**AB928 Associate Degree for Transfer Intersegmental Implementation Committee
Findings, Considerations, and Outline Draft of Final Report Elements
Version: August 2023**

This document is being publicly released in August 2023.

It includes the results of explorations undertaken by three study groups that met for the purpose of capturing information and providing considerations to inform the work of the AB928 Associate Degree for Transfer Intersegmental Implementation Committee (hereafter "AB928 Committee" and/or "Committee") in producing recommendations in three areas.[1]

While the study groups were tasked with deep-dives in the three specific areas around which the AB928 Committee is to make recommendations, the groups were oriented by the broader purposes of the Committee as outlined in legislation[2]:

> *(b) The Associate Degree for Transfer Intersegmental Implementation Committee
> is hereby established for the following purposes:*
>
> *1) To serve as the primary entity charged with the oversight of the associate
> degree for transfer for the sole purpose of strengthening the pathway for
> students and to ensure it becomes the primary transfer pathway in California
> between campuses of the California Community Colleges and the University of
> California, the California State University, and participating independent
> institutions of higher education defined in subdivision (b) of Section 66010, so*

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[1] In late 2022, the AB928 Committee facilitator, Sova, determined that it would not be possible for the Committee to achieve its legislative mandate in any meaningful way without the Committee members having the opportunity to explore and discuss the wide range of enormously complicated issues involved in the specific legislative mandate for 2023 regarding recommendations in three areas. Informal, non-quorum study groups began meeting around the three areas to study the issues implicated in the legislative requirements. The findings and considerations outlined in this report represent the result of the study groups' efforts to provide insight for the Committee as it produces its formal recommendations.

[2] California State Legislature. (2021). *Assembly Bill No. 928, Student Transfer Achievement Reform Act of 2021: Associate Degree for Transfer Intersegmental Implementation Committee*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB928

that more students can avail themselves of the pathway's benefits. The oversight shall include, but is not limited to, all of the following:

(A) Ensuring a reduction in the number of excess units accumulated by California Community College students before transferring to four-year postsecondary educational institutions.

(B) Eliminating repetition of courses at four-year postsecondary educational institutions taken by California Community College students who successfully transfer into four-year postsecondary educational institutions.

(C) Increasing the number of California Community College students who transfer into a four-year postsecondary educational institution through an ADT pathway.

Within the overarching purposes described above, the AB928 legislation calls for work in 2023 in three very distinct areas (additional details on the legislative requirements are embedded in each section):

Goals: *Identifying annual goals for increasing transfer rates in California and closing racial equity gaps in transfer outcomes to be adopted by the state.*

STEM: *Proposing a new unit threshold for STEM degree pathways that meet the requirements for admission to the California State University and the University of California.*

Reengagement: *Reengaging ADT earners who do not transfer or apply for transfer into a four-year postsecondary educational institution.*

By necessity, the approaches taken to studying the topics, analyzing data, and generating considerations for the Committee reflect those differences. As a result, the discrete sections on these three topics that form the bulk of this report do not conform to a single prescribed format. Although all of the sections include contextual information and considerations for the Committee, each section reflects the distinctiveness of the topic. The next draft will reconcile differences in approach, etc.

In addition to providing considerations to inform the AB928 Committee's legislatively mandated work of making recommendations in three areas, this report also includes draft outline and elements of the final report that will be produced as the Committee moves from considering the results of the study groups' explorations to making formal recommendations.

As noted, this document includes a set of considerations that the AB928 Committee will use to distill its final recommendations. The AB928 Committee will vote on its final recommendations at a public meeting in November 2023. A draft of the Committee's final report is due to the Governor of California's Office of Planning & Research by December 1, 2023, and a final version to the legislature by December 31, 2023.

Members of the public wishing to provide comment on this draft may do so using this form: https://www.ab928committee.org/public-comment. Public comments will be publicly posted and delivered to the AB928 Committee members for their consideration and discussion during public Committee meetings. Comments will not be responded to individually.

Details about the AB928 Committee, including its meeting agendas and materials, can be found at its website: https://www.ab928committee.org/

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I. AB928 COMMITTEE DRAFT FINDINGS AND CONSIDERATIONS

This draft report includes a set of findings and considerations that the AB928 Committee will use to distill its final recommendations. The AB928 Committee will vote on its final recommendations at a public meeting in November 2023. A draft of the Committee's final report is due to the Office of Planning & Research by December 1, 2023, and a final version to the legislature by December 31, 2023.

A. INTRODUCTION

INTRODUCTORY GUIDING PREMISES

While undertaking its work, the Associate Degree for Transfer Intersegmental Implementation Committee operated with a set of guiding premises. They are:

- In order to sustain a productive workforce in California, a higher percentage of Californians must attain a postsecondary degree or workforce credential. There are pervasive, unacceptable inequities in postsecondary attainment based on race, region, and income.[3]
- The state's ability to increase the number of degrees earned by Californians is currently limited due to constraints in enrollment capacity at the University of California (UC) and California State University (CSU) systems. Other transfer partners, such as in-state members of the Association of Independent California Colleges and Universities (AICCU), do have additional capacity and an interest in enrolling more transfer students.
- These capacity constraints are partially addressed through an evolving system of college transfer, in which students complete the first two years toward a bachelor's degree at one of the California Community Colleges (CCC) and then transfer to a university for the remaining coursework.
- College transfer in California is currently inefficient, evidenced by the fact that only one in four students who start at a community college with a transfer goal successfully

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[3] California Competes. (n.d.). *Pathways to Prosperity*. Retrieved April 18, 2023, from https://californiacompetes.org/p2p; Lumina Foundation. (2021). *A Stronger Nation: Learning Beyond High School Builds American Talent*. Retrieved April 19, 2023, from https://www.luminafoundation.org/stronger-nation/report/#/progress

transfers within five years and transfer rates for Black, Latine, and poverty-affected students fall behind those of their Asian, White and affluent counterparts.[4]

- There are pervasive, unacceptable inequities in transfer outcomes based on race, region, and income. According to an analysis by the Public Policy Institute of California (PPIC), 56 percent of freshmen who enrolled in a California Community College in 2016 were Latine, African American, or Native American, but only 47 percent of CSU transfers and 32 percent of UC transfers were from these populations.[5]

- Despite the creation of guaranteed-transfer pathways such as the Associate Degree for Transfer (ADT) and the UC Transfer Pathways, the transfer system remains unnecessarily complex and contains too many contingencies to be considered universally accessible.[6]

- To meet state workforce needs and achieve greater educational and economic equity, California's postsecondary transfer system must transform in dramatic and meaningful ways.

[4] Johnson, H., & Cuellar Mejia, M. (2020). *Increasing Community College Transfers: Progress and Barriers*. Public Policy Institute of California. Retrieved April 18, 2023, from https://www.ppic.org/wp-content/uploads/increasing-community-college-transfers-progress-and-barriers-september-2020.pdf

[5] Johnson, H., & Cuellar Mejia, M. (2020). *Increasing Community College Transfers: Progress and Barriers*. Public Policy Institute of California. Retrieved April 18, 2023, from https://www.ppic.org/wp-content/uploads/increasing-community-college-transfers-progress-and-barriers-september-2020.pdf

[6] Student-Ready Strategies. (2023, January 26). "Understanding Transfer: Current Research in California." Presentation for the Associate Degree for Transfer Intersegmental Implementation Committee. Retrieved April 18, 2023, from https://www.ab928committee.org/meetings/january-26-2023

B. GOALS

A CALL FOR GOALS

The California State Legislature called upon the Associate Degree for Transfer Intersegmental Implementation Committee to identify annual goals for increasing transfer rates in California and closing racial equity gaps in transfer outcomes to be adopted by the state. Specifically, these goals shall include all of the following:

(A) Annual goals for improving transfer attainment needed to meet the state's workforce demands.

(B) Goals for closing gaps in transfer outcomes by race.

(C) Goals for closing regional opportunity gaps to access ADT pathways.

(D) Annual goals to meet the statewide degree attainment goal of 70 percent.

GOALS: GUIDING PREMISES

While undertaking its work to set goals, the Associate Degree for Transfer Intersegmental Implementation Committee operated with a set of guiding premises. They are:

The imperative to eliminate inequities in transfer outcomes by race.
- There is no acceptable level of racial inequity in California's education system. Disaggregated data lay bare pervasive, unacceptable inequities in transfer outcomes based on race. PPIC found, for example, that "In terms of race and ethnicity, we see large equity gaps among transfers." Latine students represent 51 percent of students who declare a degree/transfer goal, but only 35 percent of those who transfer within four years. African American students represent 7 percent of those who intend to transfer and 5 percent of those who do.[7]
- To achieve transfer equity, the demographics of successful transfer students should be consistent with the demographics of students entering a community college with the intent to transfer.

The need to increase credential production to meet the statewide degree attainment goal of 70 percent.

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[7] Johnson, H., & Cuellar Mejia, M. (2020). *Increasing Community College Transfers: Progress and Barriers*. Public Policy Institute of California. Retrieved April 18, 2023, from https://www.ppic.org/wp-content/uploads/increasing-community-college-transfers-progress-and-barriers-september-2020.pdf

- The state of California has a goal that 70% of the adult population, ages 25-64, will have a postsecondary credential–college degree, certificate, industry-recognized certification, or other credential of value–by 2030.[8]
- California's population of people between 25 and 64 years of age is nearly 21 million, so each percentage point gain in the educational attainment rate requires that 210,000 more degrees be produced within the state.[9]
- California's public and independent colleges and universities are implementing a number of efforts designed to improve student success, including CSU's Graduation Initiative 2025, UC's Capacity 2030 and CCC's Vision for Success.[10] California's public colleges and universities have also set goals to increase enrollment, improve graduation rates and close equity gaps.
- These reforms and initiatives make it possible to set ambitious goals for increased degree production and postsecondary educational attainment.
- Efforts to increase credential production should be inclusive of short-term credentials. Short term credentials are critical vehicles for economic mobility with increases in earnings for each level of educational attainment and are an important starting point for low income students, in particular adult learners as they begin their educational journey.[11]
- A comprehensive plan to meet California's 70% attainment goal should be supported by a holistic analysis–as yet not undertaken–of factors such as regional workforce demand, in-out migration, population growth, students attending out-of-state institutions, institutional capacity and changes needed by particular dates to meet the goal.

The need to improve transfer attainment to meet the state's workforce demands.
- There is no acceptable level of inequity in transfer student outcomes in California's education system. It should be no harder for a student who begins at a CCC to complete a bachelor's degree as it is for a student who begins at a baccalaureate-granting institution.
- Many students transfer regardless of completing the requirements for transfer or completing the ADT, but at the same time far too few students transfer. There are many

[8] See, for example, Office of Governor Newsom. (n.d.) "California Blueprint." Retrieved August 1, 2023, from https://www.gov.ca.gov/wp-content/uploads/2022/01/Higher-Education-Fact-Sheet.pdf

[9] U.S. Census Bureau. (n.d.) "Quick Facts." Retrieved April 19, 2023, from https://www.census.gov/quickfacts/CA

[10] California State University. (n.d.). "Graduation Initiative 2025." Retrieved April 18, 2023, from https://www.calstate.edu/csu-system/why-the-csu-matters/graduation-initiative-2025/What-Is-Graduation-Initiative-2025; California Community Colleges Chancellor's Office. (2021). *Update to the Vision for Success*. Retrieved April 18, 2023, from https://www.cccco.edu/-/media/CCCCO-Website/Reports/vision-for-success-update-2021-a11y.pdf; University of California. (2022, July 22). *University of California 2030 Capacity Plan*. Retrieved April 18, 2023, from https://regents.universityofcalifornia.edu/regmeet/july22/b5attach2.pdf

[11] Tillery, R., Booth, K. & Johnstone, R. (2023). "Transfer, Credentials, and Employment in CA." WestEd and National Center for Inquiry and Improvement.

attrition points in the transfer system, including students not applying to transfer, not being admitted for transfer, and not enrolling even if admitted. To create a more equitable and effective system of transfer, attrition must be dramatically reduced at each of these points.

- A labor market analysis conducted by WestEd's Center for Economic Mobility, in collaboration with the National Center for Inquiry and Improvement, found that "bachelor's degree attainment is the most reliable path by far to attaining a good job that pays a living wage." California's workforce is demanding bachelor's degrees at the same time that many of its public four-year institutions are challenged by enrollment constraints. Improving the transfer function–ensuring students can start at a community college and complete a bachelor's degree at a public or independent university, thereby reducing enrollment pressures on constrained four-year institutions–is absolutely essential to ensuring more California residents have the opportunity for a living wage job.[12]

The need to close regional opportunity gaps to access ADT pathways.

- Multiple studies have documented that the majority of college students seek to stay close to home, and community college students are more likely to stay close to home than their peers attending bachelor's-granting institutions. For many students in California, being able to continue to live, work and attend college in their region is a matter of necessity, allowing them to meet their familial, financial and work responsibilities.[13]

- For placebound students, access to ADTs is only achieved if the ADT in that program of study is both offered by a community college and accepted by an institution in the student's region of residence.

- Statewide, there are more incomplete regional ADT pathways than there are complete pathways, between the CCCs and the CSU, that offer both the community college and university curriculum in a given region and program of study.[14]

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[12] Tillery, R., Booth, K. & Johnstone, R. (2023). "Transfer, Credentials, and Employment in CA." WestEd and National Center for Inquiry and Improvement.

[13] Hillman, N. & Weichman, T. *Education Deserts: The Continued Significance of "Place" in the Twenty-First Century*. American Council on Education, retrieved June 21, 2023 from https://www.acenet.edu/Documents/Education-Deserts-The-Continued-Significance-of-Place-in-the-Twenty-First-Century.pdf; Carter, J. (Aug. 17, 2016). "College Students Prefer to Stay Close to Home, Data Finds." *Higher Ed Dive.* Retrieved June 21, 2023 from https://www.highereddive.com/news/college-students-prefer-to-stay-close-to-home-data-finds/424594/; Wozniak, A. (March 22, 2018). "Going Away to College? School Distance as a Barrier to Higher Education." *Econofact*, University of Notre Dame. Retrieved June 21, 2023 from https://econofact.org/going-away-to-college-school-distance-as-a-barrier-to-higher-education

[14] Student-Ready Strategies. (2023). "Regional Associate Degree for Transfer Analysis." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data from the California Community Colleges Chancellor's Office and the California State University Transfer Model Curriculum website.

- WestEd's Center for Economic Mobility reported "extremely little variation by region" in its finding that "bachelor's degree attainment is the most reliable path by far to attaining a good job that pays a living wage."[15]
- Regional studies of associate degree and ADT production and transfer rates by the WestEd Center for Economic Mobility find that production of associates and ADT degree earners far exceeds the actual transfer rates into the California State University System for nearly all disciplines, sometimes by multiple factors, and that there are equity gaps in which students of color are disproportionately represented in degree pathways with much lower transfer rates such as interdisciplinary studies.[16]
- Opportunity gaps in regional ADT access create an insurmountable barrier for many students, evidenced by the fact that only roughly one in 10 "redirected" transfer students enrolls at a CSU. Nearly half of students who enroll in a CSU after being redirected are Latine, while Asian and White students each make up about 20 percent of those who are redirected and enroll. All other racial groups make up less than 10 percent of those who are redirected and enroll.[17]
- A disproportionate share of California's Black students transfer to for-profit institutions, and many are concerned about inequities in how they are served by those institutions.[18]
- Greater regional and programmatic alignment for ADT pathways will help many more students successfully transfer and improve the overall effectiveness of the transfer system.

GOALS: FINDINGS AND CONSIDERATIONS

To that end, the goals study group identified the following considerations that can be developed into recommendations by the full AB928 Committee. California's best opportunity to meet state workforce needs and achieve greater educational and economic equity is to:

Retrieved April 18, 2023, from https://www.calstate.edu/attend/degrees-certificates-credentials/Pages/TMC-Search.aspx#page-2

[15] Tillery, R., Booth, K. & Johnstone, R. (2023). "Transfer, Credentials, and Employment in CA." WestEd and National Center for Inquiry and Improvement.

[16] Tillery, R., Booth, K. & Johnstone, R. (2023). "Transfer, Credentials, and Employment in CA." WestEd and National Center for Inquiry and Improvement.

[17] California State University. (2022). *Student Admissions and Impaction Policies Report 2022*. Retrieved April 18, 2023, from https://www.calstate.edu/impact-of-the-csu/government/Advocacy-and-State-Relations/legislativereports1/Student-Admissions-and-Impaction-Policies-Report-2022.pdf

[18] Campaign for College Opportunity. (2019). *State of Higher Education for Black Californians.* Retrieved April 18, 2023, from https://collegecampaign.org/wp-content/uploads/2023/02/2019-State-of-Black-Californians-Full-Report-Final.pdf

Consideration 1[19]: Prioritize first and foremost closing equity gaps by race and ethnicity.
California is the most racially diverse state in the nation, yet stubborn equity gaps by race and ethnicity in postsecondary attainment persist.[20] Closing equity gaps in postsecondary attainment will deliver benefits and improve the well-being of all of the state's residents, while also ensuring fair opportunity.[21] These considerations thus elevate closing equity gaps as the first priority and as a theme underlying all subsequent findings and considerations.

It is imperative for the AB928 Committee to call for equity gaps to be fully closed by 2030 in measures that are aligned to critical steps along the student transfer pathway. The lack of an intersegmental data system in California constrained the ability of the AB928 Committee to analyze comprehensive data about transfer student outcomes. The goals that follow are therefore grouped into two categories, aligned to the most robust data available for the Committee to study:
- The first category is responsive to inequities in the outcomes of students who begin in the CCC and seek to transfer.
- The second category is responsive to inequities in outcomes for students who start in the CCC and seek to apply, be admitted, enroll and graduate from the UC and CSU systems (AICCU does not have this data available).

Category 1: Closing equity gaps by race and ethnicity in the outcomes of students who begin in the CCC and seek to transfer.
As data in Figures 1-3 and Table 1 make clear, there are concerning inequities by race and ethnicity in:
- Who starts at the California Community Colleges and transfers to any four-year institution within six years. For example, the percentage of AY 16-17 CCC entrants who transfer to any four-year institutions within six years is: 16% for Hispanic, 21% for African American, 26% for Asian and 28% for White Non-Hispanic.
- Who starts at the California Community Colleges and applies to transfer to the UC or CSU. For example, while 48% of all CCC entrants are Hispanic/Latine, Hispanic/Latine

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[19] Aligns to AB928's call for "(B) Goals for closing gaps in transfer outcomes by race."

[20] Lumina Foundation. (2021). "A Stronger Nation: Learning Beyond High School Builds American Talent." Retrieved April 19, 2023, from https://www.luminafoundation.org/stronger-nation/report/#/progress

[21] McKinsey & Company. (2023). *Fulfilling the Potential of US Higher Education*. Retrieved August 11, 2023, from https://www.mckinsey.com/~/media/mckinsey/industries/education/our%20insights/fulfilling%20the%20potential%20of%20us%20higher%20education/fulfilling-the-potential-of-us-higher-education.pdf; Postsecondary Value Commission. (2021). *Equitable Value: Promoting Economic Mobility and Social Justice through Postsecondary Education*. Institute for Higher Education Policy and the Bill & Melinda Gates Foundation. Retrieved August 11, 2023, from https://www.postsecondaryvalue.org/wp-content/uploads/2021/05/PVC-Final-Report-FINAL.pdf

students represent 30% of the CCC students who applied to the UC for transfer in AY 18-19 and 43% of the CCC students who apply to the CSU for transfer in AY 18-19.

The CCC, UC and CSU systems are already engaged in and committed to implementing a number of efforts designed to improve student success and close equity gaps, including CSU's Graduation Initiative 2025, UC's Capacity 2030 and CCC's Vision for Success. Individual AICCU institutions are similarly focused on improving equitable student success. As a part of those efforts, CCC, UC, CSU and AICCU systems and institutions must look at this transfer data carefully and implement strategies now designed to close all equity gaps by 2030. For example, the AB928 Committee is considering some overarching calls for a holistic approach to equitable student success, with a focus on key interventions such as equitable dual admission practices; advising and career planning supports; increase financial aid; and intentional ongoing monitoring of progress to close equity gaps, with data disaggregated by at least race/ethnicity, income, age and region as well as by the credential levels and types needed to meet the state's workforce demands (see Section 1E, Potential Overarching Findings and Considerations).

Figure 1: Distribution of California Community College First-Year, First-Time Entrants in AY 16-17 by Race/Ethnicity
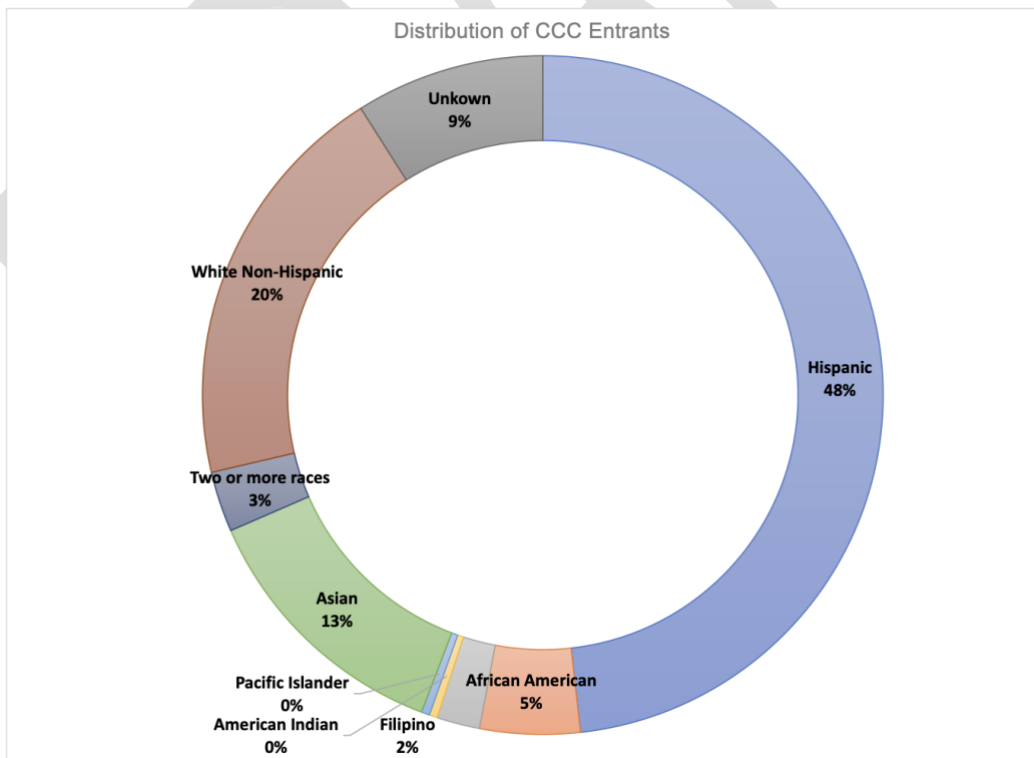
Table 1: Racial Distribution of CCC AY 16-17 First-Year, First-Time Entrants and Transfers

Race/Ethnicity	Number of students who enter (AY 16-17)	*Racial distribution of entrants*	Number of AY 16-17 entrants who transfer within 6 years	*Racial distribution of transfers*	Transfer Success Rate
African American	14,996	*5%*	3,206	*5%*	**21%**
American Indian	1,193	*0%*	202	*0%*	**17%**
Asian	39,945	*13%*	10,238	*17%*	**26%**
Filipino	6,460	*2%*	2,138	*3%*	**33%**
Hispanic	152,192	*48%*	24,639	*40%*	**16%**
Pacific Islander	1,249	*0%*	245	*0%*	**20%**
Two or more races	9,081	*3%*	3,147	*5%*	**35%**
Unknown	28,327	*9%*	899	*1%*	**3%**
White Non-Hispanic	62,098	*20%*	17,275	*28%*	**28%**
Total	315, 541	*100%*	61,989	*100%*	**20%**

Figure 2: Distribution of CCC Transfer Applicants for AY 18-19 by Race/Ethnicity, UC
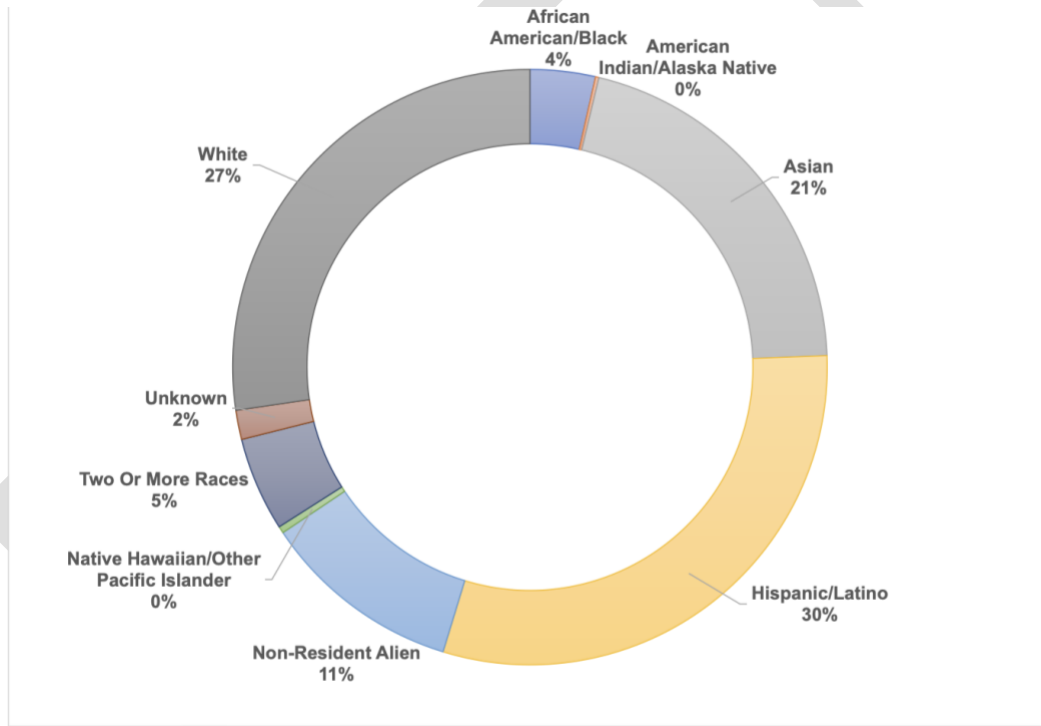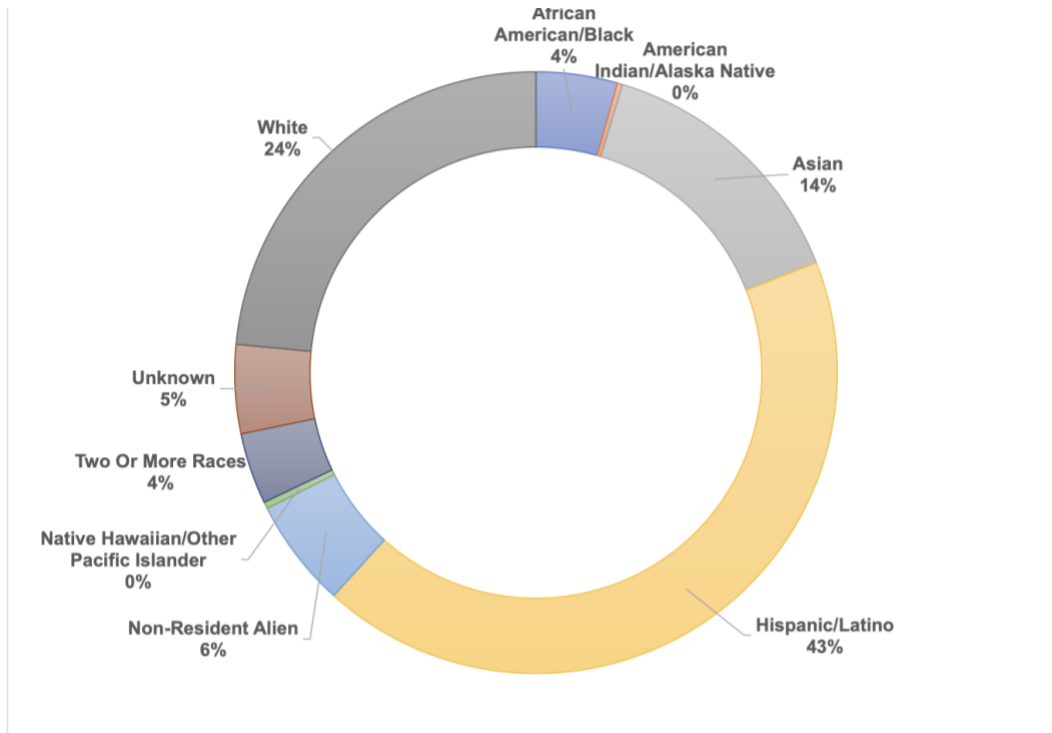
Figure 3: Distribution of CCC Transfer Applicants for AY 18-19 by Race/Ethnicity, CSU

Category 2: Closing equity gaps by race and ethnicity in the outcomes of students who begin in the CCC and seek to apply, be admitted, enroll and graduate from the UC and CSU systems.
As Tables 2 and 3 below make clear, there are concerning equity gaps by race and ethnicity for students who apply but are not admitted, are admitted but do not enroll, and enroll but do not graduate within four years.[22] At the CSU, for example, the percent of transfer students who apply and are not admitted is: 20% for Asian, 20% for Hispanic/Latine students, 21% for White students and 27% for African American/Black students. At the UC, the percent of transfer students who apply and are not admitted is: 23% for Asian, 27% for Hispanic/Latine students, 25% for White students and 38% for African American/Black students.

As noted earlier, the UC and CSU systems are already engaged in and committed to implementing a number of efforts designed to improve student success and close equity gaps, including CSU's Graduation Initiative 2025 and UC's Capacity 2030, and individual AICCU institutions are similarly focused on improving equitable student success. As a part of those efforts, transfer partners must look at their transfer data carefully and implement strategies now designed to close all equity gaps by 2030.

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[22] Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

Table 2: Baseline Inequity Gaps by Race and Ethnicity in Transfer Attainment, AY 18-19, CSU[23]

CSU	Applied	Applied but not admitted	*Percent of Racial group*	Admitted but not enrolled	*Percent of Racial group*	Enrolled but not graduated	*Percent of Racial group*
African American/Black	4,252	1,150	*27%*	1,185	*28%*	526	*12%*
American Indian/Alaska Native	268	63	*24%*	74	*28%*	32	*12%*
Asian	14,022	2,865	*20%*	4,039	*29%*	1,302	*9%*
Hispanic/Latino	41,569	8,463	*20%*	11,011	*26%*	4,457	*11%*
Non-Resident Alien	5,690	1,031	*18%*	1,666	*29%*	595	*10%*
Native Hawaiian/Other Pacific Islander	348	81	*23%*	106	*30%*	46	*13%*
Two Or More Races	3,732	800	*21%*	1,094	*29%*	366	*10%*
Unknown	4,645	1,035	*22%*	1,239	*27%*	498	*11%*
White	22,884	4,720	*21%*	6,134	*27%*	2,135	*9%*

Table 3: Baseline Inequity Gaps by Race and Ethnicity in Transfer Attainment, AY 18-19, UC[24]

UC	Applied	Applied but not admitted	*Percent of Racial group*	Admitted but not enrolled	*Percent of Racial group*	Enrolled but not graduated	*Percent of Racial group*
African American/Black	1,289	489	*38%*	213	*17%*	127	*10%*
American Indian/Alaska Native	68	23	*34%*	11	*16%*	6	*9%*
Asian	7,510	1,726	*23%*	1,284	*17%*	551	*7%*
Hispanic/Latino	11,032	2,954	*27%*	2,350	*21%*	1,054	*10%*
Non-Resident Alien	3,962	695	*18%*	691	*17%*	261	*7%*
Native Hawaiian/Other Pacific Islander	134	47	*35%*	21	*16%*	7	*5%*
Two Or More Races	1,858	494	*27%*	333	*18%*	162	*9%*
Unknown	576	150	*26%*	99	*17%*	52	*9%*
White	9,936	2,459	*25%*	1,847	*19%*	686	*7%*

Consideration 2[25]: Increase coordination, analysis, infrastructure, investments and resources to ensure California's in-state public and independent institutions are able to increase credential production at the level needed to meet the state's 70% postsecondary credential attainment goal.

As noted earlier, the state of California has a goal that 70% of the adult population, ages 25-64, will have a postsecondary credential–college degree, certificate, industry-recognized certification, or other credential of value–by 2030.[26]

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[23] Student-Ready Strategies. (2023). "Transfer Attainment." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President and California State University Chancellor's Office. Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

[24] Student-Ready Strategies. (2023). "Transfer Attainment." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President and California State University Chancellor's Office. Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

[25] Aligns to AB928's call for "(D) Annual goals to meet the statewide degree attainment goal of 70 percent."

[26] See, for example, Office of Governor Newsom. (n.d.) "California Blueprint." Retrieved August 1, 2023, from https://www.gov.ca.gov/wp-content/uploads/2022/01/Higher-Education-Fact-Sheet.pdf

Fulfilling the statutory duty to set "Annual goals to meet the statewide degree attainment goal of 70 percent" required reviewing data and research on topics such as historical trends in credential production, current outcomes, and projections for meeting the 70% by 2030 goal.[27] That analysis revealed, for example, that to meet the goal through the efforts of in-state public and private institutions of postsecondary education alone would require each segment to achieve a 20% percent increase in credential production each year. Presently, the in-state public and private segments of postsecondary education increased credential production at a rate of a 2.7% average annual increase (see Table 4). A comprehensive plan to meet the 70% attainment goal should also be supported by a holistic analysis of factors such as regional workforce demand, in-out migration, population growth, students attending out-of-state institutions, institutional capacity and changes needed by particular dates to meet the goal. Such an analysis has not yet been undertaken in California, but there are other valuable state examples to explore to understand the stakeholders engaged, data sources used and analysis conducted.[28]

Table 4: Average Annual Increase in Credential Production, 2002-2021[29]

AICCU	CSU	UC	CCC	Combined
1.4%	3.1%	2.7%	2.7%	2.7%

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[27] Student-Ready Strategies. (2023, January 26). "Understanding Transfer: Current Research in California." Presentation for the Associate Degree for Transfer Intersegmental Implementation Committee. Retrieved April 18, 2023, from https://www.ab928committee.org/meetings/january-26-2023; Student-Ready Strategies. (2023). "Goal-Setting Model." Tool created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President, California State University Chancellor's Office, Association of Independent California Colleges and Universities, and the U.S. Census Bureau; Student-Ready Strategies. (2023). "Historical Credential Production." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President, California State University Chancellor's Office, and the Association of Independent California Colleges and Universities.

[28] See, for example, Texas Higher Education Coordinating Board. (2021). *2021 Texas Public Higher Education Almanac*. Retrieved August 8, 2023, https://reportcenter.highered.texas.gov/agency-publication/almanac/2021-texas-public-higher-education-almanac/; Massachusetts Department of Higher Education. (2023). *Strategic Plan for Racial Equity*. Retrieved August 8, 2023, from https://www.mass.edu/strategic/documents/Massachusetts%20Department%20of%20Higher%20Education%20Strategic%20Plan%20for%20Racial%20Equity_Updated_01242023.pdf

[29] Student-Ready Strategies. (2023). "Historical Credential Production." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President, California State University Chancellor's Office, and the Association of Independent California Colleges and Universities.

Moving from a 2.7% annual increase to a 20% annual increase in credential production each year will require more than goal-setting; it will require a concomitant effort to advance systems change. Achieving a 20% annual increase under current levels of investment, resources, capacity, and coordination–especially considering current patterns of enrollment and out-migration–will not be possible. And yet, the 70% attainment goal is what is required for the state to bolster the economy, meet workforce demands and provide equitable opportunity for all California residents. As such, it's prudent for the AB928 Committee to call for fundamental structural changes with accompanying resources designed to close equity gaps, while reaching 20% annual increases in credential production to meet the 70% goal. Key facets of this consideration include:

- **Coordination:** Since the dissolution of the California Postsecondary Education Commission (CPEC) in 2011, California has lacked a mechanism for true intersegmental coordination and collaboration.[30] Informal and voluntary venues exist, such as the Intersegmental Coordinating Committee, but achieving the 70% goal will require a much higher level of authority and resources. While California cannot look to another state as a "model," many states have valuable coordinating bodies in place and there are important resources that could be leveraged to build the right fit for California's context.[31] Enhanced coordination across the AICCU and the public segments of in-state postsecondary education is needed to address current gaps such as:
  - An intersegmental data system that results in trusted and actionable analysis;
  - A keen and up-to-date understanding of student learning patterns and trajectories in the state of California;
  - Ongoing assessment of educational program alignment to workforce demand;
  - Coordination on policy analysis and action;
  - Collaboration for implementation of legislative mandates; and
  - Real movement on achieving equitable transfer student outcomes, including developing a process for statewide course articulation acceptance of CCC courses that are commonly numbered (in response to Assembly Bill No. 1111

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[30] Observers suggest that CPEC was dissolved due to issues with its design, such as its charge "to serve both as a part of the state's higher education infrastructure and as an objective analyst of it." However, nearly every other state in the country has a functioning coordinating or governing body for postsecondary education. An expert study is needed to design a coordinating entity that learns from the lessons of the past. See for example California Legislative Analyst's Office. (2003, January). *CPEC: A Review of Its Mission and Responsibilities*. Retrieved August 1, 2023, from https://lao.ca.gov/2003/cpec/CPEC_0103.pdf; Governor's Office of Planning and Research. (2018). *The Master Plan for Higher Education in California and State Workforce Needs: A Review*. Retrieved August 3, 2023, from https://opr.ca.gov/docs/20181226-Master_Plan_Report.pdf

[31] See, for example, Pechota, D., Fulton, M., Broom, S. (2020). "50-State Comparison: State Postsecondary Governance Structures." Education Commission of the States. Retrieved August 8, 2023, https://www.ecs.org/50-state-comparison-postsecondary-governance-structures/; Bishop, B., Heckert, K. (2022). Membership Report, FY 2021. State Higher Education Executive Officers. Retrieved August 8, 2023, https://sheeo.org/wp-content/uploads/2022/08/SHEEO_FY21_Membership_Report.pdf

(2021), the CCCs are currently establishing a student-facing common course numbering system), incentives for faculty to engage in curriculum review and alignment, and funding to establish a statewide curriculum inventory.[32]

- Comprehensive analysis: A two-pronged, comprehensive analysis of postsecondary supply and demand is also needed.
  - *Demand:* Collaboration with an entity that has the skills and resources to conduct a comprehensive analysis of labor market needs, in- and out-migration, the role of online education and out-of-state providers, transfer and other means of increasing credentials to deepen the state's understanding of what level of postsecondary attainment is needed to meet the state's economic and workforce goals and ensure equitable opportunity for all California residents. This analysis must paint a picture of the level and types of credentials (e.g., how many Bachelor's in Computer Science) the state needs, aligned to workforce demand.
  - *Supply:* A comprehensive analysis of statewide and regional capacity at the existing public and private institutions of postsecondary education in California to understand: the role of transfer in increasing credential attainment; which institutions have additional capacity to step in to support the goal; and the role of "impaction" at public universities. This analysis must have a strong regional, localized focus as well as a state lens.
- **Statewide infrastructure and investments:** With a deepened understanding of existing and needed capacity, state leaders–who set the 70% attainment goal–must also put in place the statewide infrastructure and resources needed to meet it. This includes the physical capital, human capital and funding needed to ensure students are able to take maximum advantage of the state's rich postsecondary ecosystem.
- **Ongoing monitoring:** To ensure the state is closing equity gaps, meeting the 70% goal, and increasing credential production at the levels needed, the state needs a mechanism for ongoing monitoring of progress. This monitoring must include data disaggregated by at least race/ethnicity, income, age and region as well as by the credential levels and types needed, as identified by the comprehensive demand analysis. As noted multiple times throughout this document, the lack of an intersegmental data system is a major barrier to understanding and monitoring transfer student outcomes. Ensuring that the forthcoming Cradle to Career longitudinal data system is able to produce valuable and actionable analysis and monitoring of transfer student outcomes is a priority.

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[32] California State Legislature. (2021). *Assembly Bill No. 1111, Postsecondary education: common course numbering system.* Retrieved August 2, 2023, from
https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB1111

Consideration 3[33]: Bolster efforts to increase degree production and meet the state's workforce demands by improving transfer attainment among the students who begin at a California Community College, according to the targets outlined in Table 6. As noted earlier, there is no acceptable level of inequity in transfer student outcomes in California's education system. It should be no harder for a student who begins at a CCC to complete a bachelor's degree as it is for a student who begins at a baccalaureate-granting institution.

To increase overall transfer attainment, the AB928 Committee is considering setting goals to increase the percentage of students who enter the CCC, meet academic qualifications and apply to transfer, are admitted, enroll and complete a bachelor's degree within four years of transfer at any accredited non-profit institution in- or out- of state. Due to the lack of an intersegmental data system in California, the data needed to track students as they move across the segments is lacking and it is extremely difficult to understand current baseline data for each of these steps. This analysis thus uses data from the CCCs related to students enrolling in and transferring out of the CCCs, and data from CSU and UC related to who applies, gets admitted, enrolls and graduates.[34]

For the AY 16-17 cohort 315,541 students enrolled in the CCCs. Of those, 132,394 had an informed primary educational planning goal including transfer to a four-year institution. Within six years, 61,989 (20% of 315,541 and 47% of 132,394) transferred to any four-year institution (including in- and out- of state, public/private, proprietary, etc.).

For transfer to the UC:
- Number of students who had previously attended a CCC who applied for transfer for AY 2018-2019 to UC: 36,365.[35]
- Number of those students who were admitted to UC: 27,328.[36]
- Number of those students who enrolled at UC: 20,479.[37]

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[33] Aligns to AB928's call for "(A) Annual goals for improving transfer attainment needed to meet the state's workforce demands."

[34] Student-Ready Strategies. (2023). "Transfer Attainment." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President and California State University Chancellor's Office. As noted elsewhere, the lack of an intersegmental data system presents serious challenges to understanding transfer student trajectories and outcomes.

[35] AICCU data not available; students who apply to both UC and CSU are counted in both numbers; unduplicated counts could not be constructed in absence of student-level data sharing between UC and CSU.

[36] AICCU data not available; students who are admitted to both UC and CSU are counted in both numbers; unduplicated counts could not be constructed in absence of student-level data sharing between UC and CSU.

[37] AICCU data not available; count assumes students enroll in either CSU or UC, not both.

● Number of those students who enrolled and graduated with a bachelor's degree within 4 years[38] of transfer: 17,573.[39]

For transfer to the CSU:
● Number of students who had previously attended a CCC who applied for transfer for AY 2018-2019 to CSU: 97,410.[40]
● Number of those students who were admitted to CSU: 77,202.[41]
● Number of those students who enrolled at CSU: 50,654.[42]
● Number of those students who enrolled and graduated with a bachelor's degree within 4 years[43] of transfer: 40,697.[44]

Table 5, below, applies these numbers from the UC and CSU to the entering CCC cohort numbers from CCC (note that these students likely began at a community college in different academic years, which means this cohort is different from that submitted by the community colleges). This is an imprecise estimate, but it represents a good-faith effort to use the best-available baseline data for setting goals in the absence of an intersegmental data system.

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[38] Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

[39] University of California (2021). "UC Opens Doors for Community Colleges." Retrieved August 8, 2023, from https://www.universityofcalifornia.edu/sites/default/files/2022-02/uc_transfer_onesheet_2021.pdf

[40] AICCU data not available; students who apply to both UC and CSU are counted in both numbers; unduplicated counts could not be constructed in absence of student-level data sharing between UC and CSU.

[41] AICCU data not available; students who are admitted to both UC and CSU are counted in both numbers; unduplicated counts could not be constructed in absence of student-level data sharing between UC and CSU.

[42] AICCU data not available; count assumes students enroll in either CSU or UC, not both.

[43] Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

[44] California State University. (n.d.). "CSU Graduation and Continuation Rates Dashboard." Retrieved August 8, 2023, from https://tableau.calstate.edu/views/GraduationRatesPopulationPyramidPrototype_liveversion/SummaryDetails?iframeSizedToWindow=true&%3Aembed=y&%3Adisplay_count=no&%3AshowAppBanner=false&%3AshowVizHome=no

Table 5: Data Support for Goal-Setting for Transfer Attainment[45]

	Public Sector Minimum (based on CSU data only)	Public Sector Maximum (based on CSU and UC data)	Additional Transfer Opportunities at Any Other In- or Out-of-State Public and Private Institutions
Estimated % of CCC cohort who **applied** for transfer to a California public 4-year institution for AY 18-19	30.9%	42.4%	Unknown, but must be taken into account when goal-setting
Estimated % of CCC cohort who were **admitted** to a California public 4-year institution for AY 18-19	24.5%	33.1%	Unknown, but must be taken into account when goal-setting
Estimated % of CCC cohort who **enrolled** in a California public 4-year institution in AY 18-19	16.1%	22.5%	Unknown, but must be taken into account when goal-setting
Estimated % of CCC cohort who **graduated** from a California public 4-year institution within 4 years[46]	12.9%	18.5%	Unknown, but must be taken into account when goal-setting

The AB928 Committee made a good faith effort to set the goals in Table 6 using the best-available data. The Cradle to Career longitudinal data system created by AB132 is expected to improve the availability of intersegmental data.[47] In the interim, the Committee considered the options available for setting goals. One option is to align to available data, which would limit which goals can be set. Another option, and the path chosen, was to set aspirational and developmental goals aligned to what would best support equitable student success.

The goals in Table 6 reflect the Committee's effort to look at best-available data, estimate some of which cannot be known (e.g., additional transfer opportunities at any other in- or out-of-state public and private institutions) and set aspirational, developmental goals.

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[45] This table applies the AY 18-19 cohort numbers provided by UC and CSU to the AY 16-17 cohort numbers provided by CCC. AICCU data not available. This provides an imprecise but still useful estimate.

[46] Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

[47] California State Legislature. (2021). *Assembly Bill No. 132, Postsecondary education trailer bill*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB132

An effort to align data and begin to monitor these goals is needed. When more comprehensive and accurate baseline data is available, the AB928 Committee reserves the right to modify these targets.

Table 6: Goals for Increased Transfer Attainment[48]

	Goals to reach 2030 (transfer to any accredited non-profit institution in- or out- of state, including AICCU, UC & CSU)
Percent of entering CCC cohort who intend to transfer and meet academic qualifications and **apply** to transfer to any accredited non-profit institution in- or out- of state	2024: 50% 2025: 55% 2026: 60% 2027: 70% 2028: 80% 2029: 90% 2030: 100%
Percent who meet academic qualifications and apply to transfer and are **admitted** to any accredited non-profit institution in- or out- of state	2024: 40% 2025: 50% 2026: 60% 2027: 70% 2028: 80% 2029: 90% 2030: 100%
Percent who meet academic qualifications and apply to transfer and are admitted and **enroll** at any accredited non-profit institution in- or out- of state	2024: 35% 2025: 45% 2026: 55% 2027: 65% 2028: 75% 2029: 85% 2030: 100%
Percent who meet academic qualifications and apply to transfer, are admitted, enroll and **complete** a bachelor's degree within 4 years of transfer at any accredited non-profit institution in- or out- of state	2024: 25% 2025: 35% 2026: 50% 2027: 60% 2028: 75% 2029: 85% 2030: 100%

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[48] Earlier, this document notes that an analysis of labor market needs, in- and out-migration, the role of online education and out-of-state providers, and notably transfer and other means of increasing credentials, is needed to deepen the state's understanding of what level of postsecondary attainment is needed to meet the state's 70% attainment goal. This analysis seeks to set aspirational goals but they are not directly tied to meeting the 70% attainment goal.

Consideration 4[49]: Close regional opportunity gaps to access ADT pathways, which is defined as ensuring students can transfer *in their region and in the major in which they earned their ADT*. This definition of regional opportunity would be met by achieving the following goals:

- There are sufficient ADTs available to students in every region;
- Guaranteed admission for ADT earners applies *in the region* (i.e., students will not be redirected outside of their region);
- ADT earners are able to transfer with junior standing;
- ADTs offered and accepted in a region will be aligned to workforce demand in the region and statewide, particularly high-wage, high-demand fields, and will not be limited by the region's current workforce demand. ADTs will be analyzed and:
  - Any ADTs and other associate's degrees that do not result in high applicability for transfer or a labor market payoff, such as research suggests is true of the ADT in interdisciplinary studies, will be analyzed for redesign or elimination;[50]
  - ADTs not currently in place for high-wage, high-demand fields within the state, such as in STEM pathways, will be prioritized for creation.

To meet these goals will require intentional and holistic implementation of a range of strategies that can improve regional opportunities for students and ensure students have equitable access to non-profit, accredited programs, such as:

- Further partner with AICCU and its member institutions to sign MOUs to accept and apply ADTs with their guarantees to completion, as a way to address capacity and regional constraints. Explore possible support, resources, and funding for these efforts, including improved marketing efforts to ensure students understand the independent sector as a valuable transfer option;
- Expand online course offerings and increase awareness of online offerings by all types of institutions including independent institutions, and ensure online course and program availability is incorporated into all student-facing transfer communications;
- Establish satellite four-year campuses at community colleges in underserved regions; and
- Scale equitable dual admission practices to give students certainty about their transfer destination.

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[49] Aligns to AB928's call for "(C) Goals for closing regional opportunity gaps to access ADT pathways."
[50] Tillery, R., Booth, K. & Johnstone, R. (2023). "Transfer, Credentials, and Employment in CA." WestEd and National Center for Inquiry and Improvement.

In addition, opportunities must be well-communicated to students, including requiring that clear articulations of all required lower-division courses are publicly available and honored, to ensure students know which courses to take.

C. STEM

SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM)
DEGREE PATHWAYS

The California State Legislature called upon the Associate Degree for Transfer Intersegmental Implementation Committee to propose a new unit threshold for Science, Technology, Engineering, and Mathematics (STEM) degree pathways that meet the requirements for admission to the California State University and the University of California. Specifically, in regards to STEM degree pathways, the recommendations shall comply with both of the following requirements:

> (A) The recommendations shall include sufficient evidence supporting a higher unit threshold for each STEM degree pathway, including an analysis of colleges that have succeeded in adopting similar pathways within the 60-unit framework for lower division units taken at the California Community Colleges.

> (B) A recommendation for a differing unit threshold within a STEM degree pathway shall not recommend a change of more than six units.

STEM DEGREE PATHWAYS: GUIDING PREMISES

While undertaking its work for STEM degree pathways, the Associate Degree for Transfer Intersegmental Implementation Committee operated with a set of guiding premises. They are:

- Degrees in STEM are in high demand in California's economy and provide graduates with opportunities for high-wage careers after graduation.[51]
- Many STEM programs require students to earn a higher number of units including major preparation in the lower division before they transfer. These include areas such as Engineering, Physics, and Chemistry programs.[52]
- Higher unit requirements in community college STEM programs generate the need for greater time to prepare, which costs students time and money on the path to transfer,

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[51] State of California Employment Development Department (2015). *California Labor Market Trends: Science, Technology, Engineering, and Math Jobs in California*. Retrieved April 19, 2023 from
https://labormarketinfo.edd.ca.gov/Publications/Trend-Reports/STEM-California-August-2015.pdf

[52] Student Ready Strategies. (2023). "AB928 STEM Study Group Data Review." Data analysis created for the STEM Study group of the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President, California State University Chancellor's Office, and the Association of Independent California Colleges and Universities.

making transfer pathways less accessible for students with limited financial resources. However, adequate preparation in the lower division also ensures timely graduation for the bachelor's degree.

● Increasing the number of college students who earn STEM credentials and enter STEM careers remains a national priority, as does the need to diversify the population of STEM workers by race/ethnicity, gender, and socioeconomic background. Postsecondary STEM credentials lead to some of the highest paying jobs in the labor market.[53]

● Community colleges serve as an important entry point for those who want to pursue either a workforce-oriented STEM associate degree or lower-division coursework leading to transfer to a four-year college in a STEM major.

● Low-income students are less likely to enter STEM programs or to transfer in STEM fields than higher income students, and Black, Latine, and Native American students are underrepresented in all transfer-level STEM courses in community colleges. STEM fields have particular barriers to student entry and progression and different patterns of student underrepresentation than non-STEM transfer programs.[54]

● Students struggle to navigate STEM program requirements, which require strict adherence to course sequences. Academic or career advising services are often under-resourced in community colleges. Students often attend more than one community college adding to complexities in taking year-long course sequences that are common to STEM programs.

● By all measures, the sheer scale and multi-system nature of the California education ecosystem makes problem-solving very complicated. The different segments are shaped by differences in resources, capacity, and expectations; learners' opportunities are shaped in part by the differing levels of preparation provided by different high schools.

● The work of creating seamless, equitable STEM transfer pathways for underrepresented students has many challenges and requires long-term commitment, but there is much progress to celebrate and an infrastructure to leverage and strengthen.

THE APPROACH OF THE STEM STUDY GROUP
The STEM study group met over the course of several months to explore issues related both to the specific legislative charge concerning STEM unit thresholds and to the broader purposes of

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[53] National Center for Science and Engineering Statistics. (2023.) *Diversity and STEM: Women, Minorities, and Persons with Disabilities 2023. Special Report NSF 23-315*. Alexandria, VA: National Science Foundation. Retrieved August 17, 2023, from https://ncses.nsf.gov/wmpd

[54] Wang, X. (2020). *On My Own: The Challenge and Promise of Building Equitable STEM Transfer Pathways*. Harvard Education Press, https://www.hepg.org/hep-home/books/on-my-own; Varty, A.K. (2022, Summer). "Promoting Achievement for Community College STEM Students through Equity-Minded Practices." *CBE Life Sci Educ*, 21(2): ar25.

the AB 928 Committee as outlined in the legislation and the work of creating equitable STEM transfer pathways. The result of these conversations is presented here as considerations for the full AB928 Committee as it moves toward the creation of specific recommendations.

Each member of the STEM study group comes to this work in good faith and cares a great deal about students, yet the group also recognizes that there are many areas where thinking diverges on how to reduce or eliminate the barriers for students to enter and succeed in STEM programs.

The initial conversations focused on what it would take to create an Associate Degree for Transfer/Transfer Model Curriculum (ADT/TMC) (up to 66 units) for high-unit STEM majors. These conversations built on existing efforts from Faculty with initial focus on Engineering, Chemistry, Physics, Environmental Science, and Math.

The study group considered STEM pathways from existing Academic Senate for California Community Colleges (ASCCC) work. These STEM pathways include Agriculture Animal Sciences, Agriculture Business, Agriculture Plant Sciences, Anthropology, Biology, Chemistry, Computer Science, Environmental Science, Geology, Kinesiology, Mathematics, Nutrition and Dietetics, Public Health Science, Physics, Engineering, Information Technology, and Nursing.

All of the above mentioned STEM pathways have TMCs with the exception of Engineering, Information Technology, and Nursing.

In putting forward the considerations below, the study group seeks to elevate where consensus was reached and to clarify where and why consensus was not reached for those issues clearly within the charge of the study group. We also captured additional considerations that some members of the study group wished to have included in this report to the full Committee. The individual members of the group, just as the larger Committee, represent diverse constituencies and bring diverse experiences; the work required to create equitable STEM pathways requires these diverse perspectives are brought together in service to accelerated problem solving for students. The considerations included here reflect the group's recognition of the overall purpose of the AB928 Committee as laid out by the legislation, and they are intended to inform the deliberations of the Committee as it makes specific recommendations concerning STEM unit thresholds required by the legislation.

HIGH UNIT STEM PATHWAYS
The study group considered STEM pathways from existing ASCCC work. These STEM pathways include but are not limited to Agriculture Animal Sciences, Agriculture Business, Agriculture

Plant Sciences, Anthropology, Biology, Chemistry, Computer Science, Environmental Science, Geology, Kinesiology, Mathematics, Nutrition and Dietetics, Public Health Science, Physics, Engineering, Information Technology, and Nursing.

All of the above mentioned STEM pathways have TMCs with the exception of Engineering, Information Technology, and Nursing. Based on data from Student-Ready Strategies (SRS) the High Unit STEM pathways were identified as follows: Engineering, Chemistry, Physics, Environmental Science, and Math. Engineering, Chemistry, and Environmental Science have transfer unit requirements/recommendations in excess of 60 units as prescribed by current ADT legislation.

The data gathering process included panels and presentations shared with the STEM study group:

- C-ID/TMC/ADT 101 (January 2023)[55]
- Student Panel (February 2023). Some types of questions asked included:
  - Did they earn an associate degree? Was it their goal to earn an associate degree? Did they transfer into a STEM major?
  - If they earned an ADT, did the student feel they were prepped for upper division work? Did they also get an associate degree?
  - If they earned an ADT, did they choose to take additional courses before they transferred? As they look back, what do they think worked and what would be better?
  - How did they make decisions about which community college to attend (if they attended multiple)?
  - How long did it take to transfer and is that what they expected? If it felt too long, what was holding them back? If they transferred within two years, what helped?
- SRS Data Review (April 2023)[56]

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[55] May, G. (2023, January). *C-ID/TMC/ADT 101 on behalf of the Academic Senate for California Community Colleges.* Available at https://www.ab928committee.org/resources

[56] Student Ready Strategies. (2023). "AB928 STEM Study Group Data Review." Data analysis created for the STEM Study Group of the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President, California State University Chancellor's Office, and the Association of Independent California Colleges and Universities. Available at https://www.ab928committee.org/resources

DATA REQUESTS

In February 2023, SRS worked with the California Community Colleges Chancellor's Office (CCCCO) data team to pull outcomes data for STEM programs, based on the definition of STEM provided by the study group, following several conversations on the topic:

1. List of majors that require Calculus 1 AND 1 semester of Physics[57]
2. List of high-unit majors within that Calc1/1 semester of Physics (70 or more units) including but maybe not limited to Engineering, Public Health, Computer Science
3. Disaggregated data on retention/completion (rolled up) on ADTs, Transfer Admission Guarantees (TAGs), transfer pathways of CC to UCs and CSUs within the list of STEM majors identified in 1

SRS then analyzed the data, identified key findings, and presented those findings to the study group.

In June 2023, the STEM study group asked SRS to make a second data request of the CCCCO. This data request was further refined and includes a different list of STEM programs than was originally queried (to broaden the focus to outcomes related to all STEM programs, not just those that are high-unit programs), along with requests for data on student enrollment, progression, and transfer outcomes in those programs. The group re-requested data which CCCCO had already advised was unavailable. The CCCCO indicated that they still do not have a good mechanism available for differentiating ADTs from the local Associate Degree as a major.

This current data request is in progress with the CCCCO.

STEM: CONSIDERATIONS

The group offers considerations in two broad areas: (1) Considerations relevant to the Committee's 2023 legislative charge regarding STEM; and (2) Considerations relevant to the broader barriers that exist in the creation of equitable STEM transfer pathways.

1. **Considerations relevant to the Committee's 2023 legislative charge regarding: STEM unit structures of the ADT:**

   a. *Considerations relevant to proposing a higher unit threshold for STEM degree pathways that meets the requirement of programs at CSU and UC, is based in evidence, and is not a change of more than six units:*

      i.   To facilitate the work that is needed to articulate specific higher unit

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[57] This is not a requirement of the current TMCs for math, it is an option.

needs for some STEM pathways: Consider recommending full funding for the Transfer Alignment Project (TAP) that has established infrastructure but insufficient resources for efficient, expeditious work. Leverage and enhance the TAP to prioritize STEM alignment (ensuring alignment where feasible with both CSU and UC transfer requirements). https://www.asccc.org/transfer-alignment-project

TAP works with and through Faculty Discipline Review Groups (FDRGs) to examine TMCs and UC Transfer Pathways, so fully funding TAP would serve as an engine of improvement for streamlining pathways. These groups could provide information and make recommendations to the Committee about unit thresholds between 60-66 units including which STEM programs can make it in 60, and how many need additional units (up to 66).

b. *Considerations relevant to the effective implementation of more streamlined STEM pathways:*
   i. Consider creating a California General Education Transfer Curriculum (Cal-GETC) for STEM that works for both UCs and CSUs and that permits greater flexibility in when and where General Education (GE) requirements are taken.
   ii. Consider the need for new legislation to permit higher unit TMCs, where justified.
   iii. Consider the possible effects of AB 1749 (*Student Transfer Achievement Reform Act: University of California*)[58] on the work of AB 928 (*Student Transfer Achievement Reform Act of 2021: Associate Degree for Transfer Intersegmental Implementation Committee*).[59]
   iv. Consider exploring alternatives to an arbitrary Grade Point Average (GPA) requirement to achieve equity in transfer.

Additional proposed considerations by some members of the study group:

- The STEM study group members understand that streamlining high-unit majors and meeting the AB928 legislative requirement of a unit threshold that does not

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[58] California State Legislature. (2023). *Assembly Bill No. 1749, Student Transfer Achievement Reform Act: University of California*. Retrieved August 1, 2023, from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320240AB1749

[59] California State Legislature. (2021). *Assembly Bill No. 928, Student Transfer Achievement Reform Act of 2021: Associate Degree for Transfer Intersegmental Implementation Committee*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB928

exceed 66 credits will not solve the entire transfer problem, but diverse opinions were expressed about whether attempts to streamline high-unit majors might bring negative unintended consequences for students.

- Some suggested that legislation is needed to reduce GE requirements for high-unit STEM majors, while others suggested that GE preparation for STEM majors should not be reduced. From the perspective of doing so, it offers the opportunity to reduce challenges transfer students face in STEM programs. The group did consider other barriers that would impede transfer student success in STEM (see considerations relevant to broader barriers below).

- A diversity of opinions was expressed around the equity implications of a possible single STEM pathway that would allow students to transfer to either the CSU and UC at the point of transfer. Some suggested that a single pathway would lower barriers to equitable transfer students' success while others noted that the only way to create a single pathway would be to hold all students to the standards of both systems. From this perspective, a single pathway would likely raise greater barriers to completing STEM ADTs for those students planning to transfer to the CSU. Others suggested that students are already at a disadvantage because the differentiated requirements are confusing to students and believe there is more that could and should be done to create a single pathway that does not bring pernicious unintended consequences.

- Some members believed that major preparation could be more streamlined with a reduction in required courses. Others emphasized the need for students to begin their Junior work well prepared to do so. Despite the diversity of opinions, the group agreed that faculty from the three systems working together to identify and remove nonessential preparation would be a worthy goal.

- Some suggested it is necessary to examine how well the processes established in the wake of SB1440[60] are working for students and for faculty to strengthen support and resources to these groups. Others suggested that the focus should be on compensation for faculty participation rather than on processes and procedures that shape their work.

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[60] California State Legislature. (2010). *California Senate Bill No. 1440, California Community Colleges: student transfer.* Retrieved August 1, 2023, from https://legiscan.com/CA/text/SB1440/id/10519

2. Considerations relevant to the broader barriers that exist in the creation of equitable STEM transfer pathways

 a. Considerations related to improving operations, processes, and procedures for building equitable STEM transfer pathways

  i. Consider engaging with the Intersegmental Curriculum Workgroup, Course Identification Numbering System (C-ID) Advisory Committee, and Transfer Alignment Project to utilize TMC processes for reviewing and updating TMCs and work already completed.

  ii. Consider focusing collaboration on the leadership and staff who facilitate the work of the FDRGs in order to generate insights about how the Discipline Input Groups (DIGs) and FDRGs that were created as the components of the process for colleges to meet the mandates of SB1440 are working in practice in STEM programs, and to identify opportunities for improving the processes/procedures and better supporting the leaders and faculty involved in this work.

  iii. Consider focusing on creating more transparency around intentional diversification of faculty participating in FDRGs and other intersegmental curricular groups and consider making public all appointments.

  iv. Consider the need for funding for process improvements identified and for effective faculty engagement in intersegmental curricular development in STEM programs including, but not limited to, FDRGs.

  v. Consider increased efforts to foster effective participation of students in matters that impact/affect them.

 b. Considerations related to scaling student support & academic / pedagogical improvements for the creation of equitable STEM transfer pathways:

  i. Consider leveraging dual enrollment to ensure early STEM preparation, especially for students that historically do not receive STEM preparatory courses in high school.

  ii. Consider the need for full funding for the creation or expansion of Bridge for incoming STEM CCC students to ensure adequate preparation for success at the CCCs.

  iii. Consider the need for full funding for the creation or expansion of Bridge programs in STEM for CCC students transferring to the UCs and CSUs to ensure adequate preparation for success and in-time degree completion.

  iv. Consider the need for substantial funding for Faculty Professional Development around culturally responsive and responsible pedagogy and

advising, including release time for learning and participation in collaborative projects and improvement communities.

v. Consider clarifying what mathematics is needed for STEM degrees, including preparatory skills, and ensuring transferability of degree applicable mathematics courses.

Additional proposed considerations by some members of the study group:

● Some members questioned whether the diversity of faculty participating in the intersegmental curriculum group is sufficient. Documentation of demographic diversity of faculty working groups was provided to the study group and it was shared that when FDRGs were established the decision was made to not make the participant lists of those groups public because of concerns FDRG participants might be subject to undue pressure and/or a multitude of requests from peers. It was suggested that more intentionality and publicly available lists of participants is essential for the public to hold institutions accountable for being sufficiently representative. It was agreed that more work is needed to arrive at a level of transparency and visibility that meets both needs.

● There was diversity of opinion expressed about whether the Master Plan[61] (1960 Donahoe Act)[62] has outlived its usefulness, and about whether this study group should comment on the Master Plan in these considerations. Some expressed concern that this is a side issue that is not relevant to the work of the specific charge of the AB928 Committee concerning the unit thresholds in STEM, while others expressed that for this study group and fuller Committee to do its work well, issues related to the effects of the Master Plan on transfer students should be highlighted as foundational issues that relate to the core purposes of the Committee.

● While agreement was reached that alternatives to an arbitrary GPA requirement should be explored, consensus was not reached about the specific alternatives with some suggesting consideration of a lower GPA for UC admission and others suggesting such an effort might bring negative unintended consequences for

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[61] Legislative Analyst's Office. (2009, November 12). "The Master Plan at 50: Assessing California's Vision for Higher Education." Retrieved August 1, 2023, from
https://lao.ca.gov/2009/edu/master_plan_intro/master_plan_intro_111209.aspx
[62] California State Legislature. (1960). *California Senate Bill No. 33, 1960 Donahoe Act, Amendment to the California State Education Code: Sections 22500-22705*. Retrieved August 1, 2023, from
https://oac.cdlib.org/view?docId=hb5b69n9fm&brand=oac4&doc.view=entire_text

students.

- While the study group recognizes that issues related to capacity and impaction are afield of its specific charge, a diversity of viewpoints were expressed about whether these issues should be noted and included in the considerations put forth by the group.

D. REENGAGEMENT

The California State Legislature called upon the Associate Degree for Transfer Intersegmental Implementation Committee to specifically identify how to support reengaging ADT earners who do not transfer or apply for transfer into a four-year postsecondary educational institution.

REENGAGEMENT: GUIDING PREMISES

While undertaking its work with reengagement, the Associate Degree for Transfer Intersegmental Implementation Committee operated with a set of guiding premises. They are:

- The majority of students who start at a California community college with the intent to transfer do not go on to earn a baccalaureate degree, adding to the ranks of the nearly 1.8 million Californians with some college, but no degree.[63]
- Improving the transfer function–ensuring students can start at a community college and complete a bachelor's degree at a public or independent institution, thereby reducing enrollment pressures on constrained four-year institutions–is absolutely essential to ensuring more California residents have the opportunity for a living wage job.[64]
- AB 928 identifies that students who earned ADTs but did not transfer represent a key target for reengagement.[65]
- As noted earlier, research shows that 56 percent of freshmen who enrolled in a California Community College in 2016 were Latine, African American or Native American, but only 47 percent of CSU transfers and 32 percent of UC transfers were from these populations.[66] The demographics of community college students who enroll with the intent to transfer should be mirrored in the demographics of students who successfully transfer.

[63] Johnson, H., & Cuellar Mejia, M. (2020). *Increasing Community College Transfers: Progress and Barriers.* Public Policy Institute of California. Retrieved April 18, 2023, from https://www.ppic.org/wp-content/uploads/increasing-community-college-transfers-progress-and-barriers-september-2020.pdf; Lumina Foundation (2022). *A Stronger Nation: Learning Beyond High School Builds American Talent*. Retrieved April 19 from https://www.luminafoundation.org/stronger-nation/report/#/progress/state/CA

[64] Tillery, R., Booth, K. & Johnstone, R. (2023). "Transfer, Credentials, and Employment in CA." WestEd and National Center for Inquiry and Improvement

[65] California State Legislature. (2021). *Assembly Bill No. 928, Student Transfer Achievement Reform Act of 2021: Associate Degree for Transfer Intersegmental Implementation Committee*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB928

[66] Johnson, H., & Cuellar Mejia, M. (2020). *Increasing Community College Transfers: Progress and Barriers*. Public Policy Institute of California. Retrieved April 18, 2023, from https://www.ppic.org/wp-content/uploads/increasing-community-college-transfers-progress-and-barriers-september-2020.pdf

- Students who do not successfully transfer most often cite affordability, pathway navigation, a lack of intentional supports, and life changes as the contributing factors.[67]
- Opportunity gaps in regional ADT access create an insurmountable barrier for many students who wish or need to stay within their regions. Evidence shows, for example, that roughly one in 10 "redirected" transfer students enroll at a CSU, and so there must be an emphasis on broadening access to transfer opportunities within regions.[68]
- Californians can complete transfer degrees at institutions other than CSU and UC, including California independent institutions and 39 Historically Black Colleges & Universities (HBCU).[69]
- Reengagement campaigns for former students with some college but no degree have proven successful, particularly when the colleges have streamlined processes and adequate student support, and the action steps are clearly communicated.[70] A well-executed statewide reengagement effort that helps returning students overcome known barriers will retroactively improve transfer outcomes for past cohorts.

REENGAGEMENT: FINDINGS AND CONSIDERATIONS

To that end, the reengagement study group identified the following considerations that can be developed into recommendations by the full AB928 Committee to address the systemic barriers that are creating obstacles for ADT earners with a keen eye to key populations not being served well. During implementation of the final recommendations, specific sectors will need to be called out for clear accountability and success of the work.

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[67] Cooper, D., Nguyen, A., Nguyen, K., Chaplot, P., Rodriquez-Kiino, D., Kretz, A., Purnell, R., Brohawn, K., & Karandjeff, K. (2020, May). *Students Speak Their Truth about Transfer: What They Need to Get Through the Gate*. Retrieved April 23, 2023, from https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/RPGroup_TheTruthAboutTransfer_TTGPhase3_R3%5B79%5D.pdf?ver=2020-05-18-171449-773

[68] California State University. (2022). *Student Admissions and Impaction Policies Report 2022*. Retrieved April 18, 2023, from https://www.calstate.edu/impact-of-the-csu/government/Advocacy-and-State-Relations/legislativereports1/Student-Admissions-and-Impaction-Policies-Report-2022.pdf

[69] California Community Colleges. (n.d.). "Enroll Now." Retrieved August 10, 2023, from https://icangotocollege.com/

[70] Causey, J., Gardner, A., Pevitz, A., Ryu, M., and Shapiro, D. (April 2023). *Some College, No Credential Student Outcomes, Annual Progress Report – Academic Year 2021/22*. Herndon, VA: National Student Clearinghouse Research Center; Weissman, S. (April 2023). "New Report Finds Increase in Students with Some College, No Credential." *Inside Higher Ed*. Retrieved August 10, 2023, from https://www.insidehighered.com/news/students/retention/2023/04/25/some-college-no-credential-cohort-grows; National Governors Association. (March 2021). *State Strategies to Re-engage Students with Some College and No Degree*. Retrieved August 10, 2023, from https://www.nga.org/publications/state-strategies-to-re-engage-students-with-some-college-and-no-degree/; Complete 2 Compete. "One Degree Better." (July 2023). Retrieved August 10, 2023, from https://msc2c.org; ReUp Education. (n.d.). "Leaders in the Future of Higher Ed." Retrieved August 10, 2023, from https://reupeducation.com/institutions/partner-stories

To improve greater equitable outcomes in transfers, including ADT earners who do not apply to transfer or enroll, it is imperative that these considerations be centered in equity to ensure that all students, particularly first-generation, low-income, students of color and other key populations who have been historically excluded from institutions of higher education are empowered to take advantage of transfer opportunities.

The study group recognizes that intentional work is necessary to dismantle the past and persisting structural inequities if the committee is to succeed in creating and achieving equitable outcomes.

In addition, and as mentioned elsewhere, the lack of an intersegmental data system in California constrained the study group's analysis in areas including but not limited to the effects of impaction/redirection and overall outcomes for transfer students who start at community colleges, including baccalaureate graduation rates and total time to degree (all of these disaggregated by key demographic characteristics).

Consideration 1: Solidify a statewide, student-level data identification process that can be accessed by each UC/CSU/CCC/AICCU institution to better understand who the students are who are "near the gate"--meaning they have prepared for transfer, or are close to doing so, in particular by pursuing completion of an ADT–to directly target and support their successful transfer and/or reengagement if they have left without transferring or applying to do so.

Researchers at RP Group found that 156,999 students (roughly 8%) of the examined cohort were near the transfer gate, meaning that the students had earned ≥60 transferable units with a 2.0 GPA, however had not yet transferred as they were missing transfer-level English and/or math.[71] This finding affirms there needs to be a centralized data identification process which elevates who these students are in real time to aid in colleges' awareness and students' success. Such a data system must allow disaggregation by key demographic characteristics, including but not restricted to race/ethnicity, gender, and income. Long-term, this finding should lead to creating a statewide strategy to manage, maintain and ensure accountability throughout the ADT reengagement process across all segments. By making students at or near the gate visible, the segments will be able to dedicate resources to (re)engage them in the transfer process.

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[71] Cooper, D., Fong, K., Karandjeff, K., Kretz, A., Nguyen, A., Nguyen, K., Purnell-Mack, R., Schiorring,E. (2017). *Through the Gate: Mapping the Transfer Landscape for California Community College Students*.Retrieved August 10, 2023, from https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/Through-the-Gate-Phase-I-Technical-Report.pdf

In addition to making these students more visible to strategically (re)engage in transfer planning, it is equally as important to center their lived experiences. A key part of this strategy should include the UC, CSU, CCC and AICCU coordinating with other key entities such as the California Student Aid Commission (CSAC) to engage students to better understand the opportunities and barriers in the transfer process. This is critically important for students of color and other key populations who are often not served well by our current processes and structures. Such strategies should include but not be limited to surveys, focus groups and other feedback opportunities biannually, if not annually to create streamlined and consistent touch points to assess and improve processes.

Consideration 2: Establish a statewide reengagement campaign with funding levers and metrics that can incentivize institutions' focus on increased student enrollment, persistence, and completion.

Research shows intentional reengagement campaigns aid in students re-enrolling and persisting. Indiana provides just one example of a statewide strategy to reengage students. In 2015 Indiana passed legislation that helped launch the Indiana Commission for Higher Education's initiative "You Can. Go Back." The legislation required public universities to reach out to former students who hadn't graduated, and institutions that didn't have the capacity to handle the outreach could lean on the commission for support. Working with the universities to find email and mailing addresses, the commission launched a marketing strategy to reach out to students who had dropped out within the last decade and who had earned at least 25% of their credits.[72] Similarly, researchers from the *Going the Distance in Adult College Completion: Lessons from the Non-traditional No More Project* analyzed strategies from six states that sought to reengage adult learners. Recommended promising strategies included broad public outreach campaigns, reentry concierges or coaches, and flexible course scheduling.[73]

Of note, AB928 similarly calls for a focus in 2024 on a "comprehensive communications plan and guidance on student-centered outreach to inform students about the ADT pathway," recognizing the critical nature of clear information for transfer students. The work in 2024 on a communications plan, and further development of a reengagement campaign, should be pursued together.

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[72] Quinn, S. (2020, January 27). "More Indiana Adults Returning to College to Finish Degrees." WFYI Public Media. Retrieved August 10, 2023, from https://www.wfyi.org/news/articles/more-indiana-adults-returning-to-college-to-finish-degrees

[73] Lane, P., Michelau, D. K., & Palmer, I. (2012a, June). *Going the Distance in Adult College Completion: Lessons from the Non-traditional No More Project*. Retrieved August 10, 2023, from https://www.wiche.edu/wp-content/uploads/2018/resources/ntnmStateCaseStudies.pdf

Other principles to consider for a reengagement campaign in California include shaping the campaign in culturally-responsive ways to ensure it resonates with students identified by the data as most likely to not apply for or transfer, including students of color, low-income, first-generation and non-traditional age students. A clearly articulated value proposition for low-income, first-generation, non-traditional age students and students of color needs to be at the center of this campaign, with answers to specific questions such as: How will this work for me? Who can help me when I get stuck? Where are the resources that can help me succeed? Furthermore, asset-oriented concepts, such as a sense of belonging, inclusion, and familism need to be integrated in the messaging campaign. The campaign should also be intentional about going to where opportunity-seekers are, such as workplaces, job centers, and various community-oriented organizations (faith-based organizations, libraries, etc.).

To ensure active participation by institutions and real commitment to engaging students, the state should also consider creating system and/or state level incentives to reengage students from key populations.

Consideration 3: Streamline application and on-boarding processes for students with ADTs who previously applied for transfer and did not matriculate to a CSU or UC, including but not limited to waiving application fees and eliminating the resubmission of transcripts.

Despite the creation of guaranteed-transfer pathways such as the ADT and the UC Transfer Pathways, the transfer system remains unnecessarily complex and contains too many contingencies to be considered universally accessible.[74] Tables 2 and 3 in this document (in the Goals section) demonstrate baseline inequity gaps by race and ethnicity in transfer attainment at CSU and UC.[75] Such data reaffirm the need to simplify the process for ADT earners looking to transfer and provide clear navigation and ensure there is institutional capacity and program alignment and availability to enroll students.

Consistently, the onus of successfully navigating the transfer process is on students. To address this, the institutions and segments must be ready to serve the students that need access to baccalaureate degrees the most. This means that they must invest in designing and implementing streamlined application and on-boarding processes that minimize bureaucracy

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[74] Student-Ready Strategies. (2023, January 26). "Understanding Transfer: Current Research in California." Presentation for the Associate Degree for Transfer Intersegmental Implementation Committee. Retrieved April 18, 2023, from https://www.ab928committee.org/meetings/january-26-2023

[75] Student-Ready Strategies. (2023). "Transfer Attainment." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data provided by the California Community Colleges Chancellor's Office, University of California Office of the President and California State University Chancellor's Office. Note that the four-year time horizon begins in Fall 2018 for both Fall 2018 and Spring 2019 entrants.

and unnecessary fees and create supportive structures that facilitate students applying for transfer and enrolling. These services and practices must be visible, accessible, and flexible to meet their needs.

Consideration 4: Address the capacity of institutions to serve ADT earners and ensure they have evidence-based supports in place to achieve equitable student success [76]**:**

Several studies report that community college students are more likely to stay close to home than their peers. Therefore, having access to a college in the region is a matter of necessity, allowing students to meet their familial, financial and work responsibilities.[77] However, statewide, there are more incomplete regional ADT pathways between the community colleges and the California State University than there are complete pathways that offer both the community college and university curriculum in a given region and program of study.[78]

It is thus critical to address the capacity of institutions to serve students in their region, which is a critical theme in the Goals section of this document as well. Systems and institutions must prioritize:

- Facilitating students' access to their campus of choice, and addressing major impaction issues, to prioritize reengagement applicants/students to ensure they have a seat at their top choice institutions, particularly within their home regions;
- Aligning admissions cycles to eliminate students facing different standards for when they enroll vs. when they are ready to transfer; and
- Addressing physical barriers to transfer for place-bound students through cross enrollment opportunities and expanded online offerings.

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[76] California State University. (2022). *Student Admissions and Impaction Policies Report 2022*. Retrieved April 18, 2023, from https://www.calstate.edu/impact-of-the-csu/government/Advocacy-and-State-Relations/legislativereports1/Student-Admissions-and-Impaction-Policies-Report-2022.pdf

[77] Hillman, N. & Weichman, T. *Education Deserts: The Continued Significance of "Place" in the Twenty-First Century*. American Council on Education. Retrieved June 21, 2023 from https://www.acenet.edu/Documents/Education-Deserts-The-Continued-Significance-of-Place-in-the-Twenty-First-Century.pdf; Carter, J. (Aug. 17, 2016). "College Students Prefer to Stay Close to Home, Data Finds." *Higher Ed Dive.* Retrieved June 21, 2023 from https://www.highereddive.com/news/college-students-prefer-to-stay-close-to-home-data-finds/424594/; Wozniak, A. (March 22, 2018). "Going Away to College? School Distance as a Barrier to Higher Education." *Econofact*, University of Notre Dame. Retrieved June 21, 2023 from https://econofact.org/going-away-to-college-school-distance-as-a-barrier-to-higher-education

[78] Student-Ready Strategies. (2023). "Regional Associate Degree for Transfer Analysis." Data analysis created for the Associate Degree for Transfer Intersegmental Implementation Committee based on data from the California Community Colleges Chancellor's Office and the California State University Transfer Model Curriculum website. Retrieved April 18, 2023, from https://www.calstate.edu/attend/degrees-certificates-credentials/Pages/TMC-Search.aspx#page-2

In addition, to close equity gaps and dramatically improve transfer student success, there has to be consideration for holistic implementation of a range of evidence-based strategies, which could include but not be limited to:

- Explore and learn from other institutional approaches. For example, what strategies are employed by out-of-state, non-profit public and private institutions with fully-online, accredited transfer programs?
- Expand online course offerings and ensuring online course and program availability is incorporated into all student-facing transfer communications;
- Further partner with AICCU and its member institutions to sign MOUs to accept and apply ADTs with their guarantees to completion, as a way to address capacity and regional constraints;
- Establish satellite four-year campuses at community colleges in underserved regions; and
- Ensure returning students are able to develop meaningful and sustained relationships with staff and faculty to be able to persist and succeed in higher education. Failing to support returning students will result in perpetuating existing inequities.

To link this strategy to Consideration #2 above, a well-designed and implemented re-engagement campaign will likely incentivize students to take the necessary steps for reenrolling; however, if institutions are not ready to serve them and do not have capacity, then the re-engagement efforts will only waste limited resources. To avoid inefficiencies, it is important that these recommendations be considered proactively. This will likely require intersegmental coordination, communication, and cooperation.

Consideration 5: Examine the data around the critical "one-year engagement timeline" of ADT earners who do and do not transfer within the year and better understand the opportunities and the challenges that students face.

Researchers of the study *Through the Gate: Mapping the Transfer Landscape for California Community College Students* identified that if students do not transfer within the first year of arriving near the gate, the likelihood they will make this transition reduces considerably: "Nearly 90% of students who made it through the gate, transferred within a short period of time."[79] Given this, it's clear timing matters. Reengagement strategies must encompass reaching students during this critical time frame.

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[79] Cooper, D., Fong, K., Karandjeff, K., Kretz, A., Nguyen, A., Nguyen, K., Purnell-Mack, R., Schiorring,E. (2017). Through the Gate: Mapping the Transfer Landscape for California Community College Students. Retrieved August 10, 2023, from https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/Through-the-Gate-Phase-I-Technical-Report.pdf

Consideration 6: Review statewide transfer and articulation to identify and address systemic barriers that impede student success.

The RP Group found that the complexity of, and lack of clear information about, the transfer and articulation process is one of the largest barriers to success students face: "Students are often missing accurate and timely information about pursuing a bachelor's degree throughout their transfer journey—from both their community colleges and prospective universities."[80]

Of particular relevance to supporting ADT earners who do not transfer or apply for transfer, RP Group found that, "Research also shows that even students who are close to the transfer gate struggle to know what practical steps to take to transfer and when."

There needs to be an intentional review of how to simplify transfer and articulation through strategies that might include but not be limited to:
- Collaborate on an intersegmental student voice research strategy, updated on a regular cadence, that uses multiple methods (e.g., focus groups, surveys) to identify systemic barriers to student success;
- Incentivize faculty to work together across institutions and disciplines to agree on streamlined program pathways;
- Shorten time-frames required for course articulation review; and
- Consider building to system-to-system transfer and articulation. While this is a massive undertaking, starting with the highest volume majors could help to create a workable process that could be scaled, while serving a significant proportion of students. California is one of 16 states that does not have a statewide guaranteed transfer of an associate degree.[81]

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[80] Cooper, D., Nguyen, A., Karandjeff, K., Brohawn, K., Purnell, R., Kretz, A., Nguyen, K., Chaplot, P., Rodriquez-Kiino, D., Chaplot, P., & Nguyen, K. (2020, May). *Students Speak Their Truth about Transfer: What They Need to Get Through the Gate*. Retrieved April 23, 2023, from https://rpgroup.org/Portals/0/Documents/Projects/ThroughtheGate/RPGroup_TheTruthAboutTransfer_TTGPhase3_R3%5B79%5D.pdf?ver=2020-05-18-171449-773

[81] Whinnery, E., & Peisach, L. (2022,July). *50-State Comparison: Transfer and Articulation Policies*. Education Commission of the States. Retrieved August 10, 2023, from https://www.ecs.org/50-state-comparison-transfer-and-articulation/

E. POTENTIAL OVERARCHING FINDINGS AND CONSIDERATIONS

In addition to the items that respond directly to the 2023 legislative requirements, the AB928 Committee is also considering these additional items as relevant to the creation of recommendations.

DATA

The lack of an intersegmental data system in California constrained the analysis that the AB928 Committee would have liked to have completed. Until an intersegmental database of postsecondary student records is built, the following will remain difficult or impossible to quantify, particularly as it relates to persistent and pervasive inequities based on race, income, and region:

- Start-to-finish understanding of transfer outcomes;
- The effects of impaction/redirection;
- Intra- and inter-regional transfer patterns;
- Intersectional identities of transfer students and related success patterns;
- Credits lost and repeated in the transfer process; and
- Overall outcomes for transfer students who start at community colleges, including baccalaureate graduation rate and total time to degree.

The AB928 Committee calls for accelerated progress toward the creation and mobilization of Cradle to Career, a longitudinal data system created by AB132.[82]

LONG-TERM COMMITMENT TO INTERSEGMENTAL COLLABORATION

As the AB928 Committee considered each legislative requirement, a recurring theme was the need for long-term commitment across the segments of higher education in California to engage in the ongoing problem-solving required for successfully removing barriers to equitable opportunities and outcomes for transfer students. The AB928 Committee recognizes that the work of achieving equity for transfer students is not work that can be accomplished through legislation or through any simple solution or 'magic bullet.' Real progress for students will be made only to the extent that stakeholders from across the segments are supported to engage in the long-term work of building and maintaining clear pathways for transfer students. Transfer student success is everyone's work and while there is much effort to recognize and

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[82] California State Legislature. (2021). *Assembly Bill No. 132, Postsecondary education trailer bill*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB132

achievement to build on, there is a long road ahead that will require durable commitment to intersegmental collaboration from stakeholders at every level. While a wide range of key stakeholders, including faculty, staff, and administrators, are implicated in this long-term work, the AB928 Committee also recognizes the necessity of ensuring effective participation of students and elevation of student voice and perspective is embedded into this ongoing collaborative work.

HOLISTICALLY ADDRESSING EQUITABLE STUDENT SUCCESS

As the AB928 Committee considered each legislative requirement, a recurring theme was the need to knit together a range of strategies designed to close equity gaps and ensure transfer student success. The strategies listed below also appear in other sections of this document, but they are repeated here, together, to ensure they are not overlooked. *(Note: This list will need to be revised and updated as the AB928 Committee formulates its recommendations. This is a placeholder list representing strategies that appear in other places in the document.)*

To close equity gaps and dramatically improve transfer student success calls for intentional and holistic implementation of a range of strategies. Strategies to consider include:

- Address the complexity of the underlying transfer infrastructure, including ensuring transfer opportunities are well-communicated to students, and requiring that clear articulations of all required lower division courses are publicly available and honored, to ensure students know which courses to take;
- Scale equitable dual admission practices to give students certainty about their transfer destination;
- Provide additional advising services with trained professionals;
- Provide additional career planning and support for workforce preparation;
- Increase financial aid funding;
- Expand online course offerings and increase awareness of online offerings by all types of institutions including independent institutions, and ensure online course and program availability is incorporated into all student-facing transfer communications;
- Establish satellite four-year campuses at community colleges in underserved regions; and
- Ensure intentional ongoing monitoring of progress to close equity gaps, with data disaggregated by at least race/ethnicity, income, age and region as well as by the credential levels and types needed to meet the state's workforce demands.

II. DRAFT OUTLINE OF FINAL REPORT ELEMENTS

A. INTRODUCTION

In 2021, the California State Legislature (via [AB928](#)) created the Associate Degree for Transfer Intersegmental Implementation Committee (hereafter "AB928 Committee") and called upon it to:

> [S]erve as the primary entity charged with the oversight of the associate degree for transfer for the sole purpose of strengthening the pathway for students and to ensure it becomes the primary transfer pathway in California between campuses of the California Community Colleges and the University of California, the California State University, and participating independent institutions of higher education.

The AB928 Committee began its work on July 1, 2022 and will work through June 30, 2025. The legislation clearly outlined the Committee's areas of focus for 2023, which are to make recommendations to the Legislature in the following areas:

- "Identifying annual goals for increasing transfer rates in California and closing racial equity gaps in transfer outcomes to be adopted by the state."
- "Proposing a new unit threshold for STEM degree pathways that meet the requirements for admission to the California State University and the University of California."
- "Reengaging ADT earners who do not transfer or apply for transfer into a four-year postsecondary educational institution."

B. LEADERSHIP

Dr. Aisha Lowe, Executive Vice Chancellor of the California Community Colleges, is the AB928 Committee's first Chair, serving a two-year term. AB928 states that:

> The first chair of the committee shall be the representative from the Office of the Chancellor of the California Community Colleges and shall serve a two-year term. Following the first chair's two-year term, the committee shall elect a chair from its members to serve a two-year term. A member shall not serve consecutive terms as chair of the committee and the position of chair shall rotate among the members of the committee.

The facilitator, Sova, will design an election process for 2024 to ensure a timely transition.

C. MEMBERSHIP

Current Members

The members of the AB928 Committee, as of the writing of this draft, are:

(i) Designating/appointing entity: The Office of the Chancellor of the California Community Colleges

Aisha Lowe
Executive Vice Chancellor, Equitable Student Learning, Experience and Impact Office
CA Community Colleges Chancellor's Office

(ii) Designating/appointing entity: The Office of the Chancellor of the California State University

Laura Massa
Interim Associate Vice Chancellor, Academic and Faculty Programs
Office of the CSU Chancellor

(iii) Designating/appointing entity: The Office of the President of the University of California

Yvette Gullatt
Vice President and Vice Provost, Graduate, Undergraduate and Equity Affairs
University of California, Office of the President

(iv) Designating/appointing entity: The Association of Independent California Colleges and Universities

Tanaz Arteaga
Associate Department Chair, BA Psychology - Los Angeles, San Diego, and Online Campuses
The Chicago School of Professional Psychology - Southern California Campuses

(v) Designating/appointing entity: The State Department of Education

Peter Callas
Director, Career and College Transition Division

California Department of Education

(vi) Designating/appointing entity: The Student Senate for the California Community Colleges

John "Jay" Doherty
Student
American River College

(vii) Designating/appointing entity: The California State Student Association

Open Seat

(viii) Designating/appointing entity: The University of California Student Association

Open Seat

(ix) Designating/appointing entity: The Academic Senate for the California Community Colleges

Virginia May
Past President
Academic Senate for California Community Colleges

(x) Designating/appointing entity: The Academic Senate of the California State University

Beth Steffel
Chair
Academic Senate of the California State University

(xi) Designating/appointing entity: The Academic Senate of the University of California

Susan Cochran
Chair
Academic Senate, University of California

(i) The Senate Committee on Rules shall appoint one member from the workforce sector with expertise in the fields of science, technology, engineering, or mathematics.

Rose-Margaret Itua

Professor of Engineering

Ohlone College

(ii) The Speaker of the Assembly shall appoint one member with a background in higher education research that includes scholarship on student transfer issues in the state.

Cecilia Rios-Aguilar

Professor and Associate Dean of Equity, Diversity and Inclusion

School of Education and Information Studies

University of California, Los Angeles

(iii) The Lieutenant Governor shall appoint one member from an educational equity and social justice organization.

Mike Muñoz

Superintendent-President

Long Beach City College

(iv) The Governor shall appoint one member from an educational equity and social justice organization.

Jessie Ryan

Executive Vice President

Campaign for College Opportunity

(v) The Governor shall appoint one member who is a California community college student.

David Ramirez

Student

University of California, Los Angeles

Please see Appendix A for the history of any changes in representatives.

Membership Criteria

The membership requirements of the AB928 Committee are outlined in the legislation. AB928 states that "the membership of the committee shall reflect its intersegmental function by

including a cross-section of the stakeholders who will be needed to fulfill the committee's responsibilities," and stipulates one representative from each of the following entities:

- The Office of the Chancellor of the California Community Colleges.
- The Office of the Chancellor of the California State University.
- The Office of the President of the University of California.
- The Association of Independent California Colleges and Universities.
- The State Department of Education.
- The Student Senate for the California Community Colleges.
- The California State Student Association.
- The University of California Student Association.
- The Academic Senate for the California Community Colleges.
- The Academic Senate of the California State University.
- The Academic Senate of the University of California.

Designating entities, as named above, shall fill vacancies when their representative member positions on the Committee are vacant. Appointing entities must notify both Sova and the Committee Chair of any vacancies and appointments.

AB928 additionally stipulates that five members of the Committee shall be appointed as follows:

- "The Senate Committee on Rules shall appoint one member from the workforce sector with expertise in the fields of science, technology, engineering, or mathematics.
- The Speaker of the Assembly shall appoint one member with a background in higher education research that includes scholarship on student transfer issues in the state.
- The Lieutenant Governor shall appoint one member from an educational equity and social justice organization.
- The Governor shall appoint one member from an educational equity and social justice organization.
- The Governor shall appoint one member who is a California community college student."

Appointing entities, as described above, shall fill vacancies when their appointed member positions on the Committee are vacant. Members appointed shall serve at the pleasure of their respective appointing entities. Appointing entities must notify both Sova and the Committee Chair of any vacancies and appointments.

D. TIMELINE AND ARC OF THE WORK

To date, the AB928 Committee has held five public meetings:
- October 13, 2022
- December 7, 2022
- January 26, 2023
- April 25, 2023
- June 12, 2023

Before the end of 2023, additional meetings are scheduled for:
- September 18, 2023
- November 30, 2023

Meeting agendas and materials are available here: https://www.ab928committee.org/

In addition, study groups reviewed research, heard from experts, and requested additional data (through the AB928 Committee's data partner Student-Ready Strategies). The study groups concluded their studying and the facilitator, Sova, compiled this set of emerging considerations to be released for public comment and distilled by the AB928 Committee into its final recommendations and report.

E. AB928 COMMITTEE'S RECOMMENDATIONS

This is where the Committee's recommendations will appear in the next draft.

F. NEXT STEPS

This report represents the culmination of the first 18 months of work for the AB928 Committee. With facilitation from Sova, the Committee will continue its work through June 30, 2025. In 2024 the AB928 Committee "shall elect a chair from its members to serve a two-year term."[83] In addition, on or before December 31, 2024, the Committee will respond to the following legislative requests:

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[83] California State Legislature. (2021). *Assembly Bill No. 928, Student Transfer Achievement Reform Act of 2021: Associate Degree for Transfer Intersegmental Implementation Committee*. Retrieved April 18, 2023, from https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB928

- "Establish timelines and reporting deadlines for the existing regular review of declaring or matching transfer model curricula similar to the California State University majors for admissions purposes."
- "Develop a plan for the periodic analysis and creation of additional transfer model curricula for the ADT to respond to evolving workforce demands, including STEM degree pathways, and degree pathways that will aid in the economic recovery from the COVID-19 pandemic, such as nursing and cybersecurity."
- "Develop a comprehensive communications plan and guidance on student-centered outreach to inform students about the ADT pathway and to ensure prompt and accurate information is communicated across four-year postsecondary educational institutions, the California Community Colleges, and elementary and secondary education."
- "Provide feedback for the regular review and identification of updates needed to the ADT internet website maintained by the California Community Colleges to ensure current information and updates are communicated to students, families, and student support staff engaged in educating students about their college options, participating four-year postsecondary educational institutions, and degree options."

RESOURCES AND TOOLS

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APPENDIX A: PREVIOUS COMMITTEE MEMBERS

(ii) Designating/appointing entity: The Office of the Chancellor of the California State University

      Sylvia Alva
      Executive Vice Chancellor, Academic and Student Affairs
      Office of the CSU Chancellor

(vi) Designating/appointing entity: The Student Senate for the California Community Colleges

      Paul Medina
      Student
      Los Angeles Community College District

(vi) Designating/appointing entity: The Student Senate for the California Community Colleges

      Trajan Robinson
      Student
      Folsom Lake College

(vii) Designating/appointing entity: California State University Student Association

      Michael Schouten
      Student
      California State University, Northridge

(viii) Designating/appointing entity: The University of California Student Association

      Tariq Azim
      Transfer Student Affairs Officer
      University of California Student Association

(viii) Designating/appointing entity: The University of California Student Association

      Abeeha Hussain

Student
University of California, Los Angeles