
PREFACE

Responding to National Needs is a remarkably appropriate title for this volume on the history of an institution that was created by Congress for that very purpose. In a sense, every Federal agency is established to respond to needs perceived as being important to the Nation's well-being. In that respect, the National Institute of Standards and Technology has much in common with hundreds of other organizations. But perhaps more than any other agency, our mission has been fine-tuned with the addition of literally dozens of new assignments, all designed to help the United States solve some problem, to take advantage of some opportunity, and to improve our economic strength and societal well-being.

The evidence found in Federal statute books shows clearly that NIST has responded to National needs in a meaningful way over the past 100 years. But especially over the period covered in this volume, 1969-1993, the assignments by our country's lawmakers exploded. We gained or expanded responsibilities for work as varied as energy conservation and recycling, the metric system, fire safety, computer security, quality improvement, assistance to smaller manufacturers, advanced technology research and development funding and quality improvement in companies. In all, from 1969 to 1993, 79 separate pieces of law recognized NIST's capabilities and added to them.

The most significant of these literally changed the name of the institution from the venerable National Bureau of Standards to the National Institute of Standards and Technology. As this document notes, the change came because the Congress recognized an urgent need to help boost the competitiveness of U.S. industry. The change was not without tension and controversy, both within the institution and on Capitol Hill. I was intimately involved in discussions about the new assignments that accompanied the name change. There was as much debate at "the Bureau" as there was in Congress. Insiders worried about possible damage to our reputation for excellence in laboratory-based research, and about our ability to maintain our reputation for third-party independence. Those of us who supported the change took a chance. But we knew that NBS always had responded to national needs, and the Nation clearly needed the assistance of a Federal agency with a strong track record, close ties to industry, and a history of quality work.

That risk-taking has paid off handsomely. Today, the NIST Advanced Technology Program—though still politically controversial among some that question the government's role in supporting civilian technologies—has generated dozens of successes by co-funding high-risk technologies developed by industry. The Manufacturing Extension Partnership—now offering services in every state and Puerto Rico—has helped more than 80,000 smaller companies to be more productive and competitive. The Baldrige National Quality Program has proven so successful in promoting and recognizing quality improvement and performance excellence by manufacturers and service firms that NIST recently was assigned to help foster this approach among organizations in the education and health care communities.

There was no need to fear that these additional assignments would negatively impact the measurement and standards laboratories—the core of the agency. Our laboratories are as healthy as they ever have been. While a variety of overseas metrology laboratories have been subjected to substantial reductions and privatization, the NIST laboratories remain intact and extraordinarily productive. In 1997 and 1998, we added a Nobel Prize in Physics and a National Medal of Science to the cache of distinctions held by NIST researchers. Today we count 11 members of the National Academies of Science and Engineering among our active staff. During the time covered in this historical installment, we branched out into entirely new—and sorely needed areas of science and technology.

Responding to national needs is not easy. It certainly challenges the “comfort level” of an agency and its staff. As you read this volume, you will note the dozens of ways in which NBS and then NIST were called upon by the Nation—and how we delivered. I believe that is the ultimate test of an organization’s usefulness. NIST has passed the test with flying colors.

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