Collaborating with Customers

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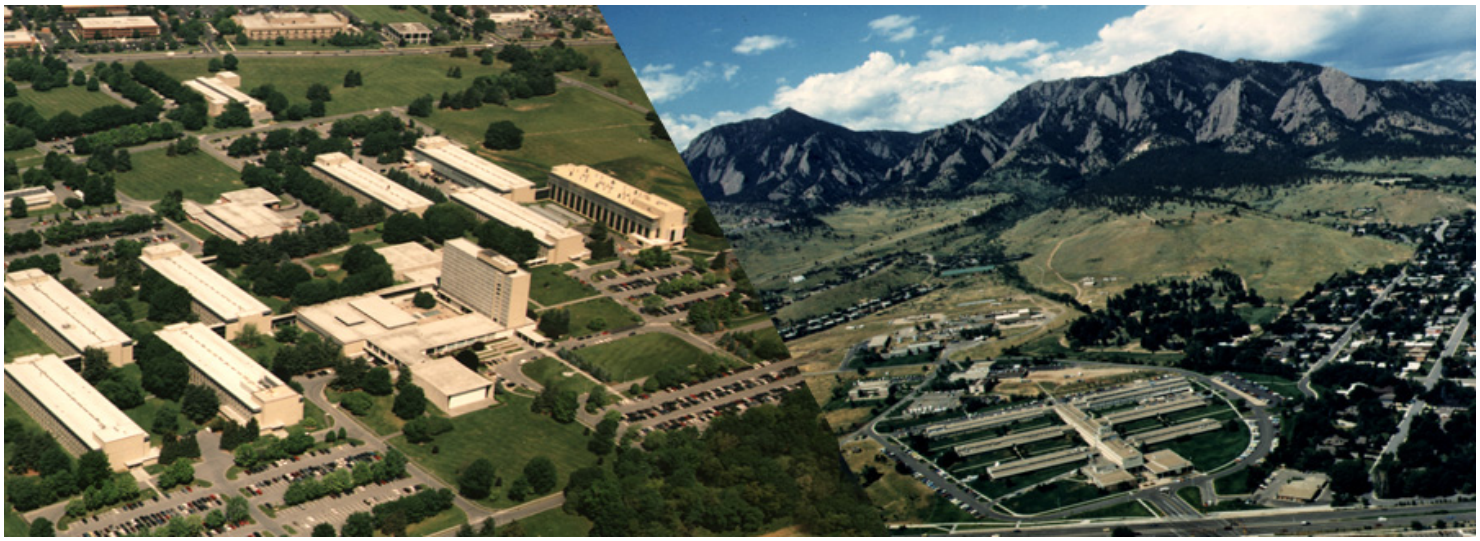
National Institute of Standards and Technology
U.S. Department of Commerce

Presentation Overview

- Introduction to NIST & the Lab Liaison program
- Analysis Collaborations
- Technology Collaborations
- Next steps
- Closing thoughts

Who is NIST?

- Non-regulatory agency within U.S. Dept of Commerce
- Science and Technology Research in Measurement Science
- 3,000 researchers at two campuses



NIST Gaithersburg NIST Boulder

What Does NIST Do?

Mission: Develop and promote measurement, standards, and technology to enhance productivity, facilitate trade, and improve the quality of life.

NIST carries out its mission through a portfolio of four programs:

Laboratories

Advanced Technology

Manufacturing Extension Partnership

Baldrige National Quality

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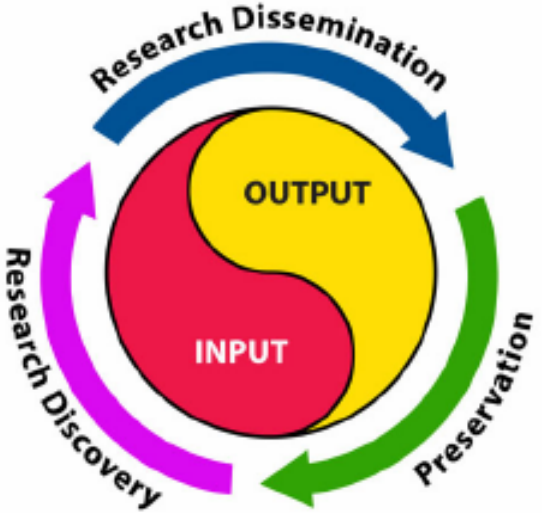
Who is the Information Services Division?

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

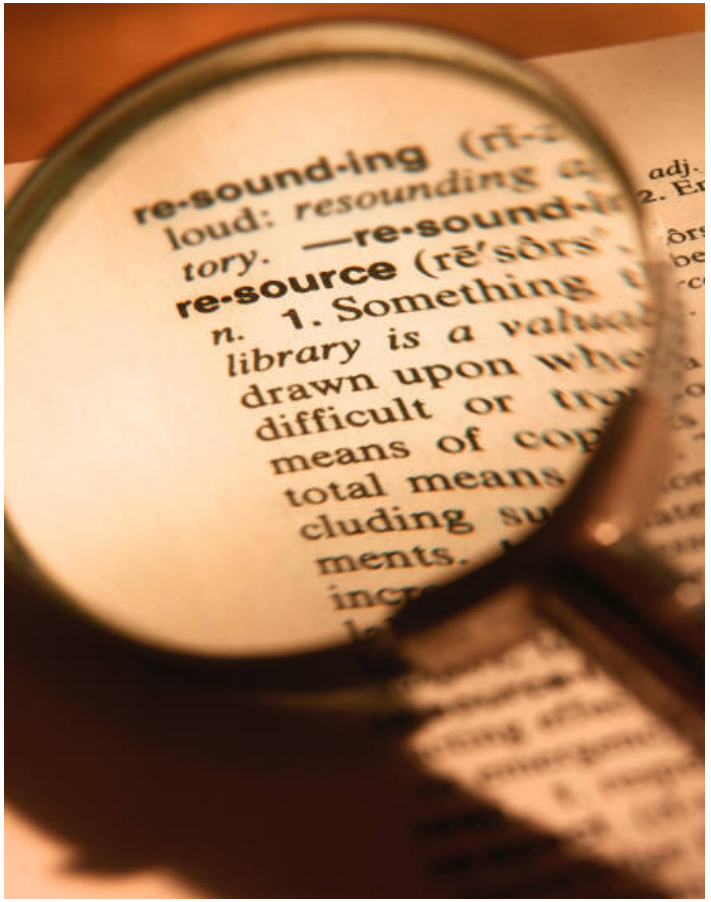


- **Two organizational groups**
  - **Research Library & Information**
  - **Electronic Information & Publications**

What Services Does ISD Provide?

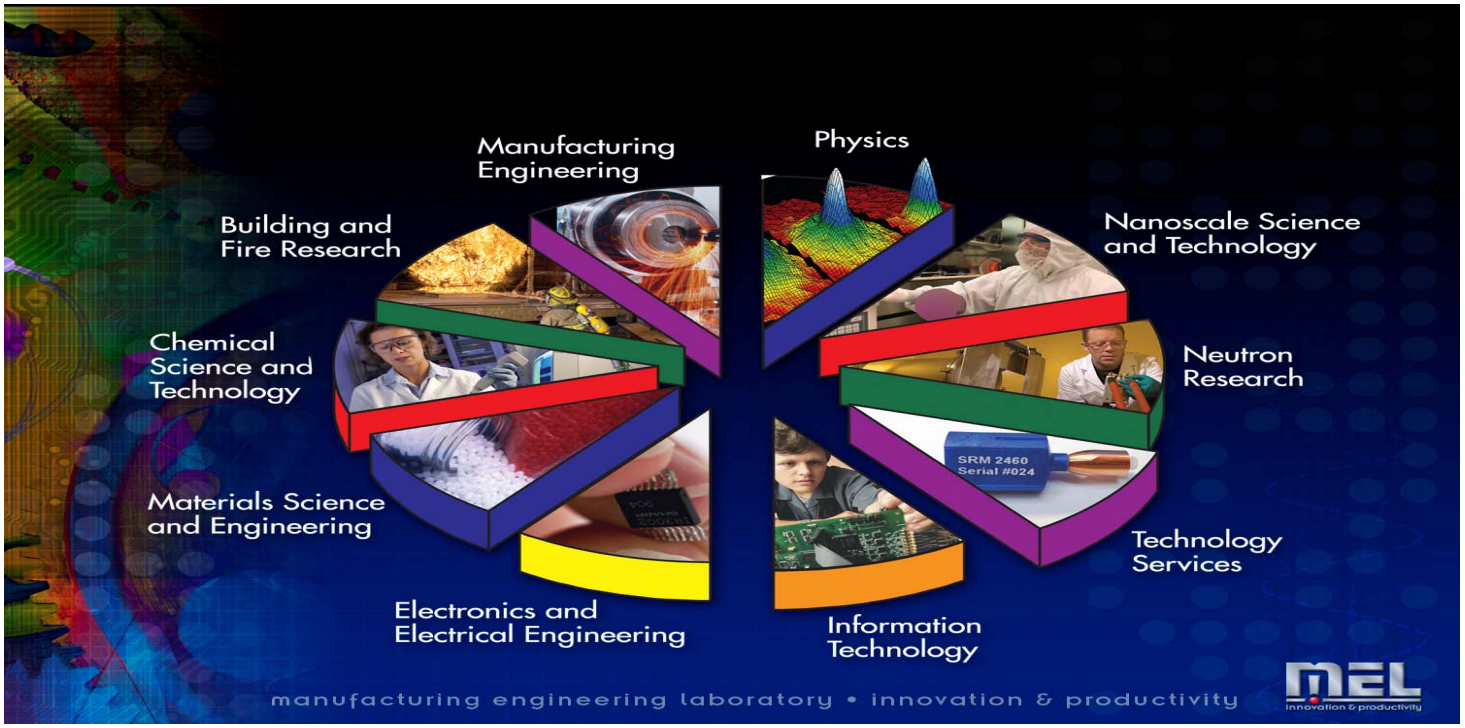
Services Align with Knowledge Continuum

- Research Discovery
  - Information resources & Access tools
  - Customer Support
- Research Dissemination
  - Editorial review
  - Publications analysis/support



Who are Our Major Customers?

All major research laboratories, such as:



. . . As well as other portfolio programs at NIST

Lab Liaison Program at NIST

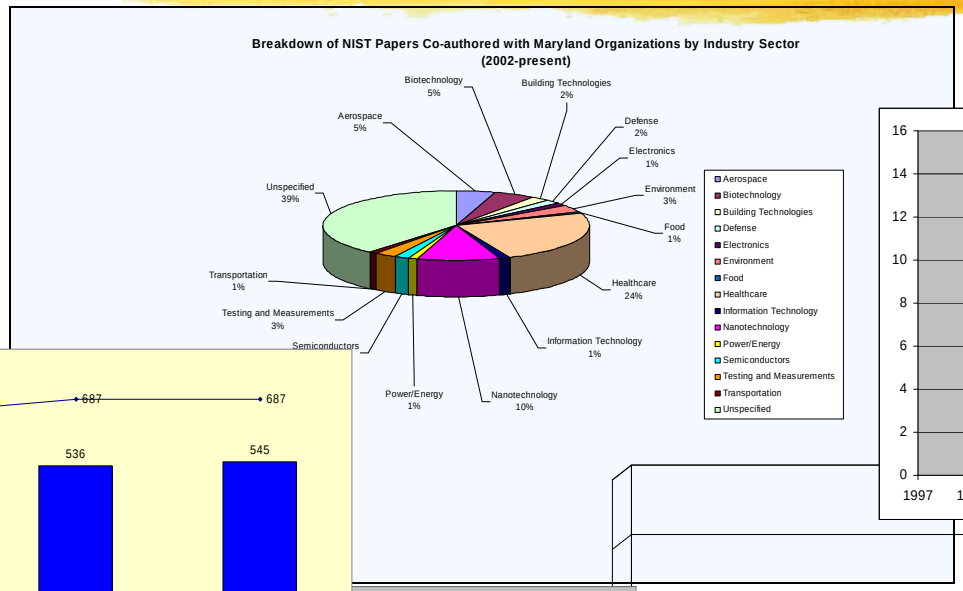
- **Performance Objective**
  - To support NIST research, innovation, and discovery
  - To create and promote new ways to package and deliver targeted information
- **Activities and Collaborations**
  - Performing in-depth information research or comprehensive literature searches
  - Conducting publication, citation, and impact analyses
  - Providing Knowledge Management expertise
  - Developing the NIST Research Library collections

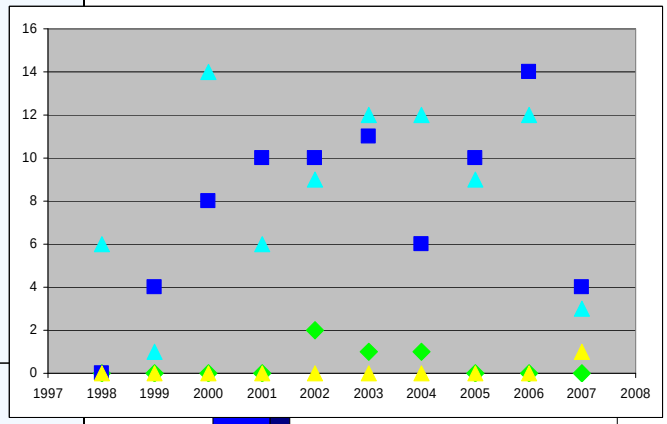
Collaboration is Key for Liaisons

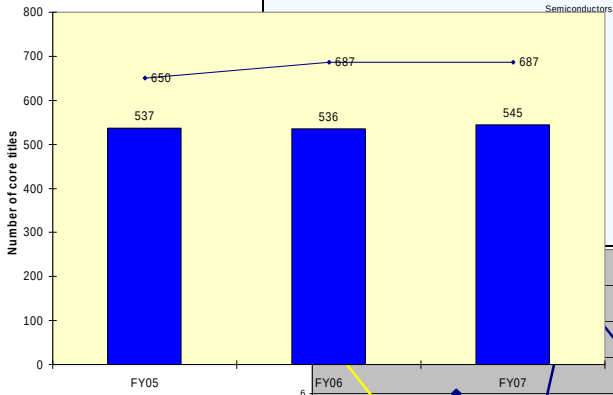
- **Collaboration offers best way to develop customer relationships**
  - **Understand their needs**
  - **Show our capabilities**
  - **Demonstrate impact/value**

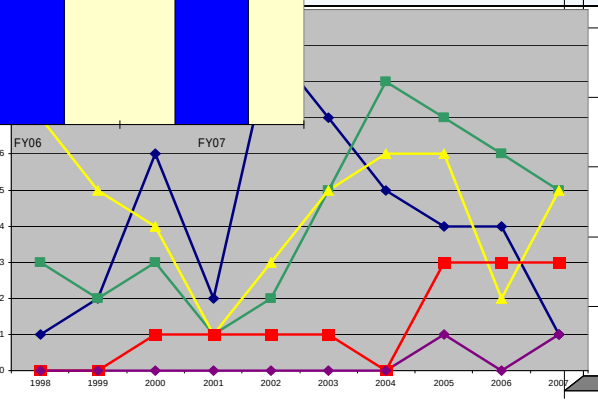
- **Use technology in ways most suited to customer needs**
  - **NIST publication/report intensive**
  - **Continue to develop new technical skills to insert as appropriate**

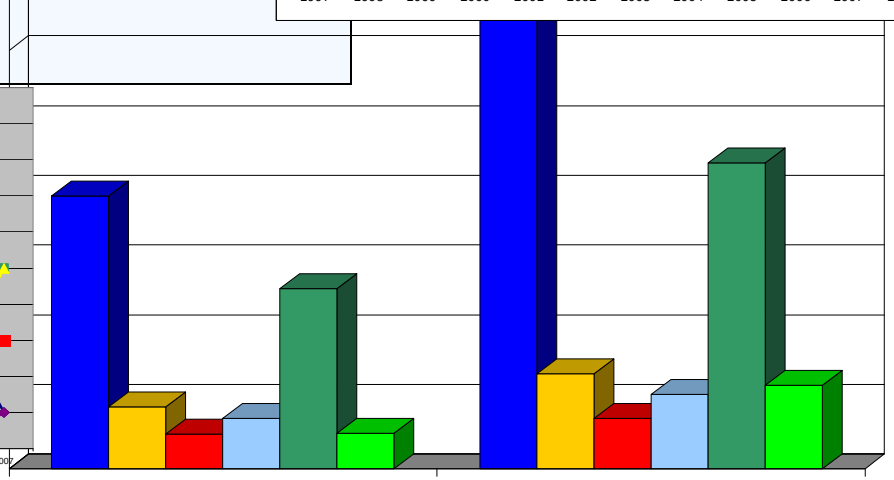
Analysis Collaborations











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Increasing Visibility

Problem: Two laboratories were interested in increasing visibility of their publications

Our Approach: Analyze impact of current publications and conference attendance, to increase "reach"

- Provide basis for developing comprehensive publications strategy and tailoring messages for specific audiences

How Did We Do It?

Our Methodology:

- Analyzed both journal and conference literature
- Studied journal rankings, impact factors, and other titles in same subject categories
- Developed a series of metrics to gauge prestige and "reach" of a conference

Technology Used:

- Mined Internal publication database
- Used commercial & Sci/Tech database resources

Investment in Research Areas

Problem: To what extent has NIST invested in specific research areas?

Our Approach: Use publications in specific subject areas as a measure for tracking research activity across NIST

Existing Tools Used In Innovative Ways

INFORMATION SERVICES DIVISION

Our Methodology:

- Used internal database to “count” number of subject-specific publications created during timeframe
  - Innovative way to use this data
- Through collaboration with researchers, developed list of subject-specific search terms (90+ terms used)

Technology Used:

- Mined previously existing publications database
- Final product prepared using typical suite of tools: spreadsheet, data/charts, word processing

Our analysis answered questions such as:

- What percentage of NIST's publication portfolio reported results of nanotechnology-related research?
  - How has this changed over time since investment began?
- What specific labs are most heavily invested in this subject area?
  - Which divisions within labs?
  - How have these patterns tracked over time?

Relationships with Local Community

Problem: How involved is NIST with businesses in the local community/state of Maryland?

Our Approach: Use publications in specific subject areas as a measure for tracking research activity across NIST

Strategy Used

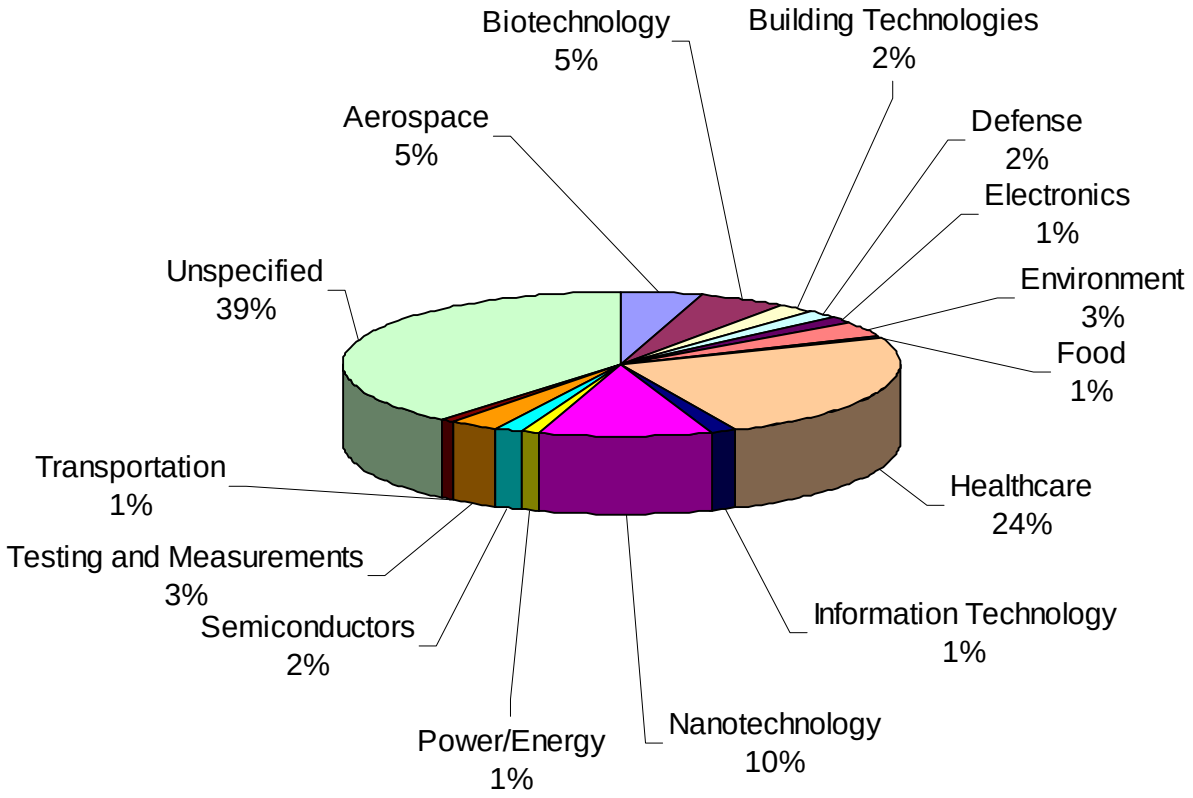
Our Methodology:

- Identify number of papers which NIST had co-authored with researchers in Maryland agencies, organizations, and academic institutions
- Examine to determine corresponding industry sector

Technology Used:

- Commercial database resource

Breakdown of NIST Papers Co-authored with Maryland Organizations by Industry Sector (2002-present)



Technology Collaborations

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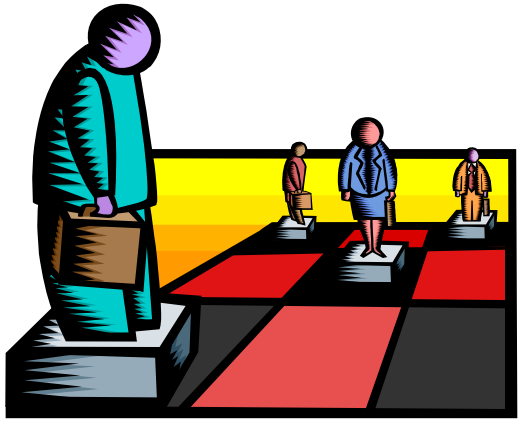
NIST Editorial Review Process

- ***Problem***: How to automate the NIST editorial review process to increase efficiency and show impact?

- ***Our approach***: Build an automated system in incremental steps

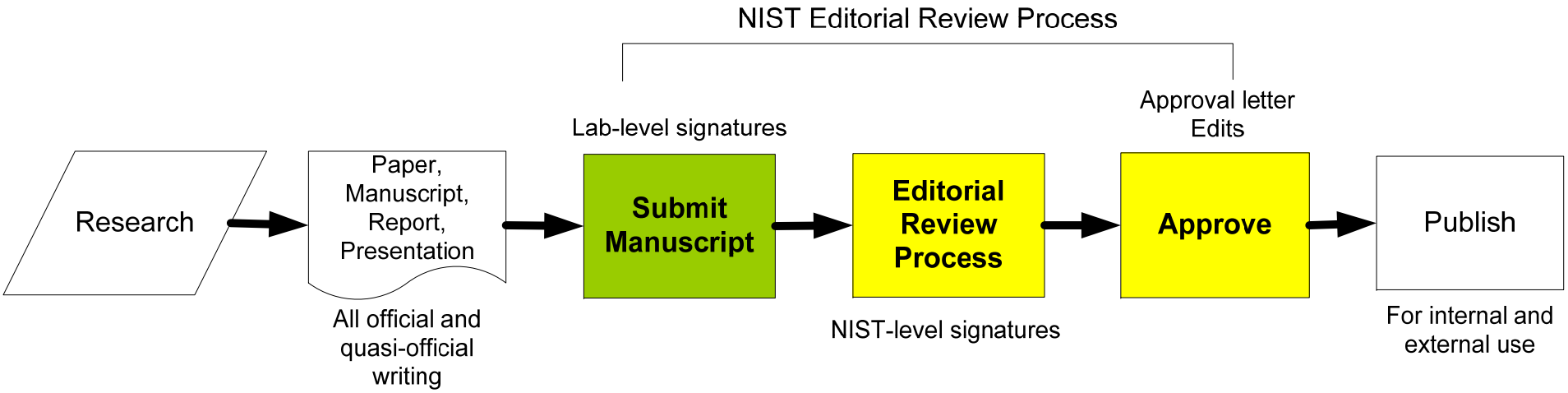
Strategy Used

- Our Methodology:
  - Gather business requirements
  - Prioritize customer needs
  - Liaison between interested parties (stakeholders)
  - Build system in steps:
    - Submission system
    - Editorial Review Board process
    - Digital Signature
    - “The sky’s the limit”
  - Participate in training
- Technology used:
  - System built in-house using commercial tools



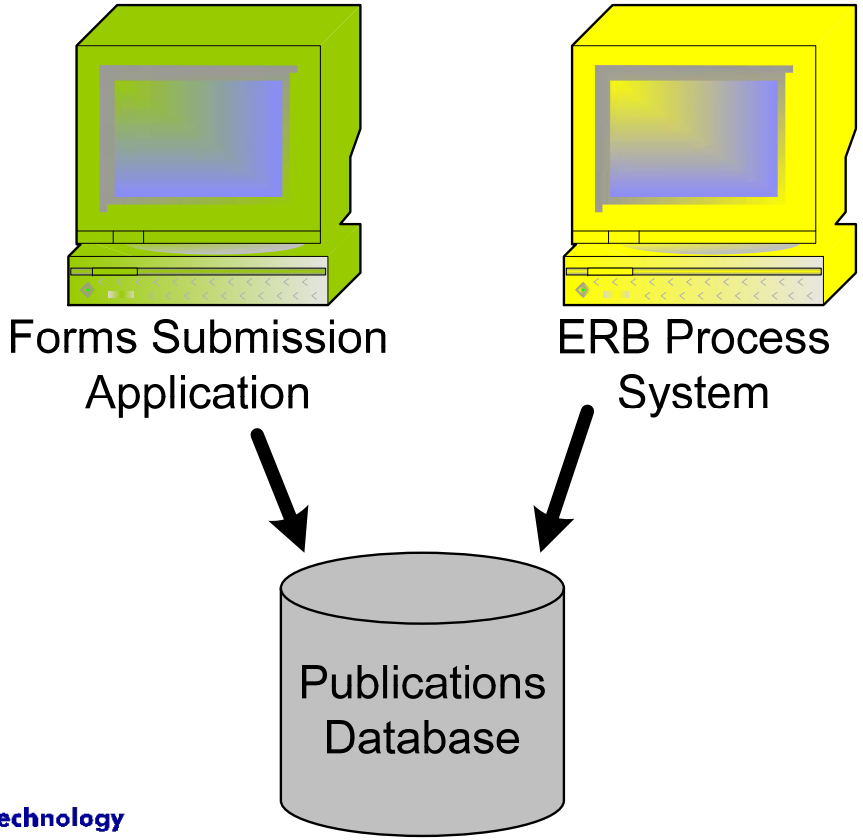
NIST Publication System

Workflow

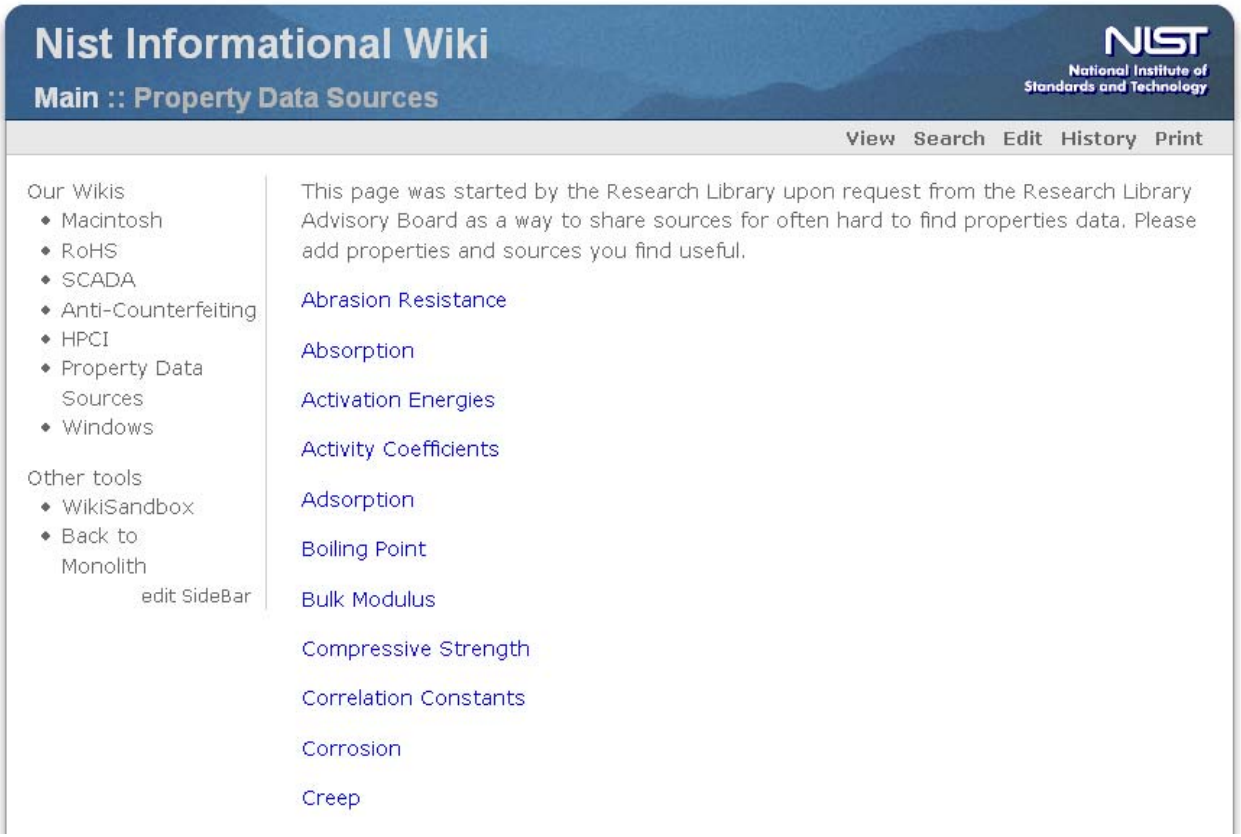


NIST Publication System

Components for Automation



Property Data Sources Wiki

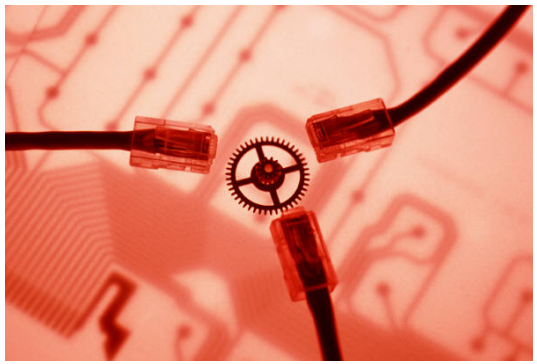


- Created in response to idea from the Research Library Advisory Board
- Collaborate about sources for hard-to-find properties data

Remote Science

- Leadership Development Program
  - Nine individuals from across NIST's labs came together

- NIST's future infrastructure
  - What might it look like to enable "good science with good security?"



Podcasts

- Primarily a marketing effort for Lab Liaison program
  - Provide a synergy with highly successful iPod circulation program
- Opportunity to also show capability of technology
  - Adds podcasting to Lab Liaison “toolbox”

Future Directions/Next Steps

- Collaboration remains desired outcome of our strategic objectives
  - Liaisons emphasize building these relationships
  - Liaisons share knowledge and combine skills – collaboration works on many levels
- Use of Technology expands to meet customer needs

Closing Thoughts

- Opportunities can come from anywhere
  - Be receptive to and aware of them
- Collaborating externally starts with collaborating internally
  - Recognize that the sum is greater than its parts
- One size does not fit all
  - Lab Liaison program can support our customers in a variety of ways and all activities benefit NIST

Questions?

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