The Schedule of Classes

CSUCI President's Operational Effective Challenge – Executive Summary, March 2024

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Summary

Framework and Methods

Bolman & Deal (2017) informed a four-frame analysis of the case study consisting of the following lens:

a) Structural
b) Human Resources
c) Political
d) Cultural

Guiding questions for this analysis were as follows:

- What purpose does the SoC serve for the campus population, including staff, faculty, and students?
- What barriers limit the effective workflow from schedule data entry to student registration?

In an effort to provide data to inform the analysis and answer the guiding questions, a survey was distributed among campus employees via Qualtrics and student feedback was sought using discussion-based feedback sessions. In addition, use statistics were provided for Schedule Builder by Student Systems.

Problem
SoC platforms do not have a unified maintenance support structure or effective use strategy.

Findings
Oversaturation & Inconsistency: There are more enrollment platforms than can be effectively maintained; inconsistent policies and strategies impede effective decision-making for platform prioritization and resource allocation; students are overwhelmed with options, but only use one platform with any regularity.

1. *Student Use Expectations vs Reality*: Employees believe multiple options are beneficial, but students still only use one; current marketing campaigns for increased use are not working; real data is needed on student motivations, wants, needs, and use to inform decisions.
2. *Siloed Working Units*: Multiple areas manage platforms for the SoC without a unified hierarchy; resources are being wasted on multiple platforms without a single cohesive strategy for increasing use of existing platforms; units operating in isolation creates information deserts for both employees and students.
3. *Lack of a Unified Vision & Strategy*: Existing platforms were brought online without a single, unified strategy or workflow; knowledge on which platforms should be used for what tasks is limited to subject matter experts; information on available platforms has not been effectively marketed to students or employees.

Recommendations
Streamline & Support: SoC platforms should be streamlined such that only 1-2 are maintained per campus role or use, with an overarching strategy implemented to ensure full campus awareness and buy-in; data collection on use and efficacy should be incorporated in current institutional research initiatives and individual units should be empowered to manage the platforms they are responsible for more directly.

1. *Research & Data Collection*: Implement methods to monitor SoC platform use data within Enrollment Management; incorporate technology use and digital user experience metrics into existing ITS and/or OIR data collection efforts; publish data to broader campus community to enable better use of current platforms; provide support for small-scale student feedback initiatives on digital user experience within individual units to inform department/unit-level or division-level decisions; increase opportunities for staff to engage in professional and academic research.
2. *Clarity of Roles:* Formalize the authority of the University Registrar and Registrar's Office staff over the student records and SoC data housed in CI Records, registration process, and all SoC and registration platforms; support expansion of Student Systems and/or Registrar's Office staff to include a dedicated programmer to allow for consolidation of platform oversight under the Enrollment Management umbrella.
3. *Unified Strategy & Goals:* Pair platforms to user groups to maximize efficacy; implement a strategic marketing campaign to increase awareness and use of identified primary platform(s) by role or purpose.

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Background

At CSUCI, Schedule of Classes (SoC) data is entered and maintained in CI Records. This data, once published, is then viewable to students, faculty, and staff on **five separate platforms**: students can view the SoC directly in CI Records via the Class Search, through Schedule Builder, in a web app housed in the Catalog & SoC web pages, and in the goCI mobile app; in addition to CI Records and the web app, employees can additionally view the SoC in dashboards in OneCI.

Schedule Builder and CI Records are also directly connected to the CI Academic Requirements Report (CARR) and Degree Planner, and although these are not tools for viewing the schedule or enrolling in classes, the interconnected nature of these tools (known collectively as Student Success Tools) results in the need to consider them when anticipating any downstream effects of any proposed changes to CI's SoC platforms. A visual map of the associated platforms that are fed directly from the data in CI Records can be viewed in Figure 1. Platform ownership is indicated based on which side of the map the platform has been placed.

Figure 1: SoC & Associated Platforms
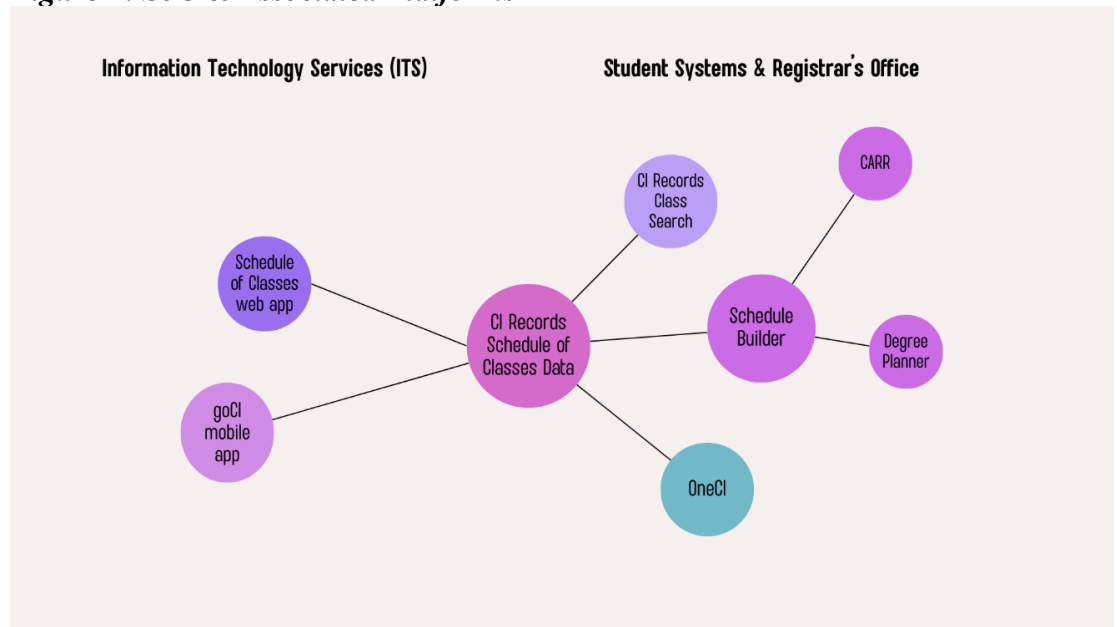
Purpose & Problem

The initial proposal for this case study was focused on the web SoC in particular. The SoC web pages as they currently exist are comprised of two separate pieces: a web app which populates the semester class schedule from CI Records and static content pages are that are updated **manually** each semester. Updates to both content areas and the app itself require **the coordination of staff** in multiple divisions, primarily Academic Affairs, Business & Financial Affairs, and Student Affairs. Most information provided in the content pages is available on different web pages throughout the CSUCI umbrella, as the content itself is provided by a contact person from the given area to assure alignment with that area's own web page(s). The web app and content pages are accessible to all members of the campus community and the general public and do not require login credentials to view.

CI campus community; abbreviated throughout as ITS.

OneCI: a Tableau-based data warehouse connected to CI Records and other platforms that allows viewing of data in dashboards; accessible only to employees.

Schedule of Classes: a list of all individual class sections being taught during a given semester, including details such as classroom assignments, instructor names, meeting days and times, and learning mode; abbreviated throughout as SoC.

Student Success Tools: platforms maintained by Student Systems to facilitate student degree planning and individual class schedule planning; consists of the CARR, Degree Planner, and Schedule Builder.

Student Systems: specialized staff and administrators who support the Oracle PeopleSoft platform and other technology tools housed in Enrollment Management.

Web-based SoC: the web application and static web pages where the SoC and other semester-specific information is displayed for public view; referred to throughout as the web SoC or SoC web app.

The SoC web app is a snapshot of the live data in CI Records. While it is designed to update automatically (roughly every 30 minutes) to reflect the latest entries in existing fields – fields include instructor names, meeting days and times, assigned classrooms, learning modes, and other attributes - **the app requires manual work to add any new fields** or details that may have been added in PeopleSoft. Adjustments to active fields or the addition of new fields occur periodically as the Chancellor's Office provides updates to the PeopleSoft platform and CI's internal Student Systems team improves the usability and visibility of the CI Records SoC.

Maintenance of the web app is the responsibility of the specialized staff in ITS who also manage all other web pages and apps throughout the CSUCI umbrella, while maintenance of the SoC data in CI Records is managed by staff in the Registrar's Office and Student Systems. The **responsibilities being split between two separate divisions creates difficulty** in coordinating maintenance of the web SoC, as ITS staff are not given the same depth of access or training in CI Records as the staff who manage the SoC, nor are they as connected to the Student Systems or systems staff in the Chancellor's Office who oversee updates and changes to our Oracle PeopleSoft platform. Staff who work in CI Records do not have the web development training or access to maintain the web app and must contact ITS for any updates or changes that need to be reflected in the web app.

The multiple responsible units involved, and steps required, when a new field, mechanism, or visual feature is implemented in CI Records can be seen in the flowchart labelled Figure 2. Any update to the platform can be triggered and implemented by any of the four entities involved in maintenance of the platform: Oracle, the CSU Chancellor's Office and their technical teams, CI's internal ITS, and CI's Student Systems team. Regardless of which entity implements the update, testing, implementation, and documentation updates must occur in any downstream platforms impacted by the update.

As a result of the complexity of the task of updating CI Records, and by extension, the SoC web app, **no major changes to the web app's structure or navigation have occurred since its launch in 2014,** and many fields and features available in CI Records have not been able to be added to the web app in a timely fashion.

Figure 2: SoC Update Flow
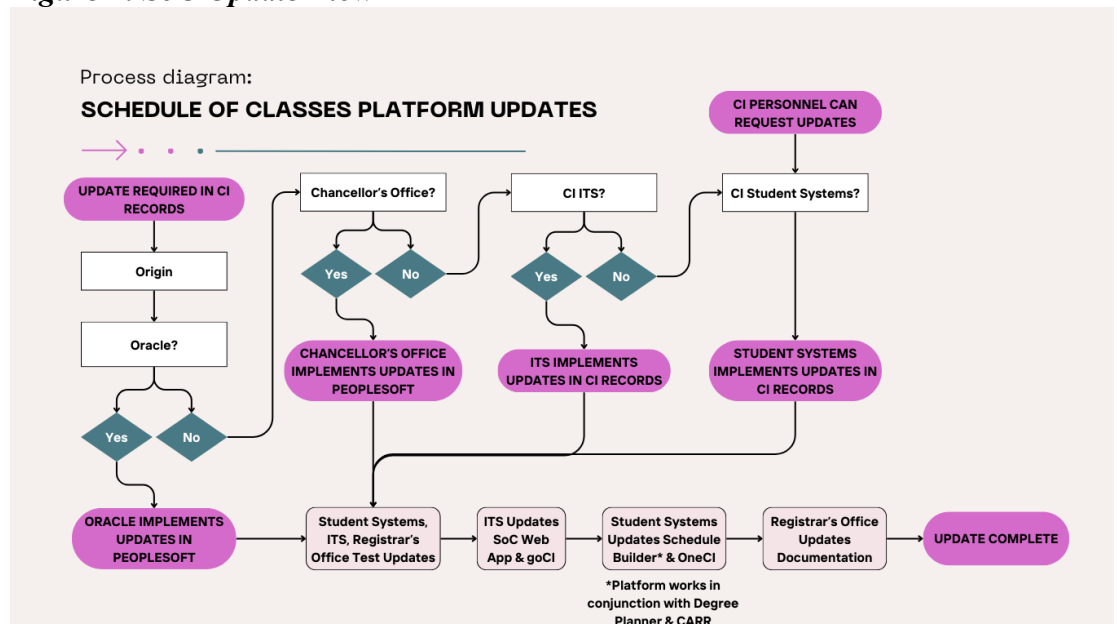
Data Collection Methods

Survey Instrument:
Staff, faculty, and administrators were surveyed via Qualtrics on their experiences with the platforms that display the SoC. A full list of questions in the survey instrument can be found in Appendix A. The survey link was distributed through all five campus divisions. 61 total university employees responded.

Staff and administrators' responses were pooled to create a single 'staff' response group to compare to the faculty response group.

Focus Groups:
Student feedback was collected using in-person discussion-based focus groups held during class time provided by individual instructors. Classes made available to the team for data collection were from the following departments: Political Science, Education, Computer Science, and Business. Both lower division and upper division classes participated, resulting in feedback from a mix of student academic levels.
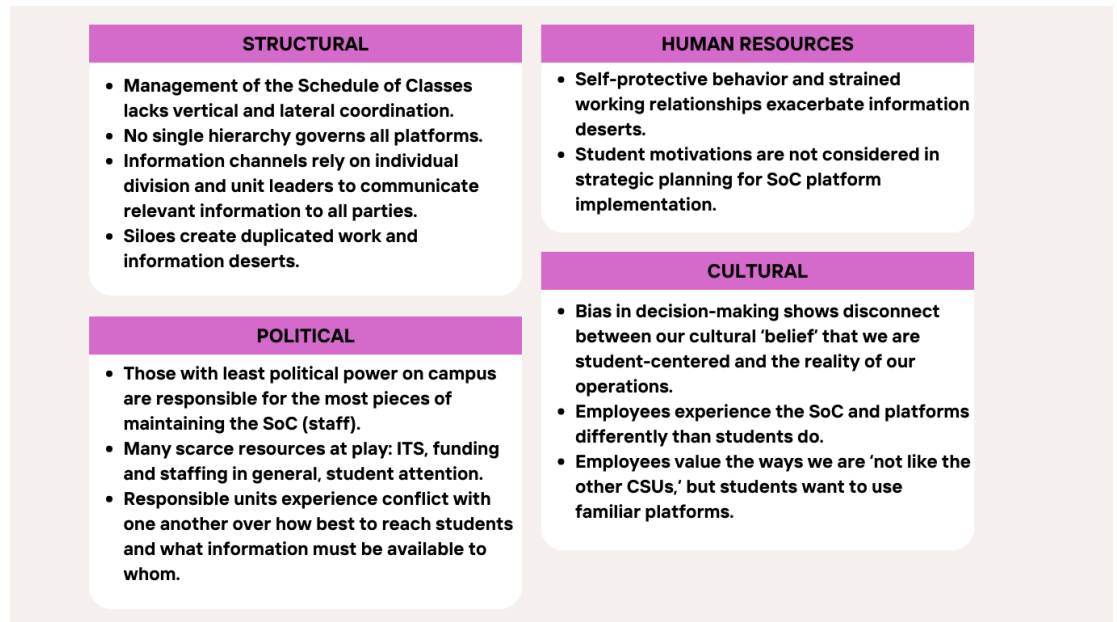
Use Statistics:
Direct use statistics for the web SoC and Schedule Builder were provided by ITS and Student Systems, respectively.
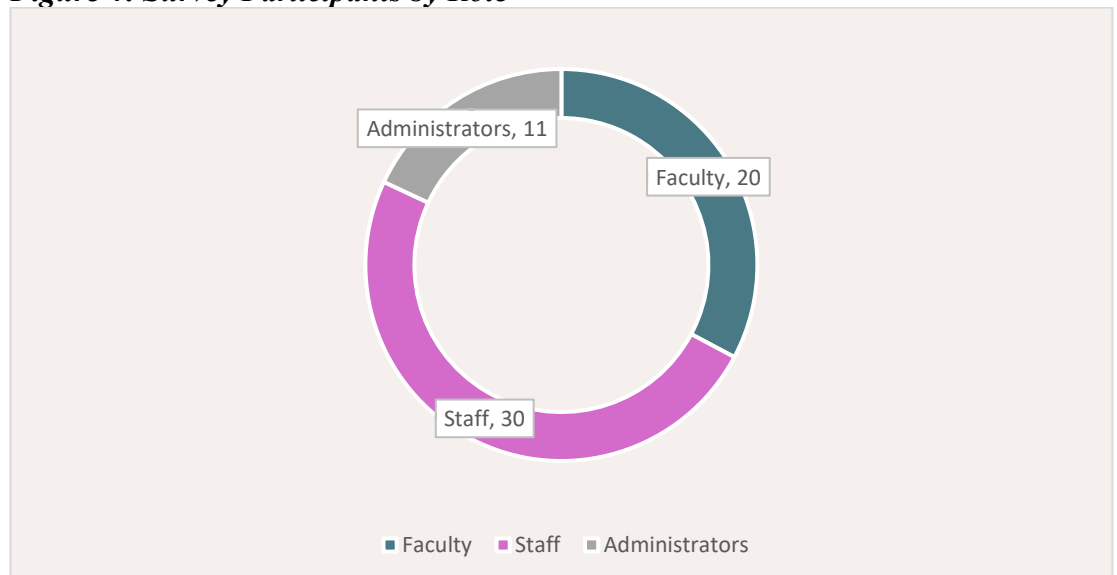
Four Frame Analysis

Analysis of the SoC update workflow using Bolman & Deal's (2017) Four Frames resulted in the main findings noted in Figure 3, grouped by frame.

Figure 3: Four Frame Analysis

STRUCTURAL
- Management of the Schedule of Classes lacks vertical and lateral coordination.
- No single hierarchy governs all platforms.
- Information channels rely on individual division and unit leaders to communicate relevant information to all parties.
- Siloes create duplicated work and information deserts.

HUMAN RESOURCES
- Self-protective behavior and strained working relationships exacerbate information deserts.
- Student motivations are not considered in strategic planning for SoC platform implementation.

POLITICAL
- Those with least political power on campus are responsible for the most pieces of maintaining the SoC (staff).
- Many scarce resources at play: ITS, funding and staffing in general, student attention.
- Responsible units experience conflict with one another over how best to reach students and what information must be available to whom.

CULTURAL
- Bias in decision-making shows disconnect between our cultural 'belief' that we are student-centered and the reality of our operations.
- Employees experience the SoC and platforms differently than students do.
- Employees value the ways we are 'not like the other CSUs,' but students want to use familiar platforms.

Survey Participant Statistics

Figure 4: Survey Participants by Role

Administrators, 11
Faculty, 20
Staff, 30

■ Faculty ■ Staff ■ Administrators

Comparison of Split-Focus Use vs Single-Platform Use:
Degree Planner allows students to project individual semester-by-semester plans to complete their degrees. **Degree Planner is an example of a best-case scenario student platform** – it has no competing options currently operated by CI, it is accessible directly in the CI Records Student Center, and it has buy-in from both faculty and staff to support student use. Its actual use statistics are for very good – for Fall 2023 and Spring 2024, **Degree Planner users made up 82.1% and 81.6% of enrolled undergraduates**, respectively. In comparison, **Schedule Builder users made up just 1.4% and 1.8% of enrolled undergraduates** for Fall 2023 and Spring 2024, respectively.

Overarching Theme: Oversaturation & Inconsistency

Initially, our team began assessing the platforms, responsible units, and process workflows through the lens of two separate but interconnected platforms: CI Records and the SoC web app. However, as our research deepened, additional platforms were incorporated into the overall analysis as we became aware that the our campus maintains a total of **five separate platforms** that all enable view of the SoC for at least one of the three role-based groups of campus and community members.

A visual guide is presented in the form of a Venn Diagram in Figure 5 that demonstrates the availability of the different platforms for different groups and the use those platforms serve. The SoC web app is the only platform available to students, campus employees, and the general public, but does not enable either enrollment for students or export capabilities for employees – in other words, it is a view-only representation of the SoC. Students have three separate platforms through which they can identify classes and enroll in them directly in the platform – Schedule Builder, the goCI mobile app, and CI Records. Employees have data analysis and export capabilities in CI Records and OneCI.
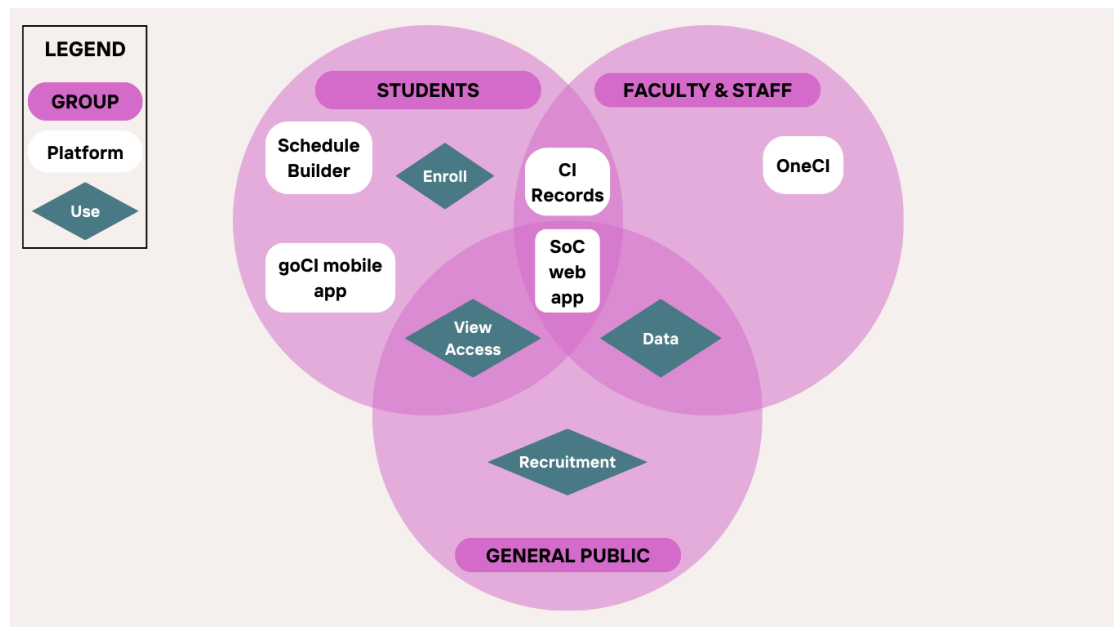
Figure 5: SoC Access

Relevant Laws & Policies:
California SB 1359 requires that any online campus SoC must include clear symbols for zero-cost or low-cost course materials for any section using zero- or low-cost course materials.

On the surface, the use of multiple platforms to access the SoC appears to be a responsible attempt to provide options to our students and increase enrollment. While the argument can be made in some settings and on some topics that meeting students where they are, no matter how many platforms that requires, can only benefit them, it is the opinion of this team that this is not the case for the SoC for two primary reasons.

First, adding to the number of platforms in use may *raise* barriers for students rather than lowering them. **Each new platform a student must navigate to accomplish a task is an additional barrier to said task**, requiring the development of additional knowledge and expertise. Platforms created by different companies and managed by different units will likely be inconsistent with one another in both logistics and user interface, creating more opportunities for confusion and **compounding existing barriers** for our first-generation

students, students for whom English is a second language, and students with disabilities. There are already multiple platforms our students must be able to navigate to succeed in their academic goals – any proposal for the implementation of an additional platform should have required demonstration that it would, at minimum, have a neutral impact on the administrative barriers that exist for our students, but ideally would lessen the existing burden and provide a more equitable experience for our most at-risk students.

Second, by providing multiple avenues to reach the same destination, we have in essence **oversaturated** the market with platforms that allow students to view the SoC. We cannot ensure wide use of any one tool if there are **half a dozen competing options**. A key example of this is the Schedule Builder platform. Despite presenting a cleaner, more user-friendly UI and providing functionalities that the other platforms don't share, **the student use rate for Schedule Builder for the Spring 2024 enrollment cycle was just 1.8%**. Schedule Builder is meant to be not only a tool for students, but also for employees, as, in conjunction with Degree Planner, students can map out future terms, which can inform semester schedule planning for academic programs, meaning **that low use impedes our ability to provide useful data** for academic planning. It is disadvantageous to split students' attention with the availability of multiple platform options when there is a direct need to funnel them toward a specific platform.

In analyzing this case study, our team interrogated the premise that we as campus employees are operating and making decisions based on data and best practices rather than based on assumptions made about students' behavior, habits, and motivations. Our data reflected an **inconsistency in the perception of students' behavior versus the reality**, not only in platform use related to the SoC, but also in general device usage and motivations for said usage, which undermines our culture as a student-centered institution. We were only able to provide a snapshot of student use and preferences, however, and without additional data to inform our decisions, students will likely continue to opt for whichever choice is easiest or most familiar rather than using the tools that best support them. **A true student-centered culture would be grounded in research and real data on our own students**. It is vital that we assess the digital user experience from multiple lenses, identify which platforms are most effective for which uses, and focus resources, training, and awareness campaigns to increase use of existing platforms by both students and employees for the uses they are best suited for.

There are many questions that were unable to be answered within the scope of this case study. Any adjustments to current platform availability and marketing requires knowing which platforms we are obligated to maintain due to contracts signed, mandates from the Chancellor's Office, or funds already spent, as well as comprehensive documentation of which information we are required to present in what formats based on CI policy, CO policy, and state and federal law. Even in understanding our obligations, there is inconsistency, as **this team was unable to source any active CSU policy that governed the *format* in which the SoC needed to be displayed**, despite there being both state and federal laws requiring specific elements be visible (SB 1359 for free course material designations, AB 607 and HEOA for course material costs and course fees). This team, however, notes that a lack of consistent policy and strategic planning is a recurrent theme in most of the case studies launched in this pilot operational effectiveness challenge.

In addition to these overarching findings, additional key findings are detailed below.

Finding 1: Student Use Expectations vs Reality

Who uses the SoC web app and for what purpose or purposes were the primary questions that informed the creation of the Qualtrics survey instrument and student focus group data

collection methods. In analyzing the collected data, however, our team determined that the realities of student platform use are out of line with what University employees believe.

Primary job duties requiring access to, or use of, the SoC were polled using the Qualtrics survey instrument, with response totals by job duty visible in Figure 6. Employee responses to the survey instrument indicated that **the primary job duty requiring use of the SoC is advising students or assisting students** when they are registering for classes (21 responses), and primary use of the SoC web app (29 responses) and CI Records (32 responses) was reported to be in service of advising students.

Figure 6: Primary Job Duty Requiring the SoC
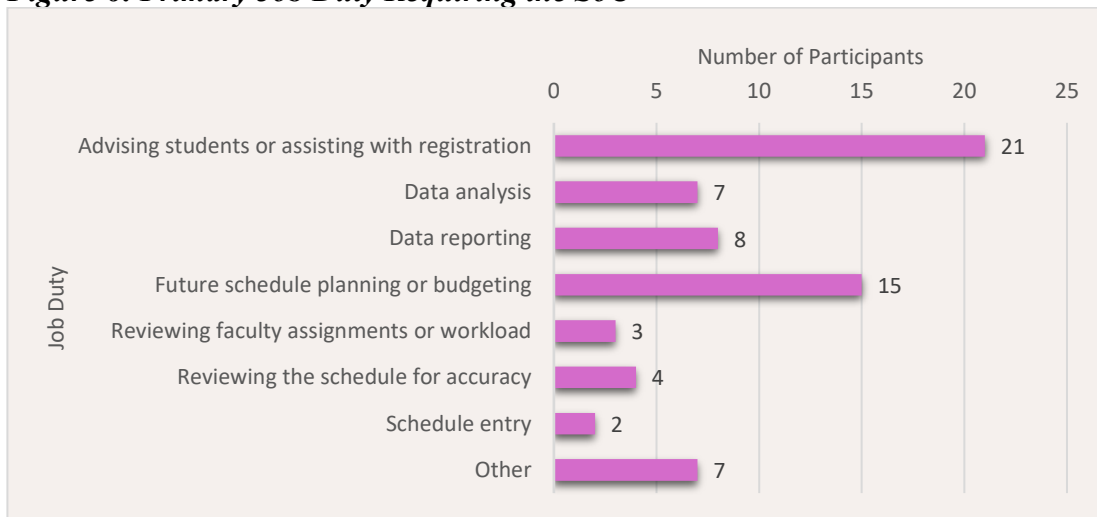
However, responses from students during the focus group data collection sessions indicated that, despite the plethora of available options for viewing semester schedules and registering for classes, students at CI primarily use CI Records. **Knowledge of and familiarity with other platforms was limited, and those students that did report using other platforms such as Schedule Builder or the SoC web app did so sparingly**, and usually only when directed to do so by university employees. No participating students reported awareness of the ability to view and register using the goCI mobile app (knowledge and use of the mobile app was not posed to campus employees, as knowledge of the app's registration capabilities was unknown to even team members until survey response collection was nearly completed).

The consensus among the participating students was that CI Records met their needs, so **the availability of other platforms did not positively or negatively impact their ability to view and schedule classes** – they simply didn't use them. Reasons varied, but the most common were a) that CI Records provided the most information of all known or available platforms, b) the CI Records Class Search was most convenient due to the shared access with the CARR and Degree Planner, and c) CI Records provided direct access to the enrollment shopping cart. This feedback is directly opposite that of more anecdotal feedback from Registrar's Office and Academic Advising staff already known to team members *and* the assumptions of this team upon undertaking this case study.

While Bolman & Deal's (2017) Cultural Frame reinforces the notion that culture is as much composed of ideas and symbolism as it is actions, the disconnect between employee beliefs and student behavior suggests that **we as an institution need to interrogate whether we are maintaining a truly student-centered culture**, or whether our actions have become largely symbolic. If we are committed to embodying a student-centered culture in all areas that provide student support services, the question then becomes, **how do we ensure that we are identifying and meeting student needs with our digital platforms**? Better use data

and feedback from students are needed ahead of any major changes or updates to any platform that provides access to the SoC.

Finding 2: Siloed Working Units

In analyzing the SoC publication, maintenance, and availability through Bolman & Deal's (2017) Structural Frame, we defined this topic as less a single process and more **multiple interconnected processes managed by multiple units in multiple divisions**. Information Technology Services (ITS) is housed within the Division of Business & Financial Affairs (BFA) and is responsible for the basic technological infrastructure of all platforms and websites used at CI, including those used for the SoC. However, internal maintenance and management of CI Records and Schedule Builder falls to the Student Systems team, which, as of the writing of this report, is part of the Division of Academic Affairs (DAA). Student Systems works alongside the Registrar's Office, the other responsible unit for the SoC and other enrollment processes, and both are under the Enrollment Management umbrella within DAA.

Due to the separation of these responsible units into two separate divisions, **the command structures governing these interconnected processes are wholly separate,** ultimately only connecting at the level of the university president. Differentiation of roles, tasks, and responsibilities results in minimal overlap between the different pieces of these processes. The Registrar's Office is the closest thing to a central hub connected to all different elements, but even this unit lacks direct connection to the knowledge, skills, and access of some contributing units such as ITS.

While the differentiation has enabled units to become experts in their portions of the process, it has also resulted in near total isolation regarding platform development and implementation. An example: the feature allowing semester schedule viewing and registration via the goCI mobile app was launched directly through ITS without consultation with the Registrar's Office – as a result, the registration guides and other documentation housed on the Registrar's Office web pages does not include instructions for registering using the mobile app. In fact, there is no reference to this capability anywhere in any of the platforms or information repositories maintained by Enrollment Management, it is not widely advertised to students by staff in this area, and area staff likely could not assist with or troubleshoot registration using the app. The use of multiple platforms and the separation of the units responsible for said platforms, without a centralized support structure for collaboration and information dissemination, inhibits our ability to support students as they register.

Per Bolman & Deal's (2017) Political Frame, **scarce resources are a key source of conflict in any organization**. Any important decision made within an organization will involve the allocation of scarce resources, and due to said scarcity, spending resources on one initiative or group will necessitate depriving another initiative or group. In our analysis, we identified **ITS staff and bandwidth as a scarce resource** – there are only so many skilled employees on staff with only so many hours in a day to spend on maintaining our technological infrastructure, and since ITS provides support to all campus areas, their time and attention must be carefully allocated. It also cannot be understated that when multiple campus stakeholders are continually jockeying for priority when proposing projects or submitting tickets, ITS staff and leadership must continually assess each request on multiple axes to determine which to move forward and which to deprioritize or even deny based on their limited resources. Whether there can be improved transparency regarding these assessment criteria in order to shift some of the burden of justification back onto individual units and employees before they submit any proposals remains to be determined, but this pain point will likely persist due to the nature of scarce resources and competing needs – after all,

everyone believes that their proposals are worthy of support, or else why would they be submitting them?

Ultimately, **maintaining multiple disparate platforms requires funding and trained staff to support each platform**, as well as cross-training for end-user staff and the time and effort required to update and expand upon existing documentation to support both employees and students in navigating each platform. Different units working in isolation on similar problems instead of collaborating also creates inefficiency and waste at a time when our scarce resources are only becoming scarcer. Any expenditure of campus funds or the time and efforts of specialized staff should require careful consideration by all connected units, and the possibilities of adapting existing platforms to meet students' increased or shifting needs should be exhausted before new platforms are pursued in order to preserve these resources and improve our overall organizational efficiency.

Finding 3: Lack of a Unified Vision & Strategy

Problem:

Split Focus – Existing platforms were brought online without a single, unified strategy or workflow.

Poor Awareness – Information on which platforms should be used for what tasks has not been marketed effectively to either students or employees, and knowledge remains limited to subject matter experts.

Recommendation:

Identify internal technological goals and priorities and assess where individual units can shift resources to align with broader campus goals.

Identify which platforms meet which campus needs; eliminate any extraneous platforms.

Implement a strategic marketing campaign to increase awareness and use of identified primary platform(s) by role or purpose.

Bolman & Deal's (2017) Human Resource Frame reminds us that **organizations exist to serve human needs.** This is true for both the people served *by* the organization and those that make up the organization, considering how organizations cannot exist without the people that comprise them. The Human Resource Frame (Bolman & Deal, 2017) is built on the premise that understanding and meeting employee needs is necessary for an organization to be successful, because a successful organization builds a symbiotic relationship with its employees – employees provide ideas, energy, and talent to their organization, while the organization provides salaries, opportunities, and careers to their employees. In Pink's (2011) theory of human motivation, people are primarily motivated by three drives: autonomy, mastery, and purpose. Pink argues that purpose is an example of an intrinsic motivation – people inherently want to do things that matter – but one that requires active effort from the organization to sustain. Mission, vision, and goals all must be communicated to and understood by employees for them to be able to identify where their individual role and work fit into the organization's vision – what their individual purpose is in the larger machine.

Structurally, this team was able to identify where the SoC process fits into the larger picture of student enrollment and how the different units and tasks fit into the whole. From a human resource lens, however, the connections are less clear, making it difficult for individual employees to see where their work connects to the broader mission of our university. While this can negatively impact the motivations of individual employees, **it also undermines strategic planning if individual units do not have a sense of where their work intersects with that of other connected areas**. This ties back to Bolman & Deal's (2017) Structural Frame, as it is the lack of organization-wide lateral coordination that undermines our ability to tie individual unit strategy and vision with the broader campus strategy and vision.

A recurrent theme in many working groups at present is the notion that, due to attempting to **'build the plane while flying it' in our institution's early history, we have not paused our efforts to develop a flight plan.** In assessing the SoC and the student registration experience, SoC platform implementation and improvement has also suffered from a lack of a 'flight plan,' i.e. a unified vision and strategy. Nothing drives this point home more clearly than the fact that **this team, comprised of the primary specialists responsible for maintaining the campus catalog and schedule for student use, were not aware of the existence of some platforms with student registration capabilities when this case study began.**

Effective implementation of any platform or service that will be used by the broader organization requires strategic planning during development and launch to ensure alignment with organizational goals. **If individual units are unable to articulate how their goals and**

strategy connect to our high-level university mission, we risk misallocating vital resources and reducing our ability to serve our students. In this case study, the structural and human resource contexts are inextricably linked – effective cross-divisional collaboration requires knowing and understanding where each unit fits in both the workflow and the vision and planning our overall strategy with both in mind. Findings from both the employee survey instrument and the student focus groups indicated a **lack of knowledge of available SoC platforms across the campus community, meaning somewhere between planning and implementation, connection to a unified vision for the SoC was lost.** We must be able to identify the value of the work we are doing, articulate how it serves our larger vision and goals, and communicate that outward if our individual area initiatives are to be successful in the long term.

Recommendations

Streamlining

Proposed Platform Uses & Audience

Schedule Builder – Students

CI Records – Faculty, Staff by roles, Students as needed

OneCI – Administrators, Faculty & Staff by roles

Web PeopleSoft – General Public, Faculty & Staff doing recruitment

goCI Mobile App – discontinue use for registration if possible; alternatively, pursue integration with or redirection to Schedule Builder

Overall Recommendation: Streamline & Support

It is the opinion of this team that the **SoC platforms are too diffuse to be utilized effectively across the board and those platforms that offer the most functionality for both students and employees suffer from a lack of awareness and trust from the campus community.** It is therefore the recommendation of this team that actions be taken to **streamline the available platforms, support continuous improvement of the remaining platforms, and raise the general campus knowledge threshold for SoC platforms.**

Ideally, we would only need to maintain a single platform for viewing the SoC and enrolling. However, we acknowledge that this is likely not feasible due to different platforms meeting different needs and ongoing contracts with vendors. Our proposed method of streamlining is as follows:

For Students: 1) **Schedule Builder**, due to its connectivity with Degree Planner and support from the Chancellor's Office, **should be the primary tool marketed to students** to view the SoC. CI Records Class Search and other PeopleSoft features will remain and will continue to be maintained to support Guided Registration, but student-facing employees should encourage use of Schedule Builder first for students. 2) The SoC web app should be converted to a public-facing PeopleSoft platform (no login required) similar to that of other CSUs and will look and function the same as the internal CI Records Class Search, but without enrollment functionality. A possibility to consider here is **collaboration with the Ventura County Community College District in the PeopleSoft Class Search look and feel to further support local transfer students**. 3) Assuming further data collection corroborates the findings of this case study, goCI mobile app registration capabilities should be phased out.

For Employees: 1) All employees will be able to view the SoC in the public-facing PeopleSoft platform. 2) Faculty instructors and advisors and staff who either maintain the SoC or support student enrollment will continue to have access to CI Records. 3) **OneCI will be the primary focus for data collection and data display for the SoC and student enrollment** for those employees with access – increased use of the platform will require addressing which, if any, of the dashboards could be made accessible without requiring security access.

This transition will require an overarching strategy to ensure **full campus awareness and buy-in**. It is vital that frontline employees such as instructors and academic advisors encourage use of the primary platform (in this proposal, Schedule Builder) to **provide a unified support network for student use**. In addition, data collection on platform use and efficacy should also be incorporated in current institutional research initiatives to better inform our high-level digital strategy.

Recommended actions to be taken in support of this overall strategy are detailed below, broken into three separate focus areas.

Focus Area 1: Research & Data Collection

Applying the Four Frames

Structural Frame:
Implementing methods to monitor SoC platform use data within the Registrar's Office will enable those units directly responsible for the SoC platforms to implement a single process flow to turn feedback into recommendations, and then into implementation.

HR Frame:
Providing support for small-scale student feedback initiatives on digital user experience within individual units will provide frontline employees and subject matter experts more autonomy over their own work.

Political Frame:
Incorporating technology use and digital user experience metrics into existing ITS and/or OIR data collection efforts will elevate the profile of those staff areas directly managing digital student services and will provide data to justify future resource allocations.

Providing support for small-scale student feedback initiatives on digital user experience within individual units will give individual departments more agency and data to better advocate for their unique needs.

A large component of the work required to complete this case study was accurate data on student and employee platform use and experiences. While some use statistics and student feedback were acquired, **much more is needed to accurately inform future decisions** on platform prioritization, possible discontinuation, and awareness campaigns to increase use. In addition, **overall campus research metrics should be expanded to include relevant digital user experience topics** to align with identified campus goals for improving our technological infrastructure. It is the recommendation of this team that expanded data collection targets and increased data dissemination are needed to support improvements to the SoC and other student services platforms campuswide.

The primary actions to be taken in support of this focus area are as follows, listed starting at recommendations that can be implemented at the individual unit level up to recommendations that require full campus support to achieve:

Recommendations Within Enrollment Management

Implement methods to monitor SoC platform use data and collect student feedback within the Registrar's Office: Student Systems already maintains an internal dashboard for tracking and comparing use of the Student Success Tools platforms using data from CI Records. A similar dashboard or other tool should be implemented to track real student and employee use focusing on the SoC to inform decisions regarding platform continuation and marketing campaigns. In addition, other methods of continuous feedback collection could be launched to keep the area abreast of changing student needs. The Registrar's Office should develop these data collection tools to empower their own specialists, who are directly responsible for these platforms, to have direct access to data for continuous improvement.

Recommendations Requiring Cross-Divisional Collaboration

Incorporate technology use and digital user experience metrics into existing ITS and/or OIR data collection efforts: To align with larger campus goals to improve the digital user experience for students, existing Information Technology Services and Office of Institutional Research metrics should be expanded to include topics such as device preferences, platform use, digital service experiences, and other feedback in order to better inform decision-making as we address pain points for students in accessing digital services.

Provide support for small-scale student feedback initiatives on digital user experience within individual units to inform department/unit-level or division-level decisions: The support of the Office of the President in this initiative has emphasized how important research-based frameworks and good data are to making formal recommendations for change. However, individual units often do not have the means or skillset to conduct the high-level research needed to support recommendations being made to administrators, especially when requesting increases to budget or other resources. For campuswide initiatives, the Office of Institutional Research is an obvious partner and leader for conducting campus research. However, OIR cannot be available for every department- or division-level project that requires data to inform best practices.

Instead, it is this team's recommendation that OIR be given support to develop guides, frameworks, or trainings to empower individual departments to conduct targeted research on individual services or platforms to better inform decisions made at these lower levels. This will both improve the speed with which individual units can adapt to student needs and take

Increasing opportunities for staff to engage in professional and academic research will enable staff areas to leverage data when negotiating for resources and provide opportunities for cross-role and trans-divisional coalitions to form.

Cultural Frame:
Incorporating technology use and digital user experience metrics into existing data collection efforts will improve our efforts to meet students' needs and support a true student-entered culture.

Publishing data to the broader campus community will help shift our current culture of assumptions regarding student habits and technology use and reinforce a data-driven decision-making framework for our overall institutional planning.
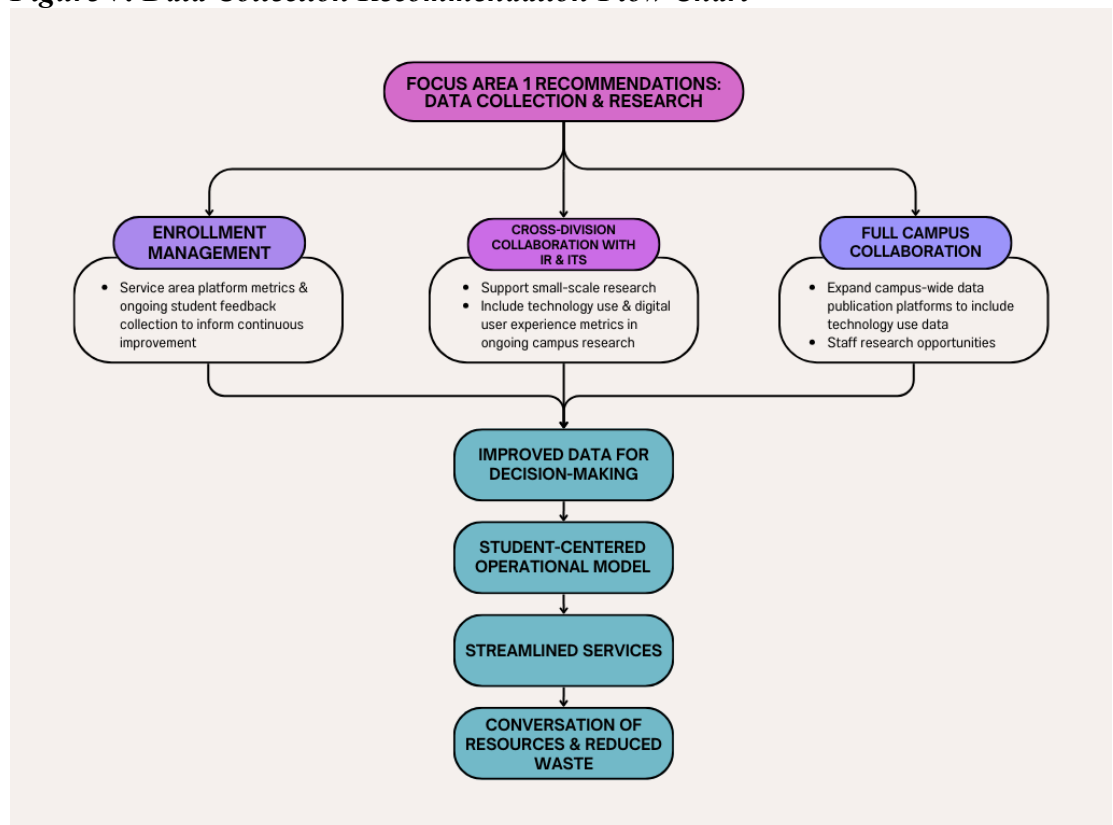
some pressure off OIR as the responsible unit for *all* research initiatives campuswide, while still ensuring that any data collection methods adhere to OIR standards.

Full Campus Collaboration

Publish data to broader campus community to enable better use of current platforms: Many misconceptions exist regarding what devices and services students use, how, and for what purpose. Campus employees make decisions every day that could be based on accurate data rather than these misconceptions. Any data on student device use preferences and other relevant feedback resulting from the above recommendations must be made available to the broader campus community to better inform frontline employees making decisions.

Increase opportunities for staff to engage in professional and academic research: Another incidental finding of this case study was that staff areas often do not have the same access to student research participants or support for professional research activities that faculty do, as it was difficult for staff members of this team to find and connect with potential student participant pools without faculty assistance. To best support a campus culture of data-driven decision-making, existing resources and research-focused initiatives should be expanded to support staff participation. In the immediate context, providing resources and space for staff to conduct professional-level research will allow us to improve our services to students with real data and research-backed recommendations. More broadly, however, this recommendation also has the potential to increase collaboration opportunities across campus divisions and roles, improve working relationships between faculty and staff, provide opportunities for staff to develop as scholars as well as higher education professionals, and raise CSUCI's profile as a research-focused institution.

Figure 7: Data Collection Recommendation Flow Chart

Supporting permanent expansion of Student Systems and/or Registrar's Office staff to include a dedicated programmer or other technology specialist will provide additional staffing support within the division rather than necessitating continuous cross-divisional collaboration to perform day-to-day work.

Formalizing the authority of the University Registrar over the student enrollment workflow will help provide additional operational guidance and delineation of responsibilities between different operational units, decreasing duplicated efforts and miscommunication.

HR Frame:

Identifying or developing a mission statement, vision, and goals for the CI Registrar's Office will enable unit staff to align their individual goals and sense of purpose with the overall organizational mission.

Political Frame:

Supporting permanent expansion of Student Systems and/or Registrar's Office staff to include a dedicated programmer or other technical specialist will enable management of enrollment platforms by subject matter experts without the need to

Focus Area 2: Clarity of Roles

Underlying the majority of this team's findings was the presence of **multiple pockets of staff doing similar work** supporting the SoC without direct collaboration linking them together. The primary core unit determined by our analysis to be central to the SoC maintenance and platform use is the Registrar's Office; however, platform implementation, maintenance, documentation, and student support has not always occurred solely within the Registrar's Office or included collaboration with the University Registrar or Registrar's Office staff. While maintenance of our technological infrastructure necessitates the involvement of ITS staff in maintaining any digital platforms or services, the fact remains that without direct collaboration with the Registrar's Office, staff will not have the information needed to develop the appropriate documentation and training required to support students in using the platform or service if used for registration or related tasks. It is therefore the recommendation of this team that there be formal acknowledgment and documentation of what services, platforms, and resources are the responsibility of the Registrar's Office; in addition, we also recommend the inclusion of specialized technical staff within Enrollment Management to best support providing excellent digital enrollment services to students from application to graduation.

The primary actions to be taken in support of this focus area are as follows, listed starting at recommendations that can be implemented at the individual unit level up to recommendations that require full campus support to achieve:

Recommendations Within Enrollment Management

Identify or develop a mission statement, vision, and goals for the CI Registrar's Office: To align with any division- or university-level vision, the Registrar's Office must first identify their own internal mission statement, vision, and goals that provide a road map or flight plan to improved student services. Examples of other CSU Registrar's Offices that maintain mission statements include CSULA, CSU Bakersfield, and CSU San Bernardino. An overall vision and goals need not be publicly advertised on a web page but should at minimum be accessible to all Registrar's Office staff. Individual staff goals and projects can then be aligned with the unit goals and vision.

Support expansion of Student Systems and/or Registrar's Office staff to include a dedicated programmer or other technical specialist to allow for consolidation of platform oversight under the Enrollment Management umbrella: The unique needs of the student services provided within Enrollment Management necessitate specialized platforms that, while used by other campus areas, are not managed or maintained by them. Student Systems and Registrar's Office staff are subject matter experts for the Oracle PeopleSoft platform and our student records and enrollment processes and are best positioned to make informed decisions on improvements or changes. However, any changes to our technological infrastructure require collaboration with ITS to implement, despite that unit's busy schedule and limited availability. The addition of a dedicated programmer or other technical specialist to the existing Student Systems team, or one within ITS whose entire position is devoted to supporting Student Systems, would enable Enrollment Management to fully manage their internal student service platforms, including basic day-to-day maintenance, without needing to make repeated requests of the currently limited ITS staff. Platform purchase, licensing, and launch would likely still require higher level ITS support and collaboration, but the goal would be the need for a minimum of direct ITS involvement in maintenance after launch.

negotiate for the additional allocation of scarce resources.

Cultural Frame: Formalizing the authority of the University Registrar over the student enrollment workflow will assist policy-making, decision-making, and operational bodies in practicing true shared governance and valuing subject matter experts' voices in future decisions.

Full Campus Collaboration

Formalize the authority of the University Registrar and Registrar's Office staff over the student records and SoC data housed in CI Records, registration process, and all SoC and registration platforms: Decision making should not only be aligned with individual unit, division, and university goals, but also should incorporate the expertise of the employees who will be directly responsible for implementing or supporting the project. While it may seem obvious that the SoC and student registration are the purview of the University Registrar, the findings in this case study indicate that we should not make assumptions regarding the flow of information in a large organization such as CSU Channel Islands or take for granted that all relevant parties have been included at the decision-making table. This team also noted throughout this case study that the availability of explicit policy to ground ongoing practices was limited, meaning our organization is often operating under the assumption that we are doing what is required while being unable to point to exactly what is required, by whom, and from whom. Whether through a formal policy, a comprehensive organizational chart, or some other tool, it is this team's recommendation that ownership of the SoC, student records, the registration process, and the data within relevant platforms be acknowledged from an operational standpoint as belonging to the University Registrar and Registrar's Office staff. This will assist with establishing a clear delineation of responsibilities for existing policy-making bodies such as the Division of Student Affairs and Academic Senate needing to draft future policies, operational units such as ITS, and others.

Figure 8: Platform & Process Ownership by Area
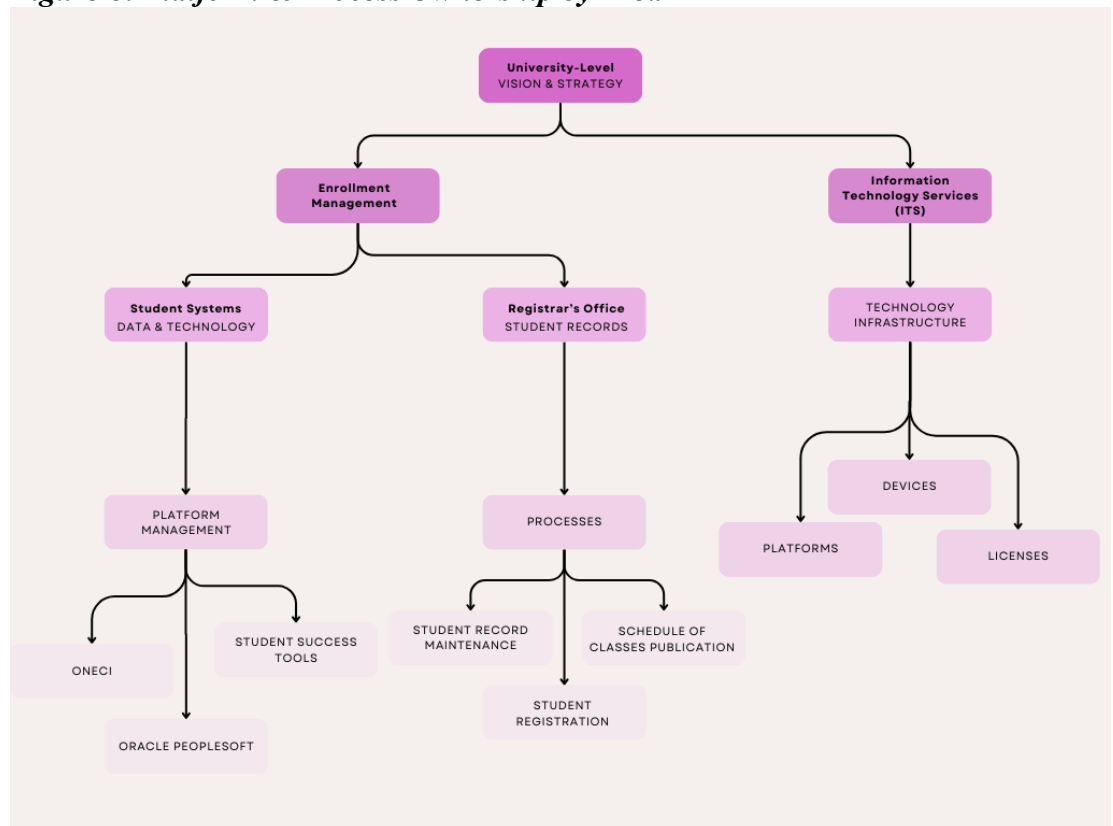
Applying the Four Frames

Structural Frame: Pairing platforms to

Focus Area 3: Unified Strategy & Goals

To make the best decisions moving forward requires understanding exactly what we are trying to accomplish as an organization. A guiding question developed at the beginning of

user groups to maximize efficacy will allow streamlining of resources and staffing.

HR Frame:
Implementing a strategic marketing campaign to increase awareness and use will help all employees align with shared goals and a sense of purpose.

Political Frame:
Pairing platforms to user groups to maximize efficacy will enable the building of coalitions to support each platform for its primary use; all university employees supporting Schedule Builder is more powerful than only some employees supporting one platform and some supporting another.

Cultural Frame:
Implementing a strategic marketing campaign to increase awareness and use will help build a shared culture of collaboration around a unified vision.

this case study was, what is the purpose of the SoC? After much data collection and analysis, the most basic purpose of the SoC is defined by this team as **a tool to support informed decision-making** by students, faculty, staff, administrators, and the public. To be true to its purpose, any platform housing the SoC must be **accessible, accurate, and inclusive** of all relevant information.

The primary actions to be taken in support of this focus area are as follows, listed starting at recommendations that can be implemented at the individual unit level up to recommendations that require full campus support (if necessary) to achieve:

Recommendations Within Enrollment Management

Pair platforms to user groups to maximize efficacy: If there are multiple platforms for the SoC that require support and maintenance, we will be unable consolidate resources and prioritize unique user groups. The first step in establishing a unified strategy for the SoC is to identify which platforms best accomplish which tasks, determine if modifications can be made to assist in consolidations, and decommission any platforms no longer serving our goals. This team's recommendations are to pair a single platform with each user group (Figure 5) so that each group's unique needs can be addressed within a single platform. Students should be guided towards Schedule Builder (with some exceptions), faculty and staff should be directed to use CI Records or OneCI depending on the task, and recruitment efforts with the public can make use of the proposed web version of the PeopleSoft Class Search. Establishing which user group should be making use of which platform will support staff in the goal of ensuring that each platform is accessible, accurate, and information-inclusive for the needs of that group rather than attempting to make one platform support multiple groups with competing needs.

Recommendations Requiring Cross-Divisional Collaboration

Implement a strategic marketing campaign to increase awareness and use of identified primary platform(s) by role or purpose: Efforts to increase use of specific campus services or platforms are only as effective as the number of campus community members who support said use. To ensure that these initiatives are successful, this team recommends a strategic marketing campaign, endorsed by leadership, to boost use of the identified platforms by their intended primary user group. For example, all student-facing employees must be communicated with about the value of Schedule Builder for students to ensure they too believe in the tool, and opportunities for feedback must be presented so that misconceptions and misinformation can be addressed directly by the subject matter experts. The same is true for any other transitions recommended in this case study – a shared organizational vision is only as strong as the beliefs of the individuals comprising the organization.

Figure 9: Proposed Platform Use Chart
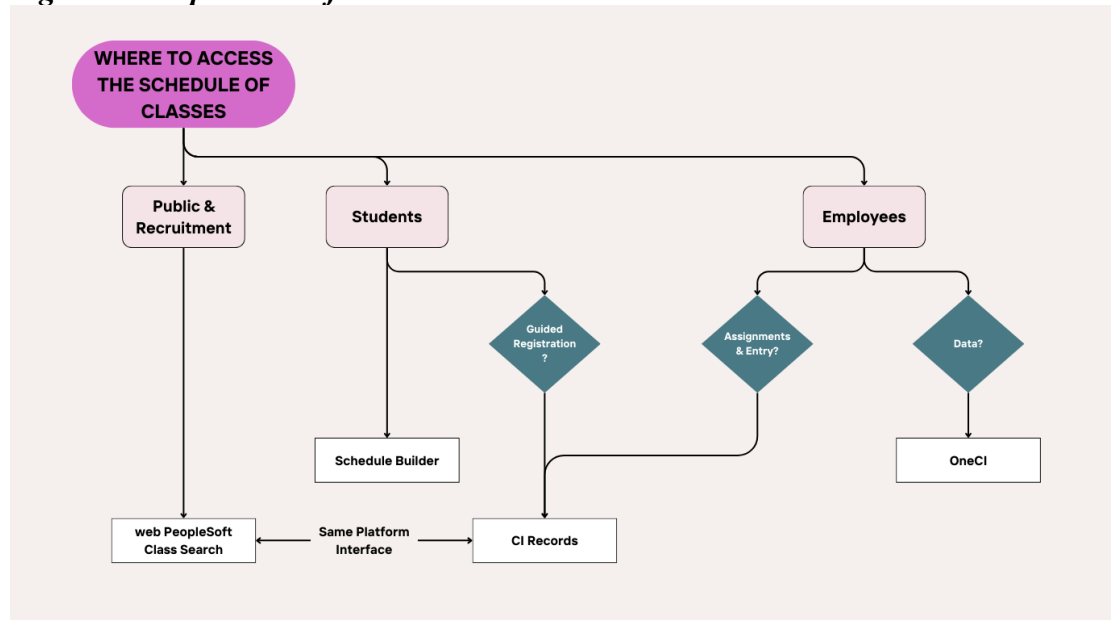
Conclusion

Final Thoughts

On March 1, 2024, EAB presented their State of the Sector for CSU Channel Islands community members and leadership. A key point made was that, in light of the decreased enrollment and subsequent financial hardship currently facing the CSU and other university systems in the US, **postsecondary institutions have to assess not just how to do less *with* less, but how to do less *better*.**

The Schedule of Classes (SoC) is a critical piece of the infrastructure necessary to maintain a functioning institution of higher learning, and the financial, (virtual) space, and staffing costs of maintenance are foundational – fixed expenses in our institutional budget, if you will. **That does not mean, however, that the upkeep of said infrastructure cannot be burdensome, and that there is not room to make adjustments that will reduce said burdens** in both the short and long term. Considering the findings of this case study, our current model for our SoC would not be described as doing less better. It might be better phrased as doing too much, and not very well, though by no means due to a lack of effort on the parts of the various specialist employees whose work supports the SoC. Instead, it is the barriers to efficacy that stifle individual efforts, creating waste, disillusionment, and conflict when there could be collaboration and hope for the future.

So we return to Bolman & Deal (2017) and the Four Frames as we conclude this report, reflecting on the barriers through the four lenses that informed our initial analysis.

For all of its benefits, our divisional structure also creates **structrural** barriers to collaborative work among dissimilar units and roles, resulting in the case of the SoC in multiple platforms being managed by siloed units without a cohesive and unified support network and strategy. **No amount of individual effort can overcome structural barriers, but collective efforts with the support of campus leadership can enable the development of established channels for collaboration around shared processes.**

Cultural and **political** shifts are also necessary to truly begin doing less better. Politically, this means elevating the voices of subject matter experts in discussions on relevant topics to their work and valuing the efforts of frontline employees no matter what rank or role they hold. We must build coalitions that are as diverse of role as they are of demographics to truly support change and provide space for those who have historically been outnumbered, or as the case may be, out-*shouted*, at the decision-making table. And to change politically, we must also change culturally, and that means changing *how* we collaborate as much as how often. Coalitions are built on trust and mutual respect – the work of collaborating begins with our efforts to rebuild our trust in one another and our mutual goals. While from an operational perspective, we can assess the necessity and efficacy of different initiatives, processes, and practices, **we cannot on one hand pin the blame for institutional ineffectiveness on individual roles or units** (or, perish the thought, on actual *individuals*) **and on the other hope to build a true culture of collaboration.**

And finally, we cannot forget or underestimate the *human* component in accomplishing our goals. The **human resources** lens tells us that we are not always aware of the ways our interpersonal interactions are impacting our organizational efficacy, for good or ill. In demonstrating the discrepancy between *espoused theories* (what people *believe* they are doing) and *theories-in-use* (what people are *actually* doing), Argyris & Schön (1996) gave us two models of interpersonal behavior within organizations: Model I is based on a culture of self-protective behavior – members of the organization assume that they must protect themselves and their ingroup from any real or perceived vulnerability, resulting in the assignment of blame outward, the exclusion of 'outsiders' from decision-making, and the camoflauging of problems rather than acknowledging weaknesses or shortcomings. Model II is based on openness and collaboration - sometimes described as being at the cross-roads of advocacy and inquiry, members maintain common goals, communicate openly, and work to continually interrogate their own assumptions and belief systems. For an organization operating in a Model I manner, Model II is an aspirational goal – we *want* to create space for open dialogue and vulnerability as a foundation for collaboration. But the findings of this case study suggest we have not found our way out of the rut of a Model I environment. **We must become comfortable acknowledging the pain points and weaknesses in our practices,** *without assigning blame***, before we can leverage our collective skills to improve them.**

This case study and the overall experience of participating in an operational effectiveness assessment has provided an exceptional opportunity to interrogate our assumptions and beliefs as an institution. Whether some, all, or none of recommendations bear fruit, it is this team's view that we are better professionals and individuals for the experience, and we will continue improving with the skills we have gained. We offer a sincere thank you to our facilitators and fellow participating teams.

Appendices

Appendix A

Survey Instrument

Q #	Question Text	Answer Options	Notes
Q1	What is your primary role when interacting with the SoC (on any platform) at CI?	Staff; Faculty; Administrator	
Q2	Which of the following roles do you currently perform as a faculty member at CI (select all that apply)?	Instructor; Advisor; Coordinator (minor, track, or course series, etc.); Program Chair or Program Coordinator Curriculum Committee or any other academic committee work Other [with text input box]	For Faculty only
Q3	Which division do you work in?	Academic Affairs; Student Affairs; Business & Financial Affairs; University Advancement; Office of the President	For Staff and Administrators only
Q4	What is your current job title?	[open text input]	For Staff and Administrators only
Q5	What primary job duty do you perform that requires access to or use of the SoC (on any platform)?	Advising students or assisting with registration; Data analysis; Data reporting; Future schedule planning or budgeting; Reviewing faculty assignments or workload; Reviewing the schedule for accuracy; Schedule entry; Other [with text input box]	For Staff and Administrators only
Q6	Which of the following platforms do you have access to in your current role?	CI Records (PeopleSoft); OneCI dashboards; None of the Above	
Q7	For what purpose or purposes do you use the web SoC (check all that apply)?	Reviewing my individual class assignments; Reviewing enrollment totals; Checking the SoC for accuracy; Analysis of current or historical class schedule patterns; Future term schedule planning or budgeting; Advising students; Other [with text input box] I am familiar with but do not use the web SoC; I am unfamiliar with the web SoC	
Q8	How would you describe your overall experience with the web SoC?	Very Positive; Mostly Positive;	

		Neither Positive or Negative; Mostly Negative; Very Negative; Not Applicable / I have not used the web SoC
Q9	For what purpose or purposes do you use the CI Records, including reports and queries (check all that apply)?	Reviewing my individual class assignments; Reviewing enrollment totals; Checking the SoC for accuracy; Analysis of current or historical class schedule patterns; Future term schedule planning or budgeting; Advising students; Other [with text input box] I am familiar with but do not use CI Records; I am unfamiliar with CI Records
Q10	How would you describe your overall experience with the SoC CI Records?	Very Positive; Mostly Positive; Neither Positive or Negative; Mostly Negative; Very Negative; Not Applicable / I have not used CI Records
Q11	For what purpose or purposes do you use OneCI dashboards to view the SoC (check all that apply)?	Reviewing my individual class assignments; Reviewing enrollment totals; Checking the SoC for accuracy; Analysis of current or historical class schedule patterns; Future term schedule planning or budgeting; Advising students; Other [with text input box] I am familiar with but do not use OneCI dashboards; I am unfamiliar with OneCI dashboards
Q12	How would you describe your overall experience with the SoC in the OneCI dashboards?	Very Positive; Mostly Positive; Neither Positive or Negative; Mostly Negative; Very Negative; Not Applicable / I have not used the OneCI dashboards
Q13	The next series of questions concerns your knowledge or experience regarding student use of our SoC platforms; please indicate below how often you engage with students regarding this topic in your current role:	I often engage with students about the SoC; I sometimes engage with students about the SoC; I rarely or never engage with students about the SoC

Q14	Which of the following platforms are you aware of as tools for students to use to view the SoC at CI?	CI Records (PeopleSoft); Web SoC; Schedule Builder; None of the Above
Q15	Based on your experience, which of the following platforms do students have mostly positive experiences with?	CI Records (PeopleSoft); Web SoC; Schedule Builder; None of the Above
Q16	Based on your experience, which of the following platforms do students have mostly negative experiences with?	CI Records (PeopleSoft); Web SoC; Schedule Builder; None of the Above
Q21	Do you have any additional comments or context you would like to provide regarding the SoC and any related platforms currently used at CI?	[open text input]

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