

A plan defining major Change Management deliverables, outcomes, and schedule for the National Institutes of Health Business and Research Support System

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1 Introduction

1.1 Background

The National Institutes of Health (NIH), after an extensive evaluation of its administrative processes and its current information technology support, has decided to implement an Enterprise Resource Planning (ERP) system, known as the NIH Business and Research Support System (NBRSS). The purpose of the system is to enhance administrative support to its biomedical research mission and to replace aging legacy computer support systems. Beyond being a simple automation effort, this project seeks to combine the latest technology with proven best business practices to provide a new level of support to research. Realizing that new technology and business processes will require an unprecedented NIH-wide implementation strategy, NIH has chosen a phased approach to implementation, allowing an orderly transition that carefully considers not only business and technology needs, but also provides for the human needs of the employees who will be affected most by these changes. It is to address these human needs that this Change Management Plan (CMP) is developed.

1.2 What is Change Management?

For purposes of this plan, and the NBRSS implementation effort, change management has been defined as: An integrated communications, training, workforce planning, and evaluation approach to assisting managers, supervisors and employees transition effectively into a new way of accomplishing work. Specifically,

Communications: In order to be effective, the NBRSS must be able: to assess the effectiveness of current and proposed business practices, to convey the capabilities of the chosen ERP software, to engage groups affected by automation or business practice change (stakeholders) in a meaningful exchange of information, to provide accurate information regarding design and implementation timing and progress, and to foster acceptance of new methods of work. These abilities are enhanced by stakeholder involvement through good two-way communications. Since the importance of the communications effort is high, in addition to this Change Management Plan, a Communications Plan detailing the specific efforts that will be made to engage stakeholders will be developed.

- Training: It should be obvious that the success of any implementation is dependent upon having well-trained end users who are comfortable with their knowledge and skill in using the NBRSS. Good training fosters acceptance of new work processes, efficiency of processing and accuracy in data collection. For purposes of this Plan, training includes, but is not limited to: classroom training, on-the-job training, the production and use of user guides, and the update and of specific NIH Manual Instructions or Issuances.
- Workforce Planning: Changes in business practices and the introduction of new computer and job skills may affect the number of positions required and the nature of work in the new work environment produced by the NBRSS. The Change Management Team (CMT) of the NBRSS management structure consists of a group of four professionals, whose responsibility it is to identify changes to workload and workforce planning issues. Working with management and partners in the Office of Human Resource Management, the IC Human Resources Offices and the Office of Equal Opportunity the CMT will facilitate a review of the impact that implementation may have on employee skills and assigned duties in order to develop a plan to address for workforce changes.
- Evaluation: In order to assess success, the CMT will make use of a number of evaluation methods. On a continuing basis, the efforts of the CMT will be evaluated and measured for success based on established performance measures and critical success factors. These performance measures and critical success factors will correlate with those established for the NBRSS project. A critical success factor might include workforce acceptance of best practices and use of the system. Conventional methods for evaluation and measurement to be used will include strategically planned surveys, questionnaires, interviews with appropriate personnel, and other activities for feedback from those affected by the system.

1.3 Why is Change Management Important

NBRSS Project Management Team Members have evaluated a number of ERP implementation efforts in large institutions nation-wide. The most consistent theme from those institutions is the need to have considerable resources devoted to change management activities. In fact, the greatest risk to the successful implementation of an enterprise-wide system is the failure to take into consideration major aspects of change management. Poor communications, training and workforce planning lead to a lack of acceptance of business changes and poor performance at the end-user level. In some

cases, failure to provide for adequate change management planning resulted in the loss of millions of dollars in failed or delayed implementation. The NBRSS Project Management Team understands the need for a substantial change management effort, and has devoted the necessary fiscal and human resources to it.

1.4 Change Management in the NBRSS Structure

Recognizing the need to address stakeholder involvement in the design and implementation of the NBRSS, the Project Management Team has ensured community involvement and support in the design and oversight process by including stakeholders as an integral part of the NBRSS structure. The established committees are summarized in the following sections.

1.4.1 Steering Committee

The Administrative Management Systems Steering Committee (AMSSC) provides executive management oversight and decision making for the NBRSS. The charter vests the AMSSC with the authority to make all policy decisions emerging from the implementation of the NBRSS, as well as those required for timely implementation. The AMSSC is co-chaired by the Deputy Director for Management, the senior program official of the NIH business community, and the Director, National Institute on Drug Abuse, the representative of the IC Directors, which is the senior decision making body at the NIH. The AMSSC is comprised of senior NIH managers and, consistent with CIO BOG guidance, representatives from stakeholder groups who use the support systems that will ultimately be incorporated into the NBRSS.

1.4.2 Project Management Team

A Federal Project Manager, a representative of the NIH business community, will manage the NBRSS project on a day-to-day basis. The PMT will assist the Project Manager with project oversight, design, and implementation.

1.4.3 Functional Teams

A functional team will be established for each of the six business areas, including financial management, service and supply fund, property, supply and acquisition, travel, and research and development contracts. Each team

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will consist of a complement of full-time NIH and contractor staff. The NIH employees selected will represent a balance between the OD and ICs.

1.4.4 Technical Team

A technical team will be established to maintain the ADB while the NBRSS is being built and consist of CIT and contractor staff.

1.4.5 Change Management Team

Of the 10 PMT positions, four are allocated to change management activities. A senior manager, expert in human resources, leads the CMT, which includes a Communications Specialist, Training/Workforce Planning Specialist, and Change Management Generalist.

1.4.6 Systems Integrator

The Systems Integrator (SI), KPMG Consulting, will provide dedicated personnel with change management expertise to assist with coordination between change management activities and technical development.

1.4.7 Functional Advisory Committees (FAC)

FACs will further participation of experts in the business, technical, and scientific communities who are not members of the functional teams but who serve in OD and IC leadership positions. Each FAC is co-chaired by an OD and IC representative and will oversee the implementation of a specific functional component of the NBRSS, including approval of implementation elements that are unique to a specific function and making policy related recommendations to the AMSSC.

FACs represent the management, policy level of end user. The role of the FACs is to evaluate proposed business processes, policy or delegation of authority changes, and system usability to ensure that proposed changes are consistent with increased efficiency. The FAC change management role includes communicating the purpose of the NBRSS and its progress and being an advocate of the NBRSS to the larger NIH community. The FAC members will also serve as a communication link to their larger communities to ensure the proper dissemination of project I

nformation.

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1.4.8 Resource Teams

Design of NBRSS modules depends upon the sound advice and input of well-informed, technically sound end-users. In both the design and implementation, the NBRSS will use standing teams of end-users, known as Resource Teams (RT). Subject matter experts from the OD and ICs will serve as resources to the functional teams, providing advice, from a working level perspective, on full issues facing the functional teams and their respective functional communities. Information technology representatives will be included on each RT.

These teams will provide invaluable information on current business practices and will serve as technical resources in the design of business practice changes. Since they are made up of end-users, the RTs serve a valuable change management role, helping to ensure acceptance of business practice changes and providing a continuing communications resource. Team members will be expected to communicate NBRSS plans and progress to their peers and other appropriate personnel.

1.4.9 Change Management Advisory Committee

To facilitate acceptance of change management activities by the stakeholder groups, a Change Management Advisory Committee (CMAC) will be used ad hoc to obtain feedback before the CMT strategies are implemented. The CMAC will be comprised of IC and OD management and staff employees.

Therefore, the structure of the NBRSS serves an important change management purpose, involving stakeholders in the design and implementation of the ERP and ensuring dissemination of information to managers and end-users.

2 Change Management Process

People tend to resist change, regardless of the nature and the reason for the change. Resistance might be linked to personal factors, fear of the unknown, organizational issues, perceived loss of job security, and lack of communication and training.

The CMT will provide continuous support throughout the entire NBRSS implementation process. The CMT will engage employees so that they become part of the solution and embrace the change more readily. Rather than addressing resistance later, the intent will be to obtain early involvement of employees who have a stake in the success of the process and to foster continuing participation. Change management activities will be structured into the five main phases of KPMG Consulting's R²i Oracle implementation methodology, shown in Figure 1:



Figure 1. NBRSS Implementation Methodology

In each phase of the implementation strategy, the focus of Change Management activities will vary. Below is a summary of the CM emphasis at each phase:

- Prepare This phase will include establishing the CMT, planning change management activities, and gaining an understanding of the NBRSS project scope and mission.
- **Design: Future Process Models (FPM)** During this phase, all new process designs identified by the RTs will be analyzed in terms of organizational changes, and design decisions will be forwarded to the FACs or NBRSS Steering Committee as appropriate. The CMT will analyze and compare the current status of organizational components with the post-implementation model and develop strategies to ensure a smooth transition.
- **Design: Conference Room Pilot 1** (**CRP1**) This phase will encapsulate the design, build, and unit test activities using a prototype environment. A

critical activity of the CMT will be identifying job specific knowledge required by NIH staff to successfully use the system.

- **Design:** Conference Room Pilot 2 (CRP2) This phase will include tests to further validate setup and business processes. The CMT will facilitate the scheduling of tests and training activities.
- Deploy Once the system has been designed and tested, it will be deployed for production. During this phase, the CMT will support enduser training and staff transitioning.

Table 1 summarizes the CMT deliverables for each project phase. Deliverables for the Prepare and Design phase are high-level change management strategies that encompass all functional areas. Deliverables in the remaining three phases are templates that will be applied as each functional area is implemented. These will be explained in subsequent sections.

Table 1. Change Management Activities per Phase

Phase	Deliverables
Prepare	Functional and Technical Team Training
(Month 0 to 2)	Schedule
	Stakeholder Analysis
	Change Management Plan
Design: FPM	Communication Plan
(Month 2 to 8)	■ Work Transition Strategy
	■ End-User Training Strategy
	Organizational Impact Summary
Configure: CRP1	Critical Implementation Issue Summary
(Month 7 to 26)	■ End-User Training Plan
Test: CRP2	Acceptance Testing Organization and Schedule
(Month 13 to 30)	Work Transition Plan
Deploy	Competency Center Requirements
(Month 18 to 41)	

2.1 Prepare Phase

The Prepare Phase objectives focus on planning and organizing project kickoff activities. During this phase, the NBRSS Team will gain an understanding of the project purpose, approach, anticipated outcomes, and various change management activities that will take place in future phases.



Figure 2. Prepare Phase

CMT deliverables and outcomes for the Prepare Phase include:

- Functional and Technical Team Training Schedule
- Stakeholder Analysis
- Change Management Plan

2.1.1 Functional and Technical Team Training Schedule

The Functional and Technical Teams are composed of subject matter experts responsible for configuring the ERP System and the associated bolt-on software to the NIH's requirements. All members of the Functional Team will require ERP training before they begin working with the System Integrator (SI) to configure the NBRSS. The CMT will be responsible for scheduling the ERP system and bolt-on software training for the Functional and Technical Teams.

This deliverable consists of a report identifying training methods, respective dates, and attendee names. The outcome will be a well-trained group of technical specialists prepared to lead configuration efforts early in the Design Phase.

2.1.2 Stakeholder Analysis

The stakeholder analysis begins with identifying key "stakeholders," i.e., individuals or groups whose support of and participation in the NBRSS project will be key to successful implementation. The CMT identified the critical issues and concerns of each stakeholder group and developed strategies for addressing them. The stakeholder analysis will provide the foundation for subsequent training and communications activities.

This deliverable is a report identifying major stakeholders, critical implementation issues, and recommendations. The outcome will be an awareness of the CMT and the PMT to potential issues and solutions related to key concerns that could compromise project success.

2.1.3 Change Management Plan

This CMP provides the framework for anticipating change barriers and planning interventions to facilitate project progress. It ensures an adequate infrastructure and a mechanism to track the progress of all the changes, and take appropriate actions, during the hectic process of designing, building, and implementing the NBRSS. This CMP is a blueprint for integrating all process, human resource, training, policy, and technology elements of the NBRSS.

This deliverable is the instant report with background information, identification of key deliverables, and a schedule.

Design Phase: Future Process Models (FPM)

The FPM Phase objectives include developing organizational and financial models for each ERP process within each functional area. A package containing a process flow diagram, list of major steps, and an organizational impact assessment questionnaire will be completed for each process. These scripts will be thoroughly reviewed against best practices to identify gaps between current processes and future processes, application development requirements, and potential change management issues.



Figure 3. Design Phase: Future Process Models

CMT deliverables and outcomes for the FPM phase include:

- Communication Plan
- End-User Training Strategy
- Work Transition Strategy
- Organizational Impact Summary

2.2.1 Communication Plan

The CMT will develop a Communications Plan (CP) that devotes resources to and focuses on communication efforts to establish and maintain effective communication channels with each stakeholder group affected by the system implementation. These channels will allow and encourage communications that flow in all directions of the organization. Producing materials and conducting communications activities that are informative, relevant, and engaging to the particular audience will achieve this outcome. The CMT will employ a variety of media, such as the NBRSS website and publication, ad-hoc List-Serv notices, and other historically effective methods to inform the NIH community. The CMT will communicate directly with stakeholder groups and through their representation in the FACs and RTs. Because of time and resource constraints, every communications product will be targeted to that group affected by the system changes during the implementation process, but not neglectful of other stakeholder groups in the community.

This deliverable will be a plan outlining the schedule and methods to be used for disseminating information about key activities so that employees can anticipate and prepare for implementation of new processes.

2.2.2 End-User Training Strategy

The End-user Training Strategy will ensure that the organization's training resources are ready for execution in later phases. The strategy will address the knowledge and skill gaps between current and future states of readiness and the technology and facilities for training support. The CMT will interview and survey sample trainees for each audience to determine what subjects and training delivery methods are appropriate. The strategy will consider a variety of training methods, including state-of-the art e-learning tools, "drive by" training (a short-term training experience provided by a dedicated computer that can be used to view how the new system handles transactions), and traditional methods. End-user needs will dictate the training method(s) selected.

As the Functional Teams design and propose changes, the CMT will work closely with the functional team members, FACs, RTs, affected organizations, and training specialists to identify the appropriate training content, schedules, and training materials.

This deliverable will identify training methods appropriate for each audience, a schedule, additional support needed after training, expectations from the training effort, and potential risks if the training plan is not executed. The outcome will be a blueprint for implementing training and the ability to make informed decisions regarding its development of course materials and delivery.

The NBRSS CMT will not execute the End-user Training Strategy. A training vendor will be used to design a detailed curriculum based on the NBRSS training strategy, develop the course materials, and deliver the training.

2.2.3 Work Transition Strategy

The introduction of NBRSS will affect jobs in various ways, from learning how to perform the same tasks using different procedures, to learning entirely new jobs. Disruption and chaos will be a concern to many employees, even if they are not directly affected. An ill-planned workforce strategy could result in employee dissatisfaction, grievances, complaints, staff turnover, and general resistance to the NBRSS. The CMT will work with representatives from the affected organizations, OHRM, IC and OD Human Resources Offices, and the Office of Equal Opportunity (OEO) to ensure that workforce-planning activities are appropriate and consistent NIH-wide.

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The CMT will work with management to create the Workforce Transition Strategy, a high level approach for moving people into the new organizational structure and jobs. It does not include a logistical plan for transitioning the workforce, as a detailed plan will be issued at a later phase in the project. This deliverable will address the following:

- Impact on current job responsibilities and processes;
- Identification of NIH-wide policies and legal authority, when appropriate;
- If applicable, employee selection and retention policies to ensure defensible procedures based on merit principles and diversity considerations;
- Employee support programs to facilitate career transition, retraining, and outplacement; and
- Review of the type, content, and timing of employee communication during and after the transition.

The outcome will be a blueprint for NIH-wide use that incorporates the aforementioned human resources issues. The NBRSS CMT will not administer the Workforce Transition Strategy but will coordinate with management and the appropriate policy offices to facilitate the planning and execution of workforce transition.

2.2.4 Organizational Impact Summary

Some ERP processes will cause radical changes, while others will cause little to no change. Each process change will be reviewed and approved by the Functional Teams in conjunction with their respective FAC and RT. The CMT, working with the Functional Teams, RTs, IC and OD Personnel Offices, OHRM, and the Office of Management Assessment (OMA), will review each proposed process change to evaluate the impact upon employees and organizational components, the need for training and education of system users and administrators, and the need for revision of NIH Instructions, Manual Issuances, and Delegations of Authority.

This deliverable will summarize major changes identified during the process design and possible resolutions, and serve as a major building block for later change management activities and deliverables. Outcomes will include the identification of scope and magnitude of change, significant impacts of resultant competency gaps, and a plan to address gaps.

2.3 Configure Phase: Conference Room Pilot 1 (CRP1)

The objectives of CRP1 include testing the newly configured system, processes, and bolt-on interfaces, using a prototype environment; migrating data; and conducting train-the-trainer sessions for NBRSS team members.



Figure 4. Configure: Conference Room Pilot 1

CMT deliverables and outcomes expected for the CRP1 phase include:

- Critical Implementation Issue Summary
- End-User Training Plan

2.3.1 Critical Implementation Issue Summary

During the previous Design FPM phase, the CMT identifies areas of major impact based on theoretical models and consolidates them in the Organizational Impact Summary. During CRP1, the system and processes will be tested based on the current configuration. The CMT will revisit previously identified changes and capture additional changes resulting from the pilot test. At this time, the issues and recommendations forwarded in the Organizational Impact Summary will be addressed in more detail. Working with partners in OHRM, OMA, OEO, and the IC and OD Personnel Offices, the CMT will review organizational impact summaries to determine what critical change management issues exist.

This deliverable will be derived from validating the results of Organizational Impact Summary against a configured system. Outcomes will include validation of each change's scope and magnitude, impacts of resultant competency gaps, identification of new changes, and a plan to address them. The CMT will issue one Critical Implementation Issue Summary for each functional module.

2.3.2 End-User Training Plan

The Training Plan (TP) will prepare NIH employees for learning the skills, technologies, and processes needed to bridge competency gaps between the current and future knowledge and skills sets. It will identify the means by which the training strategies are executed to achieve desired outcomes.

This deliverable will have a logistical nature, because it will identify training audiences for each functional track, the number of people to be trained, and a training delivery schedule. The TP will also stipulate required instructors and resources for the training rollout. The CMT will issue one TP for each functional module.

2.4 Test Phase: Conference Room Pilot 2 (CRP2)

The objective of CRP2 includes re-testing the system and processes using a prototype environment after adjustments from the first round of testing are made. KPMG Consulting and the NIH will perform cross-functional tests to verify setup and business processes. During this time, the CMT will prepare for the next phase, where most of the change will be implemented.



Figure 5. Test: Conference Room Pilot 2

CMT deliverables and outcomes expected from the CRP2 phase include:

- Acceptance Testing Organization and Schedule
- The Workforce Transition Plan

2.4.1 Acceptance Testing Organization and Schedule

The acceptance test will be an end-to-end business cycle walk-through executed by NIH staff, using real data to validate and compare the outcome between the old and new systems to ensure end user acceptance. The CMT

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will coordinate the logistics of the acceptance testing in the organizational units.

This deliverable will identify individuals who will conduct tests and validate content. The outcome will be a NBRSS that is ready for deployment and acceptance by the NIH community. The CMT will issue one Acceptance Testing Organization and Schedule for each functional module.

2.4.2 The Workforce Transition Plan

The Workforce Transition Plan (WTP) will be a detailed analysis of the employees and jobs impacted by each functional area release. It will highlight critical changes between old and new jobs and identify plans to address these changes. The WTP will include knowledge transfer requirements for transitioning knowledge from project participants to system maintenance personnel.

This deliverable will identify the individuals impacted by the change and degree of impact. The process for identifying key job changes and drafting the WTP will require the CMT to work closely with functional team members, FACs, RTs, OD Functional Managers, OMA, OEO, and OHRM. The outcomes will include a feasible plan; understanding by management about future changes within organizations; what is needed to support organizations during the transition; identification of key roles and responsibilities during and after implementation; and the ability to make informed decisions regarding employees' short and long-term training. The CMT will issue one Workforce Transition Plan for each functional module.

2.5 Deploy

The Deploy Phase objective will be installing the new system into the daily working environment at the NIH. Activities that will occur during this period include end-user training, transitioning the workforce to new jobs, acceptance testing, and rendering the system operational. During this phase, the CMT will focus on implementing the change management activities to ensure a smooth transition.



Figure 6. Deploy Phase

The CMT deliverable and outcome expected from the Deploy Phase includes the Competency Center Requirements.

2.5.1 Competency Center Requirements

The Competency Center will be the "continuing support" arm of the NBRSS, and provide the knowledge link between the NIH business community and the NBRSS following full implementation. It will be organizationally located within the Office of Management and composed of functional and technical staff. The Competency Center Director will report directly to the Deputy Director for Management. The Competency Center will routinely review and assure the accuracy of NBRSS production results, and when appropriate, develop program fixes; coordinate the scheduling and implementation of ERP vendor software changes and the implementation of system upgrades; and as necessary and appropriate approvals, develop custom software to satisfy specific NIH requirements.

After the initial training has occurred and the system is live, end-users will need support for questions and problems they may encounter using the NBRSS. The Competency Center will support a help-desk role to offer daily assistance with questions and problems arising from the user community.

This deliverable will describe the Competency Center requirements. The outcome will be a Competency Center that is equipped to answer questions and resolve problems regarding the NBRSS.

2.6 Deliverables Relationship

The way deliverables relate to each other is illustrated in the following figure. In this figure, governing deliverables (yellow) are drawn full width, because they govern and apply to all other deliverables. Related deliverables (light blue) are drawn with arrows to show their dependencies and how the output of one deliverable becomes input for the next. Stand-alone deliverables (dark blue) have no dependencies to other deliverables.

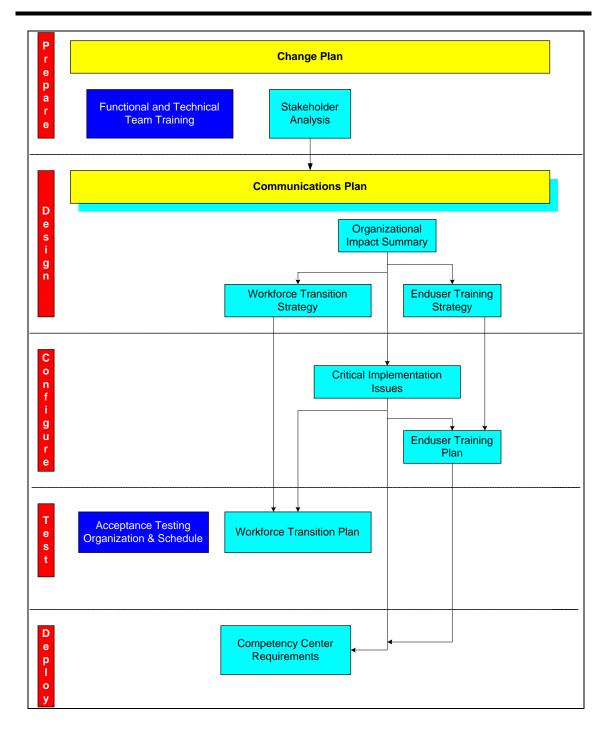


Figure 7. Relationship Among Deliverables

3 Change Management Schedule

This section illustrates the schedule of Change Management Deliverables and major milestones derived from the overall NBRSS Project Plan (Figure 7). This figure illustrates the start and end date and duration of all change management deliverables, organized by functional area. Deliverables listed first are comprehensive of all functional areas, as the CMT will execute them during the first and second phase of the implementation. As the NBRSS overall implementation schedule migrates towards a phased approach for each functional area, the CMT will execute deliverables that are specific to the following functional areas:

- Financial Management
- Property
- Travel
- Acquisition and Supply
- Service and Supply Fund
- Research and Development Contracting

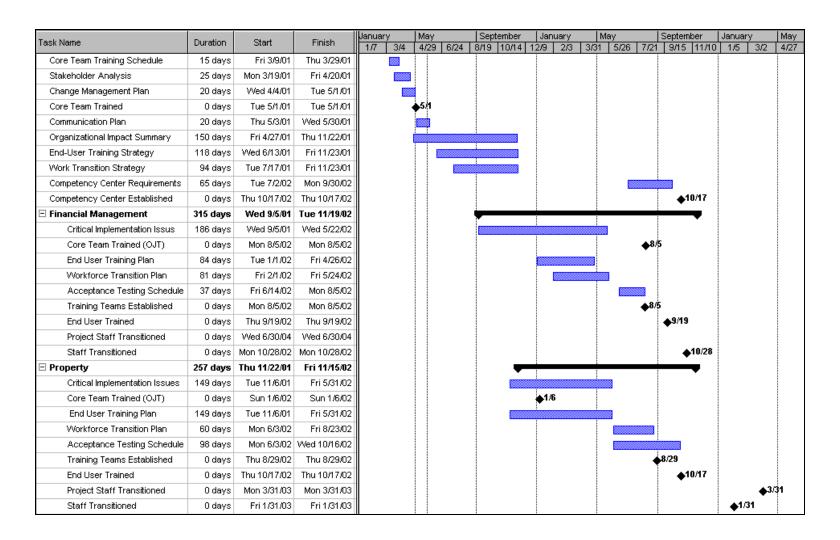


Figure 9. Change Management Schedule (continued on next page)

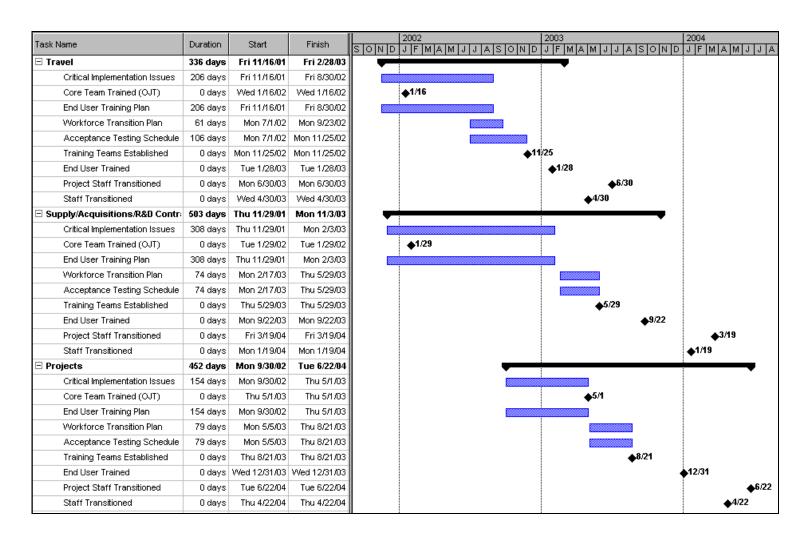


Figure 9. Change Management Schedule (continued from previous page)

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