**Final Report on Project Management Skills
of the University of California Libraries' Staff**

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**from the
Project Management Skills Task Force**

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Final Report on Project Management Skills

1. Executive Summary

This report represents the culmination of the work of the Project Management Skills Task Force (PMSTF) and is primarily composed of a set of recommendations.

The PMSTF recommends the creation of a new Project Management Common Interest Group (PMCIG), reporting to SOPAG, with responsibilities tied to a number of the other recommendations.

The other key recommendations are:
- Establish an annual inventory that identifies people in the UC Libraries with project management skills. Access to the names should be restricted and made available to SOPAG, as needed.
- Use the skill inventory to select project managers for systemwide projects when appropriate. Determine appropriateness based on a known set of criteria. A recommended set of criteria is provided.
- Focus and fund skill building resources on the skills and techniques that are most critical and weakest (based on the survey, initially, and revised annually.)
- Pursue a blended approach to project management training, including solutions such as mentoring, peer-to-peer, and on-site, and web-based training.
- Assign to the PMCIG the tasks of creating a project management glossary and central repository for project management resources, creating and maintaining standard templates for use in systemwide projects, and creating and promoting a project management community of interest.
- Make several changes to the way that systemwide projects are charged by SOPAG and the ACGs:
  - Include an explicit problem statement and success criteria;
  - Specify the scope and resources, but allow the timeframe or scope to be negotiated with the constituted team within a month of the first team meeting.
  - Require that the project manager (and team) conduct a risk assessment as one of the first tasks and come back to the charging entity with results for adjustments to resources or other elements of the charge.
  - Require that project manager utilize the PMCIG project definition template as an analysis tool.
  - When a project manager is assigned to a systemwide project, require a role discussion between the project manager and the team manager and as one of the first tasks for the two leaders.

The Appendices of this report provide a list of the key Project Management Skills and Techniques (Appendix A), a draft charge for the Project Management Common Interest Group (Appendix B), and the results of the survey of UC library staff members conducted in January 2010 (Appendix C).

2. Introduction

The work of the Project Management (PM) Skills Task Force began in August, 2009. We started with a careful study of our Charge, and two references: the Background preceding the charge and the UC Collaborative Digital Projects Principles, Roles, and Responsibilities document that had been prepared in 2007, following the VDX Implementation Project.

We then created a simple work program which included the following steps:
- Identifying a preliminary list of key project management skills;
- Developing and implementing a survey of campus library staff members about their level of competence at those skills;
- Analyzing the results of the survey, and using that information to reassess the project management skills list and to develop preliminary recommendations;
- Consulting with the All Campus Groups (ACGs) and SOPAG about our revised skills list and about our preliminary recommendations; and
- Developing our final recommendations.

Our final recommendations are the main body of this report, and, as mentioned above, they are based upon input from the ACGs and SOPAG as well as analysis of the survey responses. We have also drawn upon our own individual experiences as project managers and as UC library staff members to inform our thinking. Additionally, we were able to spend a day together holding in-depth discussions about these recommendations.

As a final note, we got additional input for Recommendation C (Training) from a special group of people: those survey respondents who indicated they had experience with *training that made a difference*, and also who told us we could re-contact them for follow-up.

3. Recommendations

Overarching recommendation:

Establish a Project Management Common Interest Group (PMCIG), reporting directly to SOPAG. The justification for reporting directly to SOPAG and not to a specific All Campus Group (ACG) is twofold. First, the scope of systemwide projects is beyond that of any one of the ACGs, and it may limit the impact of the PMCIG's work on systemwide projects if it is tied to a single ACG. Second, all ACGs expressed an interest in the outcome of this Task Force's work. An ongoing open information exchange with the PMCIG will be much easier if it is seen as neutral rather than associated with a particular ACG.

The PMCIG will have one representative from each campus, plus one CDL representative. Members will be selected by the SOPAG representatives. The PMCIG will include a liaison member from SOPAG. The Chair is selected by the membership and will serve for 2 years.

A draft charge for CIG is available in Appendix A.

A. **Continued identification of individuals with PM skills**

Observation. While the survey conducted by the PM Task Force collected information about UC Libraries staff with project management skills, survey participants (and SOPAG and LTAG representatives who provided the respondents' names) were assured of confidentiality[1]. Therefore, there is no current, accurate inventory of people across the UC Libraries system with project management skills. Such a list is necessary in order to effectively review, select, and assign people with the appropriate skills, techniques and experience to projects as they arise.

Recommendation:
Assign to the PMCIG the task of establishing an annual inventory that identifies people in the UC Libraries with PM skills and techniques.
- Use the existing lists of suggested names submitted by LTAG and SOPAG representatives for the January 2010 PM Skills Survey as the starting point.
- Re-contact LTAG and SOPAG representatives; describe the need for a system-wide inventory of people with PM skills, distributing the names they suggested for the January 2010 survey. Include the list of PM techniques and high-priority skills (Appendix B). Ask the LTAG and SOPAG representatives to consider the skills list and review the names; they can add names, drop names, and confirm that the names on the inventory possess the PM techniques and skills, *to the extent of their knowledge*.
- The individuals identified in the inventory will be notified that they have been added to the list.
- PMCIG will maintain the inventory and revise it annually. In subsequent years, the skills list used may be revised, based on feedback from project sponsors[2] and managers.
- Access to the names should be restricted and made available to SOPAG, as needed.

B. **System for assignment of project management skilled staff to collaborative systemwide projects in a timely manner**

Observation. Some of the individuals assigned to lead systemwide projects do not have project management expertise. There is inconsistency about the process of assigning project management

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[1] Some 40% of the survey respondents self-identified for the purpose of limited follow-up.

[2] The project sponsor is a committee/person that has the authority to propose the project and has commitment to make it succeed; serves as chief advocate for the project; confirms project direction, and monitors environment to help adjust charge if necessary; helps the project manager getting the resources needed; helps define project scope and validate all project phases; and accepts responsibility for issues escalated from the project manager

resources to systemwide projects, task forces, and so forth. Systemwide teams and groups are sometimes unsure about what resources they have for project management support.

Recommendation:
- Develop a set of criteria/thresholds for which projects merit the assignment of a PM. If a PM is not assigned, the Overall Team Manager must have PM skills and knowledge of PM techniques.
- Recommended criteria:
    - The presence of an external relationship (vendor, partner, collaborator)
    - Campus implementations of system/software
    - Duration of more than 1 year
- Review the use of this set of criteria after 2 years to determine if it is working effectively.

Recommendation:
- Refer to the annual inventory of library staff with PM skills (see Recommendation A).
- If the systemwide project merits the assignment of a PM according to the criteria listed above, in the interest of timeliness, SOPAG shall create a short *ranked* list of PM-skilled staff based on their business knowledge (knowledge of the business need that the project seeks to address), and the project complexity. The more complex the project, the more experienced and skilled the staff members should be.
- The next step is to contact the manager(s) of the staff on the top of the list to verify availability (vacation, retirement, over-allocation, etc).
- After getting approval from manager, contact staff and then appoint him or her as project manager.

C. **Process to identify and/or conduct ongoing skill building opportunities at the campus and systemwide level.**

Observation. Our survey results (Appendix C) revealed areas of strength (listening skills, analytical skills, problem-solving skills) that correlate with competencies that might be expected in a population of librarians and library staff members. The areas that need most improvement are the skills and techniques that are special to the project management domain. For more detail, please refer to the Skills List—Appendix B.

Recommendation: Any campus or CDL based entities making decisions about training should include skill building resources on the skills and techniques that are special to the project management domain. The areas of focus should be revisited on an annual basis by the PMCIG, using the annual inventory and project assessments. At the present time, the areas of focus should be:
- Project tracking, including
    - Familiarity with at least one automated tool, such as: MS Project, Mind Mapping, or WorkBench.
    - Ability to create a Gantt chart
    - Ability to create a work breakdown structure
    - Ability to perform critical path analysis
- Change management, including
    - Project definition
    - Scope management
    - Stakeholder analysis and management
- Time and resource management, including
    - Scheduling, including interdependencies
    - Resource management
- Risk management
    - Risk assessment
    - Risk management
    - Communication planning

Recommendation: Assign to the PMCIG the task of creating standard templates for use in systemwide projects. The PMCIG would also be responsible for creating training materials explaining how to use the templates. Simple templates could be created, such as:

- scope document
- risk assessment
- report format
- communication plan
- project definition
- templates that are requested by UC project manager community

Observation. Resources are constrained at every level (campus, CDL, systemwide) for training. Some sites may have more funds available for training than others.

Recommendation: Any campus or CDL based entities making decisions about training should include pursuit of a blended approach to Project Management Skills Training. Consider a mixture of approaches from these alternatives:

- Option 1: Support mentoring and peer-to-peer training by undertaking to reward the mentor or trainer in personnel reviews. Additionally, consider rewarding the mentee/trainee for having the initiative to get trained.
- Option 2: Provide PM skills orientation for new task forces, provided by members of the PMCIG.
- Option 3: Assess local campus staff on the PM techniques and skills, and then engage an onsite trainer who will tailor a curriculum to the specifications needed. Some will negotiate price fairly competitively at the present time. Seek recommendations of trainers. (The PMCIG may be able to maintain a list of recommended trainers. See below.)
- Option 4: Purchase web-based training modules. Unfortunately, these are not available at the desired granularity and there is less control over the content.
- Option 5: Send staff members to off-site/campus-extension classes. There will be the same issues with these as with the web-based training modules.

Observation. There is a general lack of familiarity with the concepts (and benefits) of project management within the library community. Because members of any systemwide project teams are drawn from the library community, this lack of familiarity reduces the speed with which project teams can recognize and accept project management practices, such as status tracking and risk assessment, which require the participation of team members.

Recommendation: Assign to the PMCIG the tasks of:
- identifying or selecting (and promoting) a project management glossary; and
- providing a central repository of selected online project management resources, including basic informational resources.

Observation. Based on the overwhelming response we got to our survey, there may be an interest in an ongoing Project Management Community of Interest.

Recommendation:
Assign to the PMCIG the tasks of:
- Creating and sustaining a mentoring network
- Creating and fostering a PM Listserv
- Creating and fostering a PM Wiki
    - Identifying training resources
    - Posting PM Templates
    - Posting PM glossary

D. A tool or process to measure and recommend ways to improve project management as an element of collaborative systemwide projects.

Note: In the following recommendations, where we refer to the PM, assume that we mean the individual who is assuming the project management responsibilities for the effort. In other words, if a systemwide project does not have a PM assigned, then we are referring to the Team Manager.

Observation. Systemwide projects and task forces are launched without clear success criteria, so that their performance cannot be evaluated, except in terms of timeliness and subjective measures.

Recommendation: Include an explicit statement of success criteria in every project/task force charge.

Observation. When systemwide projects and task forces are launched with a charging document setting project constraints of timeframe, scope and resources, this often leaves the PM has no flexibility to develop a successful project plan. The PM then resorts either to exceeding the timeframe, cutting the scope, or asking for more resources.

Recommendation:
Charging documents should specify the scope and resources. Require the timeframe or scope to be negotiated with the constituted team within a month of the first team meeting.

Recommendation:
Require that the PM (and team) conduct a risk assessment as one of the first tasks and come back to the charging entity with results for adjustments to resources or other elements of the charge. Recommend that PM utilize the PMCIG project definition template as analysis tool.

Observation. When a PM has been assigned to a systemwide project, the prevailing model is that the team is headed by the Team Manager, aided by the PM Consultant. Project management responsibilities, as described in the Roles for Collaborative Digital Projects, are divided between these two people. The Roles and Responsibilities document itself does not delineate which tasks would be performed by the Team Manager, and which by the PM. The more professional and skilled the PM, the likelier it is that she or he may assume they have a larger role than the Team Manager may be imagining. This can lead to a confusion of responsibilities, creating problems for the team and the project.

Recommendation:
When a project manager is assigned to a systemwide project, require a role discussion between the project manager and the team manager as one of the first tasks for the two leaders. The goal of this analysis is to divide the project management responsibilities in a way that is agreeable to both individuals *and* that is good for the project.
- We suggest the use of the RACI (responsibility accountable consulted informed) matrix.Joan
- We note that if two leads are involved, both need access to the sponsor liaison (e.g. Implementation or Executive Team Liaison Member) for communication.

Appendix A: Draft Charge for Project Management Common Interest Group

PURPOSE & CHARGE

The Project Management Common Interest Group (PMCIG) will advise and assist the Systemwide Operations and Planning Advisory Group (SOPAG) whenever necessary to promote good project management of UC library systemwide projects. The group will take responsibility for the ongoing project management skills inventory, which forms the basis for assigning project managers to systemwide projects. In addition, the PMCIG will develop various templates and other resources, and promote a project management community of interest.

BENEFITS TO CAMPUSES

The PMCIG's activities will benefit campus project management in a number of ways.

- Benefits for campus project managers:
  - access to new resources and training materials;
  - ability to participate in the project management community:
    - o new PMs can get support and assistance;
    - o experienced PMs can gain visibility;
    - o all PMs can exchange ideas.
  - for those who serve on the PMCIG, an opportunity to gain systemwide group experience, make contacts at other libraries, and build leadership skills.
- Medium and long-term results for libraries:
  - larger percentage of projects completed on time;
  - more efficient use of project resources;
  - access to lessons learned from system-wide projects, leading to avoidance of previous mistakes and pitfalls;
  - better support of library strategic goals through use of project management best practices.

KEY RESPONSIBILITIES

- Manage the annual project management skills inventory and maintain the resulting data.
- Maintain the list of project management skills and techniques that is used for recommended training, based on the inventory and post-project assessments.
- Facilitate collection of feedback about systemwide project outcomes from project managers and project sponsors. Utilize this both to assist current and new systemwide project managers and also to update the project management skills list for the annual inventory.
- Create and/or collect and make available various standard project management resources and training materials for their use, as appropriate, including:
  - Templates;
  - Glossary of project management terms;
  - Central repository of selected online project management resources, including basic informational resources;
  - Training information.
- Foster a familiarity with project management vocabulary, concepts and ideas at a level sufficient to support effective project management in the broader library community
- Foster a project management community of interest for UC library staff members, including:
  - Creating and sustaining a mentoring network
  - Creating and fostering a PM Listserv
  - Creating and fostering a PM Wiki:
    - Identifying training resources
    - Posting PM Templates
    - Posting PM glossary

COMMUNICATION & REPORTING
The PMCIG reports to SOPAG. Issues, decisions, deliverables and recommendations will be documented and made readily available to SOPAG members. In addition, PMCIG is also expected to be in regular communication with UC library staff involved in project management, via the community mechanisms created as part of their responsibilities enumerated above. PMCIG shall usually meet virtually (e.g. by listserv, by web or telephone conference) and may meet in person as deemed necessary.

The PMCIG should also consult on a periodic basis with the UC Libraries Human Resources Group regarding training and performance evaluation issues.

RECOMMENDATIONS/DECISION PROCESS
The PMCIG, having researched issues and solicited appropriate input, makes decisions regarding project management practices, and project management skill-building in connection with systemwide projects. These practices may or may not be adopted for local use. Recommendations on broad policy issues or major product implementations shall be submitted to SOPAG. Issues that are determined to be more appropriate for consideration by a body other than PMCIG or SOPAG will be referred by SOPAG to the appropriate group(s) for discussion and resolution.

TIMETABLE
Ongoing

MEMBERSHIP & TERMS OF APPOINTMENT
The PMCIG will have one representative from each campus, plus one CDL representative. Members will be selected by the campus and CDL SOPAG representatives. The PMCIG will include a liaison member from SOPAG. The Chair is selected by the membership and will serve for 2 years.

REVIEW
The PMCIG will be subject to an annual review to affirm the need for continued meeting.

Appendix B: Project Management Skills & Techniques List

Basic: a level of knowledge important for all project managers who will be involved in systemwide project management, whether at the local or systemwide level.

Basic project management techniques

Technique	Description
Work breakdown structure	A deliverable-oriented grouping of project components, used to organize and define the project scope.
Stakeholder analysis	The identification and assessment of the individuals and groups who have a vested interest in the outcome of the project, or will be affected by its deliverables.
Scope management	The processes required to ensure that the project includes all the work required, and only the work required.
Risk management	The identification, analysis and response to risk factors throughout the life of the project.
Communication plan	A plan describing the organization and control of information to and from the stakeholders, according to their communication needs.
Project definition	A document that defines the business need that the project seeks to address, project requirements, outlines roles and responsibilities, etc.
Interdependencies	The identification and analysis of the relations between one project and other related projects, and between various tasks within the same project.
Scheduling	The management or rearrangement of the activities in a project schedule to improve the outcome based on the latest available information.

Basic project management skills

Skill	Description (for high priority skills[3])
Time and resource management	Is able to maximize personal efficiency by setting priorities and effectively schedule activities, and efficiently utilize and allocate resources
Project tracking	Can efficiently use tools and methods to track project progress
Risk management	Has ability to identify, assess, and prioritize risks; also plan for and reduce the negative effects of adverse circumstances

In addition, these skills are also important: listening, problem solving, negotiation, decision making, team building, and conflict management.

Advanced, a level of knowledge suggested for the most complex systemwide undertakings.

Advanced project management techniques

Technique	Description
Gantt charts	A graphic display of schedule-related information, using bars to represent activity durations.
Critical path analysis	A technique used to predict project duration by analyzing which sequence of activities has the least amount of schedule flexibility.

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[3] "High priority skills" are those which the initial inventory reported as being at a low level among library staff members.

Technique	Description
Resource allocation	Assigning team members to projects and individual tasks, while avoiding overcommitment and overallocation of individuals.
Advanced reporting	The process of gathering, analyzing and interpreting information, then organizing it in progress reports.

Advanced Project management skills

Skill	Description (for high priority skills)
Change management	Is familiar with methods for orderly control of change requests from stakeholders; is comfortable and familiar with methods of scope management.

In addition, these skills are also important: consensus building, presentation, organizational effectiveness, strategic thinking, analysis, and conceptual thinking.

Appendix C: Survey Results

1. How many years have you led projects in this and previous organizations?
    a. More than 5 years: 78.3%
    b. 3 to 5 years: 20.9%
    c. 1 to 3 years: 7.8%
    d. 0 to 1 year: 3.2%

2. Have you managed any technical projects (i.e. Information Technology related)?

    a. Yes: 72.7%
    b. No: 27.3%

3. Have you ever managed an organization-wide project?

    a. Yes: 67.2%
    b. No: 32.8%

4. Have you ever managed a project that spanned more than one organization?

    a. Yes: 57.0%
    b. No: 43.0%

5. Have you ever received any formal project management training that made a difference to your work?

    a. Yes: 31.3%
    b. No: 68.8%

6. If you answered 'Yes' to Question No. 5, please provide details about the training that made a difference. [comments provided]

7. For the following series, we asked respondents to indicate their level of competence in each area on a three-part scale, which we did not define specifically.

7.1 Consensus-building (the ability to seek agreement, making every effort to meet any outstanding interests)
    a. Basic: 7.8%
    b. Intermediate: 45.3%
    c. Advanced: 44.5%
    d. Not sure: 2.3%

7.2 Presentation skills (the ability to communicate effectively ideas and information to an individual/group)
    a. Basic: 12.5%
    b. Intermediate: 46.1%
    c. Advanced: 40.6%
    d. Not sure: 0.8%

7.3 Listening skills (the quality of being an active listener, making an effort to understand the total message that is communicated)
   a. Basic: 4.0%
   b. Intermediate: 38.1%
   c. Advanced: 57.9%
   d. Not sure: 0%

7.4 Organizational effectiveness (the quality of understanding organizational politics and power; having high-integrity political skills)
   a. Basic: 12.5%
   b. Intermediate: 50.8%
   c. Advanced: 30.5%
   d. Not sure: 6.3%

7.5 Strategic thinking (the ability to think about, assess, and create new possibilities and opportunities)
   a. Basic: 9.4%
   b. Intermediate: 42.5%
   c. Advanced: 48.0%
   d. Not sure: 0%

7.6 Negotiation skills (the ability to reach agreement and find a mutually acceptable solution)
   a. Basic: 19.7%
   b. Intermediate: 42.5%
   c. Advanced: 35.4%
   d. Not sure: 2.4%

7.7 Risk management (the ability to identity, assess, and prioritize risk; also plan for and reduce the negative effects of adverse circumstances)
   a. Basic: 26.6%
   b. Intermediate: 45.3%
   c. Advanced: 25.8%
   d. Not sure: 2.3%

7.8 Time management (the ability to maximize personal efficiency by setting priorities and effectively schedule activities)
   a. Basic: 17.2%
   b. Intermediate: 42.2%
   c. Advanced: 39.8%
   d. Not sure: 0.8%

7.9 Project tracking (the ability to use tools and methods efficiently to track project progress)
   a. Basic: 31.6%
   b. Intermediate: 43.9%
   c. Advanced: 21.1%
   d. Not sure: 3.5%

7.10 Analytical skills (the ability to visualize, analyze and solve complex problems)
   a. Basic: 7.1%
   b. Intermediate: 40.2%
   c. Advanced: 52.8%
   d. Not sure: 0%

7.11   Conceptualization (the ability to combine relevant information from multiple sources, and apply this information to broader/new contexts)
    a.   Basic: 10.9%
    b.   Intermediate: 39.8%
    c.   Advanced: 48.4%
    d.   Not sure: 0.8%

7.12   Problem solving (the ability clearly to understand a problem, and then find an appropriate solution)
    a.   Basic: 3.1%
    b.   Intermediate: 39.1%
    c.   Advanced: 57.0%
    d.   Not sure: 0.8%

7.13   Team building (the ability to build morale, cooperation, and motivation among team members)
    a.   Basic: 16.5%
    b.   Intermediate: 42.5%
    c.   Advanced: 39.4%
    d.   Not sure: 1.6%

7.14   Change management (familiarity with methods for orderly control of change requests from stakeholders, and familiarity with methods of scope management)
    a.   Basic: 28.3%
    b.   Intermediate: 43.3%
    c.   Advanced: 22.2%
    d.   Not sure: 6.3%

7.15   Virtual team leadership (the ability to help team members understand their work and help them stay connected with others on the team)
    a.   Basic: 25.0%
    b.   Intermediate: 46.9%
    c.   Advanced: 23.4%
    d.   Not sure: 4.7%