Impact Measures for Librarians

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and

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National Institute of
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U.S. Department of Commerce

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Presentation Overview

- Introduction to NIST & the Lab Liaison Program
- Measures used by the Information Services Division Lab Liaisons
- The Practical Side – Program Office Collaboration
- Closing Thoughts

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NIST Overview

Gaithersburg, MD

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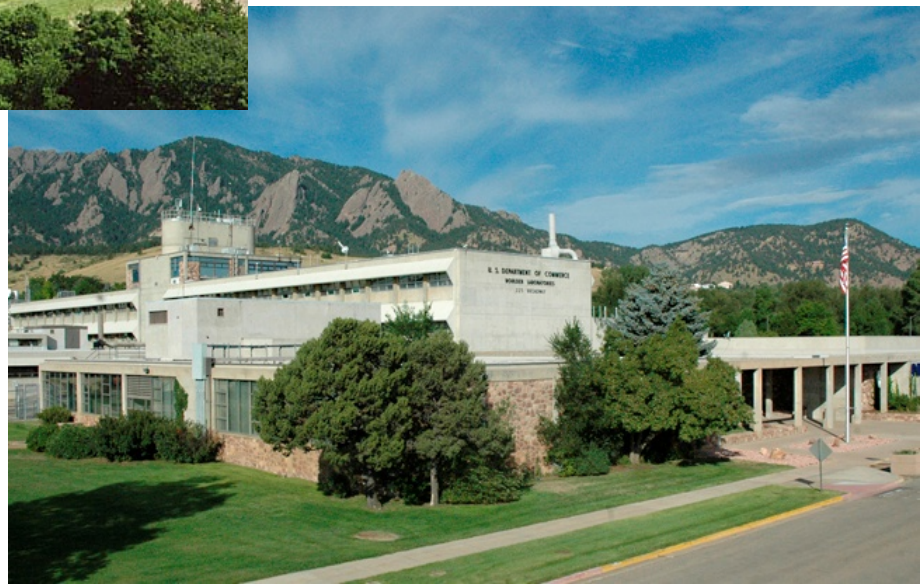
Boulder, CO



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NIST Mission and Activities

Mission: To promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.

NIST carries out its mission through four cooperative programs:

Laboratories

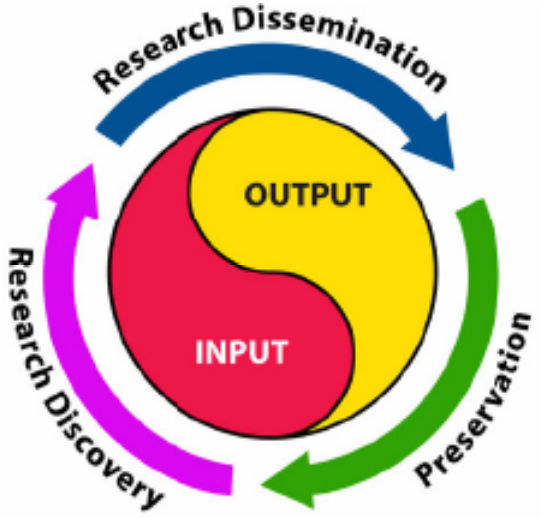
Technology Innovation Program

Manufacturing Extension Partnership

Baldrige National Quality Program

The Information Services Division

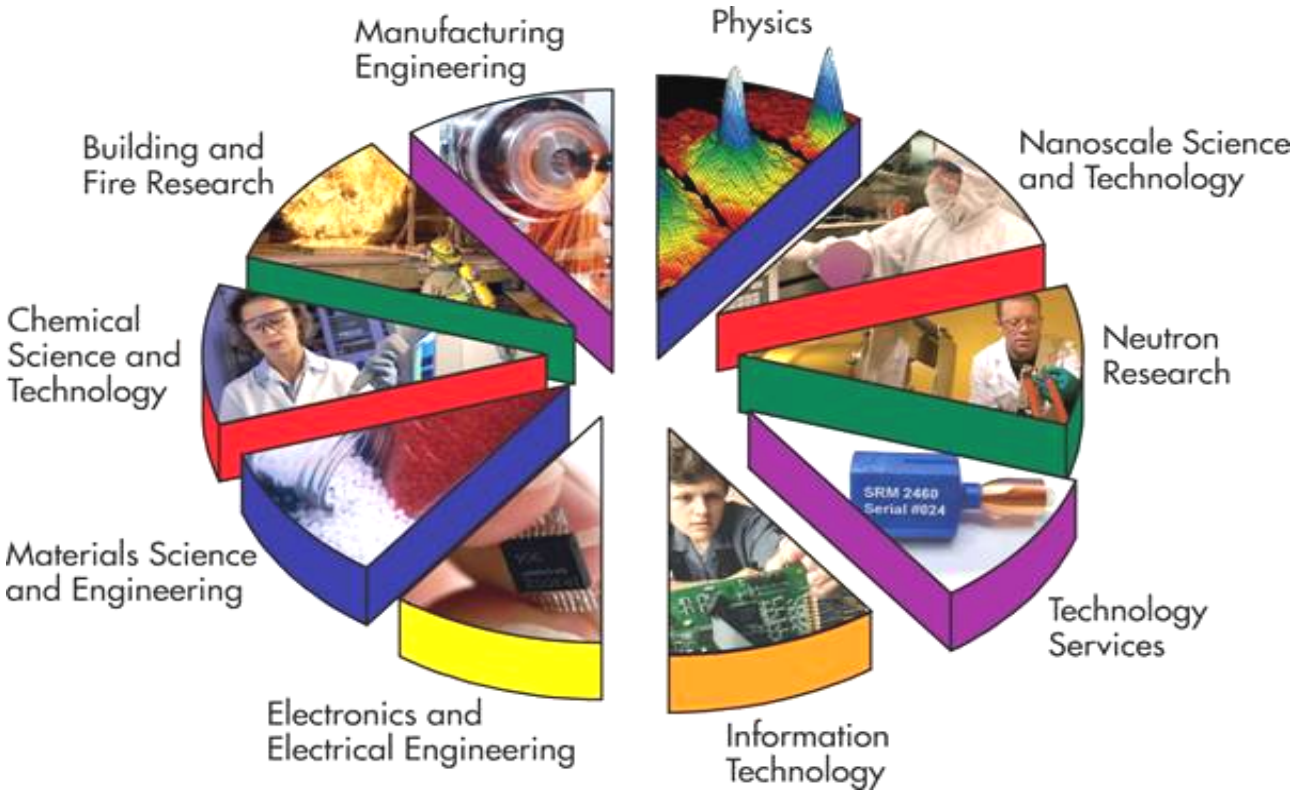
- **Provide professional scientific and technical information assistance to NIST research staff**
  - **Partner throughout entire knowledge creation continuum**



- **Two organizational groups**
  - **Research Library & Information**
  - **Electronic Information & Publications**

ISD Customers

NIST Labs and other programs at NIST …



. . . including the Program Office

Lab Liaison Program

Performance Objective

- To improve and enhance scholarly communication in support of NIST research, innovation, and discovery through promotion and delivery of ISD's analysis capabilities.

Desired Outcomes

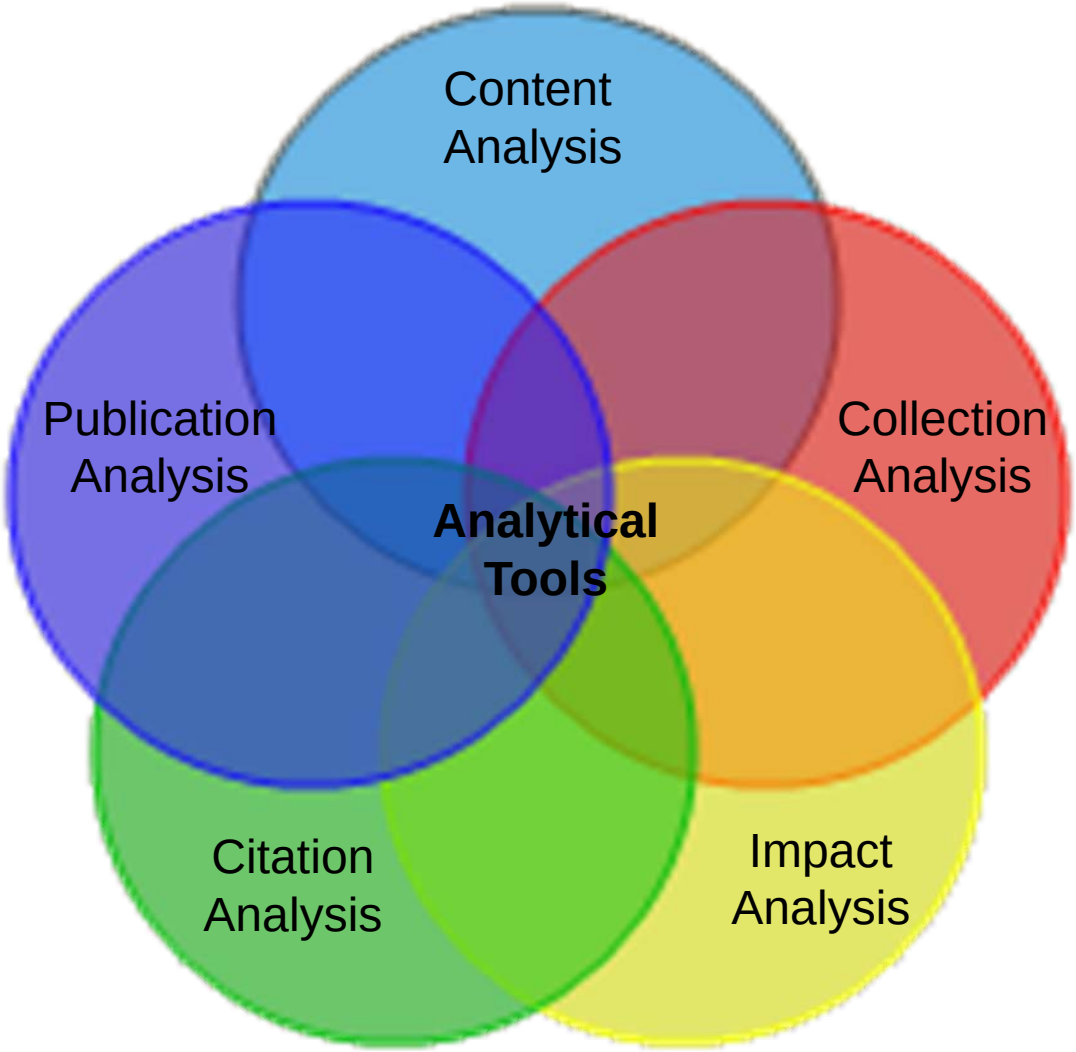
- Growing body of NIST researchers engaged in collaborative partnerships with ISD staff
- Information analyses, syntheses, summaries, and knowledge management tools that meet the needs of NIST researchers

Collaborations and Activities

- Consult/collaborate on knowledge management projects
- Conduct publication, citation, content, and impact analyses
- Develop tools to support customers needs

Bibliometric Measures

Lab Liaisons measure the impact of NIST research by performing citation, publication, and content analyses using a wide collection of analytical tools.



Bibliometrics, Impact, and Outputs

Impact analysis

- H-Index for authors…NIST
- Impact factor, Eigenfactor, SCImago, immediacy index…for journals
- Impact of the NIST Research Library collections

Citation analysis

- Impact factor and citation frequency

Publications analysis

- Determine publishing patterns, alternative publishing venues, and publication strategies to increase reach and impact
- Subject bibliographies

Content analysis

- Identify, collect, organize, synthesize, package, and disseminate information involving specific research

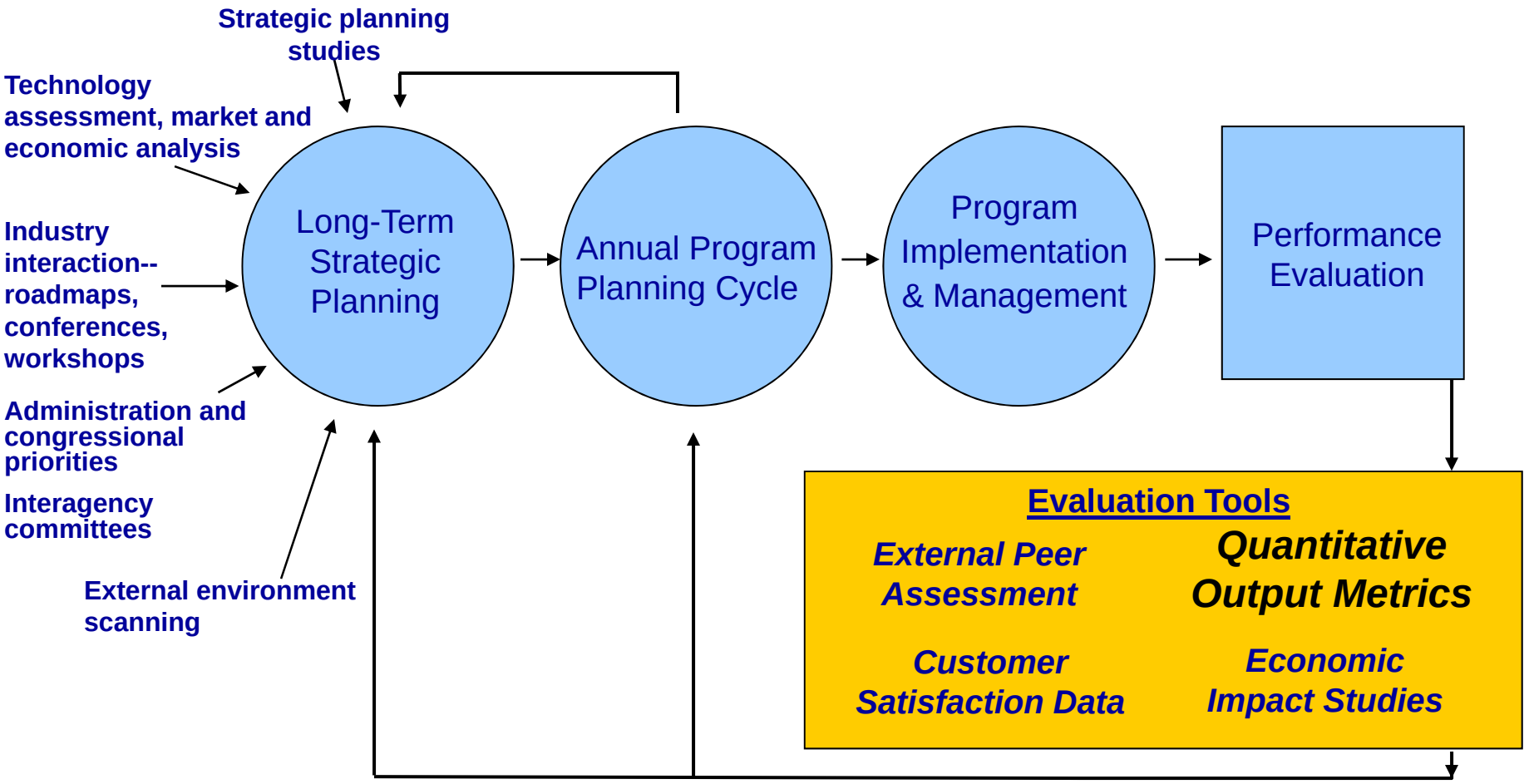
Collaboration between ISD and the Program Office

- Show impact through publications in peer-reviewed journals
- Define NIST variances for better retrieval of bibliographic data
- Knowledge sharing of best practices with National Agricultural Library, Agriculture Research Services (ARC), USDA

Impact and Evaluation of Performance of NIST Labs

- **Peer-Reviewed Technical Publications**
- **Citation impact of NIST authored pubs**
- Peer-review of NIST Labs
- Standard Reference Materials sold
- NISTmaintained data sets downloaded
- Calibration tests performed
- Economic Impact Studies

NIST's Planning and Performance Evaluation System



Number of Citations to NIST Publications by State for 2007 (~20000)

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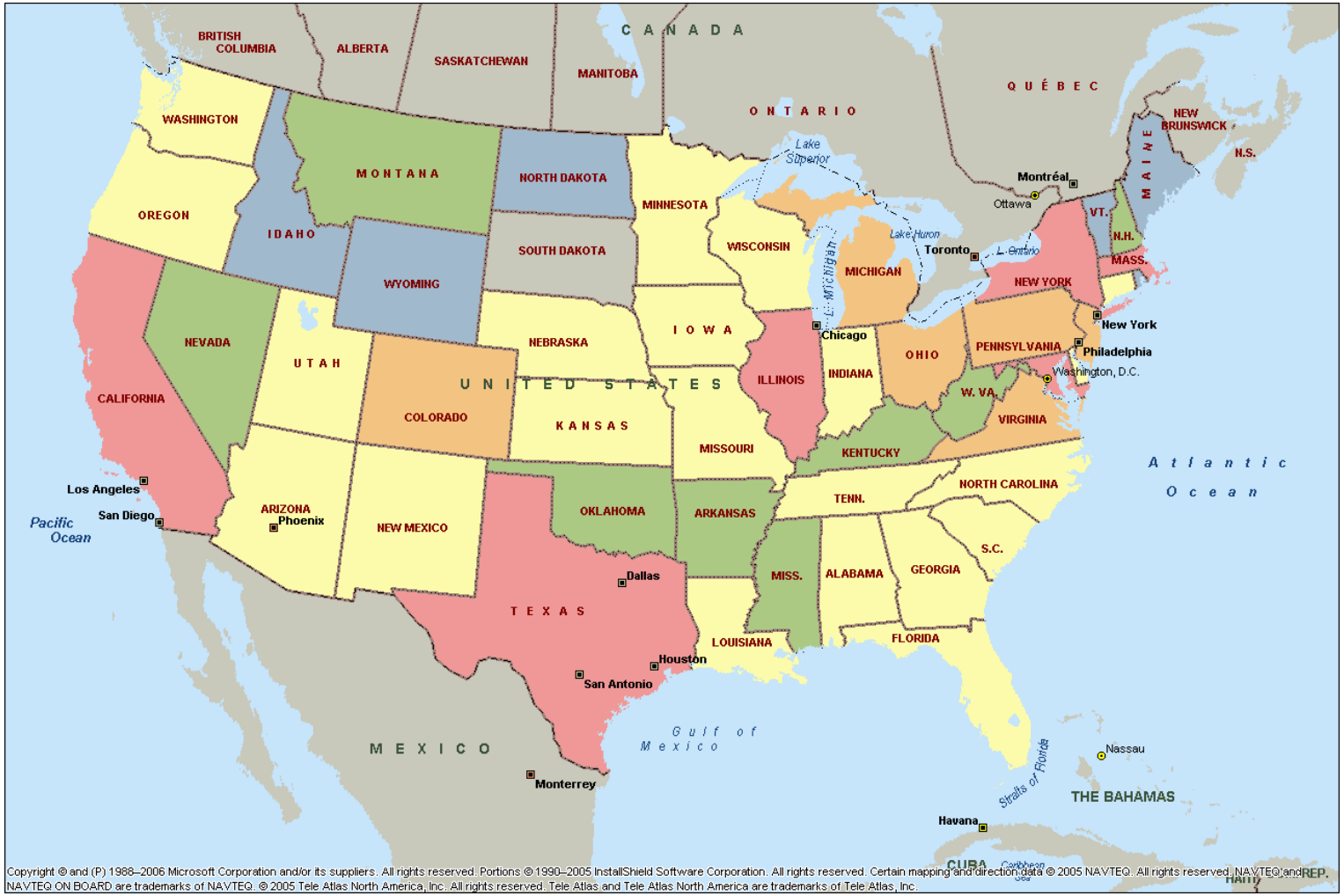
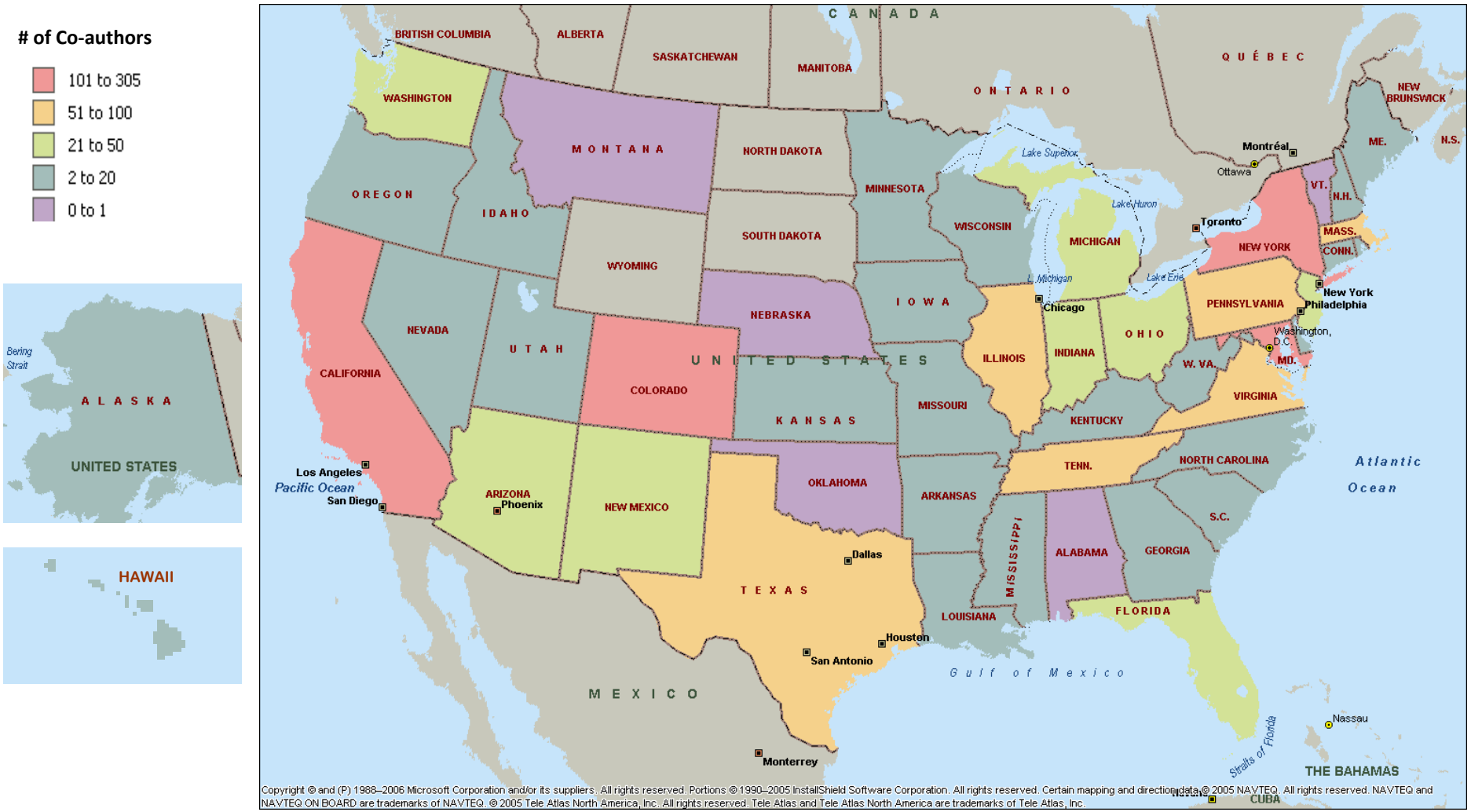
# of Citations in 2007

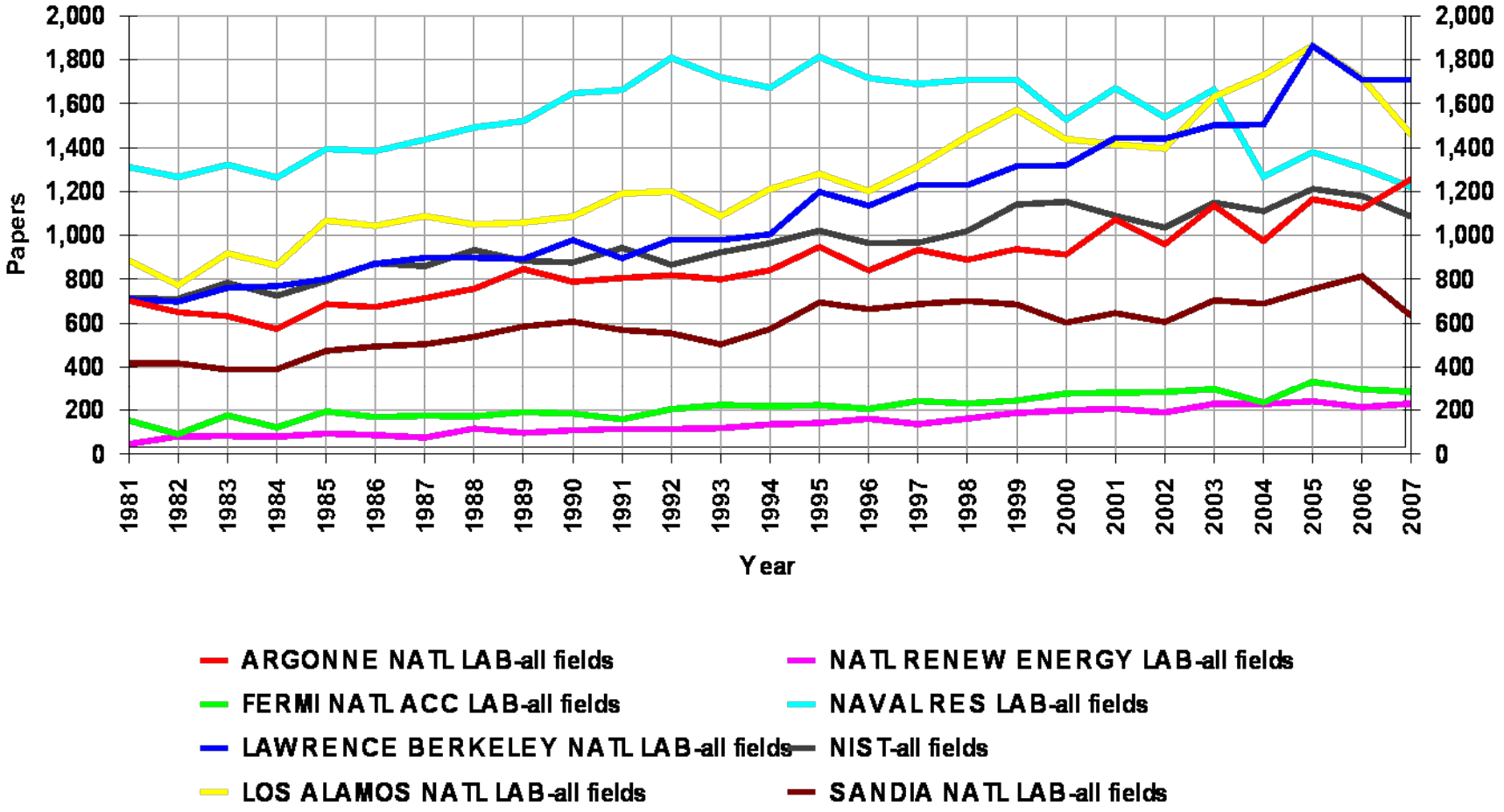
- 1,001 to 3,000
- 501 to 1,000
- 101 to 500
- 51 to 100
- 16 to 50
- 0 to 15



Co-Authors on NIST 2007 Technical Publications

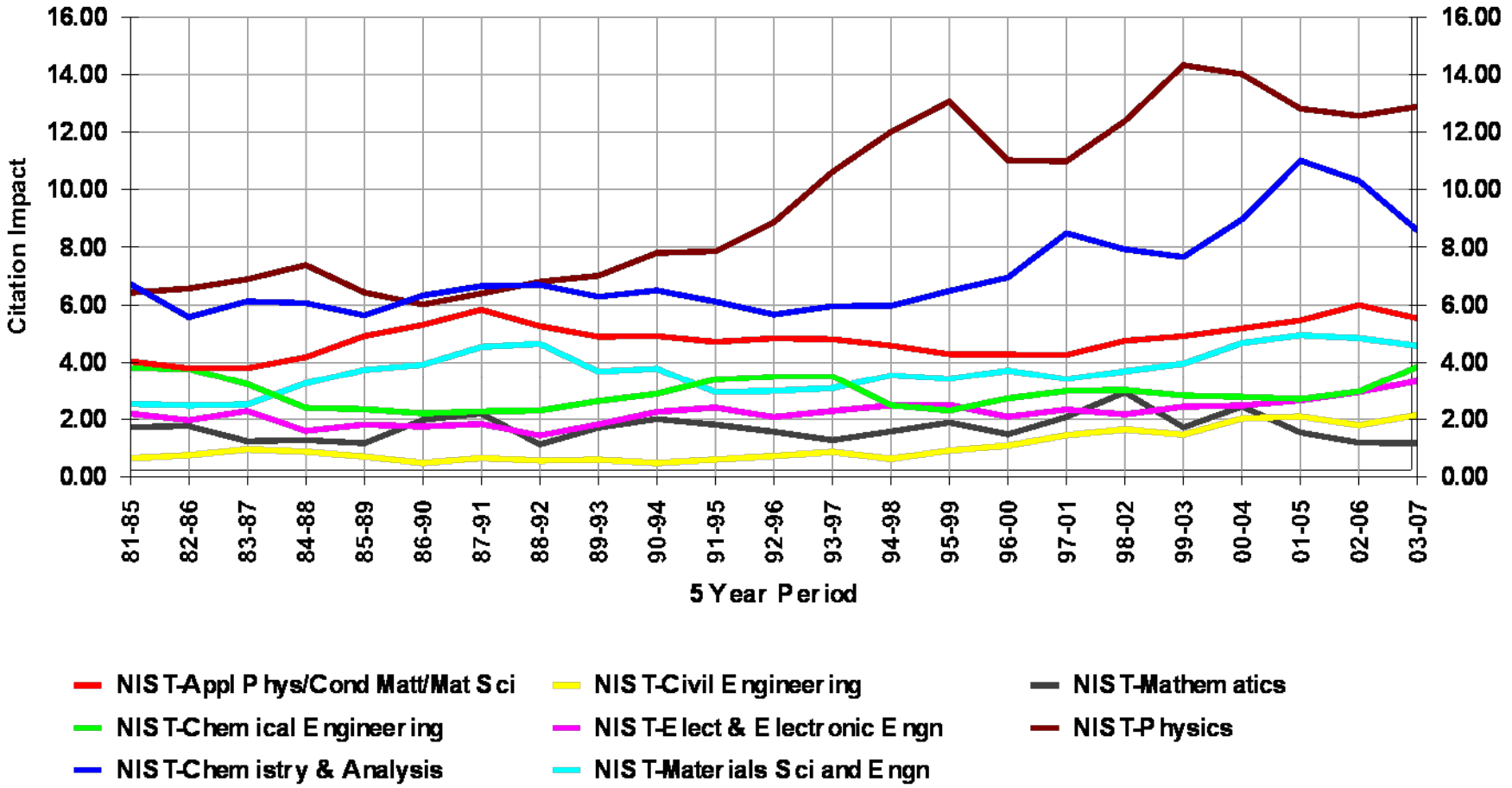


Number of papers for Overall Institution in 1-year periods cited to present



Thomson Reuters' University Science Indicators

Citation Impact by Field of Science



Thomson Reuters' University Science Indicators

Publication Metrics

- Quantity
  - Number of publications
- Quality/Impact
  - Impact factor
- Good for “academic” impact
- Not so good for “industrial” impact
  - Industry frequently does not publish or cite
- Does not include many products
  - e.g. Federal Information Processing Standards (FIPS), Standard Reference Materials, patents

Closing Thoughts

- Collaboration is key to success.
- Measuring the impact of a scientific organization is complex and challenging.
- Impact is important to show for NIST and for ISD.
- ISD continues to develop technical and analysis skills in order to serve customers better.

Questions?

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