

ATTEMPTS TO MEASURE AND MAXIMIZE SOCIO-ECONOMIC IMPACTS OF METROLOGY AT THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

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Abstract

Nations support national metrology institutes (NMIs) such as the National Institute of Standards and Technology (NIST) on the assumption that investment in the metrology infrastructure yields economic and social benefits not otherwise easily obtained. NIST was established more than one hundred years ago on that assumption, and NIST's original leaders would likely find the most recent mission statement commensurate with their original vision: "To develop and promote measurement, standards, and technology to enhance productivity, facilitate trade, and improve the quality of life." There are a few obvious examples of metrology providing clear socio-economic benefits, such as standard weights and measures to facilitate trade. However, because most of the work of NIST and other NMIs tends to be infrastructural, it is challenging to NMI leadership, stakeholders, and customers to evaluate the economic and social impact of metrology and investments in NMIs. NIST is using several approaches to try to both evaluate impact and manage for maximizing impact. Some of these approaches include: (1) retrospective microeconomic impact analyses of specific NIST metrology programs; (2) prospective analyses of opportunities for metrology to provide positive economic benefits to be used for NIST planning; (3) formal feedback from customers on impacts and relevance of NIST metrology products and services; and (4) a major strategic planning effort, "NIST 2010," to focus NIST resources on programmatic areas with the greatest potential for impact on productivity, market access and public benefit. This paper will discuss these efforts at analyzing impact and managing for maximum impact.