COLLEGE READINESS INDICATOR SYSTEMS

Essential Elements in Implementation

The John W. Gardner Center for Youth and Their Communities

CRIS

RESOURCE SERIES

Educators nationwide confront a troubling phenomenon: Increasingly, students leave high school unready for college, as evidenced by high rates of placement into remedial courses and low rates of college completion. Many students also lack either the attitudes or skills essential to succeed in a postsecondary setting, or knowledge of how to apply to, finance, and navigate college. Moreover, other capable students never apply to college because they are unaware of opportunities, did not take the necessary coursework, or did not imagine college in their futures. These realities highlight a fundamental distinction: There is more to college readiness than college eligibility. The gap between college eligibility and college readiness raises concerns that students' potential—and their potential contributions to society—will be unrealized.

The College Readiness Indicator Systems (CRIS) initiative aims to develop and study the implementation of a system of signals and supports designed to increase the number of students who graduate from high school ready to succeed in college. In this document, we draw on data collected about CRIS implementation in four sites (three urban districts and one school support organization)—Dallas Independent School District (DISD), Pittsburgh Public Schools (PPS), San Jose Unified School District (SJUSD), and New Visions for Public Schools in New York City (New Visions)*—to feature key strategies and provide concrete examples of

their use. We focus primarily on the district level because CRIS activities took place mainly at the central office during the initiative's launching phase. *Essential Elements in Implementation* will be most helpful after using the *District Self-Assessment Tool* in the CRIS Resource Series. The *District Self-Assessment Tool* is a comprehensive rubric organized around the essential elements to help district review teams examine where their strengths and challenges lie as they build indicator and support systems.

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*An additional district, the School District of Philadelphia, participated in research on community partnerships to promote college readiness.

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The CRIS Approach

The CRIS approach is unique in three ways.

1. It builds on existing early warning systems (EWSs) by advancing a menu of indicators that **focuses beyond the goal of high school graduation** and college eligibility to target college readiness.

2. It adopts a **tri-level approach,** premised on the idea that an effective early warning system generates and uses data that reflect activities, resources, processes, and outcomes at the individual (student), setting (school), and system (district and partners) levels. Contexts beyond the districts have important implications and we discuss them at various points throughout this document. Individual-level indicators help identify which students need supports and the general areas in which they need them. However, individual-level indicators do not address matters such as school climate, school and district policies, and resource allocation, which affect a student's ability to obtain those supports once the need has been identified. Setting- and system-level indicators serve to guide the allocation of resources and the design of policies intended to promote college readiness.

3. It supports districts' effective use of indicators through an iterative **"design-build" approach** that regularly incorporates feedback from a variety of stakeholders (including central office leadership and staff, school administrators, teachers, parents, students, and community partners) and affords flexibility and attention to local variation in capacity, needs, and opportunities. Many districts are expert data collectors, but they face substantial limitations when it comes to actually using data to inform decisions around the goal of college readiness. Considering the needs of key stakeholders during the design and implementation of a college readiness indicator system maximizes the chances that data will actually get connected to action that improves college readiness.

A college readiness indicator system is a central mechanism for promoting educational equity. A college readiness indicator system not only tracks the knowledge, skills, behaviors, and attitudes students need to be college ready but also monitors whether the conditions are in place to facilitate and support this process. In this way, a college readiness indicator system intentionally aligns the practices, policies, and data systems necessary to promote the long-term success of all students, particularly those who have been traditionally underrepresented in the postsecondary education system.

Questions and Considerations

Implementing efforts to support students' readiness for college requires careful consideration of several questions. Some of them are conceptual: What is college readiness? How do we know when students are ready for college? What measures do we use? Other issues are organizational and technical: What types of college readiness data are already available at the individual, setting, and system levels? Are these data meaningful and trustworthy? Schools continue to have access to more and more types of data, but to what extent are these data supportive of instruction and school practice? Careful evaluation of these issues is a prerequisite to establishing a college readiness indicator system.

Districts must also assess their current systems, stakeholders, and other priorities that can complicate implementation. Most districts have an early warning system to flag obstacles that occur on students' roads to high school graduation; however, these systems seldom consider indicators beyond academic preparedness. Typically, they also lack coherence: Districts have a patchwork of indicators at the setting and system levels that are unconnected, often exist on different platforms, reflect different metrics, are reported in different formats, and are unaligned with other district or school initiatives. Similarly, few districts have an established strategy

for data generation and use, clear expectations about norms and routines, or the necessary organizational or technical capacity to support an effective system.

Additionally, users—those individuals assigned responsibility for producing or acting on data—worry about the timeliness and relevance of data. Teachers complain that the data they receive are too little, too late, and of limited practical use. CRIS is distinct in that it assumes that data inform action, and it conforms to the different decision timelines associated with different users' needs. Moreover, if the benefits of data to practice are unclear, teachers can view data collection and examination as a poor use of time and energy, or even as a professional threat, especially in light of high-stakes accountability, new teacher evaluation schemes, or the uncertainties associated with the Common Core State Standards.

Likewise, attention to college readiness indicators and supports often is eclipsed by more apparently pressing priorities—raising test scores, dealing with fiscal crises, and satisfying accountability requirements. Moreover, most schools lack systematic structures for identifying, adopting, and adapting research-validated practices, supports, and interventions, particularly for the most vulnerable students. Thus, although college readiness is a goal, it is simply not a top priority in many settings.

Implementation Challenges at CRIS Sites

The three-year CRIS initiative began in 2011 with the selection of four participating sites based on their distinct characteristics and a longstanding commitment to college readiness goals or use of data to drive achievement outcomes. Each CRIS site designated a liaison to the initiative and a team of individuals (the "CRIS team") who worked together to develop and implement their own college readiness indicator system. While the composition of the CRIS team over the course of the initiative remained stable at two of the sites, it shifted dramatically at the other two; overall, at minimum, the teams included central office staff from the departments of Research & Evaluation and Student Support Services, as well as personnel focused on college readiness.

During the first year and a half, the goal was for sites to select research-based indicators from the CRIS Menu (see *Menu of College Readiness Indicators and Supports*) in each college readiness domain (academic preparedness, academic

tenacity, and college knowledge) and at each level (individual, setting, and system) and to work each indicator through the cycle of inquiry in the CRIS Framework (see *Beyond College Eligibility: A New Framework for Promoting College Readiness*). During the second year and a half, sites were to implement this system and develop complementary college readiness efforts specific to their needs. The John W. Gardner Center for Youth and Their Communities developed the CRIS Menu based on a rigorous review of relevant research. In addition to presenting the CRIS Menu and facilitating discussion with the CRIS sites, researchers interviewed key informants involved in the CRIS implementation process, observed meetings related to college readiness and data use, and tracked key developments at the sites. The findings directly inform this document.

CRIS sites considered some or all of the conceptual, organizational, technical, and political implementation questions mentioned above as they began their work. As

the project was getting under way, all three districts experienced the disruption associated with the departure of a superintendent, arrival of a new district leader, and new central office arrangements. This central office churn was compounded at DISD and PPS by severe reductions in funding—up to 50% from previous years' administrative budgets. PPS also experienced significant turnover both in membership on their CRIS teams and in central office staff assigned to oversee the project; CRIS leadership was reorganized several times at DISD. At SJUSD, the CRIS project was temporarily sidelined while the new superintendent and his team considered how CRIS aligned with the district's new strategic plan. Although all three districts had a commitment to college readiness prior to the CRIS project, in none was it articulated as a top priority for resource allocation.

New Visions confronted different issues as an intermediary organization dependent on soft money. Although college readiness is the organization's express goal, staff's energy and attention were often diverted by the ongoing pressures to raise money and manage multiple projects. New Visions staff similarly had to juggle the demands of multiple and sometimes competing initiatives operating within each school, as well as the site-specific issues associated with their different demographics, size, missions, and student outcomes.

All three districts lacked an adequate infrastructure to support and implement an indicator system. PPS was at the early stages of developing the technical capacity and structures needed to implement a college readiness indicator system. Both DISD and SJUSD had relatively sophisticated data infrastructures in place, but they, too, were not fully prepared for support and implementation.

Data fragmentation was the most challenging difficulty faced by all four sites. Stakeholders expressed frustration about information that was distributed across different data systems that could not be incorporated into integrated reports; they identified this as a major roadblock for timely and effective decisionmaking around college readiness. At the school level, teachers reported problems with accessing information and receiving sufficient guidance and support to use data to inform action. While New Visions' data system and technical supports were well developed, they focused primarily on indicators of academic preparedness for college, rather than on the comprehensive picture of college readiness central to an indicator system. The district sites faced the same dilemma. Despite common challenges and context-specific struggles, all sites diligently worked to navigate these obstacles. The CRIS initiative provided a framework to stay on course and a conceptual mechanism to sustain the work moving forward.

Essential Elements in Successful College Readiness Indicator System Implementation

The four CRIS sites had different starting points, strengths, and implementation challenges associated with their particular organizational contexts. Even so, the experiences of the CRIS sites revealed a series of elements fundamental to the productive progress of the initiative. These key implementation elements were highlighted across CRIS sites:

- Engaging leadership commitment to a college readiness indicator system

- Building data infrastructure

- Strengthening adult capacity around data use and college readiness

- Connecting indicators with supports to promote college readiness

- Developing partnerships with community institutions and institutions of higher education

These elements demonstrate that the generation of knowledge and data use occurs across multiple levels of the system, rather than as disjointed central office, school, or teacher undertakings. Similarly, we saw how these elements of a college readiness indicator system are functionally interdependent and implicate norms, resources, capacities, and relationships within the whole organization—the buy-in, capacity, and engagement of central office administrators, principals, teachers, parents, and students. CRIS sites' implementation efforts also underscored the importance of consistent messaging and measures about college readiness, feedback loops, and an inquiry process able to connect indicators to action at multiple levels. In all CRIS sites, building these essential elements required the development of new structures, routines, behaviors, and supports. Each site approached this work somewhat differently, depending on existing capacities and investments, available resources and commitments, and their local contexts.

Engaging Leadership Commitment to a College Readiness Indicator System

District superintendents, senior staff, organizational leaders, and school principals play a critical role in advancing the development and implementation of a college readiness indicator system. Without strong leadership commitment, a college readiness indicator system initiative risks falling to the bottom of the district's priorities or marginalization from the larger district agenda. Efforts are most likely to succeed when leadership has the capacity and will to articulate both a vision and a set of goals around college readiness and to develop communication strategies that promote a common understanding of these goals—from the central office to schools to classrooms. Effective leadership also reaches out to the community at large about the importance of college readiness and champions equitable access to college readiness resources for all students.

No less important is the role of district leadership in fostering a data-driven culture where college readiness data are used in a systematic way to inform decisions about instruction, college readiness supports for both students and adults, and resource allocation. District leaders support a rich data culture by setting expectations for data use, ensuring that data-informed decisionmaking is a key aspect of their own roles, and encouraging collaborative approaches for the examination of college readiness data.

By allocating the resources needed to develop and implement an indicator system, district leadership affirms the authenticity of its message that college readiness is a top priority. The presence of a solid data infrastructure—one with the capacity to deliver timely information in a user-friendly format that has been disaggregated into meaningful subgroups of students—is a key factor when it comes to implementing an indicator system. Equally important is building staff capacity, not only to use the technology, but also to engage in the inquiry and analysis process. Availability of district supports to the adults—including technical assistance, professional development, and allocation of structured time for staff to collaborate around college readiness indicators—greatly increases the chances that efforts will be fruitful.

Beyond prioritizing college readiness through vision and resource allocation, district leaders play a critical role in the strategic placement of the college readiness indicator system work within the entire district and community environment, ensuring that it is not siloed but regarded as a shared responsibility across agencies and departments.

Our site visits, interviews, and observations underscored how, even in the presence of a strong commitment to the goal of college readiness, district-level events and conditions can impede implementation. Leadership turnover especially posed a major obstacle to meaningful adoption of a college readiness indicator system, even in districts where a strong EWS was already in place. Changes in leadership may disrupt current development and implementation efforts as well as investment in the long-term vision and infrastructure needed to sustain an indicator system initiative.

We also found that multiple district initiatives and conflicting agendas significantly affected the degree to which the work is carried out and maintained. Factors such as severe budget cuts, internal reorganization at the district level, and accountability pressures can also detract from college readiness efforts and hamper the implementation process. Still, we identified promising strategies in several CRIS districts that can help overcome some of these challenges and promote the leadership essential to establishing a system of indicators and supports.

Questions and Considerations

? To what extent is there an agreed-upon definition of college readiness in the district? How is this message being conveyed to schools and to the community?

? How is the indicator system work positioned in relation to the district's mission? Is there an explicit articulation of how the indicator system helps advance the district's strategic goals?

? Has a communications plan been developed to convey the district's vision about college readiness to multiple stakeholder groups?

Key Strategies: Engaging Leadership Commitment to a College Readiness Indicator System

1 Strategically align indicator system development and implementation with district's mission and goals.

RATIONALE: Positioning a college readiness indicator system as a tool to advance the district's overall goals promotes stakeholder buy-in and reduces the chances that the efforts are perceived as an added burden or "just one more initiative."

Examples from the Field

- Leaders at SJUSD closely aligned CRIS indicators to the objectives of Opportunity 21 (the district's 2012–17 strategic plan) and its Key Performance Measures with a focus on measurement and evaluation. www.sjusd.org/pdf/board/SJUSD_KPM_May2012.pdf

- New Visions takes college readiness as its primary commitment and adopts the goal that 80% of students in New Visions schools will graduate from high school and enter and succeed in college. New tools for students, parents, teachers, and administrators track college readiness benchmarks beginning in the 9th grade.

- DISD's superintendent made an explicit commitment to career and college readiness in his strategic plan for the district, Destination 2020, to be supported by strong teacher instruction. As a goal, the plan states, "By the Year 2020, Dallas will have the highest college- and career-ready percentage of graduates of any large urban school district in the nation." The plan details specific college- and career-ready goals for the district to meet, including "80 percent of our students [will] enter college, the military, or a 'career-ready job' straight from high school."

2 Create a CRIS team that includes senior-level staff from key departments and is charged with developing, planning for, and overseeing implementation of a college readiness indicator system.

RATIONALE: Developing and implementing a college readiness indicator system requires a concerted effort that cuts across district departments and benefits from the point of view and expertise of key staff with different roles within the organization. Involvement of senior staff signals the leadership's commitment to the initiative and facilitates buy-in.

Example from the Field

- At the beginning of the initiative, SJUSD formed a CRIS team, which includes senior staff from the areas of Data, Research, & Assessment and Curriculum & Instruction. Staff from the Information Technology department participate in team meetings as needed. The sustained involvement of one of the assistant superintendents with the CRIS team gives visibility to the project and positions it as a district priority.

③ Champion efforts to make college access and success a community-wide priority.

RATIONALE: An educated workforce is critical to sustain a vibrant local economy. Moreover, the goal of college readiness for all students requires a concerted effort to address socio-structural dynamics that put students of color and other underrepresented students at a disadvantage. City government, employers, citizen groups, and other community organizations all have a stake in promoting college readiness (see the Developing Partnerships with Community Institutions and Institutions of Higher Education section) and can play a role in tackling intractable roadblocks to postsecondary education.

Examples from the Field

- In 2006, the PPS superintendent and Pittsburgh's mayor joined forces to create The Pittsburgh Promise, a scholarship program designed to help PPS students pursue a postsecondary education and to contribute to the city's economic and social revitalization. Results from early evaluation efforts of The Pittsburgh Promise are encouraging and suggest a positive effect. www.pittsburghpromise.org/live_benefits.php

- SJUSD has tied its college readiness goals to the district's mission to close the opportunity gap that limits the opportunities of many students in the district, especially those living in poverty and Latino students. http://www.sjusd.org/pdf/board/SP_Exec_Summary_May2012.pdf

④ Develop a strategic communications and outreach plan to inform and involve key stakeholders both inside and outside the district.

RATIONALE: Ongoing and intentional communication of a clearly defined message around college readiness, both internally and externally, builds awareness of and support for the initiative.

Example from the Field

- In 2012, PPS released its first State of the Schools report, designed to provide a public 360-degree view of where schools are succeeding and where they need to grow via key data points aligned to the district's goals. Presented in easy-to-read, school-by-school charts that also indicated progress made during the past year, both Promise Readiness rates—the proportion of high school seniors who had a GPA of 2.5 or higher and a 90% or greater attendance rate—and percentage of chronically absent students—a key indicator of focus in the district's college readiness work—were included. A corresponding State of the District event was held to help broaden community understanding of the challenges and opportunities that the district faces.

Building Data Infrastructure

An effective college readiness indicator system requires a robust and responsive data infrastructure. Technical elements constitute the architecture: database systems (e.g., those related to student information and human resources), data warehouse applications, analytical tools, and reporting mechanisms. Organizational routines and shared expectations also are important to a well-functioning data infrastructure. To make valid, useful, and timely data available to key stakeholders, districts must identify and train the actors responsible for data collection and establish timelines and procedures related to their tasks. These steps are time consuming but essential to the quality of evidence-based decisions.

Even when a district is rich in data, lack of integration across data systems can seriously jeopardize implementation efforts. As documented in the CRIS districts, different data systems often do not "talk to each other" and are not managed by the same people or even the same department. This poses great challenges to bringing information from different sources into a unified report and prevents key stakeholders from having access to meaningful data at critical decision points. Over the course of the initiative, all CRIS districts have made investments to address the siloed nature of their data through tools that pull information from many different locations and integrate it into cohesive reports.

But a strong data infrastructure attends to more than technical and organizational issues. Actionable data are relevant and accurate; they are presented in the formats and on the timelines appropriate to a range of stakeholders—central office administrators, teachers, parents, students, and community partners. A strong, vital data infrastructure features strategies and structures designed to foster communication across and within the district's central office, schools, grades, and departments. An effective data infrastructure includes norms and procedures for routinely gathering feedback from teachers and other users about the utility of reporting formats, indicators, and accessibility. For instance, do key stakeholders find the data to be accurate and relevant to questions of interest to them?

Data collaborations that bring together information technology staff with users at both central office and school levels can be highly valuable, particularly if discussions focus on the most useful data and formats for generating reports and ways to strengthen the college readiness indicator system data infrastructure. Incorporating the end user's perspective maximizes the chances that the

dissemination tools are useful and ultimately embraced. Establishing a streamlined and coherent data infrastructure takes time and work. Research at the CRIS sites indicates that top-down efforts that do not actively seek and incorporate input from end users—the ones who will actually make decisions based on the data—are less likely to succeed.

Teacher input in the process of generating and reporting data increases the chance that findings will be applied to improve students' college readiness. Additionally, teachers' involvement in devising effective tools and procedures around data collection, access, and inquiry helps promote ownership, buy-in, and shared accountability. It also allows for fertile exchange of ideas and strategies and more interconnected ways of working to ensure that students are supported appropriately. Encouraging teachers' input and collaboration in examining and making use of data weakens the isolation or "egg crate" structure of many schools, thus inviting teachers to be more reflective and bolstering their commitment to the successful implementation of a meaningful data infrastructure.

Soliciting teachers' participation and input in building and carrying out a college readiness indicator system can promote more communication within districts and schools. We have seen that data can form the common ground on which classroom teachers, school support staff, and administrators meet to share ideas, develop strategies, and assign responsibility for students' college readiness. All CRIS sites have made and continue to make significant investments to strengthen their data systems technically and organizationally and have developed strategies to include end users' perspectives and suggestions. On the following pages are some of the promising strategies we encountered.

Questions and Considerations

❓ Will the current data infrastructure be able to sustain and deepen a college readiness indicator system? What key investments are needed to address data fragmentation and build systems that are user-friendly and produce accurate, useful information?

❓ To what extent are teachers, administrators, and school leaders data literate?

❓ Who is involved in the development and implementation of a college readiness indicator system? Are multiple stakeholders and varied perspectives a regular part of the process?

❓ What kinds of structures are in place to facilitate ongoing communication and feedback between the central office and schools?

Key Strategies: Building Data Infrastructure

1 Address the problem of fragmented data systems.

RATIONALE: Data silos (e.g., academic performance, attendance, and disciplinary data housed in separate databases that "do not speak to each other") constitute a roadblock to meaningful, real-time data use.

Examples from the Field

■ SJUSD partners with DecisionEd, a company that provides data and performance management services. DecisionEd's data warehousing solution consolidates information from disparate databases to deliver critical metrics through dashboards and customized reports.

■ Since 2010, New Visions has used DataCation, a comprehensive web-based school data management system. The DataCation platform consists of an array of tools that enable educators, parents, and students to track student progress toward graduation and college readiness. DataCation supports educators in breaking down complex student data from diverse sources to inform and support instruction, professional development, curriculum planning, and accountability and policy. New Visions assumes the cost of providing DataCation to its network, although as a third-party vendor, it is available to schools and districts nationwide for a fee.

2 Work to improve data quality.

RATIONALE: The results of any data analysis efforts are only as good as the quality of the data. Evidence-based decisionmaking becomes compromised in the absence of accurate data.

Example from the Field

■ In adopting student attendance as one of the district's academic tenacity indicators, and in recognition that different schools track attendance in different ways, PPS is in the process of developing clear guidelines to bring consistency to the collection of attendance data.

3 Select data tools that users can use within the flow of their work (i.e., tool does not impose interruption to users' regular activities and does not require users to switch gears to engage with data).

RATIONALE: Data tools that do not align with users' natural workflow and that impose an added burden or interruptions are unlikely to be widely adopted.

Examples from the Field

■ DataCation's gradebook function, which allows teachers to calculate and store grade information, blends with the existing flow of teachers' work, and provides real-time access to data. New Visions has adopted a Google platform, Scripts, to provide teachers with a customized, automated workbook for core elements, such as attendance. Parents are sent an automated email or text message when a student misses a class.

■ DISD uses a database that enables the director of counseling to generate "college-ready report cards" that are given to every campus counselor, which shows schools' status with regard to the district goals around college readiness (e.g., Free Application for Federal Student Aid [FAFSA] completion).

④ Invest in resources that promote collaboration among central office departments to facilitate data sharing and collaborative decisionmaking.

RATIONALE: Many districts have disparate information systems and organizational structures that limit the effective use of data. Reform efforts that promote communication and collaboration can help facilitate data sharing, joint decisionmaking, and a shared vision toward a college readiness indicator system.

Examples from the Field

- PPS has hired a data consultant who has extensive experience creating integrated information systems with appropriate technologies that help disaggregate data by subgroups. The data consultant has interviewed and convened central office managers and staff to understand reporting priorities regarding data and develop plans around data governance.

- The DataCation system used by New Visions supports the different levels of data aggregation linked to the different roles educators play in school.

⑤ Obtain access to postsecondary data.

RATIONALE: Linking data on K–12 outcomes to data on postsecondary outcomes helps validate some college readiness indicators (see *A Technical Guide to College Readiness Indicators*).

Example from the Field

- All CRIS sites participate in the National Student Clearinghouse's Student Tracker for High School Service to examine the relationship between K–12 outcomes and postsecondary enrollment and completion. The Student Tracker for High School online research service offers real-time, accurate data on student outcomes in U.S. higher education institutions.

⑥ Enlist teacher participation in all stages of implementation.

RATIONALE: The incorporation of the teacher perspective increases the chances that the data system provides relevant, accurate, and timely information and disseminates data in a format that teachers can understand and ultimately embrace.

Examples from the Field

- A set of school administrators and teachers were actively involved in selecting SJUSD's college readiness indicators and moving each one through cycles of inquiry. Teachers are also part of the OPSTAT teams, which focus on the articulation of each of the district's Key Performance Measures. The district defines OPSTAT ("OP" for Opportunity 21, the name of the district's strategic plan, and "STAT" for Statistics and its data-driven nature) as "a process whereby teams composed of both site and central office staff create replicable systemic practices to improve student outcomes."

- New Visions teachers had a crucial role in the design of their DataCation platform, and they provide ongoing feedback about ways in which it could be improved. Additionally, the organization's teacher effectiveness inquiry team identifies data gaps and makes decisions about critical data needed to support process monitoring.

Strengthening Adult Capacity around Data Use and College Readiness

Across the country, districts are investing in new, state-of-the-art data systems and collecting an array of student-level information (e.g., attendance, course schedules, and benchmark assessments). However, end users may have a limited ability to make sense of these data to inform action in substantive ways. For both teachers and administrators, barriers to data use include insufficient allocated time to work collaboratively in data teams and lack of skills to analyze, interpret, and use data to guide improvement. To promote continued gains in college readiness, districts should pair their investment in data systems with an investment in enhancing the capacity of adults—both at the district and school levels—to use data to help improve classroom practice, increase learning, track college readiness, and apply appropriate interventions. Building adult capacity around data use includes improving knowledge of how to access, collect, filter, organize, manage, and probe data in a systematic way and act upon results in a timely manner (see the Connecting Indicators with Supports to Promote College Readiness section).

Many CRIS sites also provide parents with access to relevant data and include them in capacity-building efforts around data use through targeted outreach. These efforts focus on interpreting the attendance, grade, course-taking, and other college readiness data available from the school. In at least one CRIS site, parents receive hands-on assistance in accessing their schools' online data to see how students' progress maps to college readiness benchmarks, as well as records related to issues of attendance or discipline.

In addition to building adult capacity around data use, a sustainable college readiness indicator system involves opportunities for teachers and administrators to develop a common understanding of what it means for a student to be ready to engage and succeed in college-level work. The CRIS initiative's multidimensional and multilevel conceptualization of college readiness (see the *Beyond College Eligbility: A New Framework for Promoting College Readiness*) can provide a starting point for unpacking what it means to be college ready. Districts can further advance this framework by setting goals in all three dimensions (academic preparedness, academic tenacity, and college knowledge) that are clear, vetted, regularly communicated, and understood by all stakeholders. In turn, these goals could guide subsequent actions and responses and create the conditions that reinforce a focus on college readiness.

Building college readiness capacity also includes deliberate efforts to provide teachers and parents with information about college application and financial procedures, as well as the variety of college options students might consider. CRIS sites and other districts have learned that students typically first direct these questions about college to their teachers, who often feel ill-prepared to answer their questions—especially those working in the early high school grades. Many parents also are unfamiliar with the grades, tests, and courses that are needed for a successful college application and with the procedures and opportunities for financial aid. This college knowledge figures prominently in building both teachers' and parents' capacities to support college readiness.

On the following pages are some of the promising strategies CRIS sites used to build adult capacity on data use and college readiness.

Questions and Considerations

? To what extent are educators provided the time to analyze data and collaborate with colleagues? Are these opportunities structured, consistent, protected, and supported?

? What kinds of resources and opportunities exist to build the capacity of administrators, teachers, and parents to access, interpret, and act upon data?

? What kinds of resources exist to build capacity around college knowledge?

Key Strategies: Strenghtening Adult Capacity around Data Use and College Readiness

1 **Dedicate structured time for staff to engage collaboratively in data analysis and discussions about strategy to bolster students' readiness for college.**

RATIONALE: Creating regular opportunities for a cadre of staff to engage in a collaborative inquiry process will improve their expertise and experience in the technical, organizational, and substantive aspects of data use.

Examples from the Field

■ SJUSD piloted a college readiness indicator system in three schools; each has a data team in place that meets regularly to discuss progress on the implementation of their selected college readiness indicators. A member of the central office CRIS team attends these meetings to ensure that college readiness efforts align across schools and to serve as liaison between school staff and district leadership.

■ In addition, SJUSD established OPSTAT working groups that meet two to six times a year. Each OPSTAT team focuses on one of the district's Key Performance Measures.

■ DISD's executive directors of strategic feeder patterns lead regular group meetings with principals to review their schools' data on key academic indicators. Principals rotate presenting their data to their peers and executive directors using a standardized PowerPoint and a protocol for peers to ask questions. Data from key points during the school year (e.g. the six-week mark after school begins) are examined for intervention purposes.

2 **Designate a school-based data facilitator.**

RATIONALE: With the targeted support of a data facilitator, school leadership and teachers can develop their own data-inquiry skill set.

Examples from the Field

■ In New Visions, each school is assigned a leadership development facilitator (LDF), who provides intensive on-site coaching to a school inquiry team. LDFs support inquiry teams in the process of examining student data; selecting a target population; and developing, testing, and refining strategies to improve the achievement of that population. All New Visions schools assign a teacher to the role of data specialist to examine and present data clearly to teachers, students, and parents.

■ DISD hired data coaches who worked with school-level actors (particularly principals) on capacity building around data that the central office provided to them. These coaches were supervised at the district level but spent the majority of their time in schools.

3 **Support the use of data through professional development.**

RATIONALE: Professional development ensures that educators are able to collect, access, and analyze data to improve instruction, monitor student achievement, and provide appropriate interventions.

Example from the Field

■ The 2010 launch of New Visions' customized web-based student information system, DataCation, was accompanied by intensive staff training. In the two years following the system's adoption, New Visions delivered more than 260 trainings that reached almost 3,000 educators.

4 **Provide opportunities for school leaders to learn from one another.**

RATIONALE: Colleagues dealing with similar challenges and experiences in different settings make valuable learning partners.

Example from the Field

■ New Visions staff facilitate Critical Friends Groups for all principals in their network of schools. Critical Friends Groups tend to be either geographical or focused on a specific type of school (e.g., large high schools or transfer schools). The most effective groups studied school data extensively and visited other campuses to learn about each other's systems and practice.

5 **Provide opportunities for teachers to acquire knowledge and skills to support students in the process of applying to and getting ready for college.**

RATIONALE: Teachers can be critical conduits of college knowledge; they have ideally already built trust with their students and can make important connections between college knowledge and the high school curricula they teach.

Examples from the Field

■ DISD trains teachers across different high school campuses to help students prepare for the SAT exam.

■ New Visions provides all high school teachers with information about college options, application procedures, and other relevant college knowledge.

6 Provide parents with information about the academic prerequisites to apply for college, the steps in the application process, and financial aid.

RATIONALE: Many parents do not have experience with higher education or they come from countries with different educational systems. Giving them access to key information about how to prepare for and apply to college helps clear misconceptions (e.g., college is too expensive, family cannot afford it, etc.) and allows them to best support their children in meeting their postsecondary aspirations.

Examples from the Field

- DISD is planning to implement a Parent University, which is designed to help parents at all levels understand the steps in getting ready for and applying to college. Workshops will be offered on a variety of topics including financial aid and SAT/ACT preparation. This program will integrate current activities in which counselors educate students about scholarships and host college nights to educate parents and students about the FAFSA. Counselors target their outreach based on the FAFSA completion rate at schools and individual FAFSA filing data.

- New Visions engages parents of 9th graders early on to make sure they know what students must do to stay on track. They share information via ongoing bilingual workshops and parent-centered publications. New Visions provides parents of 11th graders the brochure "Eleventh grade: The College Application Process Starts Here!" The brochure has a detailed listing of application and financial aid requirements and resources, as well as important dates and benchmarks.

7 Provide parents with real-time information about their students' progress toward college readiness goals.

RATIONALE: Electronic access to their child's indicator data (e.g., GPA, attendance, course-taking) allows parents to take proactive steps as soon as their student falls off track and to advocate for necessary supports so he or she can overcome current obstacles.

Examples from the Field

- New Visions has put in place the Ninth Grade Parent Involvement in College Readiness Initiative. The main strategy underlying this effort has been the creation of both school- and student-level performance data tools and four core 9th grade college readiness benchmarks. A school-based coordinator uses these tools to engage parents around issues of college awareness and college readiness. New Visions provides assistance to parent coordinators to help them align parent involvement efforts to college readiness goals. The College Readiness Tracker tool enables all stakeholders, especially parents, to quickly and easily determine individual students' progress in various areas of academic performance. The trackers are often mailed with report cards or distributed at parent-teacher conferences; parents also can access the tracker electronically.

- PPS' Online Parent Access provides parents and students with a means to obtain attendance, grade, and assignment information in a real-time web tool. In addition, PPS' ePromise online system captures historical student data used to gauge Pittsburgh Promise eligibility.

Connecting Indicators with Supports to Promote College Readiness

Using data to inform action is an important foundation for improving student, school, and district outcomes. Indicators that capture trends at the student, school, and district levels can remove guesswork and reliance on anecdotal evidence in tracking progress toward college readiness and providing timely intervention as needed. The process of connecting indicator data to appropriate supports is, however, complex. Making sense of data and acting on findings require significant coordination, considerable support, and strong leadership vision.

Data points do not in themselves indicate an appropriate course of action and can mean dissimilar things to various people in different settings. Data interpretation— for example, determining possible causes underlying a particular data trend, which in turn will dictate the kinds of interventions that will be needed—is not typically a solitary undertaking. Rather it is the result of how individuals in diverse roles and locations in the education system collectively make sense of data. The translation of data into action also depends on the degree to which the individuals involved are decisionmakers (e.g., assistant superintendent versus teacher's aide) and the resources at their disposal.

When adults at schools and in district offices have the opportunity to convene regularly in inquiry groups to examine and interpret indicator data, coordinate and assess intervention efforts, and make course corrections when needed, it improves the chances that students will receive the supports they need to finish high school ready for college. These interactions also help build collegiality among staff and increase their professional capacity to solve problems and make decisions expeditiously.

The task of connecting indicators to supports can be successful only when the process used to collect, analyze, and make decisions based on data is carefully thought out. The Cycle of Inquiry is the "engine" that enables the identification of students who need help and effective interventions to ensure they stay on track for college readiness (see *Beyond College Eligibility: A New Framework for Promoting College Readiness*). The Cycle of Inquiry entails engaging in a systematic and iterative process of collecting, analyzing, and acting upon data.

The Cycle of Inquiry also helps involved adults monitor school- and district-level conditions that promote college readiness for all students and to take action when these conditions are not met. Importantly, the Cycle of Inquiry allows individuals

to engage in a recursive process of monitoring indicators after the introduction of supports or interventions and making adjustments as needed. It is also important to note that the Cycle of Inquiry is a flexible framework and not an exact recipe. True inquiry is often messy; new discoveries lead to additional questions, data gathering, and analyses. The Cycle of Inquiry captures phases rather than steps, and as such, various entry points are possible to best accommodate the needs and capacities of particular contexts at different times.
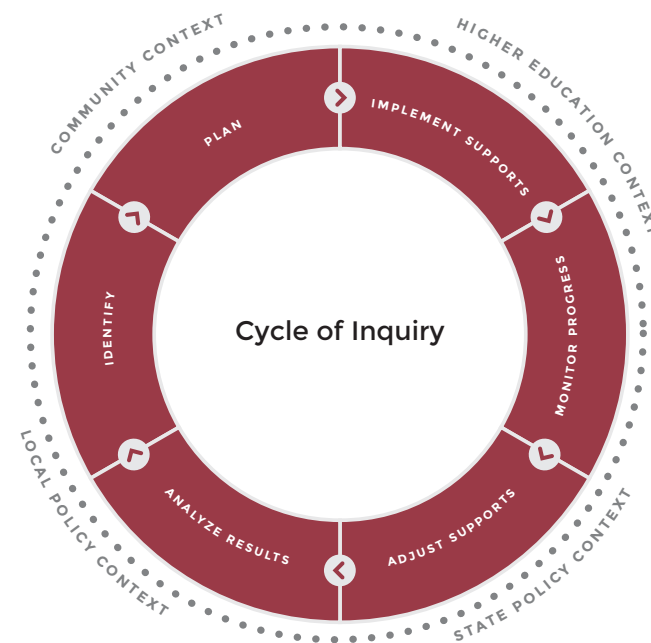
To effectively use information, stakeholders must be confident that their data are valid, reliable, and accurate. For instance, cut scores (see *A Technical Guide to College Readiness Indicators* and *Menu of College Readiness Indicators and Supports*) often are an issue in connecting indicators to action because it can be unclear where to place the threshold that differentiates between students who are college ready and those who are not. Also, there is little guarantee that the agreed-upon threshold will elicit the best information to guide the types of services and interventions students need to improve. For example, should students be identified as in need of support if their GPA falls below 2.5 or 2.0? When they fail one or two core courses? When they accrue three unexcused absences in a row? Which indicators have

more weight or predictive properties? Schools and districts will need to examine the relative importance and predictability of these warning flags and determine for themselves, using data collected in their local context, when and what type of action should be taken.

It is essential, as well, that concrete supports are used to promote college readiness. Supports refer to programs or activities that are enacted to effect some intended change in individuals' performance, behavior, or environment. In some cases, supports target students (e.g., tutoring program, workshop on how to complete the FASFA, etc.), and in others they target adults (e.g., a data coach who can facilitate staff conversations about data, teacher professional development around college readiness, etc.).

Youth who are the first generation in their families to attend college, from immigrant backgrounds, or from socioeconomically disadvantaged homes often require intensive and ongoing supports ranging from subject-specific tutoring to health and wellness services to assistance in completing applications and financial aid forms. As such, supports need to be available that target not only academic preparedness but also academic tenacity and college knowledge (see *Beyond College Eligibility: A New Framework for Promoting College Readiness*). Supports for academic tenacity strengthen the underlying behaviors and mindsets that drive students' achievement, bolstering their ability to persist in learning tasks despite setbacks, which is critical to college success. Supports that focus on college knowledge address issues for first-generation and disadvantaged students, who often lack appropriate information about the college-going process. They frequently

face the college application process without assistance from their parents or family members, who may have little to no knowledge of the process. School counselors can help address these areas of need and serve as an important resource for students and families. Supports must also target the adults working in district offices and schools: professional development opportunities, technical assistance, and structured time dedicated to data collaboration to improve college readiness.

Many of the CRIS sites remain in the early stages of connecting their identified indicators (e.g., attendance and students' enrollment in Advanced Placement [AP] courses) with a set of specific plans and actions. These districts are beginning to systematically assign and track available supports and monitor their effectiveness. Below are some of our observations of emergent strategies that demonstrate promise in both areas.

Questions and Considerations

? To what extent is the Cycle of Inquiry in place at district and school levels? Do agreements exist about responsibilities for collecting, analyzing, and acting on data? Are timelines developed and used?

? Do teachers and administrators have information about resources and supports to which they can refer students? How are decisions made about which supports to try based on the identified problem? Is there a mechanism in place to track the effectiveness of supports?

? How are supports distributed across schools? Does the distribution of supports match students' needs?

Key Strategies: Connecting Indicators with Supports to Promote College Readiness

❶ Specify plans for collecting, organizing, and analyzing data, and indicate staff members responsible for carrying out steps in the data-use process.

RATIONALE: Having an explicit plan and rationale for each action in the data-use process can help focus the team's attention and inquiry process, cultivate a culture of instructional improvement, and reinforce evidence-based decisionmaking and practice.

Example from the Field

- New Visions implemented a data timeline, which lays out when data are collected, when data are available, and which individuals are responsible for data analysis and subsequent actions. The timeline helps to demystify the data process, hold individuals accountable for collecting data in a timely way, and enable educators to make better use of data.

❷ Establish data teams composed of representatives from all levels and roles in the organization (district, school, classroom) to engage in deep inquiry around a given indicator, establish decision rules based on validated cut-off scores, and provide guidance on supports to ensure that students can be on track in relation to that indicator.

RATIONALE: Convening a team whose representatives are selected based on their expertise in relation to the target indicator, and holding focused meetings to examine relevant data and identify thresholds and interventions, is a practical and sustainable way to spearhead efforts related to that indicator.

Examples from the Field

- SJUSD established OPSTAT working groups to engage deeply with policy areas directly relevant to the district's strategic plan. The first OPSTAT team, composed of a set of administrators, teachers, and counselors, worked during the 2012–13 academic year on the district's Advanced Placement indicator. Based on in-depth examination of the district's data, the team established thresholds to define three tiers of supports that students may need to succeed in Advanced Placement courses.

- All New Visions schools have inquiry teams—groups of teachers who meet at least once a week to review student data and discuss how to improve supports for struggling students. Inquiry teams engage in a cycle of problem identification, intervention, and assessment. New Visions staff members support school teams' inquiry work and capacity to interpret student data and connect it to action.

❸ Promote students' and families' knowledge about college readiness, the application process, and the financial aspects of attending college.

RATIONALE: Access to college information, guidance, supports, and other resources assists students and families in the process of entering postsecondary education.

Examples from the Field

■ DISD is piloting the Roadmap to Success student curriculum, which was developed by the nonprofit organization Education Opens Doors. The Roadmap to Success is an interactive handbook that engages students in postsecondary preparatory activities (e.g., planning for college, calculating GPAs, and evaluating different colleges). In addition, the district offers financial aid information nights for parents in both English and Spanish.

■ New Visions partners with iMentor, a New York City school-based program that pairs students in one-to-one relationships with college-educated mentors who can help them navigate from high school completion through college enrollment. Every 9th grader at iMentor schools receives a mentor who augments existing guidance and college counseling programs. Mentor–mentee pairs are matched for three to four years, exchange weekly emails, and meet in person monthly.

■ New Visions' College Success Tracker provides information about the most promising college match for a student given his or her academic record (rather than mere eligibility). The Tracker also offers guidance about which postsecondary settings are most appropriate for various students. New Visions uses National Student Clearinghouse data and data from local postsecondary institutions to track New Visions graduates into college.

■ New Visions requires every student to complete an application to the City University of New York in their sophomore or junior year.

■ With the underlying goal of increasing student participation in advanced classes, SJUSD holds Advanced Placement/International Baccalaureate information sessions for students and parents. In addition, student ambassadors help demystify these programs for middle grade students.

❹ Connect students with the academic supports they need to prepare for the rigor of postsecondary work.

RATIONALE: Access to timely and effective academic supports helps prevent students' postsecondary aspirations from being cut short due to weak academic preparation.

Examples from the Field

■ To promote student success in advanced courses, SJUSD offers AP/International Baccalaureate summer boot camp, AP labs and review workshops, and student-led study groups.

■ In SJUSD, a school climate survey revealed that students feel they do not have enough information about how to finance a college education. To address this finding, counselors are working to make financial aid information readily available. In addition, the district offers financial aid information nights (in English and Spanish) for parents.

■ This year, DISD will pilot the Texas State Initiative assessments with students in grades 10 and 11. The assessments will help diagnose remediation issues prior to students' enrollment in college, identify areas where students need support, and increase students' enrollment in dual-credit courses.

⑤ Provide students opportunities to build skills, behaviors, and mindsets that help them persist and overcome challenges on the road to college graduation.

RATIONALE: The belief that hard work pays off, the ability to bounce back after experiencing failure, the willingness to take academic risks, and the capacity to advocate for oneself all contribute to students' success in postsecondary education and in life.

Example from the Field

■ SJUSD offers a range of supports to prepare students who are new to the rigors of advanced coursework. Students participate in AP Boot Camp, which is not content-specific but focused on learning styles, time/stress management, organizational skills, and resiliency. Student-led study groups, AVID (Advancement Via Individual Determination) classes, and AP retreats also build students' confidence and encourage peer support.

⑥ Coordinate vertical alignment of college readiness efforts through school feeder patterns.

RATIONALE: Coordinating efforts can help ensure that the path toward college readiness starts when a child enters elementary school. It can also help locate responsibility for promoting college readiness in elementary and middle schools in addition to high schools.

Examples from the Field

■ DISD has hired college and career readiness coordinators to ensure that college readiness efforts are aligned and have continuity across elementary, middle, and high school feeder patterns. The coordinators also assist with data collection to track progress on college readiness goals.

■ At SJUSD, the three CRIS pilot schools (an elementary school, a middle school, and a high school) form a feeder pattern. Administrators and teachers from the three schools have worked together to establish alignment of target indicators across schools.

Developing Partnerships with Community Institutions and Institutions of Higher Education

The shift from focusing on high school graduation to postsecondary success has created new opportunities for community-based organizations (CBOs), city agencies, and higher education institutions to partner with and support districts and schools. High-quality collaborations between districts and their partners can leverage resources, supports, and expertise that exist outside the K–12 school system and can help forge stronger links for students as they transition from high school to institutions of higher education.

As more partners collaborate and work with students to be successful in college, many have begun to recognize that sharing data across organizations can help measure the impact of their strategies, reduce redundancies in their efforts, and provide targeted student aid. Successful partnerships require shared visions, responsibilities, and cultural norms among partners. Data can strengthen not only individual organizations' internal capacity but also the relationships among partners. Districts and their partners, including our CRIS sites, are developing high-quality collaborations to increase college readiness. There are multiple types of partnerships and degrees of engagement between districts and partners, ranging from informal, ad hoc groups of organizations that meet to discuss common interests in college readiness to formal partnerships with memoranda-of-understanding and detailed data-use agreements. Data sharing around college

readiness is a key feature of many partnerships, but it can be difficult due to technical and privacy issues. Formal data-use agreements can allow districts and partners to securely and effectively measure student progress and help define each organization's roles and responsibilities.

Intermediary organizations can raise awareness of college readiness across their communities, as well as play "air traffic controller" to help coordinate the many groups focused on preparing young people for higher education. Finally, a number of partners are now extending their reach from college readiness to college completion by providing a continuum of supports from K–12 through postsecondary.

Questions and Considerations

? To what extent is college readiness supported by partnerships with community agencies, institutions of higher education, and postsecondary training programs? Have the district and schools mapped potential local public and private partners relevant to college readiness efforts?

? Where are there opportunities to engage key community actors (e.g., mayor's office, local businesses, advocacy groups, etc.) to support and champion the district's college readiness efforts?

? Do partnerships include agreements about how student data will be used?

Key Strategies: Developing Partnerships with Community Institutions

1 **Understand the district's current criteria for entering into partnerships with external organizations around college readiness.**

RATIONALE: Developing effective partnerships with external organizations requires districts to ensure that partners are aligned with district vision and goals and to have criteria for assessing the scope, scale, and quality of partner work.

Example from the Field

- DISD's Office of Evaluation & Accountability works with college readiness providers to develop quality criteria for evaluation.

2 **Share data with community institutions to assist districts and partners in supporting students' college readiness, providing needed supports, and locating gaps in both service and quality of those supports.**

RATIONALE: Shared visions and goals are critical in developing cross-sector partnerships to support college readiness. The formality of partnerships can depend on a variety of factors, including data-sharing capability, shared decisionmaking, and incentives. One of the most important elements in maintaining shared college readiness goals is a firm data-sharing agreement between partners.

Examples from the Field

- The College Access Program (CAP) is a formal partnership between DISD and CBOs to share data and provide supports to students for college readiness and success. This collaboration was created to support DISD's needs in helping high school students prepare for college (e.g., college entrance exams, parent engagement in college application, and the financial aid process). In addition to programmatic support, the partnership requires DISD and CAP program partners to establish a formal data-use agreement to exchange data on students served on campus. CAP partners receive each student's grades and schedules, and DISD collects monthly reports and updates on the progress of their students. One of the benefits of this partnership is the use of a common template that allows DISD staff to have a comparable set of indicators to measure and evaluate CAP partners' effectiveness.

- PPS provides an example of a partnership between a district and a nonprofit that includes a formal agreement around data. United Way's Be a Middle School Mentor program enlists community volunteers to mentor PPS middle school students weekly for at least one school year. The program includes both close partnerships with school-based staff and a memorandum of understanding between United Way and the district.

Key Strategies: Developing Partnerships with Institutions of Higher Education

1 **Understand the district's current criteria for entering into partnerships with institutions of higher education around college readiness.**

RATIONALE: Developing quality partnerships with external organizations requires districts to make sure that partners are aligned with district vision and goals and to have criteria for assessing the scope, scale, and quality of partner work.

Example from the Field

- DISD's Office of Evaluation and Accountability develops criteria for college access service provider selection, monitoring, and evaluation. The district puts out an RFP for outside vendors to submit bids to provide services, and a committee reviews proposals and approves vendors. The College & Career Readiness department then organizes a principals meeting where vendors present on their programs and capabilities. Providers complete monthly reports for the College Access Program, which include data on individual students' college applications and acceptance, services provided, and financial information.

2 **Share data with institutions of higher education to assist both organizations in supporting students' college readiness, providing needed supports, locating gaps in both service and quality of those supports, and bridging supports as students transition from K–12 to higher education.**

RATIONALE: One of the most important elements in maintaining shared college readiness goals is a firm data-sharing agreement between partners. If external partners do not have broad access to student information from the school or district that they work with, it will greatly inhibit their ability to match student indicators with interventions.

Examples from the Field

- Graduate NYC! is a linked K–16 data system that allows tracking of individual students and the development of "Where Are They Now?" reports that provide all New York City high schools, including the New Visions schools in the city, with data on the persistence and success of their graduates who enroll in the City University of New York system.

- A data-sharing partnership between SJUSD and the University of California at Berkeley (UC Berkeley) allowed low-performing schools in the district to provide college readiness supports based on the reports generated by UC Berkeley's Transcript Evaluation Service program. The district shares the students' transcripts with UC Berkeley, which then evaluates them based on the university's admission benchmarks and also uses this information to support their guidance counselor fellowship program.

- DISD has a relationship—and an active data use agreement—with the Dallas County Community College District (DCCCD). In the past few years, DCCCD began sharing data with DISD; DISD's CRIS team then linked DISD and DCCCD data to analyze remediation issues. The new director of DISD's Career & College Readiness department continues to reach out to the DCCCD to find ways to share data in meaningful ways to improve students' postsecondary transitions.

- The Texas Higher Education Coordinating Board reports on students applying to public institutions of higher education in Texas. DISD uses these data to track the percentage of its students applying to these colleges.

Conclusion

The five essential elements described in this resource are foundational to the successful development and implementation of a college readiness indicator system. While our research in the CRIS sites identified the presence of many relevant promising strategies, it also uncovered substantial roadblocks to the success of college readiness indicator systems.

For example, we found that the task of compiling and maintaining an inventory of the multiple student supports available across a system posed a substantial challenge because college readiness supports generally are not routinely documented or evaluated. In addition, the process of matching students with appropriate supports when college readiness indicators flag them as off-track, and customizing these supports to bolster students' progress, remains underdeveloped. Another challenge is keeping track of the students receiving any given support as well as the nature of the intervention (e.g., frequency and duration of student attendance to afterschool tutoring classes). As a consequence, formal monitoring of supports' effectiveness seldom occurs.

Also salient is the need to adopt systematic procedures for data collection, analysis, and decisionmaking around indicators, as well as the imperative to build educators' capacity to use data in substantive ways. Central office staff can support the use of evidence at the setting level in multiple ways, such as helping school staff set aside uninterrupted time to examine student records, share approaches and ideas, and explore options for improvement. District leaders also can communicate expectations for staff data use and support and model these expectations through professional development, convenings, and resources.

Using evidence to improve student outcomes is not a one-way street. Districts can provide schools with user-friendly and timely data on their students, but schools also will need to feed data they collect—including data on outcomes following use

of supports—back up to the district. Successful implementation depends on this two-way communcation; however, school-central office relationships around data are complicated and deserve further inquiry.

The reform landscape around assessment and college readiness demands a systematic approach that is flexible enough to meet the unique contextual needs of districts, school networks, traditional schools, and public charter schools. All of these entities are adopting college readiness as their ultimate outcome measure. The Common Core State Standards, which emphasize the knowledge and skills young people need to succeed in college, have been promoted at the federal level and adopted in nearly every state. More states are also adopting longitudinal data systems that allow them to offer vision, guidance, and support to districts and school networks. *A Technical Guide to College Readiness Indicators* and *Essential Elements in Implementation* are specifically designed to buttress current and future college readiness reform efforts.

Closing Questions and Considerations

? To what extent are Common Core State Standards implementation efforts linked with the district's college readiness indicator system implementation efforts? Where are there opportunities to leverage a college readiness indicator system in support of Common Core implementation?

? Are current state-level college readiness efforts aligned with or supportive of the district's indicator system (whatever stage it is in)? Are there opportunities to use state efforts to the benefit of the college readiness indicator system initiative?

? Have challenges with establishing the district's college readiness indicator system been documented? Is there a mechanism for ongoing quality assurance and improvements that involves actors at the school, district, and community levels?

The CRIS Research Partners