



SUSTAINABILITY CONSIDERATIONS FOR PROCUREMENT TOOLS AND CAPABILITIES

Summary of a Workshop (2012)

Many government agencies, businesses, and organizations are seeking ways to operate more sustainably: in ways that maximize environmental, social, and economic benefits in both the short and long term. Tools that help these agencies and businesses find and purchase goods that are both high quality and produced in a sustainable way will be critical to reaching goals for sustainability. Examples of sustainable purchasing tools already in use include ecolabels, calculators that track products' environmental footprints, and software that helps assess products' impacts across their life cycle.

In December 2011, a public workshop was held to explore ways to better incorporate sustainability considerations into procurement tools and systems across the public and private sectors. The workshop, convened by the National Research Council's Science and Technology for Sustainability Program and Computer Science and Telecommunications Board, was designed to help participants assess the current landscape of green purchasing tools, identify needs for new or better tools, identify barriers to progress, and explore potential solutions. Participants included users of sustainable procurement tools – including federal, state, and local governments and industry – as well as those who develop them, along with experts in sustainable procurement.

GOVERNMENT EFFORTS

Many current government efforts toward sustainable procurement have been spurred by a 2009 Executive Order that requires agencies to develop sustainability goals that focus on improving environmental, energy, and economic performance. Because the federal government spends tens of billions of dollars on goods and services each year, its move to incorporate sustainable procurement practices could have a profound impact on the types of products being developed by the market as a whole. Workshop presenters from several of these agencies described their efforts to advance sustainable purchasing.

The General Services Administration formulates policies on how federal agencies can procure goods and services, and the agency has developed programs to assist agencies in making sustainable procurement decisions. The agency also purchases about \$95 billion in goods and services annually, including 12 million products through 18,000 vendors. The agency's goal is to have a supply chain that is sustainable throughout and views sustainable procurement as about "making smart investments in products that provide better services" for a longer period of time.

The Department of Energy is trying to find ways to incentivize and reward behavior in the agency and with contractors that integrates sustainable approaches. The Defense Department's Defense Logistics Agency is also continually trying to incorporate sustainability into its decisions and those of its contractors. An example of DLA's sustainable procurement program is the effort to increase use of renewable energy and biodiesel. The National Institutes of Health finds a gap in sustainable purchasing tools is in identifying hazardous toxic or polluting substances -- one of the most important criteria in sustainable acquisition from a public health perspective. Federal regulations require procurement of products and services that are nontoxic, but this has been difficult to implement, in part because clear definitions and toxicity data are lacking. Other gaps for future procurement tools to address include the need to track and reduce greenhouse gas emissions in the supply chain and consideration of a product's end of life.

Elements of a Sustainable Purchasing Tool:

- ✓ Provide authoritative, one-stop sustainable shopping reference
- ✓ Centralized and automated
- ✓ Interactive
- ✓ Simple, two-step search and buy function
- ✓ Have data collection and reporting functions
- ✓ Link directly to other procurement systems
- ✓ Characterize as compliant or noncompliant to FAR
- ✓ Track desirable, sustainable attributes
- ✓ Link to agency approvals and published literature

*Edward Rau, National Institutes of Health,
December 8, 2011.*

SOURCING AND MATERIALS

Procurement is often thought of as simply the act of purchasing goods and services by processing a requisition, receiving an invoice, and then making a payment. However, many workshop participants emphasized that procurement should be thought of as a much broader process, from generating and soliciting requirements all the way to closing out a contract. Tools to foster sustainable purchasing could be integrated into all aspects of the process, participants noted. The cost of disposing of products, especially those containing hazardous components, is seldom considered during purchase. If procurement professionals consider this, they may decide to purchase a product that is more expensive up front but which may ultimately result in savings over the entire life cycle.

Supply chains. Representatives from IBM Corp. and Nike described how they monitor the sustainability of their supply chains. IBM uses third-party auditors to audit suppliers against the company's Supply Chain Code of Conduct, which addresses labor, safety, environment, ethics, and social responsibility. IBM feels a responsibility to develop its supply base by working to educate suppliers; many suppliers want to do the right thing, but need to have the organization, policies, and capability in place to sustain their performance over time.

Nike Inc. focuses on designers because, as the earliest group in the product-development process, designers have the largest impact downstream. As such, they need design tools and systems that allow them to make better choices. The company tracks materials from their sources – whether the material was grown in a field or extracted from an oil well – to the product factory. This approach considers the early life-cycle stages of the material, which can account for up to about 60 percent of a product's environmental impact.

Ecolabels. Ecolabels, standards, and certifications are tools that can convey some kinds of sustainability-related information. Being able to represent products' environmental, social, and economic attributes in a simple, easily understood label could enhance the efficiency of the purchasing process. Certifications could be especially useful in areas where "green-washing" – making unsubstantiated or misleading claims about the environmental benefits of a product. Many retailer-created ecolabels are inconsistent, which increases confusion. Agreement on the claims and criteria would help clarify matters.

Certifications exist for some products for which a lot of environmental or health information is available; but for many other products, such data do not exist, and so neither do the certifications. Not many ongoing efforts in the public or private sector are attempting to solve this problem. However, some consumer efforts are trying to increase transparency in the market, creating an opportunity to demand better data to inform purchasing decisions.

TOOLS AND TECHNOLOGY FOR SUSTAINABLE PURCHASING

Various types of tools are used in private-sector and federal procurement. These tools may be simple, such as specific ecolabels, or more complex, such as tracking and reporting software or customized search engines used to purchase and maintain inventories. Complicating matters are the many different attributes of products, the variety of stakeholders with diverging opinions as to what attributes are important, trade-offs between attributes, a range of methodologies to define them, and many different technical platforms to convey this information.

The choice of technology platform and the availability of data can affect how widely a tool is used. For instance, modern Web applications and associated mobile apps could help move technology and tools forward. In addition, a shift toward more accessible or “open” data could enable an ecosystem to develop around agreed-upon data structures and standards.

Better Sustainable Purchasing Tools:

- ✓ Integrated with financial systems
- ✓ Integrated with other sustainability-related systems
- ✓ Openness - online and optionally public
- ✓ Aesthetically beautiful to motivate users
- ✓ Enables behavior change

*Chris O'Brien, American University,
December 8, 2011.*

Having to use multiple systems for a purchase is a challenge to sustainable procurement. Integration is needed so that new tools can share data and information in an accessible and usable fashion. Another important aspect of integration is that procurement is not a self-contained process; it is connected to many components of the organization, such as sourcing, contracting, financing, analytics, and auditing. Procurement tools that incorporate all parts of the process and integrate information on the financial impact would be very useful.

EMERGING REQUIREMENTS AND CRITERIA

Tools that are designed to work within or take into account an entire procurement process, not just the purchasing step, will be critical. Procurement is not simply one company or organization procuring products from suppliers; rather, it is an entire economy encompassing a network of companies and organizations. All stages of the procurement process--defining purchasing requirements, contract RFP writing, deciding what to buy, contract administration, compliance, reporting, and measurement--are ready for tool development. Tools could be developed to overcome the current barriers to sustainable purchasing, such as information overload. For example, although ecolabels are important for sustainable purchasing, there are hundreds of them in the market; purchasers already need to understand a great deal of information, and new information is constantly being generated. Tools that provide the right information to the right users at the right times would greatly assist procurement professionals.

Related to information overload is the need for procurement professionals to make trade-offs among the different criteria and policies guiding them. Procurement professionals are primarily focused on optimizing price, availability, and the performance or quality of a given product. A tool is needed to allow sustainable criteria to be integrated into this focus so that procurement professionals can find products that are competitive with or lower in price than nongreen products and that perform as well or better.

Integration and interoperability are important, and shared semantics and application programming interfaces need to be developed where appropriate. The potential benefit of interoperability between tools is increased data flow and accessibility of information. Effective interoperability would also increase accountability, allowing information to be tracked across different systems. And it would allow purchasers to make better comparisons among products and services. Purchasers need to identify necessary tools and types of format; develop common glossaries and classification systems or methods for translating between systems; collaborate to map and compare systems; develop data frameworks and reporting templates; develop the ability to export data as appropriate to other systems; and participate in various multi-stakeholder forums. Companies more and more want to leverage cloud-based tools and systems in part because they can usually be deployed more quickly. Also, individuals want information to be accessible wherever they happen to be, not only through their desktop computers but also from mobile devices.

WORKFORCE AND CULTURE

Behind the ecolabels, standards, tools, and technology are the procurement professionals and other staff who make the decisions to move sustainable procurement programs forward. The roles and responsibilities for different workers need to be clearly identified so that training can be targeted. Culture change is needed in addition to training. One possible solution is to have a pilot-scale project in order to foster buy-in from some, and then expand the effort to all. Training should be presented and viewed as education, and it should be a two-way activity; receiving feedback, both data-driven and qualitative, helps point out opportunities for improvement and reveals whether the training had the right focus.

MOVING FORWARD

During the last session of the workshop, participants discussed major gaps in knowledge for sustainable procurement, positive or negative attributes that characterize sustainable procurement, and what those attributes should be moving forward. Many participants described the following issues and themes as in need of further attention as sustainable procurement continues to be adopted by private and public sector organizations:

Semantics and units of measurement were raised as an issue. Increasing cohesiveness in the measurement and language used would bring more clarity to ratings and reports on products and be useful to purchasers.

Certifiers could be urged to disclose more information and data from the companies they are certifying so that the process is more transparent. There is a disconnect between certifications/ ecolabels and outcomes. The actual environmental health or societal impacts of products bearing such labels are typically not tracked and accounted for in any systematic way.

Harmonizing definitions on product types or moving toward unique identifiers like a sku number would allow different purchasers and procurement systems to readily identify the same product. This could also improve interoperability between technologies and data sharing among systems.

In addition to the purchasing phase of procurement, contracting is also important. However, it may not be possible to address outcomes in this context; it may be better to address sustainability concerns by writing constraints into a statement of work. In this case, tracking and evaluating work performance in an effective way would be a more accurate assessment of sustainability practices.



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For More Information

Copies of *Sustainability Considerations for Procurement Tools and Capabilities* are available from the National Academy Press; (800) 624-6242 or (202) 334-3313 (in the Washington metropolitan area), or visit the NAP online at www.nap.edu. For questions concerning the STS program, visit our web site at <http://sustainability.nationalacademies.org> or contact us at sustainability@nas.edu.