Update on Future Indicators: 2020 and Beyond

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State Indicators Data Tool

- NCSES has begun regular updates!
- Tentative update schedule
  - Quarterly
  - First update: 2018Q1 data; June, 2018
  - Second update: 2018Q2 data; late summer 2018
  - Topics covered: workforce, higher education, K-12 education
- Communication to stakeholders
  - Inform re-imagined Indicators
Guiding Principles for Re-imagining Indicators

• Maintain high-quality data and analyses
• Increase effectiveness and value to key stakeholders
  • Build on 2016 transition to a digital platform
• Production sustainability for SBE/NCSES & NSB
Beyond Indicators

NCSES conducts more than a dozen surveys

Responsible for statistical data and analysis on:

- Research and development
- Science and engineering workforce
- U.S. competitiveness in science, engineering, technology, and R&D
- The condition and progress of STEM education in the United States
Current *Indicators* Report

- Overview Chapter
- Eight Topical Chapters
- Digest
- NSB Policy Companions

NCSES Produced and Delivered Simultaneously on January 15

*Science and Engineering Indicators 2020*
Vision for Re-imagined *Indicators*

1. **Summary Report on the State of the U.S. S&E Enterprise**
   - Digest/Overview-like Report
   - Statutory Delivery
   - January 15, 2020

2. **Eight Thematic Reports**
   - Series of Streamlined Reports
   - Not Part of Statutory Delivery

3. **Special, One-Off Reports**
   - After 2020
   - New Indicators; Emerging Issues

4. **NSB Policy Companions**
Guidelines for Thematic Reports

- Published as a series of reports (not tied to statutory date)
- Developed by SBE/NCSES (with Board guidance)
- Policy relevant, neutral
- Concise, targeted versions of current topical chapters
  - Timely, effective, higher impact → improved value to stakeholders
  - Uniform production burden
- 2020 cycle: Eight thematic reports
Considerations for Thematic Reports

Key considerations

- Indicators on the state of the S&E enterprise
- Major findings in an accessible, effective fashion
- Leverage other published reports
- Special, one-time reports
- Maintain quality while improving the efficiency and sustainability of the process

Supplemental data tables to thematic reports

Streamlining tradeoffs
Thematic Report: S&E Higher Education

Main topics
1. U.S. institutions providing S&E education
2. Undergraduate and graduate S&E degree awards
3. Demographic attributes of S&E degree recipients
4. International S&E higher education

Proposed modifications
- Enrollment
- Demographic information
- For-profit institutions; online education
- Revenue and expenditure trends
- Selected international topics

Tentative release: Summer 2019
Thematic Report: Knowledge and Technology-Intensive (KTI) Industries

- **Main topics**
  1. Patterns and trends of KTI industries
  2. Global trends in trade of KTI products and services
  3. Sustainable energy technologies

- **Proposed modifications**
  - Possible new sidebar on artificial intelligence
  - Sustainable energy technologies

Tentative release: Fall 2019
Thematic Report: U.S. and International R&D Trends

- **Main topics**
  1. Recent trends in U.S. R&D performance
  2. Cross-national comparisons of R&D performance
  3. U.S. business R&D
  4. Federal government support for U.S. R&D

- **Proposed modifications**
  - Leverage existing NCSES publications on R&D
  - R&D by multinational enterprises (MNE)

Tentative release: Fall 2019
Appendix: Vision for Re-imagined *Indicators*

1. The State of Science and Engineering in the U.S.
   - Digest/Overview-like report
   - Statutory delivery January 15, 2020

2. Thematic Reports on the S&E Enterprise
   - Series of reports

3. Special, “one-off” Reports
   - After 2020
   - New indicators, emerging issues

4. NSB Policy Reports
   - Current companion reports

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Science and Engineering Indicators 2020