Academic Senate Information System (ASIS)

2019 Larry L. Sautter Award Application

UC Davis Partners:
Office of the Davis Division of the Academic Senate (ASO)
Information and Educational Technology (IET)

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Summary

The Academic Senate Information System (ASIS) is a web application that supports a portfolio of business processes for the Academic Senate and Academic Federation, two organizations that constitute UC Davis' academic governance partnership between faculty and the administration.[1] This narrative summarizes the collaborative effort to redesign and rebuild ASIS, thus streamlining business processes within academic governance.

ASIS has three user bases: faculty members at large, comprising 2,800 Academic Senate members and 1,800 Academic Federation members; 35 Academic Senate committees (338 positions) and 15 Academic Federation committees (109 positions) appointed annually; and the 11-person Academic Senate Office (ASO) team, which administratively supports both organizations and utilizes ASIS for the majority of its business processes.

Problem and Goals

From 2006 to 2015, ASIS was built incrementally, with new functionality added in response to organizational needs. Over time, however, this created an unwieldy, disconnected suite of modules that were not user-friendly and were prone to bugs and downtime. Consequently, ASIS was no longer supporting business processes at the level expected by faculty and staff.

Beginning in 2016, ASO and IET partnered to rebuild a second, modernized version of ASIS with three goals: to design **simple, user-friendly functionality** requiring minimal training; to build modules that, even when facilitating different business needs, would **integrate and share data** seamlessly; and to create a permission structure that would ensure **system security and stability**. To kick off the project and ensure accountability, the chair of the Academic Senate notified all faculty in September 2016 that ASIS would be rebuilt as part of a larger effort to make Senate service "a more efficient and meaningful experience for faculty."

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[1] Through Senate and Federation committees, faculty provide academic governance for UC Davis—a form of service for which they are responsible per Regents' Standing Orders and academic personnel requirements. Comprising all ladder-rank faculty, the Academic Senate approves and oversees all courses and curricula, and establishes requirements for admissions, certificates, and degrees; it also advises campus administration on budgetary, personnel, and other matters pertinent to UC operations. Comprising all non-Senate academic appointees, the Academic Federation promotes the ideas and interests of its members (instructors, researchers, health care practitioners, librarians, and more) to campus administration and other stakeholders.

Solutions and Success Metrics

We first built a robust permission system (*Image 1*) to manage access across and within ASIS modules. Previous permissions were hard-coded and distinct by module, not alterable by staff administrators, and required developer time to implement and monitor. Now, staff can add or remove over 100 unique permissions on a moment's notice—a nimbleness critical for maintaining modules with hundreds to thousands of users who rotate annually.
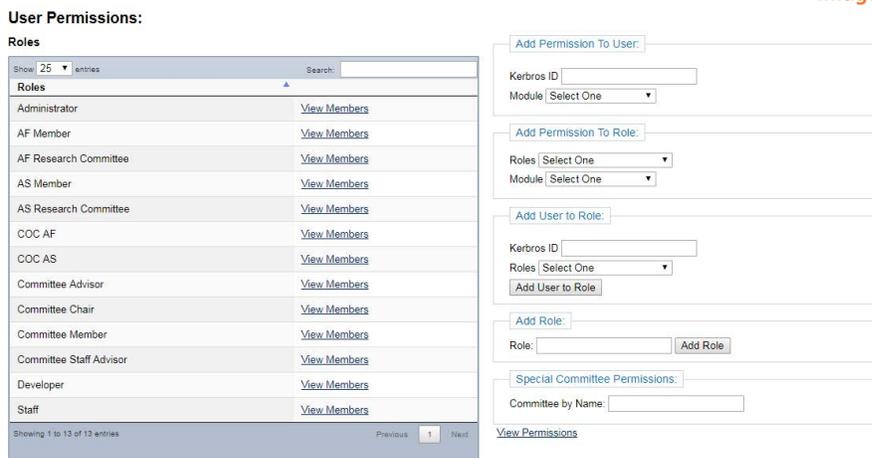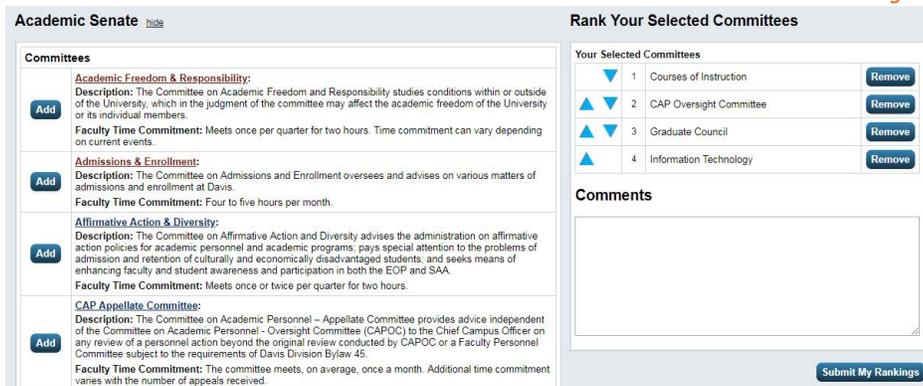

Unified by these permissions and fresher, consistent interfaces, three modules now constitute the core of ASIS: Committee Builder, Committee Pages, and Grants. While ASIS has additional modules and tools used for smaller or infrequent tasks, these three are its daily workhorses.

1. **Committee Builder** (*four-month build; deployed August 2017*)
   Each year, 447 positions are filled across 50 committees. The Senate and Federation each has a Committee on Committees (COC) comprising eight to ten faculty members who manage this annual committee recruitment and appointment lifecycle, throughout which they utilize Committee Builder as their central data source and tracking tool.

Solutions

- Previously, information was fragmented across multiple pages and relied on a series of import scripts requiring developer support. Now, information is displayed succinctly, functionality is intuitive, and data transfers immediately. Committee Builder used to require several hours of orientation training; in practice, COC members would defer to staff analysts to keep information updated. Now, training takes ten minutes, and COC members can use it from their homes and offices.
- COC members can view committee candidates populated by the annual Call for Volunteers (*Image 2*), through which UC Davis faculty quickly and easily rank their committee service preferences.
- COC members can create shortlists of candidates (*Image 3*), track communications, and view necessary faculty personnel and service data, all of which feeds dynamically from the Personnel Payroll System (soon UC Path).
- When COC finalizes committee appointments, Committee Builder automatically generates appointment letters and shares data with the Committee Pages module, where committees then conduct operations throughout the academic year.

Success Metrics

- Committee Builder was deployed to populate the 2018-19 committee year, through which 508 faculty submitted their Call for Volunteers form with 1,826 expressions of interest for positions; for the 2019-20 committee year (still in progress), 485 faculty have submitted their Call for Volunteers form with 1,690 expressions of interest for positions. In both years, no faculty members requested assistance (other than deadline extensions) on the new form—which was reduced from a multi-page to a one-page process—resulting in saved staff and faculty time in comparison to previous recruitment cycles.

- Through Committee Builder, COCs successfully narrowed these expressions of interest into shortlists and ultimately into 447 annually appointed positions.

- From Cynthia Passmore, chair of the 2018-19 Academic Senate Committee on Committees: "ASIS in general and Committee Builder in particular are essential tools that make the work of the Committee on Committees possible. The ability to interact asynchronously with other members of the committee as we complete the complex job of nominating and populating the committees of the Academic Senate means that our work is efficient and productive. Our in-person meeting time is more effective because of the preparation we are able to do using the functionality of ASIS, in particular the whiteboard and Committee Builder. Committee Builder is a well-designed tool that allows us to seamlessly view and update committees, taking into account the volunteer preferences of individuals. It also serves as a vital tool to discover past committee service and appointments for individual Academic Senate members so we can take all of that into account. I honestly cannot imagine how the work of the Committee on Committees could be done without these important resources."

2. **Committee Pages** *(three-month build; deployed August 2017)*
Once populated via Committee Builder, each of the 50 committees has a dedicated, private page in ASIS to conduct operations throughout the academic year. Features include calendaring, file sharing and versioning control, discussion boards, dynamic publishing to public websites, information archiving, and record keeping of member service history.

Solutions

- Previously, features required multiple steps across multiple pages (a recurring theme in legacy ASIS), and discussion board topics could not be easily posted, sorted, or commented on. Tellingly, both organizations spent time at yearly orientations and initial meetings teaching hundreds of committee members how to use ASIS rather than using scarce in-person time for more important tasks.
- Now, ASIS requires no annual training for faculty and minimal training for staff administrators. Faculty can quickly view all committee information on one page (*Image 4*). They can input their quarterly teaching and research schedules so Senate staff can schedule committee meetings around known commitments.

Likewise, faculty can easily post and comment on committee topics, leading to more productive discussions and reducing the number of in-person meetings required to conduct business.

Success Metrics

- We have received in-person feedback from staff and faculty that committee pages are now easier and more intuitive to use. Annual faculty training is no longer required.
- To give a sense of the scope of work conducted across Committee Pages, in the 2017-18 academic year, users created 2,305 discussion topics and subtopics, uploaded 2,433 files, posted 2,296 discussion comments, and scheduled and documented 460 committee meetings.
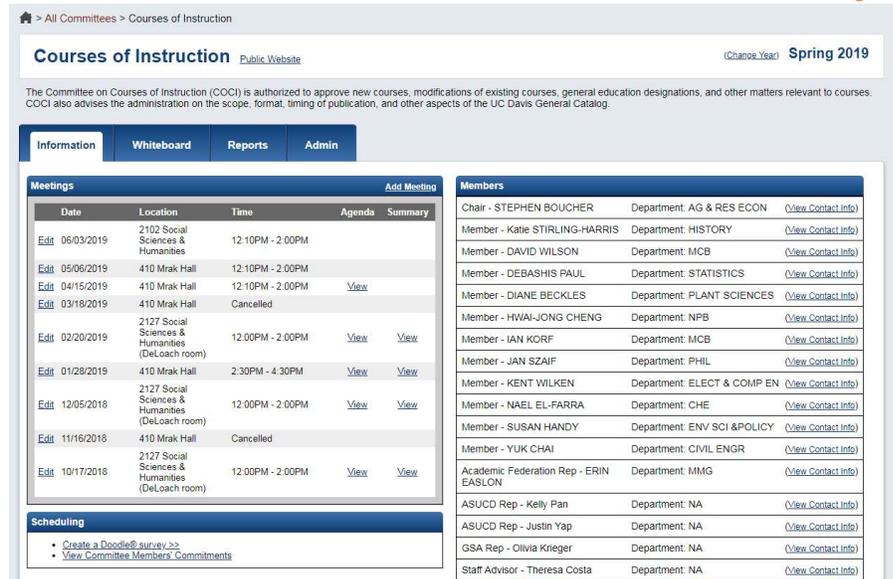

3. **Grants** (*four-month build; deployed February 2018*)
   Each organization's Committee on Research (COR) annually reviews Travel, Small, and Large grant applications, totaling 800-1000 applications that are awarded $1.3 million in funding. COR utilizes the Grants module to receive, review, and score applications; obtain departmental approvals; select recipients; and review usage reports. ASO staff utilizes it to store and transfer accounting information.

Solutions

- Previously, the Grants module comprised several outdated application forms that did not integrate with the full grant lifecycle and contained redundancies. In addition, data was not structured in a way to produce user-friendly reports for analysis or to transfer data to financial systems.
- Now, the Grants module utilizes a standard application

and approval process (*Image 5*) across all three types of grants. All steps deploy automated notifications, thus requiring fewer touch points between staff and applicants/recipients, and faculty can track the stage of their grant's review or approval. Staff can also change grant steps as needed, requiring no developer time. Once applications are received, COR members review and score grants, view automated analyses on score distributions, and pull data to assess long-term returns. Senate staff can export account information into campus financial systems, saving many hours formerly spent on manual data transfers. Lastly, at the
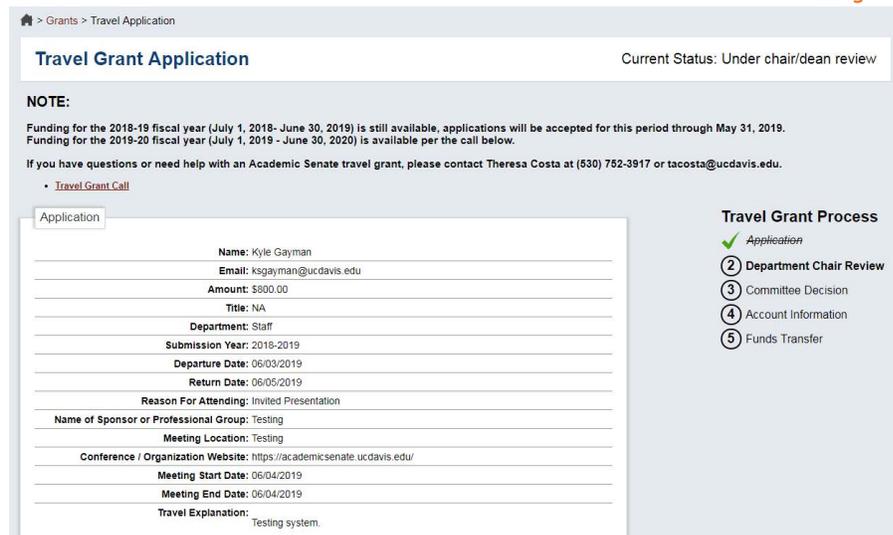
close of funding, grant recipients are automatically prompted to fill out usage report forms to complete the funding lifecycle and capture data for analysis.

Success Metrics

- Grants was deployed for the 2018-19 funding cycle and received 862 applications. As a result of process efficiencies and reductions in faculty assistance, we estimate an average of 15 minutes of combined staff and faculty time saved on each grant's lifecycle for a total of 215 annual hours saved; this savings will increase as the grants program expands. In combination with other operational efficiencies, this savings helped the Academic Senate Office reduce by one FTE and redirect funds to operational functions needing investment.

Technology Utilized

- ColdFusion: As a testament to utilizing existing technology more effectively, ASIS originally had 2000 code files. Now, it has been reduced to 795 code files, all while new functionality was added.
- Git
- SQL

Conclusion

We are a small, cross-campus team that partnered to streamline academic governance processes. Recognizing that academic governance touches many aspects of teaching, research, and public service, ASIS now comprises diverse modules unified by shared, standardized data and permissions. But most importantly, ASIS is now user-friendly for a non-technical audience. We sat down with faculty and staff along the way to ensure it would meet their needs and be adopted successfully.

On a final note, we see potential to expand ASIS across UC Davis. A few college departments now use ASIS for their committee operations, and we can onboard them in a matter of minutes. We look forward to determining how ASIS can scale to support additional operations.