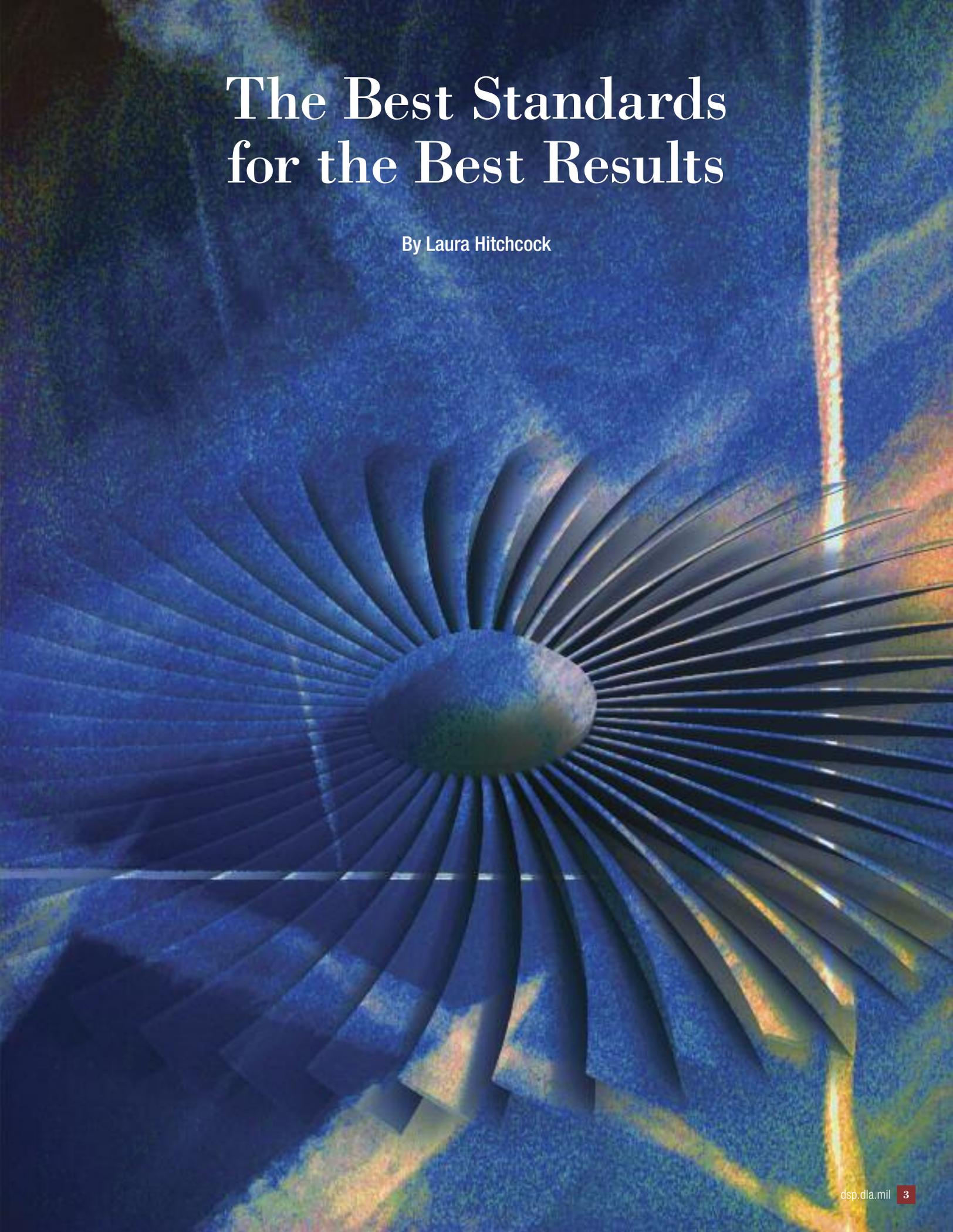
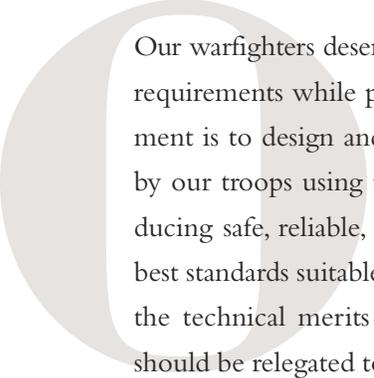


# The Best Standards for the Best Results

By Laura Hitchcock





Our warfighters deserve the best equipment and platforms possible to support mission requirements while protecting them from harm. One way to ensure the best equipment is to design and build the vehicles, weapon systems, aircraft, ships, etc., fielded by our troops using technical standards selected as the best standards suited to producing safe, reliable, and technically excellent products. The policy of selecting the best standards suitable to the design, manufacture, or operation of a product based on the technical merits of the standards may seem like such an obvious goal that it should be relegated to just common sense. However, customers and equipment manufacturers have become increasingly concerned that options for choosing standards may be limited by well-meaning but potentially restrictive policies.

In an attempt to ensure that products procured by government agencies and ministries of defense can be used, integrated, and supported as widely as possible (be it by the most number of people or across the widest number of geographic regions), there has been a growing trend to require the use of international standards, with the assumption that mandating international standards will ensure a product will be internationally accepted and used. And while the goal of striving for things such as global interoperability and global trade for goods and services is laudable, simply mandating the use of a certain type of standard may not guarantee the desired result.

The focus for the selection of standards should be placed back on the requirements for the product. Manufacturers, working in cooperation with government customers, should select those standards that will ensure the resulting product or process is of the highest quality and reliability, is as safe to use as possible, and meets the needs of the marketplace and any applicable laws. The resulting set of standards used for a particular product may end up being a mixture of standards from a wide variety of sources: government agencies, voluntary consensus standards developers, consortia, and even company-unique standards. What's important is that it's the right set of standards to manufacture a product that meets the customer's needs and ensures the safety of the users.

In the United States, the National Technology Transfer and Advancement Act, Public Law 104-103 (NTTAA), encourages the reliance on standards and conformity assessment solutions developed or adopted by private, voluntary consensus standards bodies. This policy for using non-government standards (NGSs) is documented in Office of Management and Budget (OMB) Circular A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities." However, the circular does not establish a preference among standards developed in the private sector and refrains from implying that the standards from any one standards setting organization are preferred over another.

For NTTAA purposes, a “voluntary consensus standard” is a standard developed or adopted by voluntary consensus standards bodies, both domestic and international, using agreed-upon procedures. Voluntary consensus standards bodies are further characterized as having the following attributes:

- Consensus (including an attempt to address all comments by interested parties)
- Openness
- Balance of interest
- Due process
- Appeals process.

OMB Circular A-119 differentiates between voluntary consensus standards and other types of NGSs developed in the private sector but not using a full consensus process. These NGSs can include non-consensus standards, certain types of industry standards, company standards, or de facto standards. But again, the policy does not establish a preference between consensus and non-consensus standards developed in the private sector.

The current policy also does not establish a preference between domestic and international voluntary consensus standards. And while it does encourage agencies to consider international standards in the interests of promoting trade and to facilitate the implementation of international treaty agreements, there is no further definition of what constitutes an “international” standard. Among the public comment responses to a *Federal Register* request for information conducted by OMB on March 30, 2012 (77 FR 19357) on possible improvements to Circular A-119 were a number that suggested the potential need for further guidance regarding international standards. Some included statements urging that “international standards” should not be narrowly defined as those coming from only a few select standards developers whose processes are based on a one-nation/one-vote model, but should include all venues that develop globally relevant standards.

How best to guide government agencies in the selection and use of standards is not an issue unique to the United States. The European Parliament has also been engaged in efforts to set policy to allow the use of the most globally relevant standards. Until now, European Union (EU) government procurement has tended to reference standards from only the following entities:

- International organizations: ISO, International Electrotechnical Commission (IEC), or International Telecommunication Union (ITU)
- European regional standards bodies: European Committee for Standardisation,

European Committee for Electrotechnical Standardization, and European Telecommunications Standards Institute

- European national standards bodies: Deutsches Institut für Normung e.V., Association Française de Normalisation, or British Standards Institution, among others.

This policy has meant that the EU's definition of international standards is more restrictive than that found in the World Trade Organization's (WTO's) Agreement on Technical Barriers to Trade (TBT). The WTO TBT agreement establishes principles for international standardization processes using attributes similar to those used in the OMB circular to define a voluntary consensus standard. By meeting these criteria, global standards setting organizations such as SAE International, ASTM International, and ASME are also recognized as developing international standards. The current EU policy of looking only to ISO, IEC, and ITU for international standards has hampered the ability of European government agencies to reference widely used and accepted standards for public procurement produced by other standards setting organizations, even when those standards were developed by processes that met the WTO's criteria.

This restriction on the selection of standards based on source, rather than technical merit, has proven especially limiting for public procurement in the areas of information and communication technologies (ICT). The technologies that govern networks, data transfer, Internet protocols, video formats, and so on, are extremely dynamic. The traditional standards development processes used by the international, regional, and European national standards bodies were determined—in the European Parliament's *Report on the Future of European Standardization* (October 2010)—to be too slow and were therefore inhibiting technological innovation. In addition, given that specifications being developed by industry forums and consortia at an international level (such as the Institute of Electrical and Electronics Engineers, Internet Engineering Task Force, OASIS, or World Wide Web Consortium) are playing a growing role in the ICT community, it was becoming a significant barrier to trade for these standards to be off-limits for referencing in public procurement tenders.

Therefore, on September 11, 2012, the European Parliament adopted text in a proposed European standardization regulation that would allow forum and consortia standards to be referenced in ICT government procurement. To bring things more in line with the WTO TBT agreement, the proposed standardization regulation states that

public authorities should make best use of the full range of relevant standards when procuring hardware, software and information technology services, for example by selecting standards which can be implemented by all interested suppliers, allowing for more competition and reduced risk of lock-in.<sup>1</sup>

Allowing the broader range of applicable standards to be considered is expected to increase the choice European government agencies have when defining their ICT needs and should reduce procurement costs by allowing harmonization with global ICT solutions.

Both the United States and the EU recognize the role standards play in ensuring high-quality and cost-effective technical solutions for public and private enterprise. And there is certainly agreement on the value of using relevant international standards as a basis for technical regulations when practicable. But when public procurement tenders do not specify a particular standard, industry should be free to select the most relevant standard from any source to be used in the design, manufacture, and operation of products and services.

Given the critical safety aspects of military platforms such as aircraft and other critical equipment, consideration of which standards to use should be based on the suitability to meet performance, safety, and quality needs while taking into account national and international regulations and certification requirements appropriate to the product and the intended use of the standard. And when government agencies reference or adopt specific standards for regulations or for public procurement, it is hoped that those standards will be selected from the wide assortment of voluntary consensus, forum, and consortia standards based on technical merit and suitability for meeting the intended requirements. The freedom to choose standards based on technical merit will help ensure the best standards for the best results.

<sup>1</sup>See <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P7-TA-2012-311>.

### **About the Author**

Laura Hitchcock is responsible for external standards strategy and policy for The Boeing Company, Seattle, WA. She has 38 years of diversified experience in standards, standards administration, and management. Her job involves working closely with many of Boeing's key technical affiliations. Ms. Hitchcock chairs the Strategic Standardization Forum for Aerospace and the U.S. Technical Advisory Group for ISO/TC20 Aircraft and Space Vehicles. She serves on the board of directors of the American National Standards Institute, chairs the Aerospace Council for SAE International, and serves on ASME's Council for Standards and Certification. She is also a senior member of SES, the Society for Standards Professionals. ✨