



# **Introduction to NASA Education Performance Measurement**

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**NASA EDUCATION  
STRATEGIC FRAMEWORK  
& PERFORMANCE  
REPORTING**

# 2014 NASA Strategic Plan and STEM Education

**NASA's Strategic Goal 2:** Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.

**Strategic Objective 2.4:** Advance the Nation's STEM education and workforce pipeline by working collaboratively with other agencies to engage students, teachers, and faculty in NASA's missions and unique assets.



# NASA Annual Performance Plan\*

- To support the measurement of Strategic Objective 2.4, Performance Goals and Annual Performance Indicators (APIs) with clear success criteria and evidence established
- Performance Goals remain stable throughout the Performance Plan Period (2014-2017)
- Annual Performance Indicators (APIs) are annual targets developed in consultation with OE leadership; “green,” “yellow,” and “red” ratings are assigned quarterly using pre-determined success criteria

\* Agency FY2016 annual performance plan/FY2014 annual performance report:

[http://www.nasa.gov/sites/default/files/files/NASA\\_FY14\\_APR-FY16\\_APP\\_Complete.pdf](http://www.nasa.gov/sites/default/files/files/NASA_FY14_APR-FY16_APP_Complete.pdf)

# FY2016 Performance Goals/APIs

Performance Goals (FY2014-17)	Annual Performance Indicators (FY15)
<p>2.4.1: Assure that students participating in NASA higher education projects are representative of the diversity of the Nation.</p>	<p>ED-16-1: Provide significant, direct student awards in higher education to (1) students across all institutional categories and levels (as defined by the U.S. Department of Education); (2) racially or ethnically underrepresented students, (3) women, and (4) persons with disabilities at percentages that meet or exceed the national enrolled percentages for these populations, as determined by the most recent, publicly available data from the U.S. Department of Education's National Center for Education Statistics for a minimum of two of the four categories.</p>
<p>2.4.2: Continue to support STEM educators through the delivery of NASA education content and engagement in educator professional development opportunities.</p>	<p>ED-16-2: Engage with at least 80,000 educators in NASA-supported professional development, research, and internships that use NASA-unique STEM content.</p>
<p>2.4.4: Continue to provide opportunities for learners to engage in STEM education through NASA unique content provided to informal education institutions designed to inspire and educate the public.</p>	<p>ED-16-4: Maintain the NASA Museum Alliance and/or other STEM education strategic partnerships in no fewer than 30 states, U.S. Territories and/or the District of Columbia.</p>
<p>2.4.5: Continue to provide opportunities for learners to engage in STEM education engagement activities that capitalize on NASA unique assets and content.</p>	<p>ED-16-5: Engage with at least 750,000 elementary and secondary students in NASA STEM engagement activities.</p>

# Office of Education Performance Reporting

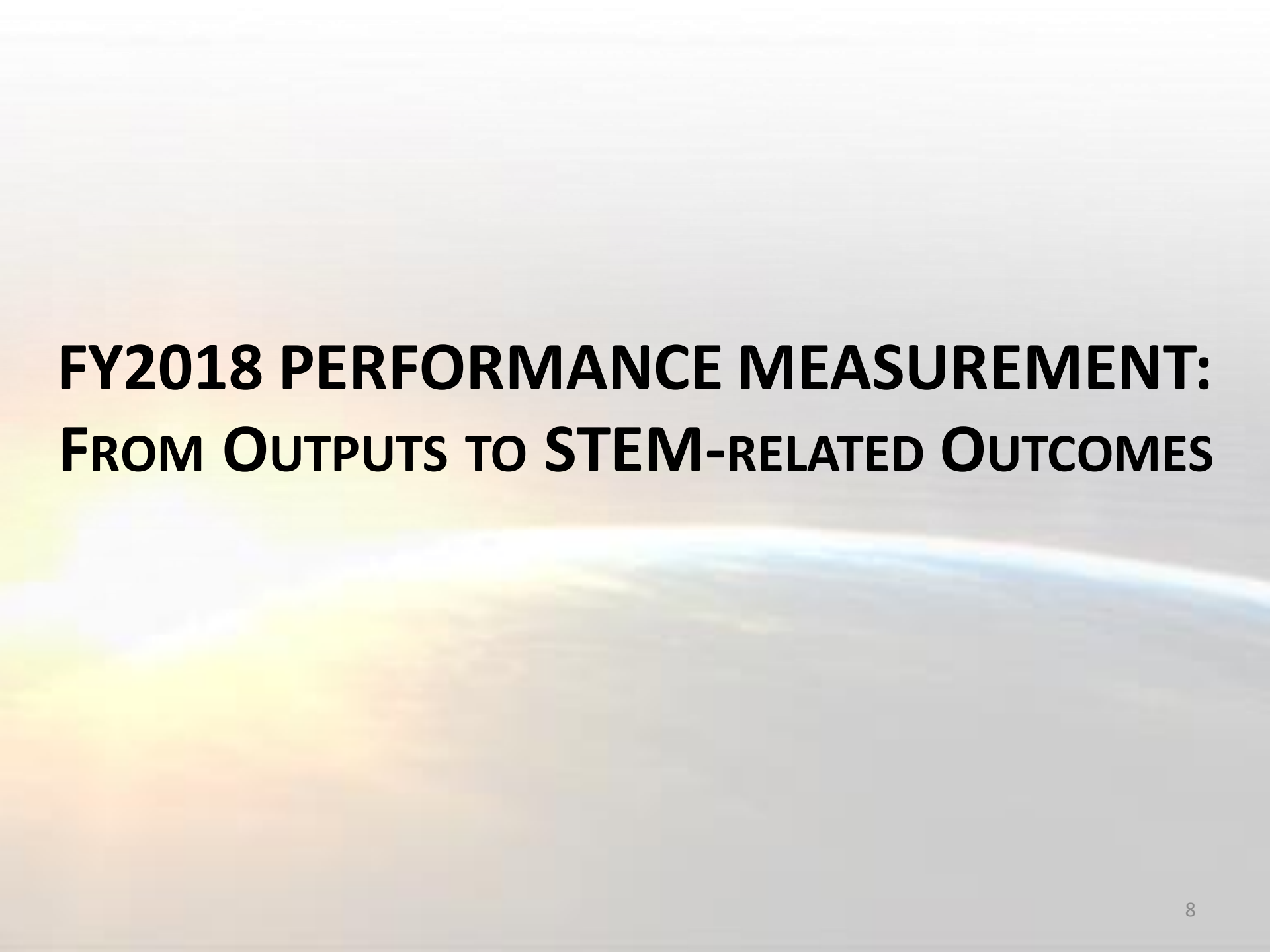
A single Office of Education performance measurement system (OEPM) is used for reporting and survey administration.

All NASA activity managers and PIs (awardees) are required to report performance data into this system.

As of FY2014, NASA Education reporting utilized prior year data (i.e. FY2013) across the entire portfolio.

# On the Immediate Horizon

- New FY2017 API focused on ensuring that independent evaluations are conducted and reported by awardees
- New agency strategic plan in place by FY2018, with ECC-level planning in FY2016 for *new* performance goals and *outcome-focused* APIs beginning this fall



# **FY2018 PERFORMANCE MEASUREMENT: FROM OUTPUTS TO STEM-RELATED OUTCOMES**



# From Outputs to Outcomes Measurement: *What we've done so far*

- ✓ Development of a ***logic model*** for each business line
- ✓ Identification of outputs and short-term outcomes from logic models for ***performance indicators*** across business lines and projects that are aligned with Federal CAP goal and FC-STEM investment priority areas
- ✓ ***Development / identification of instruments*** to assess participant-level outcomes has begun
- ✓ Paperwork Reduction Act ***clearance from OMB for methodological testing*** of data collection instruments.
- ✓ Improved ***OEPM reporting functionality***

# From Outputs to Outcomes Measurement: *What's ahead*

- Revision of **OEPM data model**/adjustment of **OEPM data collection fields** to align with output-focused performance indicators identified by the LOBs and funding programs
  - Performance data review currently underway for Space Grant
- **Instrument identification/development, testing and OMB Paperwork Reduction Act clearance** to collect participant-level outcomes
  - Outcome measures are research literature based and STEM-related
  - First draft surveys prepared for NIFS with technical review panel held last March
- Development of **outcome-focused APIs** in FY2018

# Paperwork Reduction Act and its Impact on Outcome Measurement

- All Federal public information collections require Paperwork Reduction Act clearance; each information collection clearance requires a minimum of 6-9 months not including testing/development
- OMB requires validity and reliability testing of instruments prior to clearing instruments
- Current clearance packages in process include:
  - Individual activity and project-level data fields clearance
  - STEM attitudinal surveys for middle school students for use in STEM Challenge activities

# **Visit NASA Education Performance Assessment**

**<http://www.nasa.gov/offices/education/performance/>**