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# Buying Innovation: How Public Procurement Can Spur Innovation

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The regulations governing public sector procurement are traditionally seen as necessary but mundane rules meant to keep government agencies honest, transparent and cost-minded. Yet governments are generally the largest purchaser within a country and should think strategically about procurement, taking innovation into account when buying goods and services.

Innovation policy is often articulated from a supply-side perspective (R&D and corporate tax credits, worker training programs, public-private partnership grants, etc.), but public procurement contracts are a key mechanism for boosting domestic demand for innovation. One study of over 1,000 firms found that, in over half, innovation stems from new requirements and demand. Another study found that between 1984 and 1998, 48 percent of projects leading to successful innovation in Finland were triggered by public procurement or regulation.<sup>1</sup> Indeed, governments in many countries have used their power of the purse to promote innovation within the procurement process by making innovation an explicit metric when awarding public sector contracts. This analysis provides a brief outline of the practices and policies being implemented around the world to induce more innovation through public sector procurement.

The first step many countries have taken to promote innovation within the public procurement process has been to simply acknowledge that doing so requires explicit policies and strategies to incentivize innovation. For example, in 2006, the Swedish government commissioned VINNOVA, the agency responsible for R&D and innovation, and NOU (the Swedish National Board for Public Procurement) to “examine how public procurement can contribute to developing innovation and creative renewal.”<sup>2</sup> Japan’s Ministry of Economic Trade and Industry developed an integrated procurement process aimed at expanding technology procurement horizontally across government which

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promoted the rapid adoption of ubiquitous 3G networks across the government.<sup>3</sup> And in March 2010, the European Commission held a European-wide conference on innovation in public procurement entitled, “Promoting Innovation through Public Procurement: Best Practices & Networking” that showcased best practices across Europe.

Innovation-based procurement can be general or strategic.<sup>4</sup> General policies include innovation becoming a central criterion in government contracts across-the-board. Countries that adopt a general policy typically run procurement policy out of large ministries of Interior or Finance, not within the ministries specifically responsible for R&D or innovation. The United Kingdom is an example of a country pursuing a general innovation policy in public procurement. On the other hand, some countries promote innovation in procurement through strategic plans to promote specific technologies, products or services that can stimulate the market. Because strategic innovation policies are sectoral-based (i.e. clean energy, IT) they are managed by individual agencies and not by large, cross-agency budget ministries.

The European Union, while working towards a general procurement strategy, has by and large adopted a strategic innovation policy. For example, in 2009, the EU created three specific public procurement networks dedicated to innovation; Enprotex, Sci-Network, and LCB-Healthcare. Each program has an initial budget of about €1 million (not including individual country funding) to fund operation of the program (actual procurement funding is separate). Enprotex is a joint procurement program between the governments of England, Belgium and Denmark to increase innovation in the procurement of fire and rescue services. The program helps incentivize the private sector to develop new protective textiles by connecting end-users with manufacturers and by developing a European-wide network of public procurement organizations for fire and rescue services. The Sustainable Construction and Innovation Network (SCI-Network) aims to bring together local and national public authorities to create cross-border innovation-driven benchmarks within public construction and regeneration; specifically in renovation of existing buildings, innovative building materials, and better life-cycle-analysis and life-cycle costing. Finally, Low-Carbon Healthcare (LCB-Healthcare) is a consortium of the UK’s Department of Business, Innovation and Skills, the Netherland’s Organization of Applied Scientific Research, Norway’s Directorate for Health Affairs, and the European Health Property Network (EuHPN). The consortium’s goal is to collaborate around country-based pilot projects for low-carbon building and materials in the health care industry.<sup>5</sup>

Aligning agencies around innovative procurements and implementing rules and metrics that make innovation a part of the procurement process is an important step, but many countries are going further and taking a much more active role. For example, the UK’s Department of Health and the National Health Service’s (NHS) Purchasing & Supply Agency has developed an open innovation initiative called “Design Bugs Out” to assess and develop hospital equipment to reduce hospital-related infections (see Figure 1). In 2007, an estimated 9,000 patients died from hospital-borne infections.<sup>6</sup> NHS hospital procurements have traditionally been supplied by a group of trusted incumbent manufacturers who, although sensitive to deadlines and prices, are not accustomed to innovating their products or services. In 2008, a team of NHS and academic researchers developed a list of the dirtiest places within hospitals and created a competition among private sector

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manufacturers to redesign everyday hospital equipment that poses hygienic risks, and the new designs were required to meet existing incumbent unit costs. In 2009, as a result of this new procurement process six new items were produced for UK hospitals—blood pressure cuffs, oximeter clips, intelligent mattresses, curtain clips, cannula time trackers and patient packs.<sup>7</sup> For example, the intelligent mattress has a layer of hydrochromic ink that changes color if the outer plastic hygienic layer is punctured, reducing bacterial traps where diseases can be transferred amongst patients.<sup>8</sup>

Figure 1: UK's Bugs Out program's newly designed porter's chair for easy cleaning<sup>9</sup>



One area of concern often raised concerning government procurement is the lack of contracts being awarded to small- and medium-sized enterprises (SMEs). While small and young firms often enter the market with new products and business models, they often have difficulty winning government contracts because of rules favoring incumbent firms, such as weighing contracts towards firms that have received contracts in the past. According to a report by Ireland's Department of Enterprise, Trade and Employment, "current trends in public sector procurement towards larger and longer contracts, and rationalizing the number of suppliers, means that smaller businesses often find the resulting contracts too large for them."<sup>10</sup> To address the smaller share of SMEs in the procurement process, the Enterprise of Europe Network, an organization of 572 SMEs across the EU organized by the European Commission, created the "Innovation-public procurements-SMEs" Working Group in March 2010 to help SMEs access tender information. For example, the working group publishes "Tender Electronic Daily" (TED) to alert SMEs to upcoming contracts in their area.<sup>11</sup>

The United Kingdom has gone even further in recognizing how SMEs can bring innovation to public procurements. In 2009, the Small Business Research Initiative (SBRI) program was established to use government procurements to drive innovation among SMEs. Competition for new technologies and ideas are run through specific agencies and

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allow successful SMEs to access short-term development grants for public goods and services. Since 2009, 286 contracts have been awarded through the SBRI program totaling 12 million pounds.<sup>12</sup> The United States' Small Business Innovation Research Program (SBIR) helps small firms acquire government contracts by allocating 2.5 percent of agency research budgets to small business research projects.

Countries and regions are also finding innovative ways online to make public procurements available to small firms. One-stop e-procurement websites and e-quoting allows private sector firms to easily locate and apply for government contracts. For example, North Carolina's state procurement office has created an e-procurement portal that allows buyers, vendors and citizens to login and review all available contracts. The state also provides training programs state-wide on how businesses can use the software. As of October 2010, 70,749 vendors have procured over \$18 billion in government contracts and purchases through the system.<sup>13</sup> Likewise, the Irish government is extending subcontracting opportunities to create smaller contracts for SMEs and using the country's eTenders website ([www.etenders.gov.ie](http://www.etenders.gov.ie)) to increase the visibility of low value contracts.<sup>14</sup>

For many policy makers, the role of government in promoting innovation is principally to provide ample funds for R&D while supplying the private sector with the right incentives to innovate. While these are important policies in their own right, driving innovation through the procurement process often constitutes low-hanging fruit. All governments purchase goods and services; making innovation an explicit goal in public procurement not only helps improve public services but also spurs innovation in the broader economy and the jobs that this creates.

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## ENDNOTES

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- <sup>1</sup> Jakob Edler and Luke Georghiou, “Public Procurement and Innovation- Resurrecting the Demand Side,” *Research Policy*, 36 (7), (2007).
- <sup>2</sup> “Public Procurement as a Driver for Innovation and Change,” *Vinnova Policy*, 3, (2007), <http://www.vinnova.se/upload/EPiStorePDF/vp-07-03.pdf>.
- <sup>3</sup> Ibid.
- <sup>4</sup> Jakob Elder and Luke Georghiou, “Public Procurement and Innovation- Resurrecting the Demand Side,” *Research Policy*, 36 (7), (2007).
- <sup>5</sup> “Promoting Innovation through Public Procurement: Best Practice & Networking,” *Public procurement- Public purchases as launching customers*, (2010), [http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/public-proc\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/policy/lead-market-initiative/public-proc_en.htm).
- <sup>6</sup> David Sokol, “Design Bugs Out,” *Metropolis*, (February 17, 2010), <http://www.metropolismag.com/story/20100217/design-bugs-out>.
- <sup>7</sup> “Annual Innovation Report,” *UK Department for Business Innovation & Skills*, (2009), <http://www.bis.gov.uk/assets/biscore/innovation/docs/2009-innovation-report.pdf>.
- <sup>8</sup> “Design Bugs Out,” *The UK Design Council*, (October 2010), <http://www.designcouncil.org.uk/our-work/challenges/Health/Design-Bugs-Out/>.
- <sup>9</sup> Ibid.
- <sup>10</sup> “Using Public Procurement to Stimulate Innovation and SME Access to Public Contracts,” *Department of Enterprise, Trade and Employment*, (July 2009), <http://www.deti.ie/publications/trade/2009/procurementinnovationgroup.pdf>.
- <sup>11</sup> David Wright “Enterprise Europe Network: Our Role in Innovation,” *European Commission*, (January 2010), [http://www.ipr-helpdesk.org/documents/IP\\_Presentation\\_Old\\_Trafford\\_JAN\\_2010.pdf](http://www.ipr-helpdesk.org/documents/IP_Presentation_Old_Trafford_JAN_2010.pdf).
- <sup>12</sup> “Annual Innovation Report” *UK Department for Business Innovation & Skills*, (2009), <http://www.bis.gov.uk/assets/biscore/innovation/docs/2009-innovation-report.pdf>.
- <sup>13</sup> “NC E-Procurement,” *North Carolina E-procurement Your Service*, <http://eprocurement.nc.gov/>.
- <sup>14</sup> “Using Public Procurement to Stimulate Innovation and SME Access to Public Contracts,” *Department of Enterprise, Trade and Employment*, (July 2009), <http://www.deti.ie/publications/trade/2009/procurementinnovationgroup.pdf>.

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