Appendix A: Data Validity and Verification

The *Government Performance and Results Act Modernization Act of 2010* requires agencies to describe the accuracy and reliability of data presented. The Department continues to strengthen its approach to data verification and validation. Details of how the Department assesses the completeness and reliability of the data reported are presented as part of this appendix, and known limitations of the data are also included.

To the best of my knowledge, the data verification and validation process and the data sources used provide, to the extent possible, complete and reliable performance data pertaining to goals and objectives in our *FY 2014–18 Strategic Plan.* Through a process of continuous improvement, the Department regularly assesses its validation process and welcomes input from stakeholders.

Joseph C. Conaty
Delegated the Duties and Functions
of the Deputy Secretary
May 23, 2017

GOAL 1: POSTSECONDARY EDUCATION, CAREER AND TECHNICAL EDUCATION, AND ADULT EDUCATION. Increase college access, affordability, quality, and completion by improving postsecondary education and lifelong learning opportunities for youths and adults.

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
1.1.A	Federal student loan delinquency rate	Federal Student Aid (FSA) Data Center	NSLDS is currently the source of the data. Verification and validation occur in three aspects of the process: (1) Data providers (servicers in this case) transmit data to NSLDS where the data are subject to edits and screening. FSA works with the servicers to resolve anomalies. (2) Users who analyze the data sometimes identify anomalies in the course of their analytic roles and work with experts in NSLDS to resolve. In some cases NSLDS will again work with the servicer(s) to resolve. (3) The report providing the data for this metric has been validated. This means that the programming and logic have been independently reviewed.
1.1.B	Web traffic to the College Scorecard	Google Analytics data from College Scorecard	The data are simply pulled from the GSA Google Analytics account. The data are checked for reasonability, and incorporated alongside the existing baseline data. The data need to be matched with baseline data and collated accordingly. There is limited analysis required. The data will be matched with prior data for reasonability checks. The Office of Planning, Evaluation and Policy Development will pursue solutions to anomalous data, but do not anticipate a significant problem, as the data are produced relatively automatically.
1.1.C	Percent of High School Seniors Filing a FAFSA	The denominator is the number of graduating seniors according to the most recent projection by NCES (Table 219.10 within the Digest of Education Statistics). The numerator is from Federal Student Aid's (FSA's) Central Processing System and is based on the number of applications during the first nine months of the application cycle that are—as of September 30 of the first year of the application cycle—complete (not rejected); first-time filers; incoming freshmen, with or without previous college attendance; age 18 or less as of June 30 of the first year of the application cycle; reporting high school diploma attainment; and attended a high school in the fifty states and Washington, DC.	The denominator is the number of graduating seniors according to the most recent projection by National Center for Education Statistics (3,365,560). Number of seniors obtained from the most recent release of Digest of Education Statistics (2013) obtained here: http://nces.ed.gov/programs/digest/d13/tables/dt13_219.10.asp The numerator is based on the number of applications during the first nine months of the application cycle that are—as of September 30 of the first year of the application cycle—complete (not rejected; first-time filers; incoming freshmen, with or without previous college attendance; age 18 or less as of June 30 of the first year of the application cycle; reporting high school diploma attainment; and attended a high school in the 50 states and DC. (Data Source: FSA's Central Processing System. Query timeframe: January–September 30, 2014: 2,021,691) Broadly speaking, several individuals and organizations serve as controls, including the Customer Analytics Group (for primary calculation), Business Intelligence (for technical validation), and the Financial Reporting and Analysis Branch for ensuring documentation is complete and archived. In addition to the above controls, queries and calculations are simultaneously conducted on data from previous years to ensure technical definitions remain consistent and calculations are accurate. Being that the Central Processing System is the core legacy system used to determine aid eligibility and awards and understanding the significance, value and reliability of the Digest of Educational Statistics, FSA feels confident that the outcomes are reliable, accurate, and valid.

**Metric associated with an Agency Priority Goal.*

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
1.1.D	Index of national annual aggregate earnings of VR consumers (based on the number of competitive integrated employment outcomes, hours worked, and hourly wages of VR Consumers)	Rehabilitation Services Administration (RSA)- 911	Each grantee's RSA-911 is submitted as a text file to RSA via an SFTP server. We run an edit program that converts the text file into MS Access and verifies the accuracy of the data. Each of the 215 data elements is verified. If errors are identified by the application, the grantee is requested to correct the errors and resubmit the data. Once the data file is corrected and resubmitted, it is checked again using the same process. If anomalies are identified, the grantee must provide an explanation and verify that the data is correct. RSA provides the agencies with the edit program that we use and are encouraged to run their data using the program often, at least quarterly, during the year. In addition, agencies have edits in their own systems which run additional checks.
1.1.E	Index of national annual aggregate earnings of Transition-Age Youth (based on the number of competitive integrated employment outcomes, hours worked, and hourly wages of VR Transition-Age Youth)		
1.1.F	**Number of data points or other information reports released on the FSA Data Center*	FSA Data Center	The Validation Subject Matter Expert (SME) works with the Request SME to understand the solution used to fulfill the request, checking all results, code, and documentation produced by the Request SME. Additionally, the Validation SME ensures there are no data disclosure issues that need to be addressed. In the event the Validation SME cannot validate the request results, they contact the Request SME and the Data Request Team (DRT) to resolve any issues necessary to successfully complete their validation. The Validation SME completes their portion of the Request Template and notifies the DRT that the validation step is complete. Upon receipt of the data that was requested, the DRT confirms with the assigned Validation SME that the results have been validated and documented per their selected solution and enters it into the Data Request Tracking database.
1.2.A	Pell enrollment at IHEs with high graduation rates	Data from College Scorecard	Validation of the data is conducted by the National Center for Education Statistics (NCES) through its annual IPEDS data validation process. NCES will ensure accuracy, while Office of Planning, Evaluation and Policy Development / Policy and Program Studies Service will incorporate the data into the Scorecard datasets. Analysis will be conducted to identify anomalous data. They will be handled on a case-by-case basis, as most anomalies are due to variation from year-to-year or small n-size and are already pooled and suppressed before publishing the data. Other data problems may necessitate additional runs, qualifications, or suppression for stability reasons.
1.2.B	Number of states that develop or strengthen career pathways policies, guidance, and or legislation	Development data from the National Skills Coalition, possibly supplemental with data from the Association of State Legislators and CLASP	The Department cannot independently verify the data, but rely on the tracking of the National Skills Coalition. There are no processes in place to check for anomalous data.
1.3.A	**Degree attainment among 25-34-year-old age cohort*	NCES Digest of Education Statistics, Table 104.30 (https://nces.ed.gov/programs/digest/d15/tables/dt15_104.30.asp), Number of persons age 18 and over, by highest level of educational attainment, sex, race/ethnicity, and age: 2015. Tabulated from Current Population Survey data, U.S. Census	Data quality and limitations are documented in: http://www.census.gov/prod/2006pubs/tp-66.pdf. NCES tabulates the data, which is verified prior to publication according to NCES guidelines.

**Metric associated with an Agency Priority Goal.*

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
1.3.B	Enrollment in IHEs below the minimum earnings threshold	Data from College Scorecard Tool	Extensive validation is conducted by the Treasury Department before it is shared with the Department of Education, both on the earnings file used to construct the measure and on the resulting data file by institution. The Department will also continue to validate the unit-level files that are shared with the Treasury Department to generate the match. Analysis will be conducted to identify anomalous data. They will be handled on a case-by-case basis, as most anomalies are due to variation from year-to-year or small n-size and are already pooled and suppressed before sharing with the Department of Education. Other data problems may necessitate additional runs, qualifications, or suppression for stability reasons. The median earnings is calculated only on individuals who are employed (i.e., have earnings greater than zero). The data are not produced for small years, and are pooled across years, to reduce variability or misrepresentative figures.
1.3.C	Persistence among first-time filing aid recipients	FSA's Common Origination and Disbursement (COD) system	Data used for these calculations are based on counts from operational systems (number of recipients and number of applicants). Moreover, standardized queries are used to re-run and match calculations for earlier cycles. Therefore, the metric as defined should be considered verified and valid. Data used for these calculations are based on counts from operational systems (number of recipients and number of applicants meeting certain criteria). Anomalous data would suggest there are recipients that are not recipients (or vice versa) or applicants that are not applicants (or vice versa). A variety of internal controls are in place tracking both of these processes.

Metric associated with an Agency Priority Goal.

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
1.4.A	Number of STEM postsecondary credentials awarded	Integrated Postsecondary Education Data System (IPEDS) Data Center Doctor's Degrees: (324.25, 324.30 and 324.35) http://nces.ed.gov/programs/digest/d14/tables/dt14_324.25.asp http://nces.ed.gov/programs/digest/d14/tables/dt14_324.30.asp http://nces.ed.gov/programs/digest/d14/tables/dt14_324.35.asp Master's Degrees: (323.30, 323.40, 323.50) http://nces.ed.gov/programs/digest/d14/tables/dt14_323.30.asp http://nces.ed.gov/programs/digest/d14/tables/dt14_323.40.asp http://nces.ed.gov/programs/digest/d14/tables/dt14_323.50.asp Bachelor's Degrees: (322.30, 322.40, 322.50) http://nces.ed.gov/programs/digest/d14/tables/dt14_322.30.asp http://nces.ed.gov/programs/digest/d14/tables/dt14_322.40.asp http://nces.ed.gov/programs/digest/d14/tables/dt14_322.50.asp Associate's Degrees: (321.30, 321.40, 321.50) http://nces.ed.gov/programs/digest/d14/tables/dt14_321.30.asp http://nces.ed.gov/programs/digest/d14/tables/dt14_321.40.asp http://nces.ed.gov/programs/digest/d14/tables/dt14_321.50.asp Certificates (320.20) http://nces.ed.gov/programs/digest/d14/tables/dt14_320.20.asp	IPEDS collects completions by Classification of Instructional Programs (CIP) Code which may be aggregated into STEM and non-STEM counts. The Department of Education does not currently have a single definition for which CIP codes are STEM. Data quality and limitations are identified in IPEDS First Look Publications, "Data Collection Procedures," and IPEDS methodology available at http://nces.ed.gov/pubs2014/2014067.pdf. Data are checked by NCES for consistency.

**Metric associated with an Agency Priority Goal.*

GOAL 2: ELEMENTARY AND SECONDARY EDUCATION. Improve the elementary and secondary education system's ability to consistently deliver excellent instruction aligned with rigorous academic standards while providing effective support services to close achievement and opportunity gaps, and ensure all students graduate high school college- and career-ready.

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
2.1.A	Number of states / territories that have adopted college- and career-ready standards	*Elementary and Secondary Education Act* (ESEA) Monitoring	The Office of Elementary and Secondary Education's (OESE) Office of State Support will count the number of states that either (a) have a memorandum of understanding in place to implement standards common to a number of states or (b) have a letter from Institutions for Higher Education in their state certifying that their state has college- and career-ready standards. There are no known data limitations. The Office of Elementary and Secondary Education's (OESE) Office of State Support (OSS) monitors that states are meeting requirements under the ESEA waiver. Monitoring includes desk monitoring and on-site monitoring. Previously, OSS state leads monitored using a monitor protocol and rubric based on ESEA Flexibility waivers to ensure that monitoring is consistent across all states with ESEA Flexibility. OSS is revising its monitoring practices based on passage of the ESEA, as amended by the ESSA, in December 2016, based on statutory revisions, as well as regulatory action. OSS state leads work with their Group Leader to finalize monitoring reports. There are no known data limitations. The Department is no longer conducting ESEA Flexibility monitoring, but states continued to implement their ESEA Flexibility requests through August 1, 2016, before beginning the transition to the ESSA.
2.1.B	Number of states / territories that are implementing next-generation reading and mathematics assessments, aligned with college- and career-ready standards		
2.2.A	Number of states that have fully implemented teacher and principal evaluation and support systems that consider multiple measures of effectiveness, with student growth as a significant factor	ESEA Flexibility Applications and Monitoring	In December 2015, the President signed into law the *Every Student Succeeds Act* (ESSA), which reauthorizes the *Elementary and Secondary Education Act of 1965* (ESEA). Under the ESEA as amended by the ESSA, the Secretary of Education is prohibited from, among other prohibitions, prescribing "any aspect or parameter of a teacher, principal, or other school leader evaluation system within a State or local educational agency" and "indicators or specific measures of teacher, principal, or other school leader effectiveness or quality." The Department has no new data on the number of states implementing teacher and leader evaluation and support systems consistent with this performance metric and no way to verify the data reported. The Department is no longer conducting ESEA Flexibility monitoring, but states continued to implement their ESEA Flexibility requests through August 1, 2016, before beginning the transition to the ESSA.
2.3.A	Disparity in the rates of out-of-school suspensions for students with disabilities and youth of color (youth of color metric)	Civil Rights Data Collection (CRDC)	The Office for Civil Rights (OCR) strives to ensure CRDC data are an accurate and comprehensive depiction of student access to educational opportunities in school districts. The submission system includes a series of embedded edit checks to ensure significant data errors are corrected before the district submits its data. Additionally, each district is required to certify the accuracy of its submission. Only a district superintendent, or the superintendent's designee, may certify the CRDC submission. Ultimately, the quality of the CRDC data depends on accurate collection and reporting by the participating districts.
2.3.B	Disparity in the rates of out-of-school suspensions for students with disabilities and youth of color (SWD, IDEA only metric)		

**Metric associated with an Agency Priority Goal.*

2.4.A	**Number of persistently low graduation rate high schools*	NCES ED*Facts*	ED*Facts* works with the data stewards to determine the appropriate business rule checks for these data. The checks that were done on these data include: • File validation and format checks: Identifies file submissions that do not conform to the accepted file format, the data universe (school/LEA/state directory), or the reporting requirements (mandatory reporting fields). • Submission Edit Business Rules: Submission edits and warnings ensure that the data meet or exceed an acceptable level of reasonability by checking the values entered in a field against other similar values in the same file or across files. If a discrepancy is found (i.e., a value falls outside of the acceptable range), a submission error or warning is issued. Unlike format and validation edits, submission edits and warnings are programmed into the ED*Facts* Submission System and applied to the data after they are in the staging database. • Coordinated Data Quality Reviews (CDQR): Identifies potential errors and anomalies related to completeness, consistency, and comparability in the file submissions that would affect the quality and usability of data in the files. ○ CDQR Process: At the end of a collection period, ED*Facts* runs checks to validate data quality of submitted data and presents all results to program offices. It is the responsibility of the program offices, in consultation with the ED*Facts* staff, to determine which identified errors to escalate to states for further review. The ED*Facts* Partner Support Center (PSC) sends these errors to states for remediation, which take the form of explanations for data anomalies, data file submission updates, and data corrections. OESE should be considered the point-of-contact for identifying which errors were escalated and the result of those escalations. Data concerns for state, district and school level 2014–15 data submissions are documented and available in two places: a) State Notes to submitted Adjusted Cohort Graduation Rate (ACGR) data are available within the Department's ED Data Express Tool at http://eddataexpress.ed.gov b) Identified Data Anomalies are documented at the state level in appendix B to the file documentation released along with school and district level data files at http://www2.ed.gov/about/inits/ed/edfacts/data-files/index.html Additional concerns, if any are identified, related to the calculated national rate or work done prior to 2014–15 will be available in future releases of the NCES report "Public High School Four-Year On-Time Graduation Rates and Event Dropout Rates: School Year ####-##." The most recent report covers 2010–11 and 2011–12. Reports covering more recent years of data are being prepared and once released will be available at http://nces.ed.gov/ccd/pub_dropouts.asp. Path to public release and national rates: For each collection cycle states report their calculated cohort counts and ACGR graduation rates. These counts and rates are tested against a number of submission edit business rules and the ACGR Coordinated Data Quality Review for format, consistency, completeness, and comparability. Those rule checks are delivered to the Office of Elementary and Secondary Education (OESE) for follow-up correspondence through the ED*Facts* Partner Support Center with the states. The program office, in consultation with NCES ED*Facts* staff and other stakeholders, meet to determine which issues identified by the business rules should be raised with the state for explanation, update, or correction. Following that review, data are then aggregated to the national level for the purpose of calculating and publishing a national rate. NCES processes these data to force conformity of reporting categories (mapping reported "Major Racial/Ethnic Groups" to the traditional 5 racial/ethnic groups) and addresses any issues raised by missing data. After imputations are made, NCES produces a national rate for the country as a whole; a rate which is representative of every state. Once produced, NCES documents any remaining issues with these data, and the aggregation and imputation methodology in a public report. That report, documentation, and the associated data tables are put through several stages of review including independent reviews at the division (Administrative Data), center (NCES), and principal office (IES) levels prior to public dissemination.

**Metric associated with an Agency Priority Goal.*

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
2.4.B	Percentage of SIG schools in Cohort 5 that are above the 25th percentile in mathematics, as measured by their state assessments	Analytic dataset produced by the contractor for the SIG National Summary, because this provides an accurate list of SIG schools and flags for different exclusions that we are included in the analysis. (The analytic dataset is a combination of ED*Facts* student achievement files in Math and Reading, the NCES Common Core of Data, SIG lists provided to *EDFacts* by Office of State Support (OSS), and Exclusions that are generated by the contractor that apply to these results.)	To produce these numbers, OESE relies on the analytic dataset produced by the contractor for the SIG National Summary, because this provides a list of SIG schools and flags for different exclusions that we include in the analysis. The analytic dataset is a combination of ED*Facts* student achievement files in Math and Reading, the NCES Common Core of Data, SIG lists provided to ED*Facts* by OSS, and Exclusions that are generated by the contractor that apply to these results. For the 2012–13 data, a draft version of the analytic dataset was available in March of 2015, although OESE hopes that it will be available sooner in future years. Information can be found on the ED*Facts* website (http://www2.ed.gov/about/inits/ed/edfacts/index.html).
2.4.C	Percentage of SIG schools in Cohort 5 that are above the 25th percentile in reading language arts, as measured by their state assessments		
2.5.A	Percentage of high school and middle school teachers who teach STEM as their main assignment who hold a corresponding undergraduate degree	Schools and Staffing Survey (SASS), NCES	The methods report for the 2011–12 SASS is not yet released. Study documentation from the 2007–08 survey is available at https://nces.ed.gov/surveys/sass/methods.asp.
2.5.B	Number of External high school graduates who have taken at least one STEM AP exam	College Board/AP administrative records	College Board Public School List is updated annually by state DOEs; thus small changes to the list over time are to be expected as schools open, close, and/or merge. Students are assigned to graduating cohorts based on self-reported information (i.e., grade level and/or graduation year) provided at the time of registration (in the case of SAT) or test administration (in the case of AP and PSAT). The College Board matches students' data across programs to identify the most recent valid value when assigning students to cohorts.

**Metric associated with an Agency Priority Goal.*

GOAL 3: EARLY LEARNING. Improve the health, social-emotional, and cognitive outcomes for all children from birth through 3rd grade, so that all children, particularly those with high needs, are on track for graduating from high school college- and career-ready.

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
3.1.A	**Percent of 4-year olds enrolled in state preschool programs*	Preschool Development Grants Annual Performance Reports (APR), Data Workbook, Table A(1)(a) and (b)	APR data is collected externally. The data are collected primarily through a performance report template and a data workbook submitted by State Project Directors for the grants. Data are collected by program offices through a technical assistance contractor using a performance report template and self-administered electronic submission tool. The data collection period for one year is reported in the following year's APR submission. For example, school year 2015–2016 data is reported in February of 2016. During November of 2015, State Project Directors are provided with any submission updates and granted access to the APR submission tool. The APR data collection period is January 1, 2015–December 31, 2015. The Technical Assistance (TA) contractor performs an analysis and data anomalies are clarified and verified with the State Project Director.
3.1.B	**Number of states with high-quality preschool programs standards*	National Institute for Early Education Research (NIEER) Yearbook (The State of Preschool), Table 1: State Ranking and Quality Checklist Sums, Column " Quality Checklist Sums"	NIEER data are collected externally. The data are collected primarily through surveys of state preschool administrators using the State of Preschool data collection instrument. Data are collected by staff at Rutgers University's NIEER using a self- administered online data instrument. The collection for the 2013–14 school year, for example, began in the fall of 2013. During November of 2013, links to the web-based survey instrument were sent to administrators of the state-funded preschool programs. The initial listing of administrators was drawn from the 2011–12 State of Preschool data collection. NIEER project staff updated the list, where appropriate, by recontacting state agencies to determine if new programs had been started since the 2013–14 school year, or whether any programs had been left out of the previous report (no such programs were identified). All states and the District of Columbia responded. Data collection ended in April 2015. All programs included in the data collection and current report are those that are funded and directed by the states to support group learning experiences for preschool-age children, usually ages 3 and 4. A full list of criteria programs must meet for inclusion is available in the introduction of this report. Please see Data Verification Overview. http://nieer.org/yearbook.
3.2.A	Number of states that require a teacher with a bachelor's degree in a state preschool program	National Institute for Early Education Research (NIEER) Yearbook (The State of Preschool), Workforce Supplement, Table 3: Preschool Teacher Qualifications and Salary, Column "BA Required"	NIEER data are collected externally. The data are collected primarily through surveys of state preschool administrators using the State of Preschool data collection instrument. Data are collected by staff at Rutgers University's NIEER using a self- administered online data instrument. The collection for the 2013–14 school year, for example, began in the fall of 2013. During November of 2013, links to the web-based survey instrument were sent to administrators of the state-funded preschool programs. The initial listing of administrators was drawn from the 2011–12 State of Preschool data collection. NIEER project staff updated the list, where appropriate, by recontacting state agencies to determine if new programs had been started since the 2013–14 school year, or whether any programs had been left out of the previous report (no such programs were identified). All states and the District of Columbia responded. Data collection ended in April, 2015. All programs included in the data collection and current report are those that are funded and directed by the states to support group learning experiences for preschool-age children, usually ages 3 and 4. A full list of criteria programs must meet for inclusion is available in the introduction of this report. Please see Data Verification Overview. http://nieer.org/yearbook.

**Metric associated with an Agency Priority Goal.*

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
3.3.A	Number of states collecting and reporting disaggregated data on the status of children at kindergarten entry using a common measure	Race to the Top (RTT)-Early Learning Challenge (ELC) Technical Assistance Center	The data are limited to the 20 Race to the Top-Early Learning Challenge (RTT-ELC) states. Department staff has requested Kindergarten Entry Assessment (KEA) data be collected in the 2015–16 academic year as part of the State of Preschool data collection and has requested to add KEA data reporting in ED*Facts*. In addition, the new Preschool Development Grants will provide data on additional states.

**Metric associated with an Agency Priority Goal.*

GOAL 4: EQUITY. Increase educational opportunities for underserved students and reduce discrimination so that all students are well-positioned to succeed.

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
4.1.A	**National high school graduation rate*	NCES ED*Facts*	ED*Facts* works with the data stewards to determine the appropriate business rule checks for these data. The checks that were done on these data include: • File validation and format checks: Identifies file submissions that do not conform to the accepted file format, the data universe (school/LEA/state directory), or the reporting requirements (mandatory reporting fields). • Submission Edit Business Rules: Submission edits and warnings ensure that the data meet or exceed an acceptable level of reasonability by checking the values entered in a field against other similar values in the same file or across files. If a discrepancy is found (i.e., a value falls outside of the acceptable range), a submission error or warning is issued. Unlike format and validation edits, submission edits and warnings are programmed into the ED*Facts* Submission System and applied to the data after they are in the staging database. • Coordinated Data Quality Reviews (CDQR): Identifies potential errors and anomalies related to completeness, consistency, and comparability in the file submissions that would affect the quality and usability of data in the files. ○ CDQR Process: At the end of a collection period, ED*Facts* runs checks to validate data quality of submitted data and presents all results to program offices. It is the responsibility of the program offices, in consultation with the ED*Facts* staff, to determine which identified errors to escalate to states for further review. The ED*Facts* Partner Support Center (PSC) sends these errors to states for remediation, which take the form of explanations for data anomalies, data file submission updates, and data corrections. OESE should be considered the point-of-contact for identifying which errors were escalated and the result of those escalations. Data concerns for state, district and school level 2014–15 data submissions are documented and available in two places: a) State Notes to submitted Adjusted Cohort Graduation Rate (ACGR) data are available within the Department's ED Data Express Tool at http://eddataexpress.ed.gov b) Identified Data Anomalies are documented at the state level in appendix B to the file documentation released along with school and district level data files at http://www2.ed.gov/about/inits/ed/edfacts/data-files/index.html Additional concerns, if any are identified, related to the calculated national rate or work done prior to 2014–15 will be available in future releases of the NCES report "Public High School Four-Year On-Time Graduation Rates and Event Dropout Rates: School Year ####-##." The most recent report covers 2010–11 and 2011–12. Reports covering more recent years of data are being prepared and once released will be available at http://nces.ed.gov/ccd/pub_dropouts.asp. Path to public release and national rates: For each collection cycle states report their calculated cohort counts and ACGR graduation rates. These counts and rates are tested against a number of submission edit business rules and the ACGR Coordinated Data Quality Review for format, consistency, completeness, and comparability. Those rule checks are delivered to the Office of Elementary and Secondary Education (OESE) for follow-up correspondence through the ED*Facts* Partner Support Center with the states. The program office, in consultation with NCES ED*Facts* staff and other stakeholders, meet to determine which issues identified by the business rules should be raised with the state for explanation, update, or correction. Following that review, data are then aggregated to the national level for the purpose of calculating and publishing a national rate. NCES processes these data to force conformity of reporting categories (mapping reported "Major Racial/Ethnic Groups" to the traditional five racial/ethnic groups) and addresses any issues raised by missing data.

**Metric associated with an Agency Priority Goal.*

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
4.1.B	**Gap in the graduation rate between all students and students from low-income families*		After imputations are made, NCES produces a national rate for the country as a whole; a rate which is representative of every state. Once produced, NCES documents any remaining issues with these data, and the aggregation and imputation methodology in a public report. That report, documentation, and the associated data tables are put through several stages of review including independent reviews at the division (Administrative Data), center (NCES), and principal office (IES) levels prior to public dissemination.
4.1.C	**Number of schools that do not have a gap or that decreased the gap between students from low-income families and the state average for all students*		
4.2.A	Percentage of proactive civil rights investigations <u>launched</u> annually that address areas of concentration in civil rights enforcement	Office for Civil Rights' (OCR) Case Management System (CMS) and Document Management (DM) systems	The verification and validation of CMS data utilize (1) rules built into the CMS Case Management component; (2) periodically checks on questionable data; (3) guidance and reference on data entries; and (4) regular training and guidance for primary users imputing the data. (1) Rules built in CMS: Samples of CMS validations: - Docket number is assigned by the CMS based on four required data (Active Office, Case Type, Institution Type, and Case Open Date). - Date should be a validated date. - When a notification letter is issued, current stage is changed from Evaluation to Investigation. - Resolution Type is filled by the CMS based on the Resolution Codes of allegations. (2) Periodic checks on questionable data: (monthly) - Missing entries: such as cases resolved without (a) case resolved/closed dates, (b) allegations and (c) resolutions. - Inconsistent entries: such as resolution type not matched with resolution code. (3) Guidance and reference materials for use by primary users making data entries are posted at the OCR SharePoint site and are available to all OCR staff: - Lists of issue codes, specific bases, resolution codes, milestones, stage, data definition, and etc. - CMS Data Entries requirements and checklist. - CMS User Manual. (4) Users Training: - User training is available as needed. OCR also provides training through a "peer helper" or "train the trainer" model for staff in the field offices and headquarters.
4.2.B	Percentage of proactive civil rights investigations <u>resolved</u> annually that address areas of concentration in civil rights enforcement		

**Metric associated with an Agency Priority Goal.*

GOAL 5: CONTINUOUS IMPROVEMENT OF THE U.S. EDUCATION SYSTEM. Enhance the education system's ability to continuously improve through better and more widespread use of data, research and evaluation, evidence, transparency, innovation, and technology.

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
5.1.A	Number of public data sets included in ED Data Inventory and thus linked to Data.gov or ED.gov websites	Data Strategy Team Data Inventory and the public ED Data Inventory at http://datainventory.ed.gov	The data are validated with a crosswalk between Inventory entries and the listing of public Department datasets, ensuring that the data described in the ED Data Inventory is publicly available at the identified web address.
5.1.B	Number of states linking K-12 and postsecondary data with workforce data	State Longitudinal Data Systems (SLDS) grant monitoring (monthly updates from states, annual performance reports, final performance reports, and site visits)	Data are collected through monitoring of states with active SLDS grants. The data are limited to this population. While 47 states and territories have received these grants over time, by June 2015, there will be fewer than 25 states with active grants, which leads to incomplete and not up-to-date data from states that either have not receive grants or that do not have active grants.
5.1.C	Number of states linking K-12 with early childhood data		If the state is focusing on an early childhood data system, the state's reporting might reflect only those development efforts, and not statewide P20W (preschool to college workforce) development efforts. There are additional sources for information about state data linkages in the field. For example the Data Quality Campaign (DQC) conducts surveys of state capacity to collect, store, link, and use data. Because the Department does not use the same definitions as DQC, our figures tend to be lower than theirs. For example, we require that a state possess the capacity to follow its own students in order for us to report that the state has the linkage in place. Similarly, we enable states to report on whether particular linkages are planned, in progress, or complete, and report that a state has a linkage when the state reports that the project is complete; DQC might give a state credit for an 'in progress' or pilot-stage linkage. A survey administered to the universe of states and territories would enable more systematically collect data about all states' capacity for data linkages and data use. There is a concern, however, that if those data were to be used for public reporting, states might begin to overstate their capacities, particularly on data that are also publicly reported by organizations such as DQC. Currently, data from monitoring is used in an iterative, formative approach to program improvement; our technical assistance program is designed to support states' efforts to improve their systems. This relies on states being honest about their own internal capacities.

**Metric associated with an Agency Priority Goal.*

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
5.2.A	Average time to close “cases” (PTAC + FPCO)	Case Tracking System (CTS) Monthly metric reports	The term “case” refers to requests for quick, informal responses to routine questions related to student privacy. These requests are received via email, the Family Policy Compliance Office (FPCO) / Privacy Technical Assistance Center (PTAC) resource website, or by telephone and subsequently entered into the Case Tracking System (CTS). In contrast, “correspondence and complaints” refers to written complaints of alleged failures to comply with *Family Educational Rights and Privacy Act* (FERPA) / Protection of Pupil Rights Amendment (PPRA) filed with FPCO; requests for formal written guidance/interpretation laws administered by FPCO; and, to the reporting of instances of data breaches by educational agencies and institutions. These inquiries are logged into the Correspondence Control Manager (CCM) System, given a tracking control number, and assigned to FPCO staff. The preliminary data for this metric are reviewed at least weekly for verification. If anomalous data are identified in the periodic reviews or when anomalies are suspected, individual cases are examined individually to identify if they were properly closed or if their status was entered incorrectly. When appropriate, corrections are made. Staff responsible for entering data into the CTS will continue to be trained on policies and procedures. The monthly metric reports are scrutinized by the Director of FPCO, the Contracting Officer Representative for the PTAC contractors, and the Department’s Chief Privacy Officer, to assure completeness and reliability of data and to recommend any improvements to the CTS or modifications to the standard operating procedures. The quarter entry represents the fiscal year to date average days to close as of the end of that quarter taken from the corresponding monthly report.
5.3.A	**Percentage of select new (non-continuation) discretionary grant dollars that reward evidence*	Forecast Report issued by the Office of the Chief Financial Officer and final Funding Reports from relevant programs	In determining which discretionary grants are considered “evidence-based” (i.e., the numerator when calculating the percentage), the Department includes all programs that rewarded applicants with supporting evidence of promise or better (per the EDGAR evidence framework). This could be done through a competitive preference or absolute priority, an eligibility requirement, or a selection factor. Only the amounts of the grants awarded for those projects were counted. In determining what counts as discretionary funding (i.e., the denominator when calculating the percentage), the Department includes all programs for which the EDGAR evidence framework could conceivably work. In Fiscal Year 2015, the Department counted all discretionary grant programs except for those programs run through the Institute of Education Sciences (IES), which are already evidence-based and would not be candidates for the EDGAR evidence framework).
5.3.B	Number of peer-reviewed, full-text resources in the Education Resources Information Center (ERIC)	ERIC	To be counted as a full-text, peer-reviewed article in ERIC, the document had to be indexed in ERIC and designated with a “peer-reviewed” and “full-text” flag, both of which are available on the public ERIC website The ERIC contractor uses specified quality assurance procedures. In addition, the IES program officer pays close attention to the metric in their review of deliverables.
5.3.C	Number of reviewed studies in the What Works Clearinghouse (WWC) database	WWC	To be counted as a reviewed study, the study had to be listed in the What Works Clearinghouse’s publicly available Database of Reviewed Studies. The What Works Clearinghouse contractors use specified quality assurance procedures. In addition, the IES program officers pay close attention to the metric in their review of deliverables.

**Metric associated with an Agency Priority Goal.*

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
5.3.D	**Number of completed project evaluations from grantees of select discretionary grant programs in a given fiscal year that meet What Works Clearinghouse (WWC) Evidence Standards*	Discretionary grant slate memoranda, discretionary grant financial forecasts and reports from OCFO, and the What Works Clearinghouse	Expectation is that it will take about five minutes to search the WWC database for new i3 studies each quarter. Also considering ways in which Institute of Education Sciences' staff and Office of Innovation and Improvement staff can work closely to report these data quickly. No formal verification or validation processes are in place or to check for anomalous data. So far, no anomalous data has been encountered. The Office will report out on studies that are funded by i3 that are in the WWC database and meet WWC Evidence Standards. Please note it is not implied that these studies all reflect positive results—in actuality, the WWC Evidence Standards only measure the rigor of impact evaluations and do not consider the actual outcomes reported.
5.4.A	Percentage of schools in the country that have actual internet bandwidth speeds of at least 100 Mbps	Education Superhighway (for baseline), Consortium for School Networking (CoSN)/AASA (American Association of School Administrators today known as AASA, The School Superintendents Association) E-rate Infrastructure Survey	The Department uses an external data source for this metric and relies on the external, third party's verification and validation methodology. Based on the information provided (http://cosn.org/about-cosn), the response rate for this survey may not be sufficient to ensure that the data are representative of all districts in the country. The Department is exploring the feasibility of collecting data on access to and use of education technology from a representative sample of schools and districts across the country. In the meantime, we believe these data are the best currently available and provide useful information to gauge progress on this metric.

**Metric associated with an Agency Priority Goal.*

GOAL 6: U.S. DEPARTMENT of EDUCATION CAPACITY. Improve the organizational capacities of the Department to implement this strategic plan.

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
6.1.A	Percent of selections made per job opportunity announcement (JOA)	EDHires (Monster's electronic hiring management system)	The data are entered into the EDHires system by customers, contractors, and staff, so quality of data are only as reliable as the information entered and/or updated in the system. Data are reviewed by HR Specialists for relevance and completeness to ensure correct parameters and filters have been applied. If anomalies are identified, HR Specialists will compare contractor generated reports against ad hoc hiring reports generated from the system of record and other linked HR systems. Any questionable results would be brought to the contractor's attention; in turn, OHR would work with the contractor to obtain clarity and/or resolve.
6.1.B	EVS Employee Engagement Index	Office of Personnel Management (OPM) Federal Employee Viewpoint Survey (FEVS)	Any questionable FEVS data points are brought to the attention of OPM. In turn, the OPM point of contact responds to the inquiry. Further, if there are questions regarding the FEVS data, the Department works with the OPM point of contact to obtain clarity. The Engagement index score is calculated by OPM by first determining the percent positive for each of the 15 items in the sub-indices (i.e., Leaders Lead, Supervisors, and Intrinsic Work Experiences). Then the unrounded percent positive scores are averaged across the items in the index to get the index score. The overall index score is then rounded for reporting purposes.

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
6.1.C	Time to Hire	Federal Personnel/Payroll System (FPPS) Datamart	The Office of Management (OM) identified a gap between hiring procedures and the 90 Day Hiring Model's time to hire calculations which necessitated an adjustment in the way time to hire is calculated for some actions. OM found that recruitment work is often initiated prior to the receipt of an "official" action. While this is a proactive customer-centric approach, especially prevalent in ED's noncompetitive hiring activities, it can sometimes result in a negative time to hire or a time to hire of zero—neither of which reflects a realistic or meaningful hiring lead time. To account for, track and document this upfront work, OM developed an adjustment mechanism to better gauge hiring lead time in these cases. For ease of comparison, the adjustment was applied to all FY 2016 hiring actions and resulted in a revised Q1 actual. To ensure clarity and consistency in the application of time to hire methodology moving forward, OM also clarified time to hire calculation protocols as follows: ➢ Individual time to hire: ○ Time to hire for individual hiring actions is determined by calculating the number of days between the Request to Recruit (ROE) Date and the Verbal (tentative) Offer Date, as reflected in FPPS DataMart. ▪ If time to hire results in a negative or zero, it is replaced with the value 1. ▪ If time to hire cannot be determined (i.e., date not available), it is excluded from agency calculations. ○ Time to hire is not calculated for actions In-Progress; it is only calculated for Completed actions (i.e., estimated EOD established). ➢ Agency time to hire: ○ The Department's time to hire is an annual rate determined by calculating the percent of hiring actions within a fiscal year completed within 90 days. ○ Q1, Q2, and Q3 actuals are cumulative, measured from the beginning of the fiscal year. ○ Q4 actuals represent the Department's annual time to hire rate and are reported in the Annual Performance Report. ○ Periodic snapshots of time to hire may be computed monthly, quarterly or by principal office to help gauge progress toward the annual target; however, care should be taken to ensure periodic updates are clearly identified as snapshots or progress indicators and not represented as the agency's annual rate.
6.1.D	Effective Communication Index	Office of Personnel Management (OPM) Federal Employee Viewpoint Survey (FEVS)	Any questionable FEVS data points are brought to the attention of OPM. In turn, the OPM point of contact responds to the inquiry. Further, if there are questions regarding the FEVS data, the Department works with the OPM point of contact to obtain clarity. This index score is calculated by the Department by averaging the percent positive scores from OPM FEVS questions 53, 58, and 64.

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
6.2.A.	Percentage of A-133 Single Audits Overdue for resolution	Office of the Chief Financial Officer's (OCFO) Audit Accountability & Resolution Tracking System (AARTS)	Calculations for this metric are determined by dividing the total number of audits that are overdue at the end of the Department's fiscal year by the total number of audits in the Department's inventory. Access rights to the AARTS database are managed by Office of the Chief Financial Officer (OCFO) and all users receive annual IT security training to help ensure data integrity. A Quality Control reviewer initiates a weekly upload of A-133 audit data to AARTS through a file submission directly from the Federal Audit Clearinghouse (FAC). An AARTS administrator (separate from the Quality Control reviewer) must verify the uploaded data with the actual audits. Data for individual programs are verified by Principal Offices (POs) through periodic review by Responsible Managers and Audit Liaison Officials. In addition, the specific data for this metric are verified by POs each month as part of monthly Dashboard reports. Data are validated by OCFO monthly. Staff work to reconcile data reported on the Dashboards with any discrepancies reported by the POs.
6.2.B.	Compliance rate of contractor evaluation performance reports	Past Performance Information Retrieval System, www.ppirs.gov, "PPIRS Compliance Report"	Compliance rates of contractor performance evaluations are set by OMB and are calculated by use of a Government wide reporting tool available in the PPIRS (www.ppirs.gov). Office of the Chief Financial Officer (OCFO) and Federal Student Aid (FSA) Acquisitions staff actively monitor the PPIRS report to ensure that each contractor performance evaluation reflected on that report should appear on that report, and to rectify any errors on the report.
6.3.A.	Overall average impact score of the Department's technical assistance in helping build State capacity to implement education reforms	Annual Grantee Satisfaction Survey	The contractor has a quality control system and the results are also provided to all of the programs that participate in the survey to identify issues/anomalies with the data. Program staff report anomalies to the contractor to correct. The data comes from the Annual Grantee Satisfaction Survey Report (See https://www2.ed.gov/about/reports/annual/gss/index.html). The report is produced by a contractor; the contract is managed by OCFO. One major issue with the Grantee Satisfaction Survey is the timing of the survey. The survey is administered in late spring/early summer when many staff are out of the office, which suppresses the response rate. Also, some grant programs do a better job than others of promoting the survey and showing how the survey results have been used to make improvements. We have been told that the survey is administered late each year for the following reasons: --The Interagency Agreement can't be put into clearance until the budget is approved each year; --Getting the Interagency Agreement through Departmental clearances takes several months; program staff are asked to review their customized survey questions and submit their grantee contact lists at the busiest time of the year which makes it difficult to turn them around quickly.

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
6.4.A.	Number of ED IT security incidents	Cyber Security Assessment and Management (CSAM) and RSA Security Operations management (SecOps)	Office of the Chief Information Officer (OCIO) has standard operating procedures (SOP) to verify and validate the data: 1) CSAM SOP, 2) Incident Response SOP, and 3) SecOps SOP. This process is executed on a weekly basis. Further, the data is pulled from the Department's authoritative source (system of record) for Incident Response and Tracking. In addition, SOPs enforce the use of this capability for entering, tracking, and managing all incident related activity. The data is also audited on a routine basis to ensure consistency and accuracy.
6.4.B.	EVS Results-Based Performance Culture Index	Office of Personnel Management (OPM) Federal Employee Viewpoint Survey (FEVS)	Data verification and validation process is integrated into the OPM FEVS survey results validation process. Any questionable FEVS results would be brought to the attention of OPM; the Department would then work with the OPM point of contact to obtain clarity. Data verification and validation process is integrated into the OPM FEVS survey results validation process. The Results-Oriented Performance Culture Index score is calculated by OPM by first determining the percent positive for each of the 13 items in the index. Then the unrounded percent positive scores are averaged across all index items to get the index score. The index score is then rounded for reporting purposes.
6.4.C.	EVS Leadership and Knowledge Management Index		

Metric No.	Metric (Indicator)	Data Source	Data Quality, Limitations and Improvements
6.4.D	Total usable square footage	Department's Master Space Management Plan	The Department reconciles its rent bills per building on a monthly basis. Every six months the usable square footage is verified with GSA. Because usable square footage relates directly to rent costs, the Department uses the same data verification and validation procedures. Specifically, the data are collected directly from Occupancy Agreements and rent bills per building. The data are derived from historic examples and relevant experience. Department leadership has agreed to a set of assumptions by which the data are based. Leadership has reached out to subject matter experts to broaden the scope of the data set, and lower risks of missing contingencies that may affect the data. At each step, the data are reviewed independently to double check the work of each team member and provide quality control. These processes help ensure the data's completeness and reliability. For the baseline data, the Department made the following assumptions: 1) All leased buildings: 2% is applied for anticipation of CPI (Consumer Price Index) annual increases on the anniversary date of the active lease/occupancy agreement (OA); and 2.5% is applied for anticipation of annual tax increases. 2) All federal buildings: 2.5% is applied for operating cost escalations on the anniversary date of the active OA. 3) 20% is applied to all federal buildings after an OA has expired and a new OA is unavailable. (Projected increase on the appraisal.) 4) 40% is applied to all leased buildings after an OA has expired and a new OA is unavailable. (Projected increase on the market rent.) 5) If a new OA is unavailable, 3 months' early rent is applied to all buildings that are relocating due to possible Department delays. Example: Changes made to the designs after Scope of Work (SOW) is completed. 6) 3 months' late rent is applied to all buildings that are relocating due to possible Department delays. For example, delays in returning space back to a rentable condition. The Department reconciles its rent bills per building on a monthly basis.
6.4.E	Rent cost	Department's Master Space Management Plan	Data are collected directly from OAs and rent bills per building. The actual rent may vary significantly if the Department relocates to a new leased building and/or signs short lease extensions. The Department is leveraging the examples and experience of the mobility labs and building consolidations programs. The Department reconciles its rent bills per building on a monthly basis. Every six months, leadership will re-evaluate the data, the assumptions on which it is based, and incorporate actual costs and project schedules. These steps will become part of our quality assurance program and procedures. Leadership looks to improve completeness, reliability, and quality of the data at these milestones.

Total number of the Department's 2016 external (public-facing) metrics (indicators): 52