OE RESOURCE REQUEST APPLICATION

IT GOVERNANCE

University of California, Berkeley

I. SPONSORSHIP

A. Initiative

Initiative	OE-Information Technology Design Team		
Initiative Manager	Lyle Nevels		
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B. Sponsorship

Sponsor Name	Shel Waggener		
Sponsor Signature		Date	
Sponsor Name	Paul Wright		
Sponsor Signature		Date	
OE Program Office Signature		Date	

C. Give the title of the resource

IT Governance

II. PROBLEM STATEMENT/CASE FOR CHANGE

A. Identify and describe what needs the proposed solution is seeking to address.

While UC Berkeley currently has a framework for addressing how IT decisions are made and how IT operations occurs, much of the current IT governance structure is incomplete and fragmented, resulting in unacceptably wide variation in our technology environment. . Existing governance and oversight bodies on campus provide some of what the campus needs at the technical, project, funding, and strategic levels, but their domains of responsibility and authority are limited and their relationships to each other too unclear to enable them to influence overall IT strategy and investment. In addition, the groups are inadequately staffed, and their memberships, while diverse, are not always appropriately representative. As is often the case on this campus, we have addressed these problems by creating additional committees that only increase the fragmentation.

Our decision-making structures also lack the authority to enforce best practice guidelines and standards even when they exist. Our most mature groups are advisory. The word “mandatory” is rarely used and, even when it is, enforcement is difficult. There are few impacts or consequences to individuals, departments, or units that choose to act independently and, indeed, there are often financial and political incentives for independent action. In the current state it is almost impossible for us to leverage technology to achieve the efficiencies we need to reduce the campus IT spending.

Timing is critical as without an adequate governance structure in place the IT components of the Operational

Excellence initiative teams' recommended projects will likely suffer from similar missed expectations that have befallen individual projects that rely on investments in technology to enforce process and cultural change. Regardless of the degree of technology complexity or technical risks, projects without strong governance often agreed to overly complicated business process and local accommodations for perceived uniqueness. Every OE initiative team is moving forward with recommendations for investment in IT systems and technologies; the Program Office will need a governance structure with sufficient responsibility and authority to help assess these proposals, prioritize them, and coordinate them with our ongoing projects, processes, and operations. Beyond OE, every significant IT-related project, regardless of which functional area is sponsoring the project, must be evaluated by a responsible party with the expertise, experience, and authority to make decisions about the alignment with our technical environment and architectural standards, our organizational readiness, and the accuracy of the proposed funding model (including total cost of ownership).

B. Describe the solution that is being proposed to meet the identified need(s).

There are nine proposed solutions.

1. Establish Cabinet-level IT decision-making and policy body (IT Governance Council) that combines Academic Senate representation and campus administrative leadership. This change to our decision-making process must be actively pursued and supported at the highest levels rather than being delegated. The OE IT sponsors must recruit the support of the OE Executive Committee, the Chancellor's Cabinet and several representative Deans.
    a. The ITGC would have membership drawn from the Chancellors Cabinet and be targeted at a membership of ten including the Chancellor, EVCP, VC of Administration and Finance, VC of Research, VC for Student Affairs, VC for University Relations,, Vice Provost for Teaching, Learning and Academic Planning and Facilities, Associate Vice Chancellor for Budget and Resource Planning, Associate VC for IT and Chief Information Officer and two Deans one from Letters and Sciences and one from the college of Engineering.
    b. Up to two additional key technology executive leaders would also be included on the Council.
    c. Focus the decision making on long-range strategic decision making with the ITGC operating similar to Campus Planning Committing in having full authority to be the final authorization body for major technology investments.
2. Create a dashboard of key performance metrics to assist senior leadership and facilitate their active involvement in decision-making about business priorities and the use of IT to support them.
3. Develop a framework based on the Weill & Ross Five Key Decision Domains (as described in their seminal work on IT Governance) in the development of an IT governance structure for Berkeley
    a. IT principles – clarify the business role of IT in teaching and learning, research, and administrative operations
    b. IT architecture – define integration and standards to guide the organization in meeting business needs (e.g., software solutions)
    c. IT infrastructure – determine which are the shared, Common Good services (e.g., the network, help desk, and shared data)
    d. Business application needs – specify the business need for purchased or internally developed or reused IT applications
    e. IT investment and prioritization – decide how much and where to invest in IT, including project approvals and justification criteria
4. Publish a campuswide IT governance 'process map' that identifies all of the decision-making bodies included in the governance structure, and the processes by which decisions are made, including how IT investment, divestment, architectural, ongoing operational and project-based strategies are vetted.
5. Drive the campus toward a future IT strategy and program that emphasizes shared services and

clearly defines decision rights based on governance instead of organizational models or funding sources to encourage behavior consistent with campus standards in managing and using technology. This should reduce the number of autonomous IT organizations while reducing the need to duplicate shared IT services.

6. Provide the ongoing resources necessary to support and sustain the new structure.
7. Develop an annual review schedule for all IT governance bodies utilizing guidelines and criteria developed in partnership with the Cabinet-level IT decision-making and policy body including the formation, assessment, and retirement of these structures.
8. Standardize the chart of accounts codes for IT procurement and other spending. As the campus undertakes the new financial model, this will be critical to enable the identification of and reporting on what we spend on campus IT, including staff salary, benefits and cost of IT services.
9. Link new and existing IT activities and initiatives, including OE initiatives, into a common review process immediately. The Campus Technology Council (and its subgroup the Information Technology Architecture Group, for example), should be resourced and empowered to review and advise the OE Program Office on sequencing, funding, and prioritization of the OE technology initiatives.

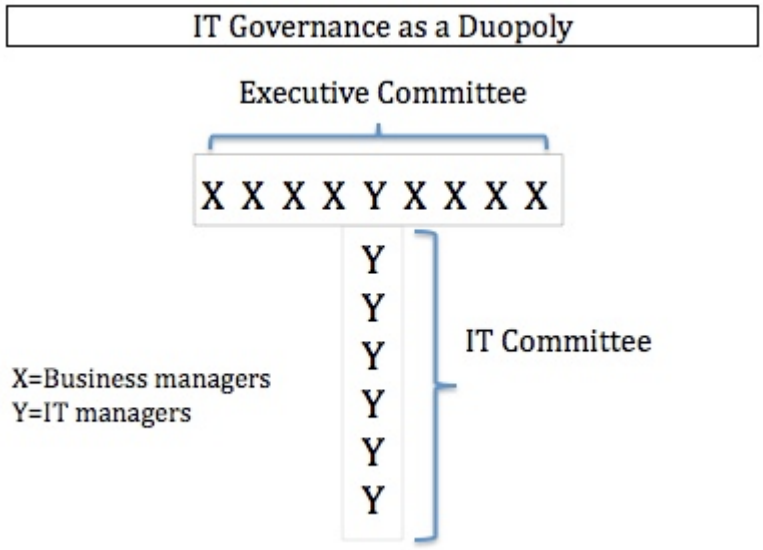
In order to facilitate the implementation of these recommendations, the OE IT Initiative Design Team is proposing four things requiring immediate resources and funding:

1. A full-time planning consultant to facilitate the collaborative process of defining and vetting an effective IT governance structure for the campus. This is the highest priority, and we expect a deliverable in six months.

2. A full-time analyst to:
    a. Support both the existing and future IT governance bodies with research needs (e.g., Best Practices at other universities, opportunities for collaboration with other UCs, industry benchmarks, etc.).
    b. Develop systems to collect data and present standardized metrics on campus IT activities, starting with those addressed in the OE IT Initiative Design Team's report.
    c. Work with the OE Finance Initiative Team on retooling the campus chart of accounts to capture IT product categories.

3. Appointment of a senior technologist (campus enterprise technology architect) to have full time responsibility for developing a technology roadmap and review process for use as a critical component of the senior governance process. This can be accomplished by having a senior point person to lead the existing ITAG function, however is an ongoing role needed to maintain alignment during the design phase of each project.

4. Establish a financial model to buy out local staff time spent working on campus IT Governance structures to recognize the impact on local departments. The Office of the CIO should subsidize this time (salary and benefits) in proportion to the level of participation - recommendation calls for a percentage contribution of salary for contributing members, i.e., e.g., for IT managers at the IT committee level at 20%, IT managers at the executive committee level at 40%.



Duopoly: 2-party arrangement where decisions represent a bilateral agreement between IT executives and one other group (i.e. Top Cabinet Leadership or High Level Administrators)

C. Describe the alternate approaches you evaluated in the process of developing this proposal and why those alternatives were not selected.

The OE IT Initiative Design Team reviewed the role of the Campus Technology Council and the various IT advisory groups on campus and compared these groups with the IT governance groups described in a longitudinal study of IT governance conducted by the MIT's Sloan School of Management's Center for Information Systems' Research (CISR). The team also reviewed models used at other universities, including other UC campuses. The lesson learned is the importance of on-site collaborative processes involving stakeholders at all levels, with equal partnership between empowered business, academic, and technology leaders when defining an IT governance structure.

III. IMPACT AND STRATEGIC ALIGNMENT

A. Describe how the proposed solution aligns with the OE goals:

- Reduce administrative costs and enable the campus to direct more resources to teaching and research
- Advance an effective and efficient operating environment
- Instill a culture of continuous improvement that leads to high quality performance and outcomes

A strong IT governance structure will:

- Promote understanding and strategic alignment of our many local and campuswide IT investments
- Provide financial oversight of the campus's $160M+ annual IT spending to enable more efficient and effective investment
- Facilitate the senior campus leadership's involvement in IT strategic decisions
- Clarify decision rights around technology investment to maximize efficiency and enforce standards where needed
- Enable true life cycle management of the IT portfolio.

B. Identify any other anticipated benefits in implementing the proposed solution.

The allocation of IT staff is out of balance, unequally distributed across campus, with primary skills often focused in areas made necessary by building redundant solutions which subsequently require a high level of support or 'fire-fighting' efforts. A better investment of IT dollars will redirect our staff focus from systems delivery to demand planning and design, including business process and user experience analysis, to more effectively manage our resources and produce better outcomes. A clearly defined and well-managed governance structure is needed to support this significant change.

Moving to clearly defined activity-based budgeting/costing and applying appropriate product categories to our purchasing processes and systems will enable us to collect better data to support decision-making across the campus, beyond IT.

Good governance can lead to improved business practices:

- Leverage economies of scale
- Bulk buying of hardware and software
- Efficient server use and maintenance, including appropriate use of cloud computing
- Standardized processes and technologies
- Common tools where business needs align
- Cost controls and operational efficiency

C. Identify the risks of not implementing the solution.

Our existing decision-making structures have proven to be ineffective at ensuring efficient spending and consistently high-quality product delivery. Unless we change our current model of IT governance, Berkeley will incur progressively higher IT costs for duplicated services with increasingly inadequate controls. Simply put, without a proper IT governance framework, we will not be able to meet the savings targets that are so critical to the campus's sustained excellence and, with further budget reductions IT investment may not be properly directed, increasing the risk of major systems failures.

D. Describe the constituency that is intended to benefit from the proposed solution (e.g. students, faculty, staff, 1-many units)

Staff, faculty, and students across the campus will benefit over time from improved and integrated decision-making about IT systems. By reducing the need for shadow systems and workarounds, increased integration of our IT systems will save all users and support staff money, time, and headaches.

IT staff will benefit from having clear goals, guidance and oversight, and well-understood paths for resources and assistance. Job satisfaction can also increase, as projects are completed with less political wrangling and are more successful, earning appreciation from the campus at large.

E. Describe the extent to which this proposed solution is a collaborative effort either within campus or with external partners.

The IT Governance Implementation Team will need to work in a highly collaborative way with the Cabinet, VCs, Vice Provosts, Deans, functional owners, and existing governing bodies.

F. If applicable, describe how the proposed solution may enable additional projects to be considered.

Establishment of a clear, empowered governance process will be critical to moving forward with any additional large IT projects or achieving further savings. Our fragmented authority and responsibility structure at UC Berkeley is one of the primary causes of o redundancies and inefficiencies, and must be resolved to move us towards a more efficient and effective operating environment. The proposed governance changes will enable appropriate review and implementation of all OE-related projects with significant IT components, as well as all other future projects.

G. What is the impact of the proposed solution on the existing systems and processes? Does it eliminate the need for existing systems and processes?

Existing IT systems and the business processes they support will have to be adjusted to align with the newly adopted governance structures. Local decision rights and exception handling processes must be determined and established.

The implementation team, working with key campus stakeholders, will together need to determine which processes and systems should be retained, re-engineered, or eliminated.

H. What is the impact on the proposed solution on the workload?

Profile/Impact in hours	Current Workload	1-time workload requirement	Ongoing workload requirement
Student	Undefined.	Yes (as facilitated by the Student Technology Council)	Yes (as facilitated by the ongoing formal engagement with Student Technology Council)
Staff	2 hour meetings, eight times a year.	Yes	CTC - 20% appointment for all CTC members requiring a significant additional time commitment for those individuals.
Faculty	6 CTC faculty members have 2 hour meetings eight times a year.	Yes (Deans, VCs & Chairs)	Those that have dual appointments to CTC and the Campus Senior IT Leaders - 40%

IV. WORK PLAN AND PROPOSED SOLUTION DESIGN

A. Provide a statement of:

- Deliverables — results the solution must deliver to achieve the stated objectives.
- Constraints — factors that may limit the options for providing the solution (*e.g., an inflexible deadline*).

Deliverables

- An established Cabinet-level IT decision-making and policy body (council) that combines Academic Senate representation and executive administration leadership. One or more new or re-aligned supporting governance bodies which include representation from key administrators, stakeholders and users, and a well-defined, collaborative and empowered decision-making process that connects them.
- A plan for driving the campus toward a unified IT strategy and program that serves all of campus, and enables a future which requires far fewer autonomous IT organizations.

- A published campuswide 'map' of IT governance that identifies all of the decision-making bodies included in the governance structure, and the processes by which decisions are made, including how IT investment, divestment, architectural, ongoing operational and project-based strategies are vetted..
- Documented decision rights based on governance rather than organizational model or funding source.
- Revised financial system, including new chart of accounts that includes IT product categories.

Constraints

- Campus leadership must support the development of a campus IT governance model that involves them. If they do not, this high priority initiative will fail, and we will continue to miss opportunities for better services, economies of scale, and optimized investment.
- Delays in hiring the planning consultant to facilitate the definition and vetting of the new IT governance model could push the deadline out.
- Funding to support the chief enterprise technology architect and the dedicated full-time analyst to support the start-up and ongoing efforts of the IT governance structure and council(s) is critical.

B. Provide a work plan for the proposed solution with high-level steps to complete the solution, including timeline. (Try to limit your plan to no more than seven steps.)

	MILESTONE	**TIMELINE**
1	Deliver a structure for IT governance.	Six months from the time the consultant begins.
2	Support both the existing and the future IT governance bodies with research needs, e.g., Best Practices at other universities, opportunities for collaboration, data analysis, comparison of options.	Assign a data analyst immediately. Ongoing needs to be defined and prioritized by the implementation team and ultimately the governance bodies.
3	Develop systems for collecting data and presenting standardized metrics on IT activities on campus, starting with those called out in the OE IT Initiative Design Team's report.	Once the analyst is on board: • Three to six months to launch a collaborative process in which stakeholders for each identified IT activity select five to eight metrics and the tools to gather them • Roll out the metrics as a pilot → collect feedback → rewrite/adjust → reissue cycle within six month. • Within three months of the start of each project, establish metrics to report transparently on the status of IT activities.
4	Select and Implement an IT Portfolio Management Tool that will be used to register all current systems solutions as well as proposed, active, and on hold projects that have a significant technology component.	Working with the technology analyst and technology architect, within four months, select and begin pilot implementation of an IT portfolio tool.
5	Work with the OE Finance Initiative Team and others on retooling the campus chart of accounts to capture product categories.	Once the working group is set up and the analyst on-board, this work should be completed within six to nine months.
6	Provide campus technology roadmap that outlines specific technology evaluation frameworks for assessing	Once a technology architect is hired, six months to develop the

	each project based on a cost/quality point/risk/interoperability review matrix to provide the CTC with consistent technical assessment.	framework for repeatable assessment against current technology standards. Ongoing updating of that roadmap would be completed annually.

C. What are the data requirements for the proposed solution?

Data will be required in the following areas:

- Additional investigation into IT governance models, with an emphasis, wherever possible, on universities that have a Responsibility Centered Management (RCM) model of budgeting and that articulate and deliver many IT services as a Common Good.
- The software tools that gather data for evaluating IT metrics are readily available, but our data requirements must be specified when defining which metrics are useful.
- Our financial system may support some but not all of this data collection. Discrepancies will have to be identified. Retooling the chart of accounts with IT product categories will help in this regard.
- Ongoing data about campus projects and investments will have to be captured and analyzed over time to enable governance oversight and decision making.

D. What are the technical requirements for the proposed solution?

The campus will need a portfolio management system to enable the tracking and monitoring of investments. In addition, software tools that are part of the "useful metric" collaborative identification process will likely be needed.

E. What are the greatest risks for the proposed solution and the plan to reduce or eliminate the risks?

	RISK	**MITIGATION PLAN**
1	Executives do not prioritize the formation of an IT governance structure.	Seek and get support for this at the highest level. To this end, the proposed external consultant should report to the co-sponsors of OE IT -- Shel Waggener, the AVC-IT and CIO, and the faculty sponsor, Paul Wright, if he continues in this role, with a dotted line to Andrew Szeri, the lead of the OE Program Office.
2	Hiring of the external planning consultant is delayed.	Immediately start the search and stay on it as a highest priority.
3	IT staffing constraints delay the identification of metrics for IT services.	Work with established groups representing the interests of the IT managers and staff, e.g., CTC, ITMF, AppNet, and ITAC, to achieve early buy-in and the identification of campus "point people" to facilitate discussion.
4	Campus leadership and functional owners do not allow oversight of their IT spending and projects.	This revision to decision-making must be actively pursued and supported at the highest levels. The OE IT sponsors must recruit the support of the OE Executive Committee and the Chancellor's Cabinet.

F. How does the proposed work plan allow for evaluation and course correction to ensure the outcomes meet the campus needs?

Metrics are heavily emphasized in this approach. They are also key to effective IT governance -- in evaluating whether a proposal should go forward, whether an approved project should be redirected, and whether ongoing operations and activities are effective. Weill & Ross conclude, from their 10 years of research with over 300 organizations, that the best metric for evaluating the effectiveness of an IT governance structure is how well or easily the senior leadership can describe it.

v. CHANGE MANAGEMENT

A. What is the change management plan to successfully implement the outcomes of the proposed solution?

The most significant aspect of change for governance is developing a strategy that emphasizes speed in decision-making processes such that the new structure isn't perceived bureaucracy. Rather than implementing IT Governance structure as a one time event, the design team recommends a multistage process including :

- Align the initial changes for IT Governance closely with the OE Program Office work in evaluating all OE Projects that have a significant IT component.
- Working with the shared services implementation team to publish clear guidelines for roles and responsibilities, including decision and input rights for IT shared services.
- Develop a clear communications plan targeted at different impacted communities including a Senior Leadership (Cabinet & Council of Deans), Administrative Officers, IT Mangers, IT Staff

Change management with governance will be a significant effort. Success will require early buy-in and engagement from campus leaders, IT managers and their staffs in order to become more effective in their respective roles.

B. What incentives and/or disincentives are proposed to influence behavioral changes necessary for the successful outcome of the proposed solution?

Beyond aligning these changes with other governance and organization changes related to OE, there are three primary incentives that apply to leaders, IT managers and their staffs:

1. Visibility into what solutions are available and how they can access those solutions will save money from IT that can be spent on other things
2. Access to resources (including funding, training, tools, infrastructure) will speed deliver and gain recognition for multiple units can leverage work done that widely.
3. Knowing that one's work can be supported on an ongoing basis by more than the original creator should allow for staff to spend higher percentage of their time on new challenges.

C. Who has been identified as the change leaders and implementers to carry out the changes necessary for the successful outcome of the proposed solution?

The campus AVC-IT and CIO Shel Waggener and the OE IT faculty sponsor Paul Wright are the primary change leaders for this effort. In addition, leadership at the highest level (both the OE Executive Committee, Cabinet and Council of Deans) will be needed to enact the significant changes proposed here. Regarding implementation, the two positions identified in this request for resources are critical to implementing change, but leadership from managers and staff, both IT and not, will be critical as well.

VI. FUNDING MODEL AND BUDGET

A. Could the proposed solution move forward with partial funding? If yes, describe the revised scope, including the associated savings impact.

If only one position were to be funded, the priority is the external consultant to coordinate the IT governance model definition and vetting. Not funding the analyst position would require the use of an existing analyst when available, which is the position we are currently in. The result would be considerable delay in implementing the metrics that will be critical to decision-making going forward. The consultant will also need dedicated analytical support. Not funding the enterprise technology architect will require a buyout of time from existing staff, resulting in reduced resources to other critical projects.

B. What is the plan for sustainable funding to support ongoing operations of the proposed solution?

Support for the IT governance bodies, both coordination and analytical support, will be needed on an ongoing basis. Until now, those efforts have been supported by the Office of the CIO, in part by using a small percentage (~1.75%) of the IT Bank block grant each year. Analytical support has mostly come from the OCIO budget. This could continue, with allowances for the increased burden.

C. Please download and fill out the OE Resource Request Budget Template located at [location] and follow the instructions on the first worksheet in the workbook to complete the budget line descriptions. Include both completed sheets with the Resource Request.

VII. ASSESSMENT PLAN

Facilitating and Enabling Governance

- % of investment decisions influenced by IT governance provided data
- % of projects aligned with Campus mission and goals
- % of projects reviewed during execution by Campus leadership and Governing Bodies\
- Campus leadership satisfaction with overall governance - survey based

Influencing Initiative Success

- Project success rate (upward trend) – based on specific project success criteria
- % of projects delivered ahead of schedule and within budget
- % of healthy Projects
- % of projects with detailed demand and design plans

Fostering Processes that Enable Success

- Governance standards, processes, tools and templates are designed and implemented
- Governance processes are owned and managed (process management lifecycle)
- Value of governance is measured and understood – survey based
- % of projects complying with governance standards & methods