Knowledge Management training and strategising.
- Integrate non-technological and organisational issues into R&D programmes.
- Support innovation in service activities
- Support KIBS in innovation systems and clusters
- User-driven, open and inter-professional innovation (inc “living labs” and demonstrators)
- Regulations, standards, procurement, legal and financial support (including accounting for intangibles).

Source: adapted from Miles 2011

Responsible agency: The Ministry of Communications and Mass Media.

The Ministry is a federal agency under the executive branch responsible for drafting and implementing national policy and legal regulation in:
• information technology, including the creation of government information resources and the promotion of access to such resources
• telecommunications, including the allocation of and conversion of the radio frequency spectrum, and postal communications
• mass communications and the media, including the electronic media, the development of the Internet, television and radio broadcasting, and related technology
• publishing and printing
• personal data processing.

The Ministry of Communications and Mass Media administers the national postal system, and national and international telecommunications networks.
The goals and tasks of the Program “Information Society 2011-2020”:

1. acquisition benefits for citizens and organizations by using of information and telecommunications technologies

2. creating conditions for rapid and effective interaction between government, citizens and businesses.

Indicators of successful implementation of the program will be the index of the Russian Federation in the international ranking of countries by level of development of information and telecommunication technologies and the increasing number of citizens who use state services in daily life. By 2020 it is planned to increase the proportion of population using e-government services, with 11% (2010 figure) to 85%
Under the state program in 2011 the Ministry of Communications and Mass Media performed the following key activities:

- creation of services for public debate and controlling the activities of public authorities, the creation of instruments of public management at the municipal level.
- formation of a unified space of trust an electronic signature.
- formation and development of infrastructure of the universal e-card.
- creation of a unified accounting system of civil registration (electronic registry office).
- creation of organizational and technological infrastructure for electronic payments for government services.
- creation of a national platform for distributed computing in which computing resources and power presented to the user as a web service.
- creation of a national information and communication platform for the dissemination of digital content.
- creation of a single web portal for the promotion of cultural heritage and traditions of Russia.

- In 2011, funding from the federal budget amounted to 1.74 billion rubles, including R & D - 173 million rubles, and "other needs" - 1.56 billion rubles.
Russian Federal State Program: “Information Society 2011-2020” consists of four subprogrammes:

1. “Information and telecommunication infrastructure of information society and services giving on these foundation”

Responsible agency: The Federal communication agency

Goals and tasks:
- guaranteeing of the availability of telecommunication services in the Russian Federation
- Developing of the federal postal services
- Improving the Spectrum Management
- Managing of the development of information and telecom infrastructure and information society services provided by these foundation
2. “Information digital environment”

Responsible agency: The Federal Agency for Press and Mass Communications

Goals and tasks:
Construction, rehabilitation, reconstruction, improvement of broadcasting facilities
Electronic media: content and access
Russian participation in the international information space
Support of social projects in the field of media Development of national information resources

4. “E-government”

Goals and tasks:
Management of the development of the Information Society
The development of e-government
Improving the quality of public administration through the creation and implementation of modern information technology
Services based on information technologies in medicine, health and social care
Development of services based on Information Technology in Education Scientific and Cultural Organization
Support of regional projects in the field of information technology

The sub-program’s budget: 1.94 billion rubles. Funding for the state program for the time of its implementation of the federal budget is 1.2 trillion rubles, including: By year:

2011 - 1.11 billion rubles 2012 - 1.28 billion rubles
2013 - 1.18 billion rubles 2014 - 1.07 billion rubles
2015 - 1.11 billion rubles 2016 - 1.16 billion rubles
2017 - 1.21 billion rubles 2018 - 1.26 billion rubles
2019 - 1.31 billion rubles 2020 - 1.36 billion rubles
• The only performer works on implementation of e-government for 2012-2014 identified Rostelecom Electronic Government, Information Society, State Program Information Society


Contractor identified for 2012-2014 in accordance with the law "On placing orders for goods, works and services for state and municipal needs."

The list of activities of the state program of the Russian Federation, "The Information Society (2011 - 2020 years)," in which the sole executor of the work defined "Rostelecom" includes, inter alia, the development of the portal of public services, the development of a common space of trust in electronic signatures, the development of interagency electronic interaction, a single identification system. It is planned that "Rostelecom" will be engaged in the development of mechanisms to use mobile devices to access e-government services and public e-mail, which will be used for the interaction of citizens with government agencies.

The responsibilities of the Executive, in addition, include the establishment of common references and qualifiers for the state of information systems, as well as the creation of projects such as "Electronic Civil Registry", "E region" and "E-democracy."

The basis for the implementation of these systems has also created the sole executor of the national platform of cloud computing.
service innovation *embody a special challenge for managerial assumptions*

Organisational and other innovations are gaining importance *(challenge for innovation policy setting the respective framework conditions)*

But there is an ongoing wave of technological innovation in services *(challenge for ICT sectors to reach SMEs, public services - and to build in service design principles)*

Both are important for the whole economy as well as for social wellbeing and confronting grand challenges

Meeting the Grand Challenges calls for more systemic innovation thinking – far beyond technological solutions but connected with the *delivery of technology*

Complex skills are often required, combining knowledge and capabilities for dealing with business and end-users, and integrating the competences of different professions in service systems *(challenge for training)*
Thank you for your attention!

dmeissner@hse.ru

20, Myasnitskaya str., Moscow, Russia, 101000
Tel.: +7 (495) 621-2873, Fax: +7 (495) 625-0367
www.hse.ru