Public procurement for innovation. Characteristics, benefits and risks

Presentation to the SEA-EU-Net Workshop on Public Procurement for Innovation
Paris June 25 2014

Jakob Edler
Manchester Institute of Innovation Research, MBS, University of Manchester
Structure

1. Demand and Innovation
2. Public Procurement of Innovation Definition - Delineation
3. PPI: policy instrument and policy trends
4. PPT, PCP
5. Rationales: justifications for demand side and PPI policies
6. Empirical Evidence
7. Challenges of PPI policy
8. Conclusion
The meaning of demand for innovation

- Efficient diffusion of innovation more important than being lead innovator for development and growth (Freeman 1994)
- Demand for innovation: **signal to market** to acquire new product / service on the basis of a need for a certain price
- Users as **source of innovation** (co-production, lead users etc.)
- **Early users**: signal, demonstration, further improvements
- Supplier Firms:
  - Demand conditions: main hindrance to innovation
  - Proximity to demanding consumers makes innovation activity more likely (true for subsidiaries of MNC!): spill overs
- Adopting firms (buyers): broad and fast adoption key to development
- Huge policy debate in Europe
The meaning of demand for innovation

- Different ways in which demand spurs innovation
  - **Demand triggering innovation**: asking for new products/services (new functions, more efficient…)
  - Demand being **responsive to existing innovation**: absorbing, adopting, using, accepting innovations
- **Innovation role of users**
  - **User produced** innovation,
  - **Co-production** user – producer
  - **Co-adaptation** user – producer
- Policies to **improve demand** for innovation (including public procurement) seen – by firms – to be highly relevant (Inno-Barometer, various years)
1. Demand and Innovation

2. Public Procurement of Innovation Definition - Delineation

3. PPI: policy instrument and policy trends

4. PPT, PCP

5. Rationales: justifications for demand side and PPI policies

6. Empirical Evidence

7. Challenges of PPI policy

8. Conclusion
2. Public Procurement of Innovation PPI

- **Public Procurement of Innovation**: State actors ask for and buy a product or service that is new to them: They
  - ...ask for something new, not existing yet (radical innovation), thus triggering innovation activity in the market
  - ...respond to an innovative offer from the marketplace
  - ...may co-produce the innovative solution with suppliers
  - Meanwhile: element of demand based innovation policy
1. Demand and Innovation

2. Public Procurement of Innovation Definition - Delineation

3. **PPI: policy instrument and policy trends**

4. PPT, PCP

5. Rationales: justifications for demand side and PPI policies

6. Empirical Evidence

7. Challenges of PPI policy

8. Conclusion
Public Procurement as Innovation Policy Instrument

Source: Edler/Georghiou 2007
Public Procurement and other demand side instruments

- Public Procurement
- Demand Subsidies, Demand tax incentives
- Awareness measures, labels, information campaigns
- Training
- Demonstration projects
- Articulation of needs, joint need definition
- Support user – producer interaction
- Support user driven innovation
- (Regulation (creating markets, security, health etc.))
- Mix of Measures
  - Various demand measures
  - Demand and supply link,
- Pre-commercial procurement (supply side and demand side)
- Panacea-like discourse at OECD, EU, country level
- Focus in most countries on Public Procurement
  - 16-17% BIP - direct effects?
  - Trendchart report 2011 (review, no in-depth verification/evaluation) (Izsak/Edler 2011)

| Type of demand-side policy tool                        | AT | BE | BG | CH | CY | CZ | DE | DK | EE | ES | FI | FR | GR | HU | IS | IT | IR | LT | LV | LU | LI | MT | NO | NL | PL | PT | RO | SE | SK | SI | UK |
|--------------------------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Fostering public procurement of innovation             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Pre-commercial public procurement                      |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Regulation as a tool for innovation policy             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Tax incentives to foster innovation demand             |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Awareness raising campaigns, labels                   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| Lead market type of initiatives                        |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| User-driven innovation                                 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

- Regional level: less well developed (Trendchart 2012, 18% have demand side policy measures implemented, very few claim PPI)
1. Demand and Innovation

2. Public Procurement of Innovation Definition - Delineation

3. PPI: policy instrument and policy trends

4. PPT, PCP

5. Rationales: justifications for demand side and PPI policies

6. Empirical Evidence

7. Challenges of PPI policy

8. Conclusion
PPI and Pre-Commercial Procurement

Public Procurement of Innovation

- The purchase of a service or a good that is novel
  - to the purchaser
  - to the supplier (needs to be developed)
- As part of the general procurement and delivery agenda

Pre-Commercial Procurement

- The purchase of a R&D service (up to prototype or limited first batch)
- Risk – reward sharing (IPR shared, different models)
- Actual uptake of the innovation solution in regular procurement (by same agency or others (public/private, or not at all!))

High on innovation policy agenda in many countries but poor implementation (EU: LMI, UK, Scandinavia, OECD paper)

Various PCP types and schemes exist dedicated, extra pots/schemes or As part of departmental (R&D) procuring

Source: Edler, own compilation
1. Demand and Innovation

2. Public Procurement of Innovation Definition - Delineation

3. PPI: policy instrument and policy trends

4. PPT, PCP

5. **Rationales: justifications for demand side and PPI policies**

6. Empirical Evidence

7. Challenges of PPI policy

8. Conclusion
Justifications for demand based policies (and PPI policies)

Market & system failures

- Information asymmetries (producers do not know preferences, users do not know innovations)
- Lack of interaction between users and producers
- Lack of capabilities and willingness to use new technologies,
- High entry costs (high potential for network effects)
- Risk aversion and lack of risk management
- Technological path dependencies
- Little awareness of consumers/policy makers

Public sector needs

- Making public service more effective and efficient (value for money, long term)
- Contributing to sectoral policy needs and goals (e.g. the eco-agenda)

Support industry and location

- Support local producers, service providers
- Indirect: Triggering something bigger, market creation
  - Dominant designs, Demonstration effects
  - Scale/scope advantages
  - Learning / upgrading for buyer and provider
  - Keep up innovation pressure in system
  - Attractive investment location (demand conditions)

Intelligent public action (including PPI) can overcome various kinds of bottlenecks, and create and capture multiple opportunities
1. Demand and Innovation
2. Public Procurement of Innovation Definition - Delineation
3. PPI: policy instrument and policy trends
4. PPT, PCP
5. Rationales: justifications for demand side and PPI policies

6. Empirical Evidence
7. Challenges of PPI policy
8. Conclusion
CATI survey conducted between June and July 2011

800 responding organisations - 10% response rate (non biased across sectors or areas of government)

Structure:
- Types of innovation
- Procurement experience: main supply categories, clients, tendering modes and procurement practice
- Procurement and innovation: main drivers and barriers, comparing public and private.
- General assessment
- Open ended qualitative assessment (not analysed yet)

* Survey within the Underpin project, see references
Innovation effects

- **Public procurement does indeed drive innovation**: 67% report innovation as result of public procurement or bidding.
- **Much of this innovation is hidden**.
- Public authorities can **trigger or co-produce innovative solutions** (source).
- Innovation done for public body leads to sales in private markets (50%), often abroad (30%) *(catalytical effects)*.
- **Large firms seem to** benefit (slightly) more in general:
  - Target action with SME, supply chains.
- **Central government** / professional services: more prone:
  - Regional actors need to improve, more conscious, bundling.
Which practices **encourage** innovation?

- Innovation requirements in tenders
- Early interaction with procuring organisation
- Outcome-based specifications
- Advanced communication of future needs
- Emphasis on sustainability criteria
- Full life-cycle costing considerations
- Competitive dialogue
- Incentive contracts such as profit-sharing arrangements
- Negotiated tender
- Open competitive tender
- Framework agreement
- Electronic submission of tenders
- Private finance initiative
- Non-OJ tender procedure
- Restricted tender
- E-auctions
- Provisions related to intellectual property

**encouraged innovation (% out of those that experience it)**
Mis-Match: innovation friendly practices not very common

- Innovation requirements in tenders
- Early interaction with procuring organisation
- Outcome-based specifications
- Advanced communication of future needs
- Emphasis on sustainability criteria
- Full life-cycle costing considerations
- Competitive dialogue
- Incentive contracts such as profit-sharing arrangements
- Negotiated tender
- Open competitive tender
- Framework agreement
- Electronic submission of tenders
- Private finance initiative
- Non-OJ tender procedure
- Restricted tender
- E-auctions
- Provisions related to intellectual property

Source: UNDERPINN Survey
## Barriers to innovation in procurement

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Very significant</th>
<th>Moderately significant</th>
<th>Not at all significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too much emphasis on price</td>
<td>453</td>
<td>209</td>
<td>102</td>
</tr>
<tr>
<td>Lack of interaction with procuring body</td>
<td>344</td>
<td>247</td>
<td>155</td>
</tr>
<tr>
<td>Variants not allowed</td>
<td>291</td>
<td>254</td>
<td>173</td>
</tr>
<tr>
<td>Risk aversion of public procurers</td>
<td>290</td>
<td>264</td>
<td>173</td>
</tr>
<tr>
<td>Specifications too prescriptive</td>
<td>279</td>
<td>256</td>
<td>204</td>
</tr>
<tr>
<td>Low capabilities of procurers</td>
<td>250</td>
<td>257</td>
<td>207</td>
</tr>
<tr>
<td>Poor management of risk</td>
<td>235</td>
<td>279</td>
<td>209</td>
</tr>
<tr>
<td>Contracts not long enough</td>
<td>200</td>
<td>243</td>
<td>290</td>
</tr>
<tr>
<td>General lack of demand for innovation</td>
<td>194</td>
<td>293</td>
<td>235</td>
</tr>
<tr>
<td>Contracts not large enough</td>
<td>154</td>
<td>215</td>
<td>359</td>
</tr>
<tr>
<td>Contracts too large</td>
<td>111</td>
<td>169</td>
<td>434</td>
</tr>
<tr>
<td>Inadequate management of IPR</td>
<td>86</td>
<td>180</td>
<td>344</td>
</tr>
<tr>
<td>Contracts too long</td>
<td>57</td>
<td>152</td>
<td>515</td>
</tr>
</tbody>
</table>

Source: UNDERPINN Survey
Risk aversion and lack of knowledge

<table>
<thead>
<tr>
<th>Risk aversion and lack of knowledge</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public procurers are knowledgeable about the technical aspects of our product and/or service</td>
<td>144</td>
<td>273</td>
<td>244</td>
<td>106</td>
<td>24</td>
</tr>
<tr>
<td>Public procurers are able to make effective use of the whole supply chain to achieve value for money and innovation</td>
<td>118</td>
<td>267</td>
<td>246</td>
<td>104</td>
<td>27</td>
</tr>
<tr>
<td>Public procurers are knowledgeable about the market in which our product and/or service operates</td>
<td>111</td>
<td>255</td>
<td>260</td>
<td>134</td>
<td>31</td>
</tr>
</tbody>
</table>

Lack of market knowledge particularly problematic for innovation demand

source: UNDERPINN Survey
1. Demand and Innovation
2. Public Procurement of Innovation Definition and variations
3. PPI: policy instrument and policy trends
4. PPI, PCP
5. Rationales: justifications for demand side and PPI policies
6. Empirical Evidence
7. Challenges of PPI policy
8. Supporting Instruments - Illustrations
9. Conclusion
Strategic Intelligence

- Identifying one's mid and long term needs
- Identifying necessity for organisational change
- Knowing the pipeline and assessing the capabilities of supply

Coordination:

- Innovation / economic policy with sectoral (procurement policy / regulation) – fiscal – social – education policy
- Critical mass – teaming with other departments/ cities/ regions/ countries
Tensions: potential dys-functionalities

- Who benefits? If demand satisfaction is seen as industrial policy: locus of economic benefit as a dysfunctional variable in sectoral policy approaches

- Innovation / social benefit vs. regional/local economic support (support second best to realise contract at home)

- National / Regional Champion Policy – International Firms

- Over-dependency on specialised (foreign) suppliers

- Risk culture and management
1. Demand and Innovation

2. Public Procurement of Innovation Definition - Delineation

3. PPI: policy instrument and policy trends

4. PPT, PCP

5. Rationales: justifications for demand side and PPI policies

6. Empirical Evidence

7. Challenges of PPI policy

8. PPI Policy

9. Conclusion
Policy measures to support public procurement
(Uyarra 2013, Georghiou et al 2013)

- Improving **organisational capabilities** (innovation strategy, procurer skills):
  - Innovation Procurement Plans (UK), Learning Network of public procures (NL), EU Lead Market procurer networks, TEKES subsidy of additional procurement costs
- Improving **communication and signalling**
  - Innovation Partnerships (EU), Innovation Platforms (UK, Flanders)
- Providing **risk** financing, risk management and multi-step procedure for innovation new to the market
  - PCP schemes (SBIR (US), SBRI (UK)), specialised agency (Germany)
  - Forward Commitment Procurement
  - Insurance schemes (Korea)

- Poor roll out, no sound learning as yet
- Multiple governance / implementation challenges
1. Demand and Innovation

2. Public Procurement of Innovation Definition - Delineation

3. PPI: policy instrument and policy trends

4. PPT, PCP

5. Rationales: justifications for demand side and PPI policies

6. Empirical Evidence

7. Challenges of PPI policy

8. PPI Policy

9. Conclusion
Conclusion I: Principles

- PPI is potential (!!) tool for national/regional innovation policy
- Strategic **integration** of innovation into *all* public policy delivery (PPI one means to deliver policies)
- **Combination** of economic / sectoral / social policy aims and innovation
- Important distinctions
  - **general** procurement (across all procurement activity) and **strategic** procurement (designed to capture multiple effects)
  - procuring something only **new to your organisation** and procuring **market novelty** (more challenging)
  - Market novelty:
    - consider various stages: PCP or competitive dialogue
    - Take advantage of specialised organisations to support and roll out good practice
Conclusion II: To do’s

- **Demand** innovation *explicitly*, set explicit incentives for innovation
- **Communicate and interact as early as possible:**
  - **Pre-procurement communication** and **early interaction**, more important than interactive modes during the process
- **Send signals** and **interaction prior to the actual procurement** (articulation of needs)
- **Allow variety**
- **When buying green, link it to innovation**
- **Use procurement practices** *intelligently*
  - E.g. Outcome specifications, full life-cycle costing, incentive contracts etc. more important than the **choice of modes of procurement** (open, restricted)
  - **Competitive dialogue for high complexity**
  - **Beware: efficiency oriented forms of procurement**, such as framework contracts, e-auction or e-tendering, **do not necessarily foster innovation**
Establish explicit commitment across the organisation

- Ensure **strong leadership** and backbone

**Strategise:** Include innovation (procurement) in annual strategies (ex ante) and reports (ex post): innovation target achievements

- When adopting an innovation **enable and foster organisational learning and organisational change**

**Establish new forms of organising public procurement**

- **Horizontal Coordination:**
  - across units in departments
  - across departments when bundling
  - Across regions / nations (take advantage of existing support schemes for PCP)

- **Vertical coordination:**
  - Decision makers/budget holders
  - Functional leaders
  - Users
  - Procurement (legal) specialists
Conclusion IV: to do’s

- **Capabilities and knowledge:**
  - Mobilise those close to the market and the technology
  - Mobilise those using it internally
  - Close interaction between internal users and procurement (support only)
  - Understand and manage **risk explicitly** (see above)
  - Real **cost-benefit** in the public arena (life cycle costing)
  - Intelligent use of existing **support mechanisms** at national and EU level
  - Keep in mind the **matching supply side / infrastructure**

- **Regional level***
  - Enhance likelihood of regional fit: Technological/Sectoral platforms to understand pipelines and bottlenecks
  - Inform about framework contracts and upcoming initiatives early
  - Bundle with other regions (EU schemes, PCP)

* See Uyarra 2010, Trendchart 2012
CONTACT

Jakob Edler, Professor of Innovation Policy and Strategy
Executive Director

Manchester Institute of Innovation Research (MIoIR)
https://research.mbs.ac.uk/innovation/
Manchester Business School ,University of Manchester,
Harold Hankins Building, Manchester, UK M13 9PL
0044 (0) 161 275-0919 (secr. 5924)
jakob.edler@mbs.ac.uk
http://www.manchester.ac.uk/research/mbs/Jakob.edler/personaldetails

Executive Education at MIoIR
https://research.mbs.ac.uk/innovation/Executivecourses.aspx
Further Reading

Demand Side Innovation Policy general (including national public procurement approaches)


Public Procurement of Innovation (general introduction)


EDLER, J.; GEORGHIOU, L., UYARRA, E.; YEOW, J (2011): Procurement and Innovation: Underpinning the debate. Background Paper Forum organised within the UNDERPINN project; Manchester

Case examples


Risk Management


Regional / City region level


Pre-Commercial Procurement

Inno Partnering Forum (2010). EU - SBRI Options Paper and Study of International Best Practice Proposal for establishment of EU SBIR.

Competitive Dialogue.

https://underpin.portals.mbs.ac.uk/Portals/70/docs/5.1-%20Pedro%20Telles%20-%20Competition%20Dialogue.pdf

Project and further references: UNDERPIN (project on public procurement and innovation, with Manchester Colleagues)

ANNEX
## Challenges and Support instruments I

<table>
<thead>
<tr>
<th>Policy Category</th>
<th>Deficiencies addressed</th>
<th>Instrument types</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framework conditions</td>
<td>i) Procurement regulations driven by competition logic at expense of innovation logic.</td>
<td>i) Introduction of innovation-friendly regulations</td>
<td>2005 change in EU Directives including functional specifications, negotiated procedure etc.</td>
</tr>
<tr>
<td></td>
<td>ii) Requirements for public tenders unfavourable to SMEs</td>
<td>ii) simplification &amp; easier access for tender procedures</td>
<td>2011 proposal in EU to introduce innovation partnerships</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Paperless procedures, electronic portals, targets for SME share</td>
</tr>
<tr>
<td>Organisation &amp; capabilities</td>
<td>i) Lack of awareness of innovation potential or innovation strategy in organisation</td>
<td>i) High level strategies to embed innovation procurement</td>
<td>UK ministries Innovation Procurement Plans 09-10</td>
</tr>
<tr>
<td></td>
<td>ii) Procurers lack skills in innovation-friendly procedures</td>
<td>ii) Training schemes, guidelines, good practice networks</td>
<td>Netherlands PIANOo support network, EC Lead Market Initiative networks of contracting authorities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii) Subsidy for additional costs of innovation procurement</td>
<td>Finnish agency TEKES meeting 75% of costs in planning stage</td>
</tr>
</tbody>
</table>

Source: Georghiou/Edler/Uyarra/Yeow (2012): Public procurement as innovation policy tool: choice, design and assessment (manuscript)
## Policy Category: Identification, specification & signalling of needs

<table>
<thead>
<tr>
<th>Deficiencies addressed</th>
<th>Instrument types</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Lack of communication between end users, commissioning &amp; procurement function</td>
<td>i) Pre-commercial procurement of R&amp;D to develop &amp; demonstrate solutions</td>
<td>i) SBIR (USA, NL &amp; Australia), SBRI (UK), PCP EC &amp; Flanders</td>
</tr>
<tr>
<td>ii) Lack of knowledge &amp; organised discourse about wider possibilities of supplier’s innovation potential</td>
<td>ii) Innovation platforms to bring suppliers &amp; users together; Foresight &amp; market study processes; Use of standards &amp; certification of innovations</td>
<td>ii) Innovation Partnerships &amp; Lead Market Initiative (EC), Innovation Platforms (UK, Flanders); Equipment catalogues (China to 2011)</td>
</tr>
</tbody>
</table>

## Policy Category: Incentivising innovative solutions

<table>
<thead>
<tr>
<th>Deficiencies addressed</th>
<th>Instrument types</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Risk of lack of take up of suppliers innovations</td>
<td>i) Calls for tender requiring innovation; Guaranteed purchase or certification of innovation; Guaranteed price/tariff or price premium for innovation</td>
<td>i) German law enabling innovation demands in tenders; UK Forward Commitment Procurement; China innovation catalogues (to 2011); Renewable energy premium tariffs (DE and DK)</td>
</tr>
<tr>
<td>ii) Risk aversion by procurers</td>
<td>ii) Insurance guarantees</td>
<td>ii) Immunity &amp; certification scheme (Korea)</td>
</tr>
</tbody>
</table>

Source: Georghiou/Edler/Uyarra/Yeow (2012) : Public procurement as innovation policy tool: choice, design and assessment (manuscript)
Public Procurement: different variations

- Open procedure
- Restricted Procedure
  - Limit tender to firms passing pre-qualification criteria
- Competitive dialogue: buyer needs market expertise to draft specification
  - Complex projects, multi stage dialogue with suppliers prior to actual tender
  - Suppliers invited to dialogue through tender
  - Dialogue leads to list of suppliers to be invited to final tender
- Negotiated Procedure:
  - If no overall pricing is possible, specifications impossible, or prior process failed
  - Tender: shortlisting of firms based on their past performance
  - Negotiating with the shortlisting firms
- Good overview:
Pre-commercial procurement according to the Communication of 2007/799

**Phase 0**
Exploratory Research

**Phase 1**
Solution design
- Supplier A
- Supplier B
- Supplier C
- Supplier D

**Phase 2**
Prototype development
- Supplier B
- Supplier C
- Supplier D

**Phase 3**
Pre-commercial small scale product/service development - Field Test
- Supplier B
- Supplier D

**Phase 4**
Commercialisation Diffusion of product/service
- Supplier A, B, C, D or X
- Supplier X

**Pre-commercial Tender** *(WTO GPA & Procurement Directives not applicable)*

**Tender for commercial deployment** *(WTO GPA & Procurement Directives applicable)*
Mis-alignment of risk/reward

Understanding Risk

- Policy maker in the relevant sectoral department(s):
  - risk of failure to deliver service, initial costs (acceptance of high entry costs)
- Innovation Policy makers:
  - Who benefits (economic spill over to other countries)
- Specialised public procurer:
  - risk of having to invest a more expensive solution with no rewards for better service, capability
- Finance ministries, actors responsible for budgets:
  - costs, failure to appreciate benefits
- Internal, administrative end users:
  - risk of failure to learn and adapt or to manage new interface with end beneficiaries, risk of being made redundant
- Supplier: Market risk –spill over to broader, private market?
- Corruption / Trust
Example
Procurement Triggering Radical Innovation

- Procurement of **new blood donation chair** (NHSBT)
- Existing products on market unsuitable; incumbent supplier unable to come up with solution
- Bespoke design the best option; idea met with strong resistance internally
- National Innovation Centre’s (NIC), expertise to assist NHSBT in getting a bespoke chair designed and built
  - Facilitated brainstorm workshop (WIBGI) with stakeholders to identify, validate and rank clinical needs of new chair
  - Check against published literature, publish formal needs assessment document
  - Assist in pre-commercial procurement activities

Case done with Jillian Yeow
Example: Procurement Triggering Radical Innovation

- NIC invited (multiple) **design houses** invited to design, prototype selected and tested in-house: all firms paid for design
- NIC conduct due diligence, help with IP issues, PCP advice, link to the market
- **Project manager** employed by NHSBT to manage testing phase, prepare business case, work with other internal stakeholders, and link externally (e.g. with NIC), traditional procurement people marginalised
- **Various feedback** loops with design house
- Result of design phase: one winning design = basis for actual tender
- Tender won by original design house – further negotiations, **roll out**
- IPR with public agency: no up scaling to other markets
- **Learning** in the buying organisation
  - Test environment centre set up to facilitate testing of the prototype (never done before), became established test environment for the organisation for future kit
  - NIC model used subsequently in NHSBT to procure other equipment

Case done with Jillian Yeow
Challenge: mis-alignment of risk/reward
Understanding Risk and Risk Management

Identify

- different types of risks
- where each type of risk is likely to originate
- what it means.

Identify actor(s)

- who are most likely to be able to deal with these risks,
- whose appropriate behaviour would eliminate them and whose incompetence would aggravate.
- who would benefit from the success of the PPI.

Based on the risk-reward identification

- suggest ways on who has to act and who carries the additional cost for diminishing the likelihood that the risk occurs.
- Agree cost sharing.
Public clients are important sources for innovation

Importance of sources for driving innovation

Changes in the market

Our public sector customers

Changes in government policy and regulation...

Our internal R&D department

Our private sector customers

Our competitors

Our own suppliers (of equipment, materials, services, etc)

- Very important
- Somewhat important
- Slightly important
Catalytical effects of public procurement

Innovations that resulted from bidding for or delivering public sector contracts have subsequently helped us to ….

- win other contracts in the public sector (n=500)
  - Yes

- increase your sales in the private sector (n=452)*
  - Yes

- enable or increase overseas sales (n=315)
  - Yes

* Excludes those organisations who said that virtually all their sales in the last three years have been to the public sector.

source: UNDERPINN Survey
Which practices **encourage** innovation?

- Innovation requirements in tenders
- Early interaction with procuring organisation
- Outcome-based specifications
- Advanced communication of future needs
- Emphasis on sustainability criteria
- Full life-cycle costing considerations
- Competitive dialogue
- Incentive contracts such as profit-sharing arrangements
- Negotiated tender
- Open competitive tender
- Framework agreement
- Electronic submission of tenders
- Private finance initiative
- Non-OJ tender procedure
- Restricted tender
- E-auctions
- Provisions related to intellectual property

- encouraged innovation (% out of those that experience it)
Mis-Match: innovation friendly practices not very common

source: UNDERPINN Survey