

# Technology Transfer Metrics

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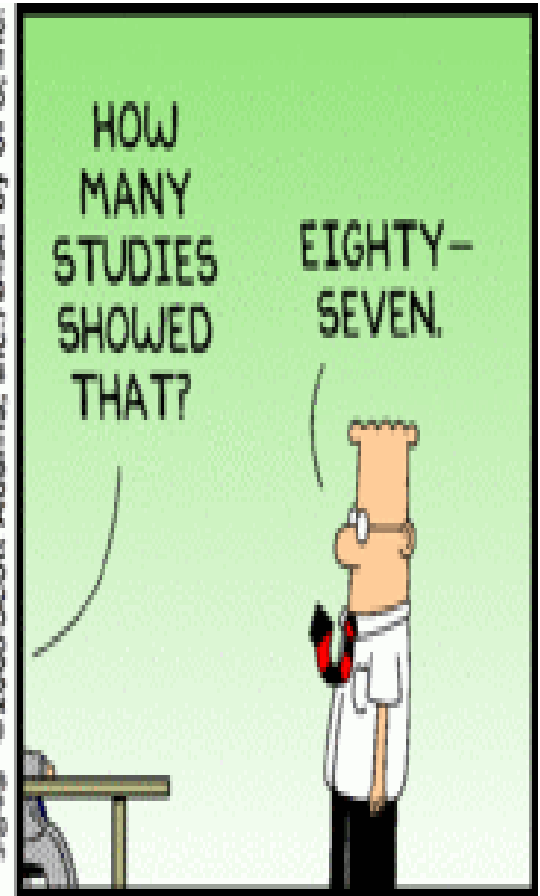
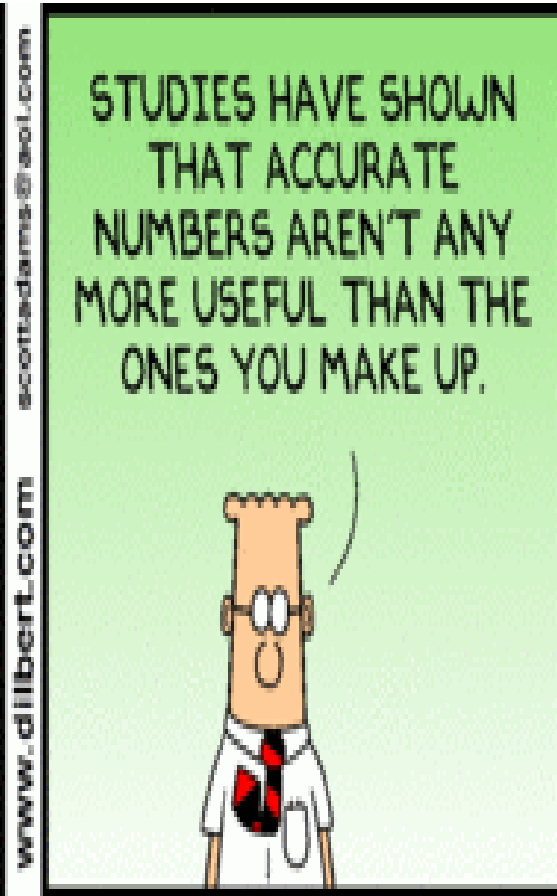
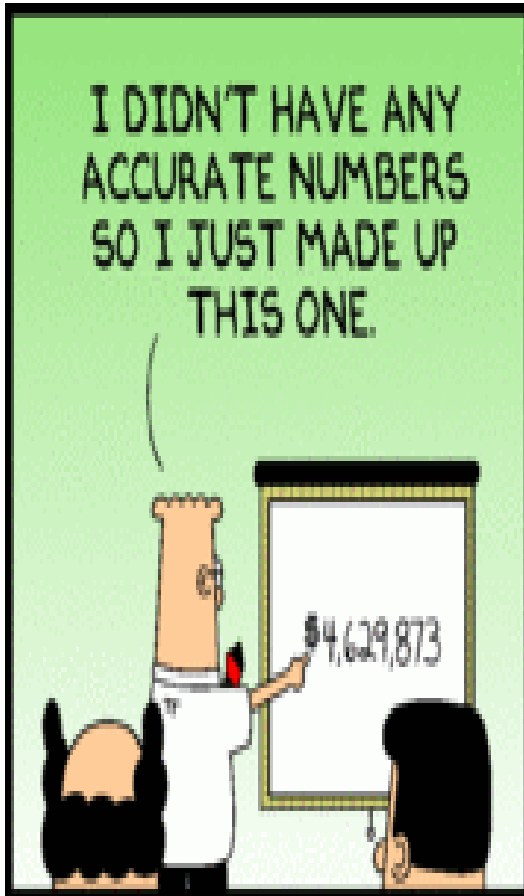
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# Need for Numbers



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# What Do We Measure With Numbers?

- Patents (applications filed, patents issued)
- Inventions disclosed
- Licenses (Invention licenses, other IP licenses)
- CRADAs (traditional, non-traditional, other R&D collaborations)
- Income bearing licenses, number of exclusive licenses
- Royalties collected
- Per 15 USC 3710 (f)(2)

# What Additional (non-numerical) Info. Do We Provide?

- Mission driven programs
- Success stories
- Link to the Tech Transfer Offices Websites
- Agency driven content

# 15 USC 3710 (f)(A)

- Two part: agency's goals for the preceding year, metrics that speak to those goals
- The report shall include-- (A) an explanation of the agency's technology transfer program for the preceding fiscal year and the **agency's plans** for conducting its technology transfer function, including its plans for securing **intellectual property** rights in laboratory innovations with **commercial promise** and plans for managing its intellectual property so as to advance the agency's mission and benefit the competitiveness of United States industry; and

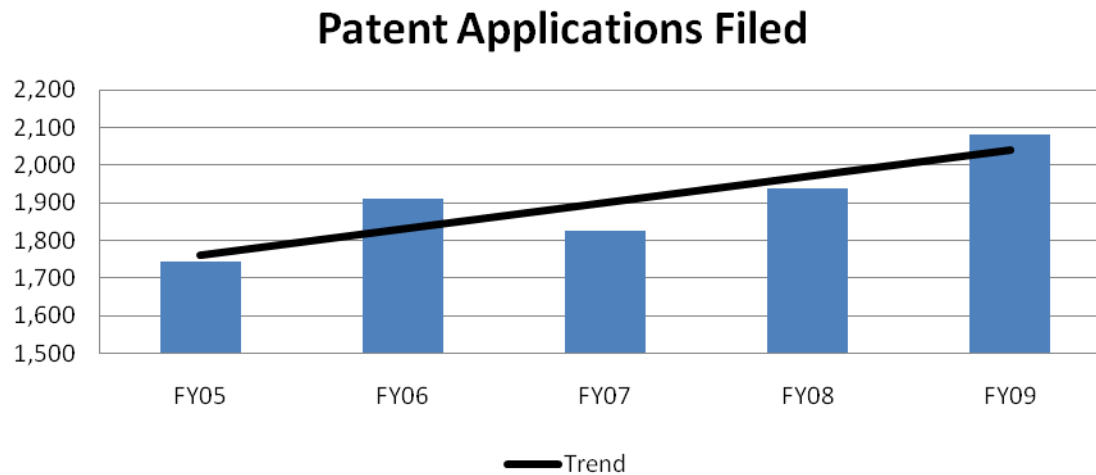
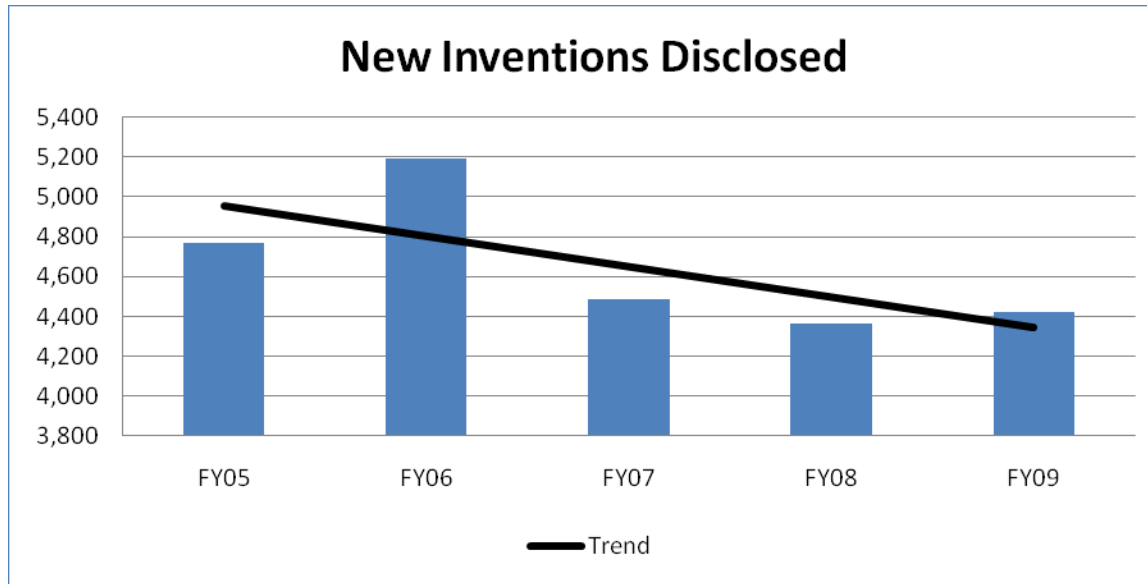
# 15 USC 3710 (f)(B)

- (B) information on technology transfer activities for the preceding fiscal year, including—
  - (i) the number of patent applications filed;
  - (ii) the number of patents received;
  - (iii) the number of fully-executed licenses which received royalty income in the preceding fiscal year, categorized by whether they are exclusive, partially-exclusive, or non-exclusive, and the time elapsed from the date on which the license was requested by the licensee in writing to the date the license was executed;
  - (iv) the total earned royalty income including such statistical information as the total earned royalty income, of the top 1 percent, 5 percent, and 20 percent of the licenses, the range of royalty income, and the median, except where disclosure of such information would reveal the amount of royalty income associated with an individual license or licensee;
  - (v) what disposition was made of the income described in clause (iv);
  - (vi) the number of licenses terminated for cause; and (vii) any other parameters or discussion that the agency deems relevant or unique to its practice of technology transfer.

# 15 USC 3710 (g)(2)

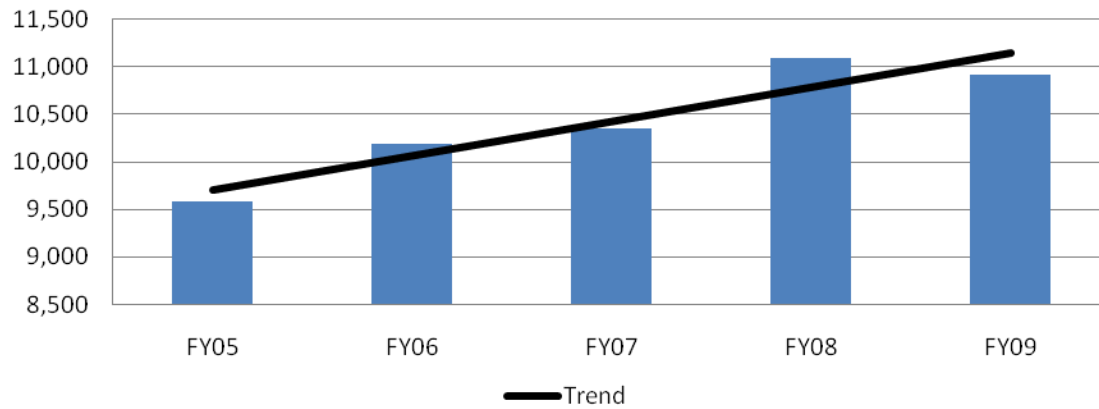
- (g)(2) Reports.—
- (B) Content.--The report shall—
- (i) draw upon the reports prepared by the agencies under **subsection (f)** of this section;
- (ii) discuss technology transfer **best practices** and **effective approaches** in the licensing and transfer of technology in the context of the agencies' missions; and
- (iii) discuss the **progress made** toward development of **additional useful measures** of the outcomes of technology transfer programs of Federal agencies.

# 15 USC 3710 (g)(2)

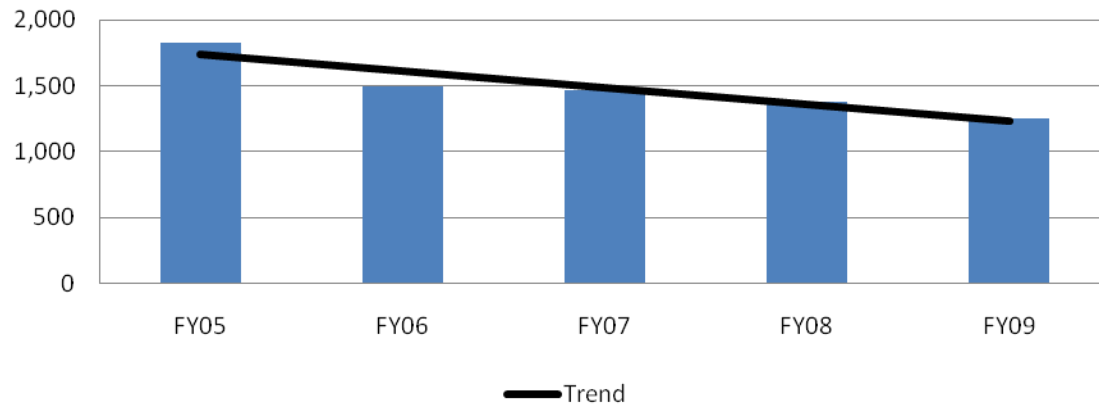


# 15 USC 3710 (g)(2)

## All Licenses



## Total New, Invention Licenses



# What Other Activities Can/Should We Measure?

- Outcome vs. output
- Number of publications by scientific or TT staff
- Number of Citations to those publications
- Number of Talks/Conference Attendance/Speeches/Webinars (Outreach) on Federal TT
- Number of fellows/interns/international staff trained
- Number of SBIR-TT contracts
- Number of Clinical Trial Agreements
- Number of Federal Sites Involved in CT
- Number of New Alliances, PIAs, MOUs

# What Other Activities Can/Should We Measure?

- Number and nature of alliances with Economic Development Organizations
- Number of jobs developed through Federal TT activities
- Number of businesses supported and/or started through Federal TT
- Number of and extent to which Biological Materials are transferred
- Number of lives saved/burdens eliminated
- Personnel Exchange Programs

# What Other Activities Can/Should We Measure?

- Aggregate Sales by Licensees
- Development of reference materials/standards
- Use of unique facilities by businesses
- New methods and mechanisms to transfer technologies
- Interagency collaborations
- Methods of leveraging Federal technologies
- Development of future scientists/number of scientists trained at the Federal Labs

# Definitions and Measures of Success\*\*

- Labs report many examples of successful TT&C.
- Yet, it is unclear how *effective* labs have been because many lack a measurable definition of what TT&C success means to their program
- Success will not be measured uniformly across all labs because it is dependent upon lab characteristics.
- Widespread acknowledgment that current required metrics are insufficient

\*\*IDA Science and Technology Policy Institute Report

# Proposed Additional Metrics\*\*

- Activity metrics
  - Researchers/Industry partners who contact or are contacted by ORTA
  - Technology showcases
- Process efficiency metrics (measuring length of time)
- Additional output and outcome metrics
  - Start-up companies
  - Revenues of companies licensing technologies
- Broader impact measures

Be wary of measurement overhead.

\*\*IDA Science and Technology Policy Institute Report