Technology Innovation Program - Performance Measures

Measuring performance allows TIP to:

- Track performance over time to assess if goals are being met;
- Link performance to budget decisions; and
- Address management challenges.

TIP measures outputs as short-run indicators of progress toward program goals. TIP measures outcomes in the longer run to assess impact of the program.

Each year, TIP estimates the following performance results as measures of key outputs and indicators of progress in meeting short-run program goals:

- Funding high-risk, high-reward R&D,
- Fostering research collaborations, and
- Accelerating the creation and dissemination of knowledge through patents, papers, and publications.

These performance measures are included in NIST's budget submissions to the U.S. Department of Commerce (DoC) and the Office of Management and Budget.

In addition to compiling actual performance results at the end of a given fiscal year, TIP forecasts results for the following three years. These forecasts are currently based on historic data from similar R&D programs. The ratio of actual total outputs for a given measure to the cumulative number of completed projects is calculated and applied to the anticipated number of completed TIP projects at each future date. The forecasts are used by the DoC as targets for annual performance.

The table below shows the TIP targets[*] for FY 2009 - 2012 that the DoC will use to assess actual performance and budgets. TIP measures are lagged and will not generate results until three or more years of project research are complete.

Performance Measure	Actual FY 2009	Target FY 2010	Target FY 2011	Target FY 2012
Cumulative number of projects funded	9	25		
Cumulative number of publications	0	0	0	27
Cumulative number of patents applications	0	0	0	18

[*] Targets were estimated by TIP in mid-FY 2009. Targets for FY 2010 include a 2009 competition and a projected 2010 competition. Targets are subject to change due to fluctuations in future budget projections. Actual results for a given year are compiled and become available for reporting purposes by the middle of the following year. With the exception of "cumulative number of projects funded", the measures are lagged and will not generate results until three or more years of project research are complete. (4/28/09)

Cumulative number of projects generating continued R&D	0	0	0	0
Cumulative number of projects with technologies under adoption	0	0	0	0

The results/targets shown in the table above are based primarily on:

- Survey data from TIP's Impact Assessment Reporting System,
- TIP portfolio of project participants, and
- Historic data from similar R&D programs.

Additional Notes on Each Performance Measure

Cumulative number of projects funded:
This number reflects the number of projects funded to support areas of critical national need. Participating organizations include small and medium-sized companies, institutions of higher education, national laboratories, non-profit research institutes, and other organizations.

Cumulative number of publications:
The measure reflects scientific knowledge being generated from the funding. Publications include academic journals, conference proceedings, and other publications. The measure also reflects the dissemination of the science benefitting other organizations outside of the project participants. Projections are based on historic data from similar R&D programs estimated at 3 publications per completed project. The measure is a lagged measure and assumed that publications will be generated by the third year of project research.

Cumulative number of patents applications:
The measure reflects an additional metric of valuable knowledge and science generated from the funded research. Projections are based on historic data from similar R&D programs estimated at 2 patents per completed project. The measure is a lagged measure and assumed that patent applications will be generated by the third year of project research.

Cumulative number of projects generating continued R&D:
This measure reflects the creation of transformative research whose value is demonstrated by continued R&D investment by the original researchers or by others. The measure is a lagged measure and is assessed after the TIP funding has stopped (generally three years or later).

Cumulative number of projects with technologies under adoption:
This measure reflects the implementation of the R&D efforts to benefit end users. Adoption includes testing of the research results at a beta site, licensing the technologies to others, or commercializing the technology through improved products and processes. The measure is a lagged measure and is assumed to be realized near the end of the project at the earliest (generally three years or later).