

SAC

Systemwide Architecture Committee

"Year In Review"

Jason A. Schmidt
Digital Innovation and Infrastructure
Technical Assistance Providers Enterprise Architecture
Lead

June 22, 2023

Introduction / Welcome



New Introductions

Catherine McKenzie

Retired Annuitant, Chancellor's Office

Jose Cruz Mora

Architecture Lead, Chancellor's Office

Jason Schmidt

Program Manager, TAP Team



FY 22/23 Year in Review



SAC FY 22/23 Year in Review - 19 Topics

The committee reviewed 16 topics; 5 surfaced by the CO, and 11 that arose from general discussions over the last thirteen months, and six committee meetings. In addition, 3 other topics were mentioned, but not briefed at SAC and are in process or implementation by other teams.

This list below was gathered from the 6 committee meeting slide decks and associated meeting notes

CO PRIORITIES (5)

- 1.AIT (Application Usage)
- 2.CCCID (Student ID and tool)
- 3. Course Exchange (Cross Enroll)
- 4. SuperGlue (Sys/data integration)
- 5.ID Proofing (Application Security)

SAC GENERAL (11)

- 1. BEAD
- 2. Cloud Strategy
- 3. CBE
- 4. Ed Tech Strategy
- 5. End of Life
- 6. Common ERP
- 7. eTranscript
- 8. CCN
- 9. Surveys
- 10. IT Service Catalog
- 11. Security (Multiple)

NOT COVERED (3)

- 1. COCI (Curriculum Inventory)
- 2. C-ID (Curriculum ID)
- 3. MMPS (Placement Services / Scores)



CO Infrastructure Priorities - FY 22/23

All Colleges Will (May 2022 Meeting):

- 1.Implement and support Application Inventory and Usage Tracking [AIT]
- 2. Use CCCID on currently and continuously enrolled students [CCCID]
- 3. Enroll students through CVC Course Exchange home and teaching colleges [Course Exch.]
- 4. Use SuperGlue for bi-directional data sharing [SuperGlue]
- 5.Implement automated fraud monitoring processes [ID Proofing]

Did we support what was asked?

- 1. Address goals set by the Chancellor's Office?
- 2. Develop effective solutions over the last 13 months (5/22-6/23)?
- 3. Make recommendations at the 6 Bi-monthly SAC Meetings?



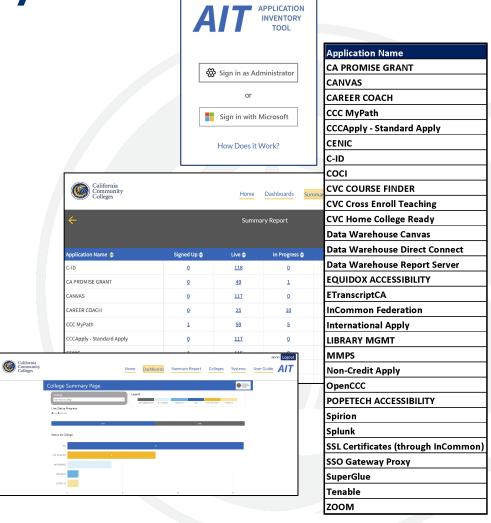


1. Application Inventory - FY22/23

- Oct 2021 DII TAP completes initial review/collection
- Jan 2023 Application Inventory Tool completed
- Feb 2023 Tool approved begins transition to CO
- June 2023 Tool transitioned to CO Environment
 - Tracks 30 applications owned or supported by CO
 - Built in SQL and needs updating annually by CCC
 - Last updated June 2022 Next update expected shortly

Confirm Recommendation from SAC?

- Request a demo in 2023, if still relevant
- Assess and provide input to CO after demo



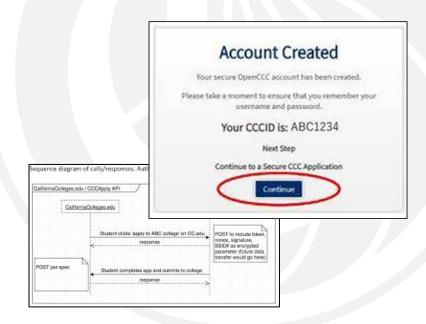


2. CCCID – Unique Identifier

CCCIDs were not being used systematically across the ecosystem which prevented student tracking and metrics. The CO requested all CCC students have a CCCID by fall 2023, and the Course Exch. Go live. API processes and workflows are being developed to request CCCIDs for students not served by CCCApply. CCCIDs are required for student level reporting, enrollment, and shared as part of SSO Gateway / Proxy fields. Most students after 2012 and CCCApply adoption have a CCCID. Students prior to 2012 and the date of CCCApply adoption may not.

Recommendation – 15 Min

- 1. Request an update brief in August
- 2. Review population Numbers / Memo
- 3. Review Paper app process and plan





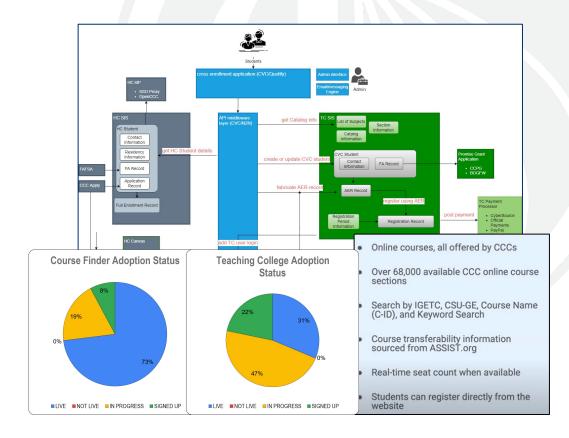
3. Course Exchange

Institute better learning management through technology partnerships (CVC/Tech Center) and roll out the CVC Course Exchange Home & Teaching College process by 12/31/23. Demo is available as needed, and students can enroll in two courses at a teaching college while enrolled in their home college. **Implementation is about 85% complete** and requires colleges to become teaching colleges first, and then institution of the course finder API. **Timeline extended to January 14, 2024**

Recommendation

- No Action due to functional rollout
- Status of results





4. Bi-Directional SuperGlue

- Supports Bi-directional connectivity and sharing between colleges and TC: CCCID/AppID (Fraud flag)
- Identified issues: Homegrown SIS/ERP support, and Local resource constraints / competing priorities
- Identified blockers: Linux vs Pref. for MS Win, Oracle vs MS SQL for staging, Pref for data, Pull/Push
- In tandem, SharePoint List enabled to collect application data to support systemwide fraud reporting

Recommendation – 15 Min

- Request an update at a 2023 SAC meeting
- Assess remaining bi-directional connectivity or communication issues
- Who is using to date





5. ID Proofing Project

Integration of ID.me software into the enterprise architecture via CCCApply to enhance application security. Initiated 12/2/2022 with **Go-Live between 8/31-12/1/2023.** ID.me contract signing by 6/30. Tho verify user identities. e goal is tID.me will enable CCC to verify the identity of end-users in accordance NIST SP 800-63-3 IAL2/AAL2 and support mitigation of fraud at the point of application. Enrollment and financial aid fraud are separate points of entry and are not supported.

- Implementation for first time / new students applying to CCC, who do not have a CCCID
- 750K are NEW plus 5-7K more for suspected Fraud Acct Recovery (Max 850K).
- Annually there are 1.8M-2.3M students

Recommendation

- Request ID.me demo at future SAC meeting
- Workflow review on technical process

California Community
Colleges

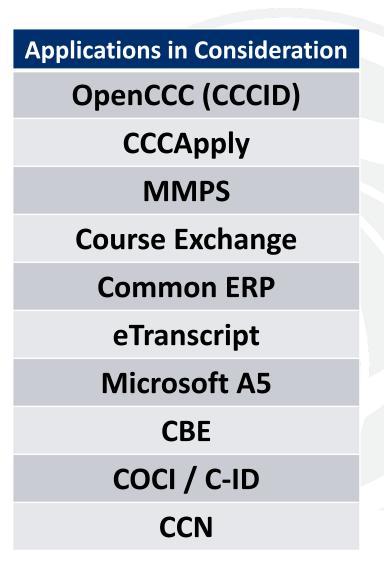
Start End		Area/Topic	Task	Comments		
Tues 5/9	Mon 6/12	College integ.	College inclusion and Integration	5/30 Select Pilot Group Leads 6/5 Begin Integration of colleges into N		
Tue 5/9	Mon 6/12	Std. Journey	Doc. Student Journey & Workflow	6/5 Walk through Refined Journey 6/12 Complete		
Mon 5/15	Fri 8/4	Development	Tech Solution Dev and Coding	Need to add relevant 3-week sprints da		
Mon 5/15	Mon 6/12	Communication	Comm Planning and Discussions	5/28 Communication Team Meeting 5/30 ID.me Comm Sheets shared with f 6/12 Drafting Communication 6/19 Communication ready for approx		
Mon 6/5	Fri 6/30	Documentation	Finalize and documents requirements			
Mon 5/22	Fri 6/30	Contract	ID.me Contract Signing Goal			
Mon 7/5	Fri 8/11	Testing	Integrate regression & testing process	100 Count sample size		
Mon 7/31	Fri 8/25	Pilot / Betas	Beta rollout	Limited Users – Draft Placeholder		
Mon 8/14	Fri 8/31	Feedback	Implement feedback from beta			
Fri 9/1	Fri 9/8	Decision	Business Go/No-Go Decision	Placeholder – Business Validation Wind		
Mon 9/11	Fri 9/22		Addt. PROD rollout, testing or config.	ONLY IF NEEDED - depending on testing		
Thur. 8/31	Fri 12/01		Full Go-Live	Goal is 8/31 (slack for Contract/Te		

PROPOSED Systemwide Technology Roadmap



New CO Infrastructure Priorities - FY 23/24

- 1. Draft List in review by CO (10 Items) >
- 2. Proposed List Driven by
 - Security
 - Student Journey, and
 - Systemwide Architecture
 - 3. Approved CO list at Aug SAC Meeting
 - 4. Seeking SAC input / recommendations





Continuing CO InfoSec Priorities - FY 22/23/24

By January 14th, 2024, per memo DII 22-300-06, districts should complete:

- 1. Implementation of Microsoft A5 Security
- 2. Implementation of Vulnerability Scanning
- 3. Adoption of SuperGlue
- 4. Implementation of Course Exchange
- 5. Eliminating end-of-life critical software (operating systems, etc.)
- 6. Implementation of Security Awareness training for all staff



New CO InfoSec Priorities - FY 23/24

1. Immutable backups implemented

By December 2024:

- 2. Student networks segmented from staff and IT networks
- 3. Windows account hardening completed
- 4. End-of-life software/hardware eliminated or removed from networks
- 5. GLBA Information Security Policy Established and Risk Assessment completed
- 6. 24/7 security operations center (SOC) monitoring all HIGH needs districts



Questions on Proposed Roadmap



REVIEW SAC PRIORITY RECOMMENDATIONS



PRIORITIZE THE FOLLOWING (28 Items)

- Existing FY22/23 Priorities (5 Topics)
- NEW FY 23/24 Infrastructure Items (11 Topics)
- Existing FY 22/23 Priorities (6 Topics)
- NEW FY 23/24 InfoSec Items (6 Topics)



SAC Recommendations

For every topic reviewed at SAC, the committee will make a recommendation to the CO. The recommendations will include specific actions required, timelines involved, resources needed and/or why it should be approved or move forward. The CO will then decide on the recommendation.

- 1. **No Further Action Needed.** Suggest the topic or issues be dropped from SAC, and ongoing meetings (or roadmap). It is not a systemwide architectural issues, and no committee or CO action is required.
- 2. Survey the Field. The survey should be effective, intuitive, and provide answers to the questions or gaps identified and can be a one time or periodic survey. It must be created, sent, and analyzed on behalf of the CO, and provide data for actions and decisions.
- 3. **Perform A Technical Review/Assessment.** The assessment can target operational gaps, policy impacts, system interoperability, software or service scalability and general planning. The assessment intent is to gather additional information for the CO to support effective decision making because not all information is currently available.
- **4. Take a Specific Course of Action or Strategy.** It can be short term strategy to meet objectives, requirements, or costs, or it can be a long-term strategy to identify future design considerations or provide general system-wide IT infrastructure improvements. It should enhance operations, save time or save money.



SAC - Priority Input / Recommendations - to CO (L, M, H)

Reviewed
Priority concept
with committee

Will send prioritization sheet with the meeting notes

Ask SAC to rank all FY22/23 applications by 7/12

Applications/Elements/Tasks	Arch. FY22/23	Arch. 23/24	Priority	InfoSec FY 22/23	InfoSec 23/24	Priority
AIT	x					
CBE		Х				
CCCApply		Х				
CCCID (Element)	х	Х				
CCN		Х				
COCI / C-ID		Х				
Common ERP		Х				
Course Exchange	x	Х		X		
End of Life Software				X	X	
eTranscript		х				
ID Proofing	х					
Immutable Backups					×	
InfoSec Policy/Risk Assess (GLBA)					Х	
Microsoft A5		Х		X		
MMPS		х				
Network Segmentation					Х	
Security Awareness Training				X		
SOC Monitoring (24/7 HN Dist.)					Х	
SuperGlue	x			Х		
Vulnerability Scanning				х		
Window Account Hardening					Х	



Questions



Support Slides Other Infrastructure Topics Covered - FY 22/23



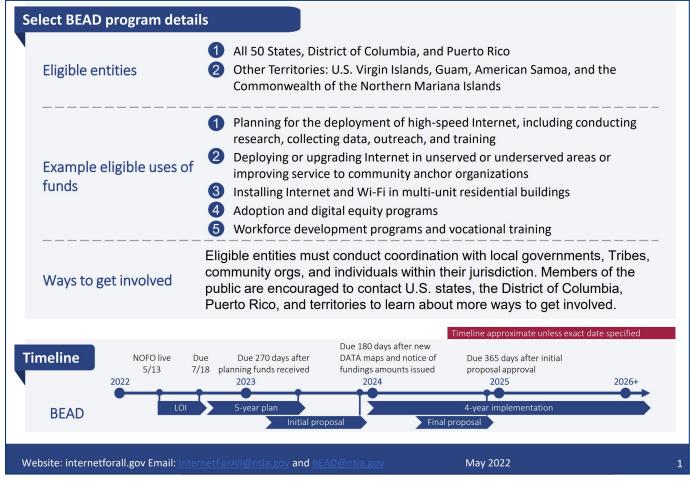
Broadband Equity, Access, and Deployment (BEAD)

The Broadband Equity, Access, and Deployment (BEAD) Program, provides \$42.45 billion to expand high-speed internet access by funding planning, infrastructure deployment and adoption programs in all 50 states, Washington D.C., Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and Commonwealth of the Northern Mariana Islands.

Funded by the Bipartisan Infrastructure Law. It is a federal grant program that aims to get all Americans online by funding partnerships between states and communities. The goal is to build infrastructure and increase adoption of high-speed internet. It prioritizes unserved and underserved locations that have no internet access, access under 25/3 Mbps or access under 100/20 Mbps. Many Americans lack access to affordable, reliable, high - speed Internet which powers our economy and supports education.

Recommendation





Common Course Numbering (CCN)

The CA legislature required all colleges to install a common course numbering system based on the passage of Assembly Bill No. 1111: Common Course Numbering Task Force (hereafter "CCN Task Force") [which was] charged with working collaboratively across the California Community Colleges and the system's key stakeholders to inform the development of an implementation plan for fulfilling the requirements of AB 1111. AB 1111 calls for ensuring that "comparable courses across all community colleges have the same course number" through a student-facing common course numbering system.

Assembly Bill No. 1111 (AB 1111) established new Education Code 66725.5 and states the following: "(a) (1) To streamline transfer from two-to four-year postsecondary educational institutions and reduce excess credit accumulation, on or before July 1, 2024, both of the following shall occur: (A) The California Community Colleges shall adopt a common course numbering system for all general education requirement courses and transfer pathway courses. (B) Each community college campus shall incorporate common course numbers from the adopted common course numbering system in its catalog. (2) The common course numbering system shall be student facing...and ensure that comparable courses across all community colleges have the same course number."

May 2022-Present

- Set up a Task (CCN TF) to discuss and implement a solution with the help of technology
- Potentially use an integrated platform (i.e., for curriculum and course catalogs to support implementation



CCN - Recommendations

Status

- The TF will meet 8 times starting fall 2022 and in person
- Members participate in all meetings and serve through Dec 2023
- Proxies or replacements are not allowed
- Review materials ahead of meetings and Respond
- Chairs: Reps from CCC Academic Senate / CCC CIO
- Chairs serve at the discretion of the CCCCO
- Work with the facilitator, Sova
- Meetings:
 - 2/3-2/5/23 Reviewed 39 Workshop sections / Phased plan
 - 8/6-8/7/23 Develop guidelines and verify implementation
 - 12/8 Finalize loose ends and closeout

Recommendation

No Further Action Needed



AB 1111

Common Course



Cloud - Isolated Backups

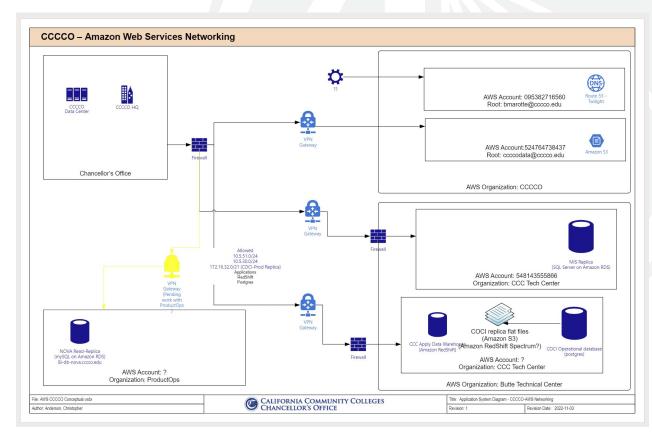
The CO is working to institute cloud infrastructure / architecture to support existing and native systems. The implementation has been ongoing for the last three years. In addition, many colleges have been unable to restore or recovery quickly following a catastrophic ransomware event. Reviewed systemwide backup solution feasibility and scope. CO architecture is moving to the cloud to support issues under AWS configuration and contract issued. Grants currently fund multiple space / enclaves support for CO, and NOVA etc. No current standard policy or process set, but Cloud recommendations sent to CO in FY22

Status

- Actively using Amazon AWS Cloud
- ●CO initiated a 1-year vendor contract.
- Migrated 1 Application (NOVA to Cloud)
- Contracted for 10 additional native applications
- Reviewing shared AWS economy of space
- Reviewing AWS Vs AZURE in light of A5 MS Lic.

Recommendation

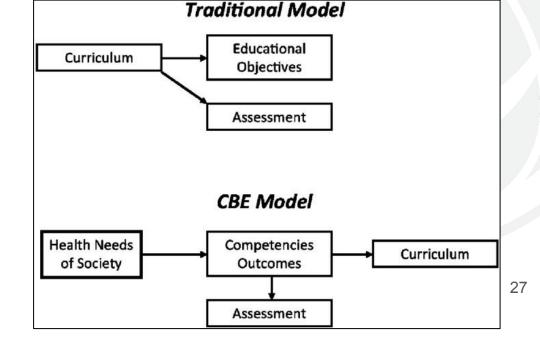




CBE

The goal is to institute competency-based education (CBE) into the CCC system. CBE focuses on mastery of learning exercises through activities and experiences that align with clearly defined programmatic outcomes. Hours can vary, but learning is fixed. Often fully online. Flexible academic calendar term options. Given the expansion of credit for prior learning and CBE with veterans, there is a opportunity to support other non-veteran students by allowing for them to demonstrate learning and obtain credit. In 2021, the CO initiated a direct assessment CBE pilot with 8 colleges to better conceptualize a system-level approach to CBE. This approach is different than the current credit hour approach. Credit Hours are based on seat time and we used to determine faculty pensions (not a measure of learning). Credit hour is the current basis for awarding financial aid, assessing faculty workload & determining degree completion. Implementation In progress (Pilots, Demos) - POC Mike Vogt

Recommendation





EdTech Portfolio - Planning

The EdTech Portfolio was developed in order to support systemwide technology initiatives while developing programmatic standards, identifying economies of scale and delivering consistent results. The goal was to extend Chancellor's Office capacity to manage technology through use of Prop 98 funding, and provide organization and logic (e.g., why are OpenCCC and CCCApply on separate grants?) by clarifying system requirements and local roles around fraud monitoring and systemwide security. The goal was to eradicate Inconsistent approaches to scope definition and management across grants and ensure systemwide oversight and management not commensurate with grant complexity and growth.

The team hosts weekly status checks on all grants. Reports and reviews status via PPM Express with the CO and supports EOY Closeout of all grants by end of fiscal year (6/30) in support of future grant planning.

Recommendation



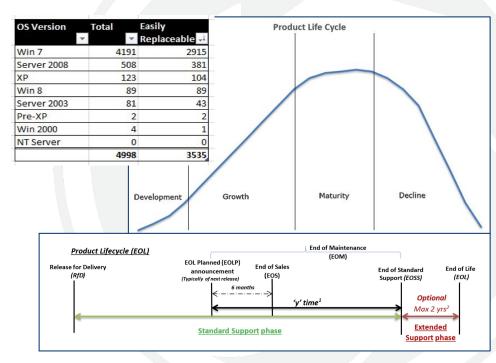
End of Lifecycle - Hardware

End of life (EOL) - in the context of product lifecycles - is the final stages of a product's existence. Specific end-of-lifecycle concerns depend on the product, and perspective of the manufacturer and end-user. EOL needs to be prioritized. Many colleges report EOL Operating systems, and the CO has made eliminating them a priority. The team discussed roadblocks associated and impact for servers/infrastructure and cloud migration, and a EOL

Inventory was requested in January 2023 Remediation Reports.

Reviewed preliminary results. How should the CO interpret?

- Est. Replacement Costs: \$1,200 1,800 per Wkstn / \$3-5K per server
- Foundation creating a CollegeBuys Survey to assess needs
- Review/revise survey Qs by 6/20, and finalize format by 7/5
- FCCC sends survey to Tech/Procurement Grps by 7/12 Closes 7/26
- Recommendation
 Review results at next WG Meeting and start Dev Survey #2 by 8/1
 No Further Action Needed
- Survey: https://drive.google.com/drive/folders/1eT6EpGppjfq47zDleJ8UVSZ5cWzABJBh





Common Enterprise Resource Planning (ERP)

Educational cloud ERP systems are comprehensive, modularized, integrated software solutions developed to manage core business processes such as student data, financial Info. And fee payments. Many colleges do not understand ERPs systems, and or their need, and part of implementation is the review of roadblocks to education, implementation, and effectiveness of a cloud ERP. The CO is currently prioritizing this need and would like SAC input.

An example of considerations under review are:

- Local Vs centralized implementation and systemwide adoption
- Standard and technical resource capacity and budget constraints
- Common Data Dictionary or data validation at the source systems
- Lack of strategy around implementation
- Release cycles
- Operational cost and resource(s)

Recommendation





eTranscripts

eTranscript CA is a statewide electronic transcript exchange supporting the request and delivery of electronic transcripts across all of CAs postsecondary systems. It is recognized as a key statewide initiative and is identified by the Cradle-to-Career System to support the statewide exchange of transcripts and other records. It is available free to CCC. Membership fees are paid centrally by the CO for the current and future fiscal years. It provides better and real-time workflow process for students, supports colleges with their choice of 3rd party vendor for delivering transcripts, standardizes integration methods, and assures that transcripts delivered through eTranscript CA are validated to the CA Electronic Data Standard. A failed RFP in 2018/2019 to re-engage on improvements, and an RFI was released in December 2022 to support the *Vision for Success*. Higher completion and transfer goals will result in more transcripts, especially for CBE/CPL. 4 RFI submissions were obtained (by vendors with varying CCC coverage). Vendor submissions were obtained from: XAP (85), NSLC (11), Parchment (105), Certree (0). All submissions have been assimilated and ready for review by the Cradle-to-Career team. The Cradle-to-Career team is currently directing the pace of the next steps on the RFI - TBD.

Recommendation



Surveys - Recommendation

Context

- Reviewed Application, IT, Security and College Buys surveys
- A survey from the colleges is usually needed every quarter
- The surveys focus on feedback from the field
 - Are there other products or vendors for which the Chancellor's Office should be playing a larger role?
 - Are there other vendors/products which a systemwide contract through CollegeBuys would be helpful?
 - Has your district implemented (Career Coach, Data Warehouse Canvas data, and Splunk)?
 - If yes, to what extent is the district actually using this tool?
 - To what extent are data being used to determine effectiveness?

Recommendation



IT Service Catalog

A centralized dB of information about active IT service offerings, and a subset of the IT service provider's service portfolio. Provides clarity on the services offered, and typically includes the following 6 info. elements: Category, Description, Availability, Specific SLAs, Owner, Costs, and should include service providers such as CCCTC Products and Services (Accessibility Center Services and Tools, and Security Center Services and Tools), CVC-OEI services and tools, Foundation for CCC (CollegeBuys, Vision Resource Center and Others). The dB will include attributes for each service, Common attributes from all services (Cost, pricing, vendor contract(s), licenses, Ability to provide Analytics about each service, Pro(s) and Con(s) of each service, Define SLA, Onboarding, and Offboarding procedures. Available to users through A Web application with Access Control List, Subscription model, Pilot Rollout, and Rollout with Districts. Performed initial research, but CO reduced scope after concept presentation.

- To Date: Software Apps CA Comm Colleges CO (cccco.edu)
- Refocused on establishing onboarding for new CTO/CISO at the districts and colleges.
- Next step was to collect data on approved list of Serv. Offerings from 2 main orgs/service providers
- Initial timeline drafted with target completion in Fall 2023
- Included UAT build-out ready in March 2023, but full schedule not defined
- Open questions: Who should build the catalog?

Recommendation



