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ANSWERING THE CALL:

Institutions and States Lead the Way Toward Better Measures of Postsecondary Performance

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Executive Summary

In an era of escalating costs and uncertain outcomes, it is imperative that prospective students, policymakers, and the public have answers to commonsense questions about whether and which colleges and programs offer a quality education at an affordable price. At present, we still lack answers to critical questions, including:

- How many "post-traditional" students—the low-income, first-generation, adult, transfer, and part-time students who make up the new majority on today's campuses—attend college? Do they reach graduation and how long does it take them?
- Are students making sufficient progress toward timely completion, particularly students who enter with less academic preparation or fewer financial resources?
- Do the students who don't graduate transfer to other colleges and earn credentials, or do they drop out completely?
- How much debt are students accumulating from the college(s) they attend—and can they repay their loans?
- Are students gaining employment in their chosen field after attending college, and how much do they earn?
- How much are students learning from their college experience, and how are they using their knowledge and skills to contribute to their communities?[1]

The metrics published today often only include "traditional" students and ignore the new normal in higher education: "post-traditional" students attending college—or colleges—in new ways en route to their credentials. Colleges and universities, and the data systems that support them, must adjust to and reflect the experiences and outcomes of all students, not just the outdated "traditional" student profile. It's time for a system reboot. And we need only look to leading institutions and states for the operating manual.

Over the past decade, thousands of colleges serving tens of millions of students in all 50 states have participated in data-driven reform initiatives—from Achieving the Dream (ATD) to Completion by Design (CBD) to Complete College America (CCA).[2] In response to the information that campus and system leaders need to support improvement in their communities not being readily or publicly available in existing data sets, these initiatives created and collected new and more robust measures of student access, progress, and outcomes.

In this paper, we share what the Bill & Melinda Gates Foundation has learned from vanguard institutions and states about how to improve and use postsecondary data to increase student outcomes. Our aim is twofold. First, the field has demonstrated the validity and value of these metrics over time and we intend to use them to evaluate the impact of the foundation's own investments toward increasing the attainment of career-relevant credentials and closing attainment gaps.

Second, informed by evidence demonstrating the significant progress that select institutions and states have made through the use of improved data, the foundation will work with partners and policymakers to support the widespread adoption and use of these metrics. Improving the quality and relevance of postsecondary data across the field can better inform higher education practice and policy decisions that, in turn, can boost college access and success across the country. Institutions and states that are already

taking advantage of the potential of better data not only show us that doing so is possible, but that it is essential.

The foundation has partnered with the Institute for Higher Education Policy (IHEP) to develop a metrics framework that represents how leading institutions and states are measuring their performance. The framework is the product of an extensive landscape and literature review, as well as consultation with a diverse array of experts in the field. The framework offers a set of metrics that are currently in use by major initiatives to measure institutional performance related to student access, progression, completion, cost, and post-college outcomes. The framework also highlights metrics in use that examine institutional performance in relation to resources (efficiency) and with respect to diverse populations (equity). These metrics are certainly not the only data that should be collected or used to inform decision-making in higher education but do represent a baseline that has garnered consensus across institutions, organizations, and states.

IHEP will release a paper in the coming months with detailed recommendations for definitions of the metrics in the framework, adopting shared definitions from the field where there is consensus while identifying where and why there are still divergent viewpoints. IHEP will also continue the conversation about postsecondary data and systems through the Postsecondary Data Collaborative, a coalition of nearly three dozen organizations seeking to improve data quality, transparency, and use.

The framework is driven by several core design principles, which were also informed by work in the field:

- **Count all students and institutions:** Most initiatives began collecting data because they could not follow the postsecondary experiences and outcomes of many of today's students using existing data sets like the Integrated Postsecondary Education Data System (IPEDS). From expanding enrollment counts to cover students who do not enter college during the traditional fall term to reporting completion rates for students who do not start as first-time, full-time freshmen to disaggregating data to ensure equitable access and success for diverse populations, the framework reflects this progress in the field.

- **Count all outcomes:** Many initiatives also collect and report a more robust set of student outcomes than existing data sets, from pre-completion progression measures such as credit accumulation to success metrics that measure transfer and completion at students' initial and subsequent institutions to post-college outcomes including learning, earnings, and employment. Although strong indicators of post-college outcomes are still under refinement, they are included in the framework to signal the increasing importance of measuring whether students are earning credentials of value, improving their economic and life chances in relation to the increasing costs.

- **Costs count:** While many of the initiatives did not directly address costs—to the student, the institution, or the public—cost metrics are included in the framework. This is in recognition of the growing pressure on colleges to more efficiently allocate resources to improve student outcomes as part of the attainment agenda in an era of scarce public resources and intense public concern about college affordability and debt.

A FIELD-DRIVEN METRICS FRAMEWORK

	ACCESS	PROGRESSION	COMPLETION	COST	POST-COLLEGE OUTCOMES
PERFORMANCE	Enrollment	Credit Accumulation Credit Completion Ratio Gateway Course Completion Program of Study Selection Retention Rate Persistence Rate	Transfer Rate Graduation Rate Success Rate Completers	Net Price Unmet Need Cumulative Debt	Employment Rate Median Earnings Loan Repayment and Default Rates Graduate Education Rate Learning Outcomes
EFFICIENCY	Expenditures per Student	Cost for Credits Not Completed Cost for Completing Gateway Courses Change in Revenue from Change in Retention	Time/Credits to Credential Cost of Excess Credits to Credential Completions per Student	Student Share of Cost Expenditures per Completion	Earnings Threshold
EQUITY	Enrollment by (at least) Preparation, Economic Status, Age, Race/ Ethnicity	Progression Performance by (at least) Preparation, Economic Status, Age, Race/ Ethnicity	Completion Performance by (at least) Preparation, Economic Status, Age, Race/ Ethnicity	Net Price and Unmet Need by (at least) Economic Status, Preparation, Age, Race/Ethnicity Debt by (at least) Economic Status, Preparation, Age, Race/Ethnicity, Completion Status	Outcomes Performance and Efficiency by (at least) Preparation, Economic Status, Age, Race/Ethnicity, Completion Status

Key Student Characteristics

- Enrollment Status
- Attendance Intensity
- Credential-seeking Status
- Program of Study
- Academic Preparation
- Economic Status
- Race/Ethnicity
- Age
- Gender
- First-generation Status

Key Institutional Characteristics

- Sector
- Level
- Credential /Program Mix
- Size
- Resources
- Selectivity
- Diversity
- Minority-serving Institution (MSI) Status
- Post-traditional Populations
- Modality

Several factors underscore why the time has come for a shared higher education metrics framework. First, a decade of investments by the foundation and other funders has yielded broad agreement on a core set of metrics for gauging performance that institutions and states are willing and able to collect, report, and use. Second, there is increasing evidence that better data contribute to better outcomes for students, illustrated by case studies of leading institutions and states. Third, there is a growing desire to increase the efficiency and consistency of data collections, particularly at a time when more students are attending multiple institutions that may cross state lines.

At the same time, existing state and national data systems do not currently provide clear or comprehensive enough information to answer the questions addressed by the framework. As such, the foundation is committed to supporting efforts to strengthen state and national postsecondary data systems to enable consistent collection and reporting of a key set of performance metrics for all students in all institutions across the country. Toward that end, a group of state, regional, and national organizations is currently working together to develop a "blueprint" for improving the national postsecondary data infrastructure by strengthening institutional, state, and national systems and reinforcing the necessary linkages between them to create secure and useful information feedback loops. A series of papers with recommendations are forthcoming from the working group later this year.

Our goal is a national data strategy that clearly articulates the purposes, use cases, and users of each system; supports the connections between them to increase coverage and quality while reducing duplication and burden; and ensures data privacy and security. The work ahead is not without challenges, but the lessons learned from leading institutions and states in a decade of efforts to better measure performance and progress provide a strong foundation from which to advance and accelerate needed improvements in postsecondary data and systems. Better data alone will not guarantee better student outcomes, but a lack of better data will guarantee that our efforts to improve those outcomes will fall short of their potential.

Wanted: Commonsense Answers to Critical Questions

In an era of escalating costs and uncertain outcomes for students, critics are increasingly calling the question: Is college really worth it? Considering the rising student debt burden in our country, it is the "trillion dollar question" dominating nearly all discussions about higher education today, from kitchen tables to the halls of Congress. The answer is a resounding "yes." Decades of data show that education still pays, particularly for the populations who have historically been denied it.[3] That's not the problem.

The problem is that prospective students, policymakers, and the public do not have answers to commonsense questions about whether and which colleges and programs offer a quality education at an affordable price, delivering the most bang for the often-borrowed buck. Questions like:

- How many "post-traditional" students—the low-income, first-generation, adult, transfer, and part-time students who make up the new majority on today's campuses—attend college, do they finish, and how long does it take them?
- Are students making sufficient progress toward timely completion, particularly students who enter with less academic preparation or fewer financial resources?
- Do the students who don't graduate transfer to other colleges and earn credentials, or do they drop out completely?
- How much debt are students accumulating from the college(s) they attend—and can they repay their loans?
- Are students gaining employment in their chosen field after attending college, and how much do they earn?
- How much are students learning from their college experience, and how are they using their knowledge and skills to contribute to their communities?[4]

In other words, how much do students and taxpayers invest in higher education and do they get enough value in return? These are important questions, and answering them requires consistent, comprehensive information. While much of the data needed to answer these questions currently exist, the problem is that the data are neither widely available nor easily accessible in the public domain, leaving partial or no answers to basic and critical questions about colleges.

Currently, higher education's data "infrastructure" is a set of disconnected systems, all of which were created for their own purposes at distinct points in time, but none of which are presently able to fully provide the answers we need to pressing questions about key student outcomes. Data collection and reporting is inconsistent, duplicative, or incomplete across these systems, which increases burden for institutions. Data sharing and security are also not governed by a coherent and complementary set of

policies and practices within and across colleges, states, the federal government, and private entities. The result: postsecondary education is data rich, but information poor.

It's time for a system reboot. And we need only look to leading institutions and states in the field for the operating manual. Over the past decade, thousands of colleges serving tens of millions of students in all 50 states have participated in data-driven reform initiatives from **Achieving the Dream (ATD)** to **Completion by Design (CBD)** to **Complete College America (CCA)**,[5] many of them supported by the Bill & Melinda Gates Foundation and other funders. These initiatives created and collected new and more robust measures of student access, progress, and outcomes because the information that campus and system leaders needed to support improvement in their communities was not readily or publicly available in existing data sets.

In this paper, the foundation shares what it has learned from vanguard institutions and states about how to improve and use postsecondary data to increase student outcomes. Our aim is twofold. First, the field has demonstrated the validity and value of these metrics over time and we intend to use them to evaluate the impact of the foundation's investments toward increasing attainment of career-relevant credentials and closing attainment gaps.

Second, informed by evidence demonstrating the significant progress that select institutions and states have made through the use of improved data, the foundation will work with partners and policymakers to support the widespread adoption and use of these metrics. Improving the quality and relevance of postsecondary data can and does better inform higher education practice and policy decisions to boost student access and success. The institutions and states featured in this paper demonstrate that improving data collection and use is not only possible but essential.

Who Needs Better Postsecondary Data?

Students and their families need transparent and targeted information about how much college will cost them, whether they are likely to transfer or graduate on time (or at all), whether they will be able to pay back their loans, and how well their credentials will prepare them for the job market.[6]

Colleges and universities need timely data to identify whether current students are on track toward their goals in order to engage them with information and support strategies that will enable their success. Colleges also need comprehensive comparative data to set stretch goals for improving outcomes for all of their students.[7]

Policymakers need data about how colleges and universities perform on key measures—including access; cost; completion; and outcomes related to learning, debt, and earnings—to make more informed decisions about how to allocate institutional funding and student financial aid in an era of constrained resources.[8]

Employers need better information about the knowledge and skills behind degrees and certificates to better identify prospective talent as well as to partner with colleges and universities to inform the development of career-relevant education and training programs.[9]

Researchers need robust and recent data representative of all students in all institutions to examine trends in college access, completion, and post-college outcomes; identify obstacles to success by type of student and institution; and evaluate the efficacy and efficiency of solutions aimed at increasing postsecondary attainment.

Mapping the Data Domain

Long before regaining our status as the best educated country in the world became a national priority,[10] a cadre of campus and state leaders began to articulate what is now called the attainment agenda. More than 10 years ago, **Achieving the Dream**—a national network supporting hundreds of community colleges—led the way by putting data at the center of the reform movement, followed by **Access to Success, Complete College America,** the **Voluntary Framework of Accountability**, among others.[11] Their collective work has yielded new and more robust measures of student access, progress, and outcomes because better data were necessary for reaching their completion goals.

The leaders of these initiatives recognized that they could neither demand nor support change in their communities without comprehensive and comparable data—and that these data were not readily or publicly available in existing data sets like the Integrated Postsecondary Education Data System (IPEDS). They also realized that the students whose college experiences were most often excluded from or obscured by current data—low-income students, students of color, adult students, transfer students, and part-time students—were the very populations these leaders needed to target to close gaps and raise completion rates. Each initiative worked closely with experts in the postsecondary community and key representatives from their constituencies to develop more inclusive and insightful measures to track performance and progress toward the goals of increasing college access and attainment, particularly for underrepresented and underserved students.

In an effort to learn from these advancements in the field, the foundation supported a 2015 study by the Institute for Higher Education Policy (IHEP) to map the postsecondary metrics landscape.[12] From voluntary national initiatives to state dashboards and funding formulas to the federal government's new College Scorecard, IHEP identified an emerging consensus in the field around a key set of metrics that leading institutions and states are using as they work to decrease access and success gaps and increase attainment. (See **Figure 1**. There is a more detailed version in **Appendix I**.)

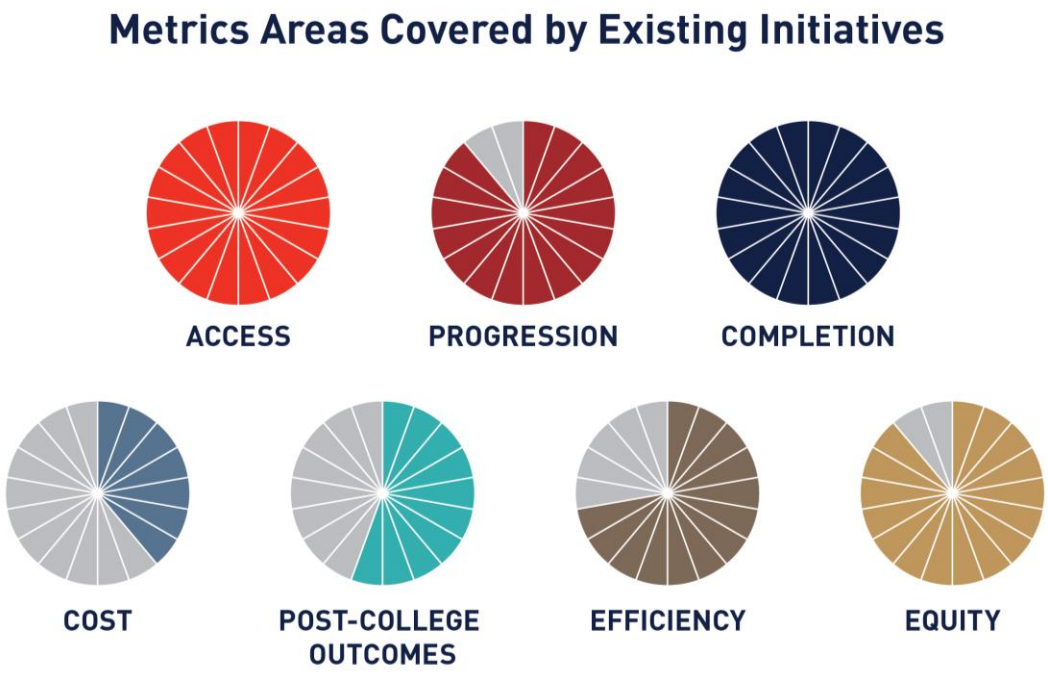
"These metrics include students who are missing from or invisible in current national higher education data systems. Together, these students constitute two-thirds of…higher education enrollments. Yet they are not counted in large-scale, public databases, nor included in most higher education performance measures. Why is including them so important? **Because students who are not counted won't count when decisions are made and priorities are set."**

Education Trust (2009)[13]

"Despite the critical importance of higher education to our economy, the data that tell us how many students are progressing through and completing college are alarmingly poor…with incomplete and inconsistent data (that) do not account for all college students. **Common, comparable data are necessary to increase graduates, decrease attainment gaps, and improve performance using existing resources."**

National Governors Association and Complete College America (2010)[14]

Figure 1. Diverse Data Initiatives Converge on Key Set of Metrics and Student Populations



There is a common focus among these diverse initiatives, notably Achieving the Dream and Complete College America, on measuring improvement in access, progression, and completion. Other initiatives, such as **College Measures,** the **Voluntary Framework of Accountability**, and now the **College Scorecard**, also focus attention on another critical point in students' pathways: post-college outcomes like employment and earnings. While measures of cost and efficiency were not central to most efforts, Complete College America has demonstrated the importance of measures such as time and credits to credential for improving outcomes for students while increasing productivity for institutions and states, and the **Delta Cost Project** remains a widely-used source of comparative data on college costs.

Perhaps most importantly, these initiatives and efforts address the problem of "missing" and "invisible" students. Most of the initiatives aim to include *all students and all outcomes* in the aggregate as well as disaggregated by age, race/ethnicity, gender, economic status, and academic preparation, and by credential level and program of study. Understanding whether and how underserved student populations succeed in postsecondary education is critical because, without them, our attainment goals simply cannot be achieved.

A Decade of Data-driven Initiatives Develop and Use New and Improved Metrics to Increase Student Success

IHEP has a wealth of resources via the Postsecondary Data Collaborative, including profiles of the major data initiatives from which these brief descriptions are drawn.

Access to Success (A2S): Launched in 2007, A2S worked with public higher education systems to address college-going and graduation gaps for low-income and underrepresented minority students, aiming to cut both in half by 2015. A2S, a joint effort of the Education Trust and the National Association of System Heads, included nearly 300 institutions in up to 20 states, covering 3 million plus students.

Achieving the Dream (ATD): Established in 2004, ATD is a national reform network supporting community colleges to increase success rates and to close achievement gaps for students of color and low-income students. ATD has included more than 200 public two-year institutions in 35 states, plus the District of Columbia, serving nearly 4 million students.

Aspen Prize for Community College Excellence: The $1 million Aspen Prize, launched in 2010, recognizes community colleges that achieve high and improving levels of student success in learning, credential completion, labor market outcomes, and access and success for minority and low-income students. In 2015, 150 institutions participated, representing 37 states and nearly 2 million students. Prize winners include Santa Fe College, Santa Barbara City College, Walla Walla Community College, and Valencia College.

Common Data Set (CDS): CDS is a collaborative effort among data providers in the higher education community and publishers as represented by the College Board, Peterson's, and U.S. News & World Report. The goal of CDS is to improve data quality and accuracy and reduce reporting burden on data providers. CDS is a set of standards and definitions, not a survey instrument or a database, that gets updated annually.

Completion by Design (CBD): Launched in 2011, CBD includes nine public two-year institutions working together as cadres in three states (Florida, North Carolina, and Ohio), serving more than 1 million students. Solutions are focused on supporting students at critical junctures along their educational pathway.

Complete College America (CCA): CCA includes more than 500 public four-year and two-year colleges in 35 states, the District of Columbia and two territories, representing about 9 million students. Established in 2009, CCA works to increase the number of Americans with a college credential of value, and to close attainment gaps. To participate, a state's governor must commit to making college completion a top priority.

College Measures: College Measures is a partnership between the American Institutes for Research and Optimity Advisors that uses data from federal, state, and private sources to provide comparative information on both two- and four-year colleges, with an emphasis on post-college employment outcomes and measures of efficiency and productivity.

Consortium for Student Retention Data Exchange (CSRDE): Established in 1994, CSRDE at the University of Oklahoma is a voluntary collaboration among two- and four-year colleges to share comparative benchmarking data on retention and graduation to promote student success. CSRDE has 400 participating institutions in all 50 states, the District of Columbia, and several U.S. territories, covering almost 8 million students.

Delta Cost Project: The Delta Cost Project uses publicly-available data from IPEDS to create an interactive database and dashboard for decision-makers in higher education. Delta Cost has compiled a longitudinal panel including most colleges and universities spanning more than 25 years showing trends in college costs, spending, and return on investment.

Multistate Longitudinal Data Exchange (MLDE): In 2010, the Western Interstate Commission for Higher Education (WICHE) launched the MLDE to link K-12, postsecondary, and workforce data across four states (Hawaii, Idaho, Oregon, and Washington). The goal is to demonstrate that these data can be matched at the individual level across state lines to reduce gaps in information on further education and employment for mobile students. The initial phase of the MLDE exchanged data on almost 200,000 students across the four states; the project plans to expand to ten states in the next several years.

National Community College Benchmarking Project (NCCBP): Established in 2004, the NCCBP is a comprehensive and representative benchmarking initiative for community colleges. Two hundred and seventy institutions participate in the project, representing 42 states and 2.4 million students. NCCBP also offers benchmarking projects for cost and productivity, workforce training, and maximizing resources for student success.

National Governors Association (NGA): Following its work with CCA to define common completion metrics for states, NGA released a set of efficiency and effectiveness metrics focused on return on investment. NGA provided technical assistance to states to implement the measures through policy academies and learning labs.

Predictive Analytics Reporting (PAR) Framework: Launched in 2011, PAR is a national, non-profit provider of learning analytics. PAR is a collaboration among institutions of all levels to mitigate student loss by identifying effective practices that support student progress. The 33 member institutions from 14 states receive student-level benchmarks, actionable reports, and student watch lists developed using predictive analytics based on the college experiences and outcomes of almost 2 million students. PAR was recently acquired by Hobsons.

Voluntary Framework of Accountability (VFA): Sponsored by the American Association of Community Colleges (AACC), the VFA collects data on 125 public two-year institutions in 33 states. The goal of the VFA is to collect and report measures that encompass the full breadth of the community college mission and the diversity of students' goals and educational experiences to strengthen accountability and drive institutional improvement in the sector.

Voluntary Institutional Metrics Project: This coalition of higher education institutions came together from 2011 to 2013 to define a set of metrics that could be applied across sectors to tell a more comprehensive story without adding substantial reporting burden. Eighteen institutions from 15 states participated, representing almost 800,000 students. This collaborative was notable for its inclusion of for-profit colleges, which have not been represented in most voluntary initiatives.

Voluntary System of Accountability (VSA): Sponsored by the Association of Public Land Grant Universities (APLU) and the American Association of State Colleges and Universities (AASCU), the VSA collects and reports data on almost 300 public four-year institutions in 48 states, publishing College Portraits for use by multiple audiences. These associations also support the **Student Achievement Measure** (SAM) along with the American Association of Community Colleges, the American Council on Education, the Association of American Universities, and the National Association of Independent Colleges and Universities. SAM follows student movement across postsecondary institutions to provide more comprehensive progress, transfer, and completion outcomes for nearly 600 institutions from all sectors and in all 50 states, including data on over 6 million students.

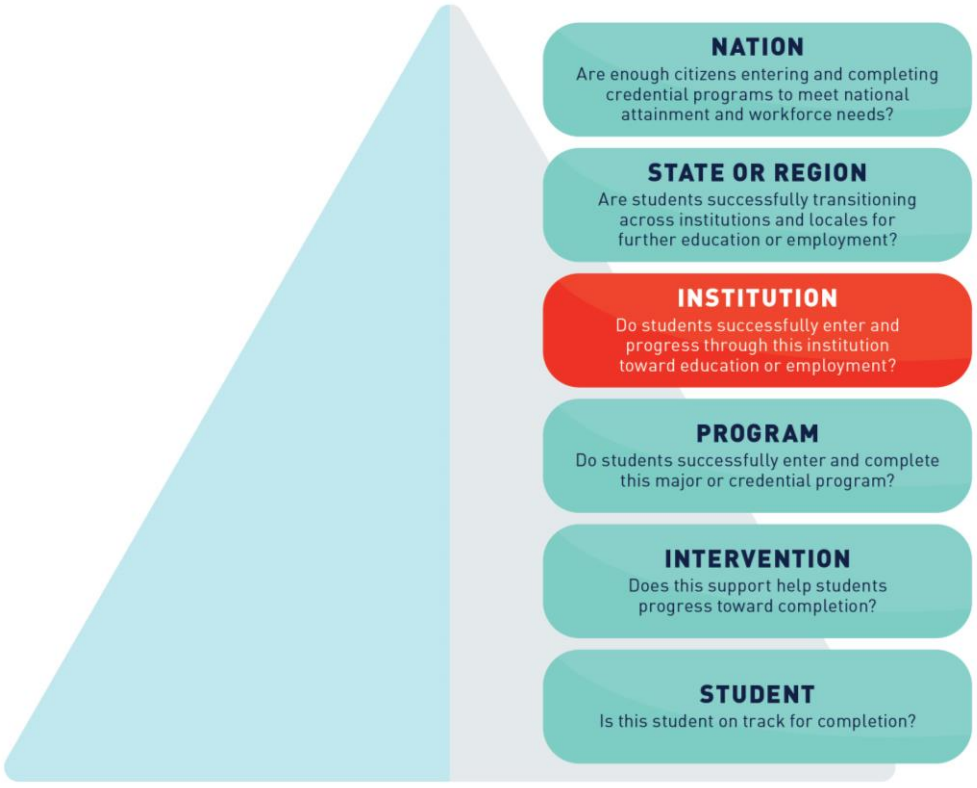
Moving Toward Consensus Metrics

The foundation has partnered with IHEP to develop a metrics framework to represent how leading institutions and states are measuring their performance to increase college access and attainment, particularly for underserved students. **Figure 3** (on page 13) presents the framework, which is the product of an extensive landscape and literature review, as well as consultation with key leaders and experts from institutions and states participating in the initiatives that developed many of these indicators.

The framework offers a set of metrics that are currently in use by major initiatives to measure *institutional* performance related to student access, progression, completion, cost, and post-college outcomes. The framework also highlights metrics in use that examine institutional performance in relation to resources (efficiency) and with respect to diverse populations (equity).

These metrics are certainly not the only data that the field recommends should be collected or used to inform decision-making in higher education. More detailed measures such as course registration and attendance are necessary to support interventions for specific students on campuses including "early warning" advising systems, while more aggregate measures such as system- or sector-wide success rates are required to spur and support action at the state, regional, and national levels. Also, a subset of the metrics framework may be more appropriate for specific use cases such as setting performance goals for institutions or counseling prospective college students.

Figure 2. Measuring Performance Across the Postsecondary Education System



Further, while today's students are increasingly mobile and interacting with new providers, colleges and universities continue to educate the vast majority of postsecondary students, remaining a critical level of analysis and action for the field. The framework captures student movement within and across institutions via more robust measures of transfer students' outcomes, reflecting advancements in data reporting and use among leading institutions and states. The metrics in the framework, while focused on institutions, are designed to be aggregated and disaggregated across levels to inform policy and practice throughout the postsecondary education system (see **Figure 2**).

The framework is driven by several core design principles, which were also informed by work in the field:

- **Count all students and institutions:** Most initiatives began collecting data because existing data sets, such as IPEDS, did now allow them to follow the postsecondary experiences and outcomes of many of today's students. From expanding enrollment counts to cover students who do not enter college during the traditional fall term to reporting completion rates for students who do not start as first-time, full-time freshmen to disaggregating data to ensure equitable access and success for diverse populations, the framework reflects this progress in the field. Most of the initiatives worked primarily with public institutions; however, the framework is intended to cover *all students in all institutions*.[*]

- **Count all outcomes:** Many initiatives also collect and report a more robust set of student outcomes than existing data sets, from pre-completion progression measures such as credit accumulation to success metrics that measure transfer and completion at students' initial and subsequent institutions to post-college outcomes including learning, earnings, and employment.[†] Although strong indicators of post-college outcomes are still under refinement, they are included in the framework to signal the increasing importance of measuring whether students are earning credentials of value, especially in relation to the increasing costs.

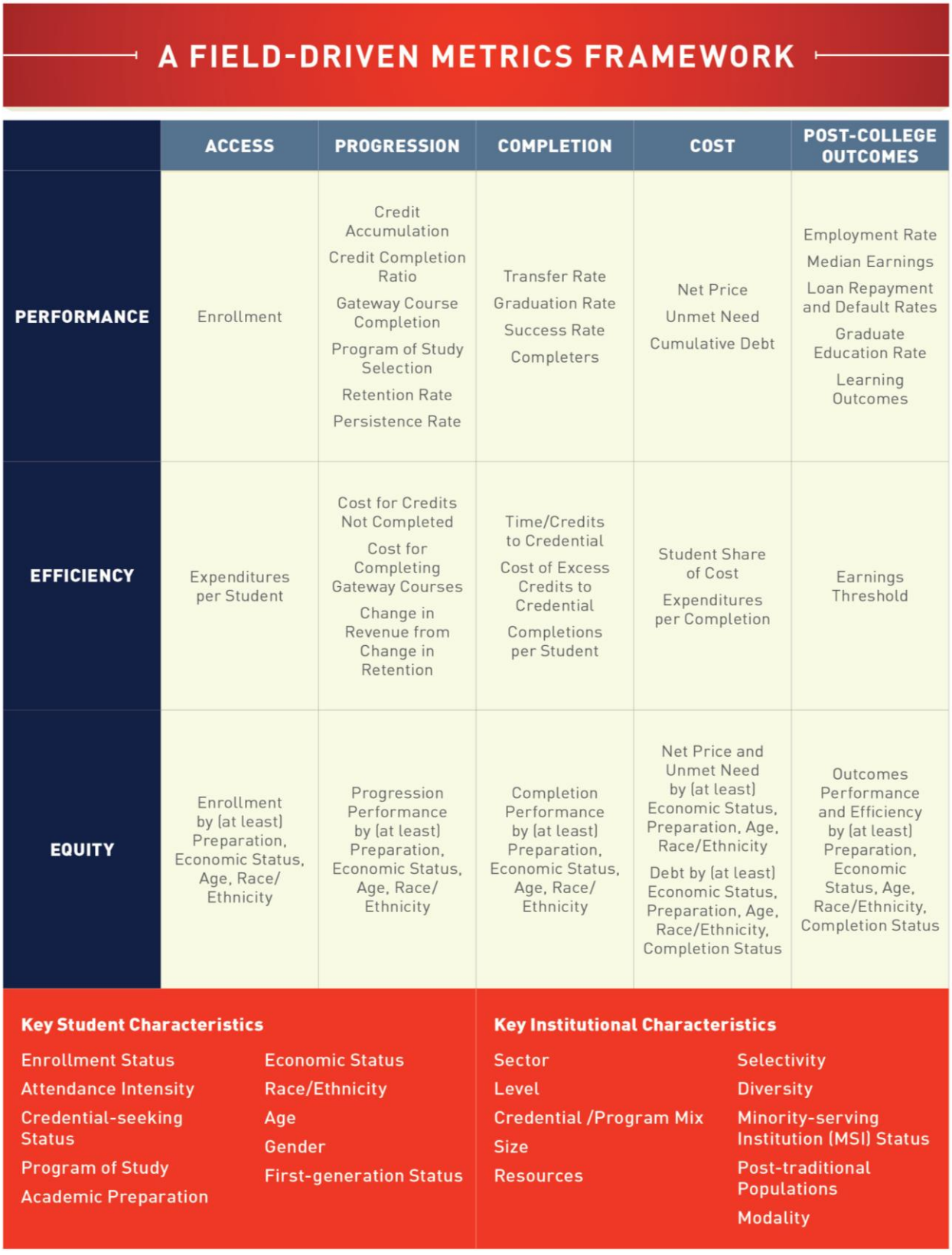
- **Costs count:** While many of the initiatives did not directly address costs—to the student, the institution, or the public—cost metrics are included in the framework in recognition of the growing pressure on colleges to more efficiently allocate resources to improve student outcomes.

IHEP will release a paper in the coming months with detailed recommendations for definitions of the metrics in the framework, adopting shared definitions from the field where there is consensus while identifying where and why there are still divergent viewpoints. IHEP will also continue the conversation about postsecondary data and systems through those recommendations and through the Postsecondary Data Collaborative, a coalition of nearly three dozen organizations seeking to improve data quality, transparency, and use.

[*] In this iteration, the framework intends to cover all students including non-degree students as they are already counted in IPEDS enrollment surveys, all institutions in the current IPEDS universe, and all credentials awarded by institutions in the current IPEDS universe. In future iterations, the framework may make recommendations to expand to post-traditional educational providers and/or credentials such as certifications as the field matures with respect to measuring student participation and outcomes in those settings.

[†] Although learning may be assessed while students are still in college, the relevance of what college graduates know and are able to do becomes particularly salient as they transition to further education or employment, thus learning outcomes are included as post-college indicators in this framework.

Figure 3. A Field-driven Metrics Framework



The Metrics Framework in Focus

PERFORMANCE METRICS

The field research revealed significant consensus around measuring institutional performance related to student access, progression, completion, cost, and post-college outcomes. It is important to note that performance on some metrics (e.g., access) might affect performance on other metrics (e.g., cost); and that the framework does not present specific performance benchmarks on the metrics at this time.

Access

While the field has rightly shifted more attention to improving student completion in recent years, most initiatives recognize that increasing access for underserved populations remains an important and unfinished goal of the attainment agenda. Currently available data provide an incomplete picture of which students are attending which colleges. To address this, the framework recommends measuring student enrollments and expanding counts to be more inclusive of today's students by disaggregating full-year (not just fall) enrollments by additional student characteristics including level of academic preparation, credential level, and program of study. These improvements are not expected to considerably increase reporting burden for institutions. Yet expanding to full-year enrollment coverage, for example, increases the number of students counted by more than a third overall and by nearly half in two-year colleges.[15]

Progression and Completion

Led by **Achieving the Dream**, **Complete College America**, and other major initiatives, the completion movement has generated interest in measuring early indicators of students' progress. New measures such as credit completion and accumulation, gateway course completion, and program of study selection have emerged alongside retention and persistence as key predictors for identifying whether students are on track toward completion[16] and deploying supports that enable more students to succeed.[17‡] With the exception of first-year retention rates, none of these measures are publicly available in national datasets like IPEDS. Given the proportion of students who drop out of college in the first year,[18] the framework recommends focusing the progression metrics on this critical period, although retention (at the initial institution) and persistence (at the initial institution and beyond) should be measured through completion.

Utmost among the lessons learned from a decade of work is that the lamentations over the IPEDS graduation rate have gone on long enough. These voluntary initiatives prove that it is possible to collect and report graduation data on *all* students: first-time and transfer, full-time, and part-time at all credential levels. These initiatives–including the **Student Achievement Measure (SAM)** and the new **College Scorecard**–have also demonstrated the feasibility and utility of reporting additional outcomes such as transfer to and completion at subsequent institutions by level of credential.[§] Further, the voluntary

‡ Developmental course-taking and completion, while important for institutions to measure as applicable to their students, were not included in the framework in recognition of major reforms in remedial delivery underway in the field and with the intention of signaling the importance of gateway course completion as the ultimate indicator for college readiness.

§ The framework includes progression and completion metrics that measure student progress at both their initial institution (e.g., retention, graduation, transfer) and subsequent institutions (e.g., persistence). The intended purpose is to encourage colleges to use persistence rates (similar to the Student Achievement Measure for bachelor's programs) to set stretch goals for improving institutional retention and graduation rates since data from the Beginning Postsecondary Students study show that students who complete their programs are much more likely to do so at their initial institution despite student mobility throughout the system.

initiatives have shown more than enough support in the field for disaggregating progression and completion measures beyond race/ethnicity and gender to include academic preparation, age, economic and first-generation status, and program of study. And it is important to note that institutions have been able to provide this additional information without undue burden or compromising student privacy.

New Students Strain Old Data Systems' Relevance and Utility for Today's Colleges and Universities

The Integrated Postsecondary Education Data System (IPEDS) is the most comprehensive publicly-available source of information on the more than 7,500 postsecondary institutions in the country. All institutions participating in the Title IV federal financial aid program are statutorily required to submit data to IPEDS. Institutions report data through a series of surveys that cover topics including institutional characteristics, enrollment, degrees, finances, student financial aid, and graduation rates. The data collected through IPEDS are used for a variety of purposes, including consumer information, institutional benchmarking, and policy analysis.

IPEDS is an important resource for the field, but its ability to answer some of the most pressing questions facing postsecondary institutions now is strained by surveys that have not kept pace with changes in the higher education landscape. The most commonly cited example is the IPEDS Graduation Rate Survey (GRS). Although the IPEDS enrollment surveys have counted part-time and transfer students for decades, the GRS follows only first-time, full-time students, leaving out a substantial and growing portion of college students. And while the U.S. Department of Education has recently attempted to expand coverage to include these students through its Outcomes Measures survey, this component lacks the critical race/ethnicity and gender disaggregates collected through the GRS, as well as other important disaggregates like credential level or economic status collected by the voluntary initiatives.

Our national data infrastructure needs significant upgrades in the near future; otherwise, our data resources will continue to fall behind the realities facing postsecondary students and institutions today, limiting their relevance and utility even more.

Cost

Although measuring the cost of college (in this case, to the student) has not been a major focus of the completion initiatives to date, it has been central to recent consumer information efforts such as the federal College Scorecard. From the outset, President Obama sought to provide students and families with more information about which colleges offer "affordability and value."[19] While developing the Scorecard, the Administration solicited extensive feedback about how to measure college affordability. Among the measures consistently recommended by the higher education community[20] were net price and cumulative debt (incurred at a given institution) as well as loan repayment. Both net price and cumulative debt are included in the Scorecard and the framework, although the framework aims to improve on both measures as currently reported by including all students and all loans (including private loans) respectively and by including a measure of students' unmet need or ability to pay after accounting for grant aid.

Post-College Outcomes

Robust measures of students' post-college outcomes are still under refinement, which explains why they are not often included in the completion initiatives. These metrics are included in the framework because the field is clearly moving in the direction of measuring whether students are earning credentials of value,

especially in relation to increasing costs and indebtedness. We expect these measures to improve in future iterations of the framework, and hope presenting them here will promote further advancements. There are other outcomes under consideration by the field, including those articulated through the Post-Collegiate Outcomes and the Gallup-Purdue studies, such as career advancement and satisfaction, social giving, and civic participation. Given their early stage of development and availability, though, these measures are not included in this framework at this time.

Earnings and employment: Despite concerns from institutions about focusing too much on the economic value of certificates and degrees, prospective students and the public consistently report that earning a college degree is essential to quality employment and earnings prospects.[21] Availability of these data has improved significantly with the recent release of the new College Scorecard, which publishes employment and earnings information for former students who received federal aid up to 10 years after enrollment for most colleges nationwide.[22] Prior to the release, these data were only publicly available for some colleges in a select number of states, although states often offer more detailed information such as pre- and post-earnings, and earnings by program of study for credential completers.[23]

While nearly 40 states now have the capability to link higher education and workforce data,[24] colleges still cannot fully access data about their students' post-college employment and earnings outcomes, and the field is still exploring the quality and utility of these newly available data. Recognizing these limitations, the framework encourages colleges and universities to utilize all available data at this time to assess whether their students are earning credentials that considerably improve their economic and life chances.

Loan repayment*:* The Scorecard also provides previously unavailable data on loan repayment rates. New research using these data is already providing useful recommendations for improving them, which will be included in the detailed paper to be released by IHEP.[25] Most importantly, the U.S. Department of Education (ED) is encouraged to provide colleges with the student-level data used to calculate repayment rates so institutions can more effectively use the information, especially alongside more established measures such as cohort default rates. Cohort default rates are certainly in need of improvement, and recommendations for doing so will also be included in the detailed paper. However, colleges are primarily offered suggestions for how to better *use* this measure given that cohort default rates are defined in statute with financial consequences. These recommendations include merging the data colleges receive from ED with their campus-based information systems to disaggregate the data by student characteristics that may impact repayment behavior to better target repayment counseling and support.[26]

Learning outcomes*:* The higher education community hasn't yet reached consensus on whether or how to measure postsecondary learning outcomes. However, there are institutions and states on the front lines making substantive progress, including those involved in the **Degree Qualifications Profile (DQP)**, the **Multi-State Collaborative to Advance Learning Outcomes Assessment**, and the **Voluntary System of Accountability (VSA)**.

In this iteration, the framework recommends guidelines developed for institutions participating in the VSA, an initiative of the **Association of Public and Land-grant Universities (APLU)** and the **American Association of State Colleges and Universities (AASCU)**. The VSA is using the **National Institute for Learning Outcomes Assessment (NILOA)**'s Transparency Framework, allowing institutions to link to online resources in their College Portrait profiles, including student learning outcome statements, assessment plans, assessment resources, current assessment activities, evidence of student learning, and use of student learning evidence.[27] The framework also recommends **Lumina Foundation's** Degree Qualifications Profile for institutions to develop or refine learning outcomes, and to map and align them to all courses and curricula to ensure students are provided ample opportunity to acquire these

proficiencies. Additionally, the **Association of American Colleges & Universities'** VALUE (Valid Assessment of Learning in Undergraduate Education) rubrics are recommended for assessing students' mastery of critical learning outcomes.

EFFICIENCY METRICS

At the outset of the attainment movement, the higher education community was focused on developing more robust indicators for measuring student completion. As the movement progressed, attention turned toward resources as a means to scale and sustain reform. Following their work to define common completion metrics with Complete College America, the **National Governors Association (NGA)** released a set of efficiency metrics for states.[28] For their part, a significant number of states have since adopted efficiency measures as part of outcomes-based funding formulas.[29] Many of these efforts draw on data developed by the Delta Cost Project, which uses publicly available information from IPEDS to construct metrics related to institutional revenues, expenditures, and return on investment.

The framework includes several Delta Cost metrics, along with time and credits to credential, which Complete College America has now brought to more than half of the states. Drawing on the work of **Completion by Design**, the framework also proposes metrics calculating the costs associated with performance on student progression and completion measures by deriving a "credit unit cost" measure using IPEDS data. While there are well-known limitations to the finance data in IPEDS, the field lacks more precise efficiency measures at this point in time.

EQUITY METRICS

As noted earlier, nearly all of the voluntary initiatives have been designed to account for more "post-traditional" students to better support their college access and success. Reflecting what has become standard practice among these initiatives, the framework includes recommendations for disaggregating metrics by more characteristics than are available in current data sets (e.g., race/ethnicity, gender). These include enrollment status (first-time, transfer), attendance intensity (full-time, part-time), age, credential-seeking status,[**] and program of study. Also recommended are academic preparation (as defined by institutions), economic status (as defined by Pell Grant receipt), and first-generation status. Some of these measures, particularly those related to academic preparation and economic status, are currently being refined by the field; however, they are included in the framework because they are among the most predictive of student outcomes and most important to our collective attainment goals.

[**]There remains some concern in the field about whether students' credential-seeking status (e.g., non-degree, certificate, associate's, bachelor's) is a reliable measure, particularly at entry; however data from the Beginning Postsecondary Students study show that the majority of students either earn the credential they sought at entry at their first institution or receive no credential at all and that there are major differences in completion rates between students pursuing different types of credentials. Also, both credential-seeking status by level and program of study are now required for compliance with new federal student aid regulations so these data should continue to improve.

Using Data to Improve Student Outcomes

The metrics framework represents what the foundation has learned from its partners about how the higher education community is voluntarily measuring its own performance, progress, and productivity to spur and support reforms that significantly improve student outcomes. The following are examples of how institutions and states across the country are using better data to make decisions about policy and practice that are helping more students—particularly those from underserved populations—reach their postsecondary goals.

ACCESS

The **Access to Success (A2S) initiative**, a collaborative effort of the Education Trust and the National Association of System Heads (NASH), brought together about 20 public state higher education systems committed to cutting access gaps in half for low-income and underrepresented minority students by 2015. The **California State University (CSU) System** had already reached their goal by the midpoint of the effort, increasing the proportion of freshmen who were students of color by nearly 10 percentage points through early assessment, targeted outreach, and local partnerships with high schools to help more students meet CSU admissions requirements. The **State University System of Florida** also cut the access gap by more than half for transfer students, making gains that even outpaced demographic changes in the state, through regional partnerships between community colleges and four-year universities such as the DirectConnect program sponsored by the **University of Central Florida**. The **University of Wisconsin System** went on to include access measures in their public accountability reports and dashboard and the **Pennsylvania State System of Higher Education** incorporated closing access gaps into their funding model.[30] Today, about half of the more than 30 states utilizing outcomes-based funding either explicitly reward improving access for underserved populations or provide incentives for graduating more low-income students or students of color, acknowledging that achieving equity in both access and success are needed to reach completion targets.[31]

PROGRESSION

As a leader in measuring and improving student success, **Achieving the Dream** was an early adopter of progression measures like credit accumulation and gateway course completion as indicators of students' chances of completion. With more than 200 member institutions across the country, ATD has coached community college leaders and staff on how to use these data to implement reforms that have measurably improved students' outcomes from **South Texas College**'s extensive Dual Enrollment and Early College High School programs[32] to the **Community College of Baltimore County**'s Accelerated Learning Program (ALP) for developmental education students[33] to **Sinclair Community College**'s MyAcademicPlan (MAP) planning and advising program.[34]

Complete College America, established in 2009, built on these institutional efforts by expanding both the data collection and the change strategies to the states. CCA has effectively leveraged the data collected from its 35 states and territories, with a focus on progression and completion measures, to

produce influential reports such as Remediation: Bridge to Nowhere and to develop an interactive dashboard linking key metrics to "game changer" strategies such as guided pathways to success (GPS). In **Tennessee**, students and institutions across the state are demonstrating real gains on the CCA metrics, with significant improvement in gateway course completion in particular, due to the system-wide redesign of remedial courses at all community colleges.[35]

Progression measures are also being used at hundreds of institutions across the country via technology-enabled integrated planning and advising systems such as Civitas Learning and Hobsons' Starfish that help college staff use "early warning" indicators to identify and provide real-time support to students who are off-track from their plans.[36] Colleges investing in these types of systems, and the requisite support services, have reported up to double-digit increases in student retention and completion, including early innovators like Arizona State University and Austin Peay State University.[37]

COMPLETION

Most of the initiatives profiled in this paper improve on existing completion measures by counting more outcomes for more students, like the **Student Achievement Measure (SAM)**, used by nearly 600 colleges and universities in all 50 states. By counting more students and more outcomes, these initiatives provide institutions and states with more information to better communicate about their performance as well as set progress targets for retaining and graduating more students. Similarly, dozens of states participating in the Win-Win and Credit When It's Due initiatives utilize information about students' transfer and enrollment patterns after withdrawing from community colleges to identify and contact students who have enough (or nearly enough) credits to receive associate's degrees or earn enough credits later while pursuing bachelor's degrees to retroactively award their credentials. To date, thousands of former students have returned to school and/or have received associate's degrees as a result.[38]

Most of the initiatives also improve upon currently available completion data by reporting the measures by students' academic preparation, age, and economic and first-generation status. Disaggregating data makes visible the experiences and outcomes of students obscured by overall averages, allowing institutions like **Florida State University**, **Georgia State University,** and **University of California-Riverside** to intentionally focus on raising completion rates and closing completion gaps for underserved populations, thereby promoting equity and excellence on their campuses.[39]

COST / EFFICIENCY

Although concerns about cost and debt dominate most current conversations about higher education, most of the completion initiatives do not directly address these issues. There is, however, some attention paid to efficiency, especially the costs associated with excessive time and credits to credential. More than half of the states participating in **Complete College America** have curtailed the creeping number of credits required to earn a credential and/or have created incentives to support students to take sufficient credits to graduate on time. States like Indiana and Hawaii have seen substantial increases in the proportion of students attempting and earning more credits as a result of their "Fifteen to Finish" campaigns, which include offering banded tuition so that taking 15 credits costs students no more than 12 credits, and summer tuition discounts to encourage students to either catch up or get ahead on earning enough credits.[40]

Cost and efficiency measures are also being included in new outcomes-based funding formulas in states such as **Colorado** and **Michigan,**[41] and **Texas** recently set a goal around ensuring that students graduate with manageable debt loads in their new strategic plan for higher education, 60x30TX. The

newly available data from the federal College Scorecard on student indebtedness and loan repayment by institution will also continue to increase attention to, and action around, the issue of college affordability.

POST-COLLEGE OUTCOMES

Measures accounting for what happens to students after college also have not been the major focus of recent initiatives, with notable exceptions. The **Voluntary Framework of Accountability (VFA)**, led by the American Association of Community Colleges (AACC), includes post-college employment and earnings for students in career and technical education programs. Community colleges are at the forefront of the field with respect to using workforce outcomes to inform their programs to align with the demands of the local economy. Institutions such as **Lone Star College** in Texas and **Lorain County Community College** in Ohio are using labor market data to decide which programs to maintain, expand, or eliminate to ensure the economic success of their graduates,[42] and the **City Colleges of Chicago** recently launched a College to Careers initiative to adjust their occupational programs to demand in the fastest-growing industries in the region. Some states also use these data to attract new businesses and jobs, like in **Mississippi**, and to encourage the development of industry-validated programs, like in **Wisconsin**.[43]

States are also leveraging their longitudinal data systems to develop employment and earnings resources aimed at student use, like the **California Community Colleges'** Salary Surfer tool and the University of Texas System's seekUT site. seekUT publishes graduates' earnings data, by institution and by program, alongside their loan debt to better guide students' college and career choices. While the employment and earnings data in the new College Scorecard have known limitations at this time, the release of such data on nearly all colleges and universities across the country has substantially changed the conversation about the role and use of this information in the field.

Among the initiatives, the **Voluntary System of Accountability (VSA)**, a joint project of the Association of Public Land-grant Universities (APLU) and the American Association of State Colleges and Universities (AASCU), is one of the few that include student learning outcomes. As noted, the VSA has adopted the **National Institute for Learning Outcomes Assessment (NILOA)**'s Transparency Framework. **Broward College** is among the early adopters of the NILOA framework, providing detailed information about the types of assessments used to measure student learning experiences and outcomes (including assignment rubrics as well as standardized tests and surveys) and recommendations for continuous improvement generated by faculty and staff in response to the results. APLU, NILOA, and AAC&U are also co-sponsoring a process to recognize institutions with strong learning measurement plans and processes through its inaugural Excellence in Assessment Designation competition this year.

Lumina Foundation's **Degree Qualifications Profile**, also recommended in the metrics framework, has been used by more than 400 colleges and universities and four major accrediting associations to articulate and clarify learning outcomes, align and improve courses and curricula, and create and administer assessments to ensure that students are receiving a high-quality postsecondary education. Some colleges, such as **Indiana University–Purdue University Indianapolis** and **Ivy Tech Community College**, are working to align learning outcomes across their campuses to better prepare community college transfer students to develop the competencies needed to successfully transition into bachelor's degree programs.[44] Early results from the **Multi-State Collaborative to Advance Learning Outcomes Assessment,** which involves more than 60 institutions across nine states, demonstrate support for using AAC&U's VALUE (Valid Assessment of Learning in Undergraduate Education) rubrics to score and compare students' learning outcomes based on classroom assignments across disciplines, institutions, and states.[45]

New College Scorecard Changes and Challenges the Postsecondary Data Landscape

In his 2013 State of the Union address, President Obama committed to creating a College Scorecard that would help parents and students "get the most bang for your educational buck."[46] The U.S. Department of Education (ED) released its first version of the Scorecard later that year, displaying previously published as well as new data for four key metrics: net price, graduation rate, debt, and loan default rate. This early version also included a placeholder for a fifth metric on employment, for which data were unavailable at the time. Over the next two years, the administration engaged in conversations with stakeholders about the needs of students and parents, and the limitations of the data available to guide families' college choices, including the consideration of a college rating system.

In September 2015, ED released a revised Scorecard with major upgrades, including a website that allows users to search for colleges by program, location, size, or name; and view profiles that include critical information about each institution, most notably loan repayment rates and post-college earnings. ED also unveiled a feature that allows users to download the Scorecard data and other institution-level information, including more robust completion, debt, repayment, and earnings and employment data. These data are also disaggregated for more students, including Pell Grant recipients and first-generation college students. ED was able to report this information using data from IPEDS, the National Student Loan Data System (NSLDS, an administrative database for the federal financial aid programs), and the Internal Revenue Service.

College Scorecard 2.0 has had an effect on the policy debates over postsecondary data, underscoring the need to use administrative data to report more information about colleges without increasing collection burden. Researchers are already using the data to reevaluate what we know about how well students fare after college and to create "value-added" evaluations of institutions based on newly-available data like alumni earnings.

While the revised Scorecard is a major advancement in the field, the new data raise more questions than answers. ED itself acknowledges considerable limitations to this data release, and experts in the field are already calling for improvements in data quality. Among the most frequently cited problems is that the measures obtained from NSLDS are limited to students who receive federal aid only, omitting over 40 percent of college students. Additionally, institution-level metrics like earnings may obscure important differences among educational programs, and the Scorecard currently omits institutions that primarily grant certificates, including a number of community colleges. Even with those limitations, the Scorecard has certainly changed the postsecondary data landscape.

Improving Data at Scale

Developing the metrics framework has yielded several important lessons. First, a decade of investments by the foundation and other funders has helped build consensus around and validate a core set of metrics for measuring performance, progress, and productivity that states and institutions are willing to voluntarily collect and report. Second, colleges and universities are using these metrics to spur and support improvement, leading to better outcomes for their students. Third, institutions of all types want to reduce the burden of participating in one-off data collections by expanding the availability and use of these metrics beyond their specific communities of practice.

The challenge is that existing state and national data systems do not currently provide clear or comprehensive enough information to answer the questions raised by key constituencies in higher education: students, institutional leaders, policymakers, and the public.[47] **Figure 4** offers an analysis of the extent to which the metrics in the framework are available as specified in three major data sources: federal, national, and state. This analysis only examines metrics availability from a *content*, not *coverage*, perspective, although the latter is important and will be addressed in forthcoming work by foundation partners on improving national data infrastructure.[48]

To that end, the foundation is committed to supporting efforts to strengthen state and national postsecondary data systems to enable consistent collection and reporting of key performance metrics for all students in all institutions across the country. Doing so will provide the information necessary to improve the capacity and productivity of the higher education system to generate more high-quality, affordable career-relevant credentials, particularly for underserved student populations, without whom we cannot achieve our collective attainment aims.[49]

To achieve the goal of strengthening data systems, a coalition of organizations is developing a blueprint for improving the national postsecondary data infrastructure, specifically, upgrading institutional, state, and national systems and reinforcing the necessary linkages between them to create secure and useful information feedback loops. Improvements under consideration include:

- **Increasing the data capacity of institutions** to integrate their own systems across campus to enable efficient reporting to state and national entities and promote greater use of data to guide academic and fiscal decision-making by leaders, faculty, and staff.

- **Continuing to develop robust state data systems** that connect disparate higher education systems within and across states, including non-public institutions, and improve linkages between higher education, K12, and workforce data to facilitate the timely and safe exchange of data for decision-making by educators and policymakers.

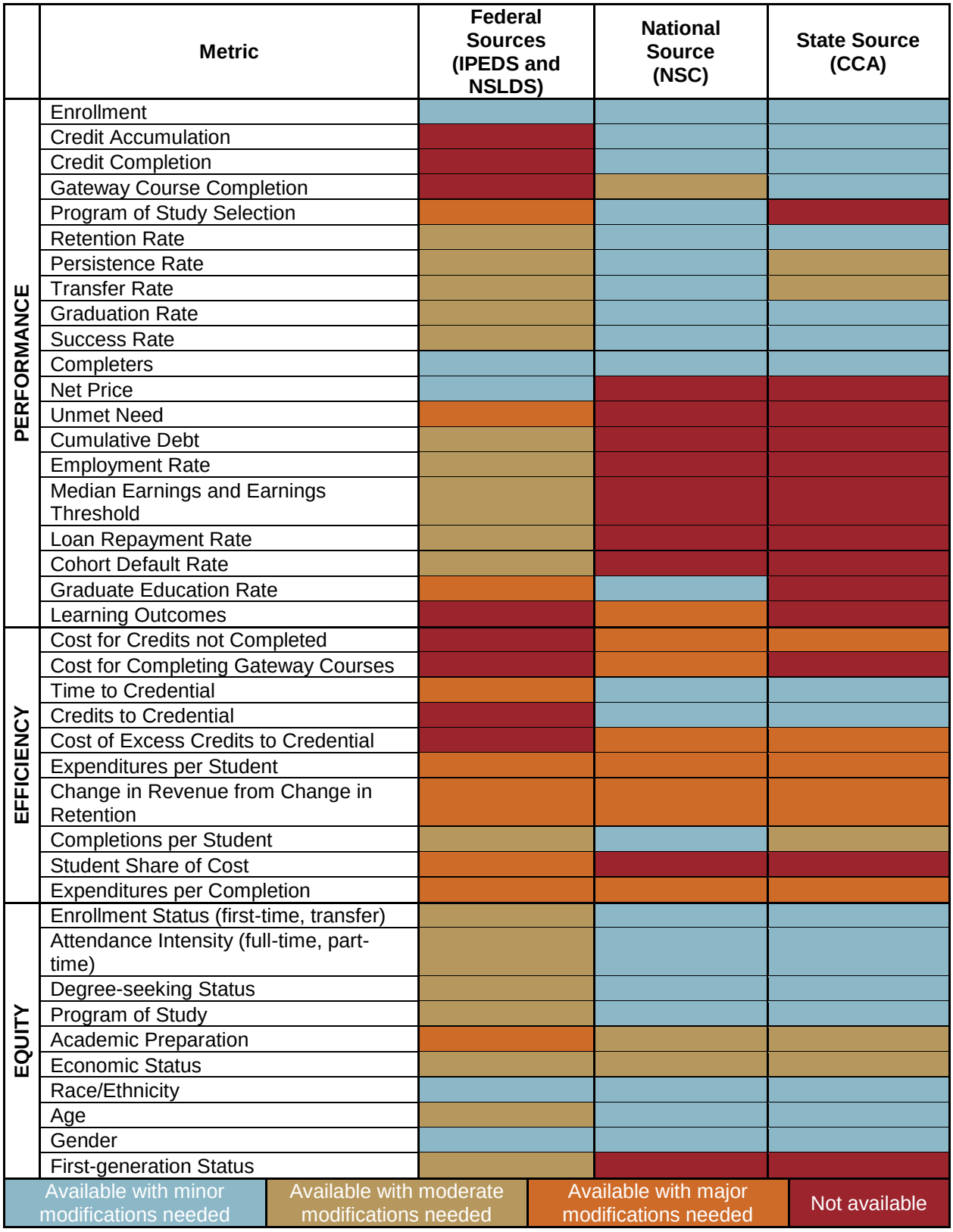
- **Developing a more comprehensive national data system or exchange** that would expand coverage and quality by collecting a key set of performance metrics for all students in all institutions. The system or exchange would also alleviate reporting burden and reduce duplication by leveraging existing state and national data collections to generate information that institutions could verify. Developing such a system would require revising data privacy and security protocols to ensure compliance with state and federal laws as well as accepted standards and practices in the field. Options for achieving this range from improving IPEDS to developing a federal student-level data system.[50]

- **Supporting open, yet secure, access and use** within and across all of these systems by taking steps to maintain student privacy and data security. This includes, but is not limited to:

    - Robust written data security and governance plans with policies that establish role-based data access and management responsibilities;
    - Procedures for safely managing all stages of the data lifecycle;
    - Up-to-date inventories of data elements and data assets assessed by level of potential risk;
    - Industry-standard protocols for ensuring data security;
    - Procedures for de-identifying personally-identifiable information (PII) according to law;
    - Screening and training all authorized data users and managers;
    - Regular data audits to monitor compliance;
    - Protocols for identifying and remedying potential data breaches including penalties; and
    - Clear communication with students about their rights under state and federal privacy laws.[51]

A coherent and comprehensive national data strategy should aim to clearly articulate the purposes, use cases, and users of each system and support the necessary connections between them to increase coverage and quality, reduce duplication and burden, and ensure safety and security. The work ahead is not without challenges, but the lessons learned from leading institutions and states through a decade of work to better measure performance and progress provide a strong foundation for advancing and accelerating efforts to improve postsecondary data that will better support college students from access to attainment.

Figure 4. Availability of Key Metrics in Major Data Sets



[1] Adapted from Voight, M., Long, A., Huelsman, M., and Engle, J. (2014). *Mapping the Postsecondary Data Domain: Problems and Possibilities*. Washington, D.C.: Institute for Higher Education Policy.
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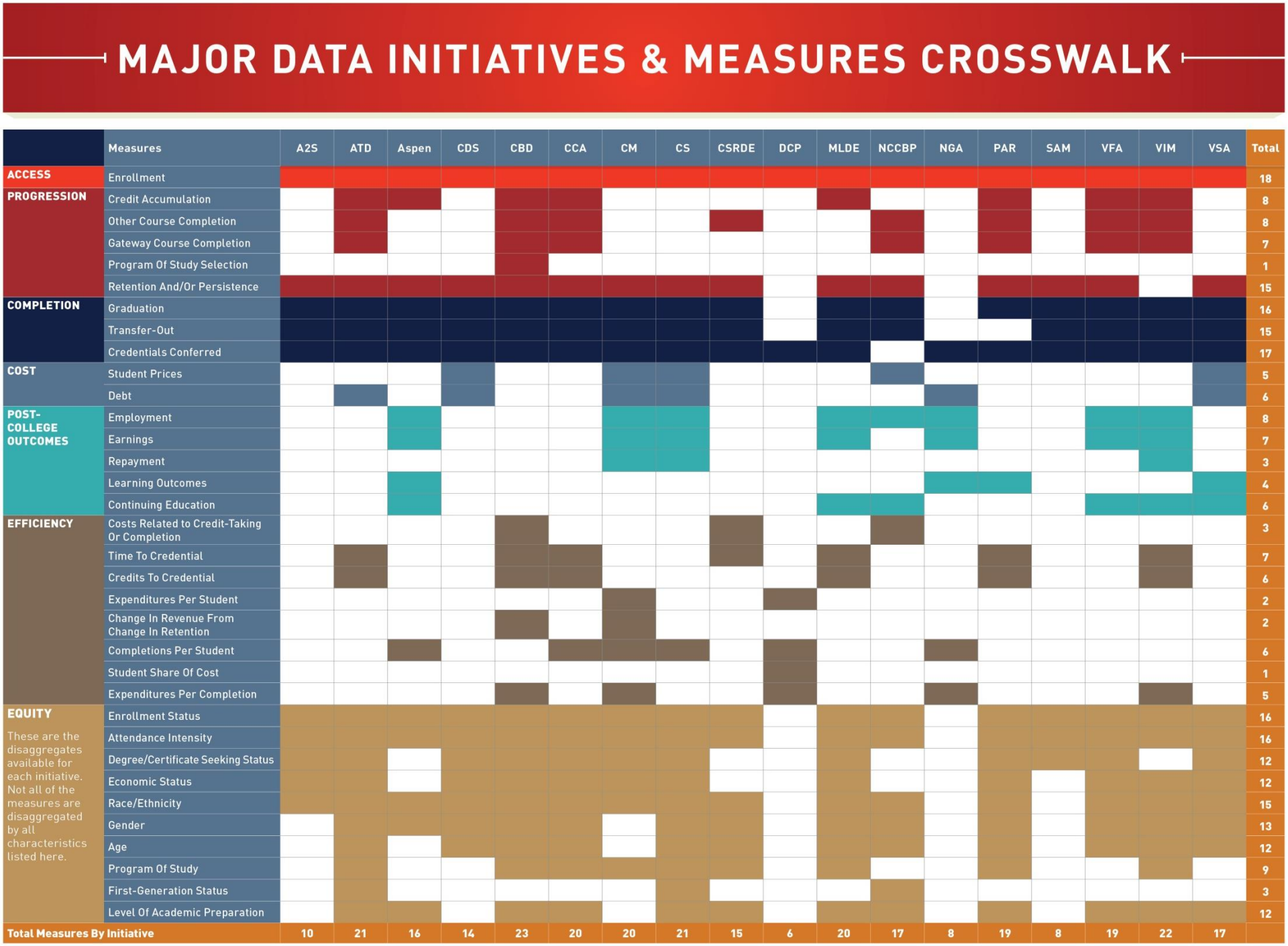
Appendix I. Diverse Data Initiatives and Efforts Share Focus on Key Metrics and Student Populations



	Measures	A2S	ATD	Aspen	CDS	CBD	CCA	CM	CS	CSRDE	DCP	MLDE	NCCBP	NGA	PAR	SAM	VFA	VIM	VSA	Total
ACCESS	Enrollment	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	18
PROGRESSION	Credit Accumulation		■	■		■	■					■			■		■	■		8
	Other Course Completion		■			■	■			■			■		■		■	■		8
	Gateway Course Completion		■			■	■						■		■		■	■		7
	Program Of Study Selection					■														1
	Retention And/Or Persistence	■	■	■	■	■	■	■	■	■		■	■		■	■	■		■	15
COMPLETION	Graduation	■	■	■	■	■	■	■	■	■		■	■		■	■	■	■	■	16
	Transfer-Out	■	■	■	■	■	■	■	■	■		■	■			■	■	■	■	15
	Credentials Conferred	■	■	■	■	■	■	■	■	■	■	■		■	■	■	■	■	■	17
COST	Student Prices				■			■	■				■						■	5
	Debt		■		■			■	■					■					■	6
POST-COLLEGE OUTCOMES	Employment			■				■	■			■	■	■			■	■		8
	Earnings			■				■	■			■		■			■	■		7
	Repayment							■	■									■		3
	Learning Outcomes			■										■	■				■	4
	Continuing Education			■								■	■				■	■	■	6
EFFICIENCY	Costs Related to Credit-Taking Or Completion					■				■			■							3
	Time To Credential		■			■	■			■		■			■			■		7
	Credits To Credential		■			■	■					■			■			■		6
	Expenditures Per Student							■			■									2
	Change In Revenue From Change In Retention					■		■												2
	Completions Per Student			■			■	■	■		■			■						6
	Student Share Of Cost										■									1
	Expenditures Per Completion					■		■			■			■				■		5
EQUITY These are the disaggregates available for each initiative. Not all of the measures are disaggregated by all characteristics listed here.	Enrollment Status	■	■	■	■	■	■	■	■	■		■	■		■	■	■	■	■	16
	Attendance Intensity	■	■	■	■	■	■	■	■	■		■	■		■	■	■	■	■	16
	Degree/Certificate Seeking Status	■	■		■	■	■	■	■			■			■	■	■		■	12
	Economic Status	■	■		■	■	■	■	■			■			■		■	■	■	12
	Race/Ethnicity	■	■	■	■	■	■	■	■	■		■	■		■		■	■	■	15
	Gender		■	■	■	■	■		■			■	■		■		■	■	■	13
	Age		■		■	■	■		■			■	■		■		■	■	■	12
	Program Of Study		■			■	■	■	■	■		■			■			■		9
	First-Generation Status		■						■				■							3
	Level Of Academic Preparation		■	■		■	■		■	■		■	■		■		■	■	■	12
Total Measures By Initiative		10	21	16	14	23	20	20	21	15	6	20	17	8	19	8	19	22	17	

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