Trending in the Right Direction

A Data for the People Progress Report on California’s Cradle-to-Career (C2C) Data System
Introduction

In 2019, at the urging of Governor Gavin Newsom, California state lawmakers passed legislation to establish the California Cradle-to-Career Data System Workgroup, comprised of dozens of members representing diverse stakeholders including state agencies, educational institutions, research and policy organizations, and community groups who were tasked to evaluate and provide recommendations on the implementation of a comprehensive statewide longitudinal data system (SLDS).

In 2021, the Office of Cradle-to-Career (C2C) was established, marking a significant milestone in these efforts. Since then, the state has allocated $40.52 million in funding to support the agency’s efforts. This commitment from the state to build the C2C Data System represents a major achievement because it addresses over a decade of calls from advocates, educators, students, researchers, families, and others to build a comprehensive, longitudinal data system connecting critical state-level educational, workforce, financial aid, and social services. That information can be leveraged to inform decisions about education and workforce state investments and individual pathways. Put simply, if developed well, the C2C Data System has the power to be a significant tool for improving racial and socioeconomic justice in California’s institutions — from a child’s earliest years all the way to a student’s educational journey into college and career.

Given the substantial state investment and the potential for more, better, and accessible data to answer critical policy questions and guide fairer educational resource allocation, in 2019 we proposed a set of five Data 4 the People principles. Advocates shared that these principles were important to guide equity-minded policy design, development, and implementation of the data system.

In this report we use those five principles to assess the C2C Data System’s progress to date and whether the system is being designed and implemented such that:

► Data can be used to inform systemic, asset, and equity-oriented change.
► Data and tools produced are accessible and publicly available.
► Student privacy is protected.
► All students are counted with the ability to disaggregate.
► Students and families are meaningfully engaged.

We find that significant progress has been made with respect to each of the five principles. In addition, we identify several areas that, at this critical juncture in the system’s development, require more attention so that implementation will more strongly align with the principles. We offer a set of recommendations that include additional steps state leaders must take to ensure that the system centers accessibility, transparency, and equity.
Assessing the C2C Data System’s Development

In this section, we assess the development and implementation of the C2C Data System against each of the five Data 4 the People principles and rate the strength of alignment based on our review of current statute, legislative reports, actions taken at governing and advisory board meetings, and official documents posted on the C2C website.

We assess the system’s development against each principle using the following rubric to determine alignment. Figure 1 displays our overall ratings:

- **Strong**: State plans and work include clear, strong evidence that C2C is being developed in alignment with this equity principle.
- **Promising**: State plans and work show an indication that C2C is being developed in alignment with this equity principle.
- **Satisfactory**: State plans and work show some indication that C2C is being developed in alignment with this equity principle.
- **Weak**: State plans and work show very little to no indication that C2C is being developed in alignment with this equity principle.

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Assessing California’s C2C Data System Alignment with EdTrust–West’s Data 4 the People Principles

<table>
<thead>
<tr>
<th>Principle</th>
<th>Current Alignment</th>
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<tr>
<td>Use data to inform systemic, asset, and equity-informed change</td>
<td>Promising</td>
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<tr>
<td>Produce accessible and public-facing data and tools</td>
<td>Promising</td>
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<tr>
<td>Protect student privacy</td>
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<td>Disaggregate all data and count all students</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Meaningfully engage students and families</td>
<td>Promising</td>
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EdTrust–West’s Data 4 the People Principles in Action

Here, we expand upon the importance of each principle and provide clear examples of state efforts and commitments to future action as evidence of the data system’s strong alignment with each principle. Although C2C leaders have yet to launch the data system to the public, ongoing development updates, as shared in public meetings, offer a basis for assessing its alignment with each of the principles. Further we present key recommendations aimed at strengthening the system’s alignment with these foundational principles.

**DATA 4 THE PEOPLE PRINCIPLE 1:**
Use Data to Inform Systemic, Asset, and Equity-Oriented Change: Promising

C2C and its board members must prioritize users’ ability to identify and remedy racial equity gaps as they continue to develop the data system. C2C leaders must also ensure the data system grounds future users in the assets of communities of color — in particular, to avoid harm to these communities. So far, C2C leaders have demonstrated promising alignment to Principle 1 by:

**Convening a Collaborative Planning Process:**
Through a collaborative 18-month planning process, C2C leaders held more than 100 public meetings and gathered input from various stakeholders including government leaders, data providers, data experts, education leaders, and community members. This level of partnership and inclusion has begun to set up the data system to respond to the needs of users and has increased the likelihood that it will supply actionable insights.

**Establishing a Governing Board and Advisory Boards:** The legislative statute that authorized the creation of the data system also created a governing board that meets quarterly and consists of representatives from higher education institutions, state education agencies, human services and workforce agencies, local and state policymakers, and youth experts. The system also has two advisory boards that meet each trimester — the Data & Tools Advisory Board and the Community Engagement Advisory Board — to give expert advice on how the system can support equitable systems change. These advisory boards are crucial to ensure that ongoing community input is built into the governance of the data system.

**Integrating More Than a Billion Data Points, Enabling Equity-Monitoring Across Silos:** As of November 2023, C2C has begun linking data from 15 state entities representing early childhood, TK-12, higher education, health and social services, and workforce development. This cross-sector integration of data will allow users to identify disparities across various systems and demographic groups from birth through the workforce. This information can be used to hold institutions accountable for addressing inequities, identifying what’s working well (i.e., bright spots), and giving all California’s communities access to opportunities and support.
DATA 4 THE PEOPLE PRINCIPLE 2:
Produce Accessible and Public-Facing Data and Tools: **Promising**

At its core, the C2C Data System must produce public-facing and actionable data and tools, including datasets, dashboards, and consumer and analytic tools for different types of users. Accessible and user-friendly data sources will also enable decision-makers at all levels to leverage data to promote racial equity in the education system and allow students and families to make informed decisions about educational opportunities in California. At this point, C2C leaders have demonstrated promising alignment to Principle 2 by:

► **Planning for the Launch of Two Data Dashboards:** C2C is set to launch in 2024 the first of its public-facing dashboards, which will include two complementary tools: the Student Pathways Dashboard and the Teacher Training and Retention Dashboard. These dashboards, and learning materials C2C plans to accompany them with to create “data stories” will shed light on students’ and educators’ pathways and help support efforts to eliminate disparities along those pathways.

► The Student Pathways Dashboard will enable users to track, visualize, and analyze educational experiences, pathways, and outcomes across institutions and educational transitions. It will include data about academic performance, attendance and absenteeism, and student demographics.

► The Teacher Training and Retention Dashboard will allow users to visualize and analyze teacher training pipelines, workforce trends, and teacher diversity across the state. This dashboard will better enable education decision-makers at all levels to address the teacher shortage, increase educator diversity, improve teacher preparation, and achieve equity in access to properly credentialed teachers.

► **Securing Interagency, Cross-Segmental Cooperation:** C2C has secured data-sharing agreements with 16 data providers. With these agreements in place, the data system will be able to share data that has historically been difficult to access. Having access to this extensive amount of information will allow local and state decision-makers and educators across the state to better understand equity challenges and disparities and design solutions to address them and advance racial equity.

► **Supporting the Scaling of Practical Tools:** C2C has supported the expansion of two practical tools for students to help remove barriers in the transition into college. These efforts will continue to simplify the college application process and offer valuable advice to both students and families.

► With leadership from the California College Guidance Initiative (CCGI), the C2C office is supporting the expansion of access to CaliforniaColleges.edu, a one-stop platform enabling high school students to streamline their planning for and applications to California colleges.

Key Considerations for Stronger Alignment:

► **To Demonstrate a Commitment to User-Centered Design, Center Equity and the Needs of Marginalized Communities:** C2C leaders must consider and center the needs of end users — especially those from marginalized communities. This effort may include developing user-friendly communications with accessible language and avoiding jargon. C2C leaders should also consider hosting workshops for staff and educator partners on communicating about data in a way that disrupts deficit framing, to ensure the data, results, and associated tools are inclusive of, and accessible to, all users.

► **Ensure Full Integration of State’s Early Childhood, Health, and Workforce Data:** As the state continues to develop its Early Childhood Integrated Data System and plans for future data integration from all state agency partners, it must establish a well-coordinated, cross-agency effort to collect data and ensure that the information meets the criteria for integration into the C2C Data System. State leaders must commit to inclusive data-collection and integration efforts across data provider agencies in the cradle-to-career continuum; such strides are necessary to truly ensure that California will be able to identify inequities and disparities along these pathways and design solutions to address them and advance racial equity.
The C2C office has also announced that it will leverage eTranscript California, an existing statewide electronic transcript exchange tool, across TK systems and postsecondary institutions. This will help to lift the administrative burden of submitting transcripts from students and shed light on the trends around concurrent/dual enrollment, college enrollment, and college transfer.

Performing a Student Experience Audit: To help inform the ongoing implementation of the data system, the C2C office is required to conduct an annual student experience audit to solicit direct feedback from students and communities about their experiences navigating the transition from high school to postsecondary education. The forthcoming annual findings of this audit will help to produce student-informed insights, which will be vital to the data system’s effective use and continuous improvement.

Establishing the C2C Data System’s Governance Manual as a Living Document: Following the statute creating the C2C Data System, the C2C office created a governance manual designed to define and describe the authority, policies, and procedures for the system’s oversight and governance. This manual serves as a reference guide for stakeholders and has been established as a living document, open to ongoing amendments by the governing board over time, to be responsive to changing conditions. As community needs evolve, our systems and governance must likewise evolve alongside them.

Key Considerations for Stronger Alignment:

Ensure Data, Dashboards, and Tools Are Accessible to and Actionable for All Californians: C2C’s office and boards must center marginalized users in the developing data system, such as by adding data that is inclusive of all communities, offering different ways to visualize connected data that anyone can understand, and providing tools that are easy to use for communities to analyze data and conduct research.

- For example, in the forthcoming Teacher Training and Retention Dashboard, the C2C office should provide teacher preparation and assignment data from the Teacher Assignments Monitoring Outcomes (TAMO) dataset. The dashboard should link this data with the student demographics of TK-12 districts so users can see the degree to which marginalized students have access to fully trained and properly credentialed teachers. In 2023, EdTrust–West released a TAMO Data Dashboard, which captures this information and could serve as a helpful model. Agencies also have a key role to play in adhering to this principle of increasing access to actionable data through C2C. To that end, the California Department of Education should resume annual publication of teacher demographic data and provide that information to C2C for inclusion in teacher dashboards in order to support state and local efforts to increase the racial diversity of the TK-12 educator workforce. Research shows that students — especially students of color — taught by educators of color achieve higher outcomes.

- Explore AI Tools: As artificial intelligence (AI) — particularly large language models — advances, the C2C office should explore how it can harness this technology’s power. AI in user-facing data tools could make it easier for stakeholders who are less familiar with navigating a clearinghouse of data to access complex analyses. AI could also assist in sense-making and provide advice or guidance on valid interpretations of, or accurate ways to frame or communicate about, data and the results of queries. The C2C office would also need to train and support users in the promises and the potential pitfalls of AI to optimize its benefits fully. The C2C office should prioritize leveraging this emerging technology to benefit all young Californians, particularly those in communities with the least access to it. Because the field is still grappling with the power and limits of AI, this exploration must deeply consider ethical, equity, and data-privacy concerns.
DATA 4 THE PEOPLE PRINCIPLE 3:
Protect Student Privacy: **Strong**

Protecting student privacy is critical, and the C2C office must implement robust security measures to safeguard student information and protect students from harm. In particular, the data system must protect the data of undocumented students and families from being used for law enforcement purposes. This effort will help to establish trust and feelings of security among stakeholders and promote the responsible use of data to improve outcomes and opportunities for individuals and communities. Thus far, C2C leaders have demonstrated strong alignment to Principle 3 by:

► **Convening a Security Policies Task Force:** With guidance from its security policies task force, C2C continues to adhere to state and federal regulations for data security and privacy. C2C’s commitment to data privacy is crucial for protecting students and families from vulnerable communities and for maintaining the C2C’s purpose as a tool for equity rather than a threat to student safety.

► **Leveraging Best Practice Methods for Cross-System Data Linkage:** The C2C office has carefully considered various options for linking data across agencies and systems, learning from what other states have done, and adopted a multifactor matching method likely to yield the highest possible level of accuracy while protecting student privacy and identity, particularly for undocumented students. The method also reduces the burden on state agencies to clean and verify data. Adopting a careful approach to cross-system data linkage will ensure that student data is accurate, secure, and protected — vital for maintaining trust in educational institutions and safeguarding student privacy.

**Key Considerations for Stronger Alignment:**

► **Commitment to Transparency and Adding Intent to Governance Manual:** To build upon their commitment to student privacy and help foster confidence in the data system’s security, C2C leaders should express their commitment to preventing data misuse for harmful purposes—particularly for undocumented Californians—in the C2C governance manual and state lawmakers should consider similar protections in state statute.
DATA 4 THE PEOPLE PRINCIPLE 4: Disaggregate All Data and Count All Students: Satisfactory

The C2C Data System must include all student subgroups in its disaggregation of early care, education, and workforce data. The C2C office and C2C board members must ensure disaggregation is possible along multiple dimensions so inequities occurring across systems and institutions are fully visible and education leaders can address them. This disaggregation should include students who are on unconventional pathways and enrolled in various educational institutions; it should represent all demographic groups, including English proficiency categories, foster care status, gender identity, and racial and ethnic backgrounds. This comprehensiveness allows users to have a more nuanced and accurate understanding of disparities; with that understanding, they can direct evidence-based policies and practices to advance educational equity. C2C leaders have yet to launch the data system, and little has been shared about the extent of data disaggregation the system and its tools will enable. Because we do not yet know how users will be able to navigate disaggregated data beyond exploring data by region and district, the system’s development shows only satisfactory alignment to Principle 4 by:

► Developing a Query-Builder: The C2C Data System is set to include more than 200 data elements and over one billion data points spanning student academic performance, course enrollment, social welfare programs, numerous graduation pathways, access to resources, discipline and suspension rates, and demographics, in addition to teacher information and district- and school-level data. C2C’s query-builder tool is critical for data-driven decision-making and will allow researchers, educators, policymakers, and communities to build their own disaggregated data reports that can help them clearly identify and address educational disparities and find bright spots.12

Key Considerations for Stronger Alignment:

► Disaggregate Data Within Large Racial Groups Across Educational Institutions: As the system’s development progresses, it must fully disaggregate demographic data by ethnic group and nationality within racial categories including for Latinx, Asian, and Native Hawaiian Pacific Islanders. This level of disaggregation will allow users to see disparities within subgroups that are currently combined, which often masks vulnerable communities’ needs. Additionally, C2C must disaggregate students learning English by category, including, but not limited to, English learner (EL), Dual Language learners (DLLs), long-term English learners (LTEL), At-risk long-term English learners (ARLTEL), newcomers, reclassified fluent English proficient (RFEP), initially fluent English proficient (IFEP), etc. This is also particularly important in higher education, where there is limited enrollment and progress data to track multilingual students in postsecondary institutions.
To ensure that the data system is transparent and collaborative and that it centers the needs of students and families of color, C2C leaders must meaningfully engage students and families in all planning and decision-making processes. The system should position students to make data-informed decisions about their education and contribute to equity-centered systems change. So far, C2C leaders have demonstrated a promising commitment to Principle 5 by:

► Convening Community Conversations: The C2C office has hosted numerous community conversations, both in person and virtual, convening members of the public to learn about and actively participate in the data system’s development. Through these community engagements, C2C staff requested direct feedback from potential users on the system’s design, features, and general functionality to ensure communities are involved in the planning process. By gathering input from dozens of community members, the C2C office has set up the data system to respond to the needs of multiple education stakeholders.

• Hosting In-Person Community Conversations: In October 2023, the C2C office announced a series of in-person community conversations in five cities/regions (Sacramento, Bay Area, San Joaquin County, Kern County, and San Diego) to engage communities and seek their input on data dashboard prototypes. In winter 2024, the C2C office hosted two of these events in Sacramento and Oakland. These events give students and families the opportunity to get up-close and personal with data and share feedback on C2C’s data visualization for different types of users.

► Engaging Communities in Advisory Boards and Public Meetings: Through the Community Engagement Advisory Board and Data & Tools Advisory Board, C2C leaders have engaged data providers, community members, advocacy groups, college students, and counselors. These boards have open meetings and provide public agendas that include public comment and opportunities to interact with C2C staff and board members. These efforts have improved C2C’s operations and increased the representation of a variety of viewpoints.

► Adopting a Process to Allow Members of the Public to Propose Changes to the System: At the February 2024 C2C governing board meeting, board members voted to adopt into the governance manual a new process that will allow members of the public to submit data or community engagement proposals that can be sponsored by members of both advisory boards. Researchers, advocates, and communities working throughout California now have a direct opportunity to submit proposals aimed at strengthening the C2C Data System.

Key Considerations for Stronger Alignment

► Strengthen Feedback Loops With End Users: Although the C2C office has made significant progress in including data users of relevant and diverse backgrounds in the design processes, C2C leaders must also establish explicit feedback loops in the system’s governance manual to guarantee ongoing user input. C2C leaders should also consider securing dedicated funding support to ensure diverse user types are meaningfully engaged as the system is continuously improved. This iterative feedback will foster greater trust with users and ensure the data system is continually optimized for users in terms of research, decision-making, and planning.

► Expand Partnerships With Advocacy and Community-Based Organizations: As C2C continues to be built out, system leaders should continue to partner with advocacy groups and community-based organizations to increase awareness of the C2C Data System across communities. System leaders should use these partnerships to connect with California communities that may otherwise be difficult to reach. The C2C office should also consider adding an online resource of local and regional organizations that can provide technical assistance, research, and resources to support use of the C2C Data System.
For generations, marginalized students’ lives have been negatively affected by siloed data systems and misguided decision-making. California’s C2C Data System presents a unique opportunity to address these long-standing injustices and empower communities with the tools they need to thrive. By focusing on improving equity, transparency, and addressing disparities, the C2C Data System has the potential to become the nation’s most robust and inclusive longitudinal data system.

We commend California for making significant progress in developing the C2C Data System and the alignment we see so far to the Data 4 the People Principles. To ensure the system fulfills its promise to empower individuals and foster evidence-based decision-making that will lead to a more equitable future for the state, we encourage C2C staff and state leaders to explore the additional opportunities for enhancing equity that we have outlined above.

We encourage students, families, communities, and education equity advocates to actively help shape the development of the data system over the next several years.

Ways to Get Involved:

- **Join the Data for the People (D4TP) statewide coalition**, co-led by EdTrust–West and Young Invincibles.
- Host a C2C informational session in your community. You may [submit a form here](#).
- Stay informed on updates to the C2C Data System by [subscribing to its newsletter](#).
- Stay informed by attending [C2C board meetings](#).
- Stay aware and involved with C2C leaders during virtual and in-person community conversations.
- Learn more about [P-20W data systems](#) (pre-kindergarten through college and into the workforce) and how data can be a powerful tool to inform individuals of opportunities that extend from school into the workforce.
- [Subscribe](#) to EdTrust–West’s emailing list to receive our reports, presentations, infographics, and other resources.


