



State of Oregon  
Budget and Management Division

## **ORBITS Project – Phase 2B**

Project Plan



## ***ORBITS Phase 2B Project Plan***

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## Executive Summary

### Project Approach

#### Background

The ORBITS project began in 1998 with a “proof of concept” pilot (Phase 1), which was used to request funding from the 1999 Legislature for the statewide development effort. The \$7.2 million multi-phase project was approved, with Phase 2A focused on core requirements (also known as ABIS+) to prepare the 2003-05 budget.

The state contracted with Legacy Solutions to provide the pilot software and continued with them to develop the Phase 2A application. Stakeholders were involved with the priority setting and development of the application through the Project Advisory Council, user groups, or information posted on the project website.

The core ORBITS application was implemented through a rolling deployment approach from February through March 2002. The ORBITS team trained 130+ state agency staff and worked with the IRMD GGDC to implement the production environment and chosen deployment solution.

Transition of the core system to BAM’s Statewide Audit and Budget Reporting Section (SABRS, formerly known as the BAM ABIS Section) was completed May 31, 2002. SABRS staff was involved throughout the Phase 2A project by participating in conceptual design, design, and technical specification overviews, reviewing test scripts, and acceptance testing.

#### Phase 2B

The state reviewed alternatives for proceeding with Phase 2B. Project management presented a Phase 2B development strategy to the project sponsor, who approved the strategy. The strategy recommended the use of state resources to develop Phase 2B instead of continuing with Legacy Solutions due to their performance issues during Phase 2A.

The next phase of the project will address critical requirements for budget execution and budget preparation. Requirements identified at the start of the project will be combined with new requirements and prioritized to reflect the narrow timeframes for implementing changes. This phase of the project will be focused on releases, or incremental changes, to the ORBITS core system.

Release 1: Tentatively planned for late spring of 2003, this release will focus on budget execution and the interface between ORBITS and R\*STARS. This may include Emergency Board actions to appropriations.

Release 2: Tentatively planned for early spring of 2004, this release will focus on improvements to the core budget preparation, such as additional analytical tools.

Release 3: Tentatively planned for late spring of 2005, this release will focus on budget execution enhancements and analytical tools.

### Future Enhancements

The Legislature supports the continued improvement of ORBITS. As new initiatives or requirements are identified, plans will be put in place to modify ORBITS. When the next phase of the SFMS Master Plan is undertaken (replacement of Position Personnel Data Base), ORBITS will need to be modified because of its' interface with the PICS system.

### Project Plan Document

This Executive Summary contains a high level description of each major module within Phase 2B. Detailed information for each major module is contained in later sections.

## **Project Management**

### Approach

At the start of Phase 2A, ORBITS project management developed a Project Charter, Definition, and Plan. Because Phase 2B will be developed using state resources, the original plan will change. Those changes will be incorporated into this document, and the Phase 2A Project Plan archived. Section 2 of the Project Plan further describes some of the project management activities that follow.

### Contract Management

Current and future contracts will follow the same process successfully established and executed during Phase 2A.

### Project Budget

An Excel workbook is used to track actual and estimated project costs. The MS Project application will not be used for this purpose.

### Project Communication

Project communication in Phase 2B will be similar to Phase 2A.

- Any continuing or new contractors will report through the project manager.
- The project manager will continue to meet weekly with the project sponsor. Every other week, the SABRS manager will join the meeting.
- The Project Advisory Council will now meet on an ad hoc basis, dependent upon the phase of the project.
- The Quality Assurance contractor (QA) will report through the project manager and will be on-site, at a minimum, once a month. The QA also has access to the project sponsor on an as needed basis.
- The project manager will meet on an as needed basis with IRMD, dependent upon the issues that arise.
- Monthly status reports will be prepared and distributed to the PAC and posted on the project web-site (Status report example found in Section 2.)
- The project manager will attend weekly BAM Managers' meetings.
- Weekly meetings will occur with SABR Section manager to address transition, migration, and development issues.
- The project team will meet on a weekly basis.

### Risk Identification and Management

It is anticipated that fewer risks will be identified and monitored during Phase 2B. Risks should be reduced because the core system has been implemented and is operational. The QA contractor will provide assistance during this process. Refer to Section 2 for additional information.

### Issue Management

Identified issues will be resolved in a collaborative manner. If the project manager is unable to resolve an issue, it will be elevated and presented to the project sponsor via an issue paper. The project sponsor will be the final decision point for unresolved issues.

### Roles and Responsibilities

Project team roles and responsibilities will change, as state resources will perform development activities that Legacy Solutions performed during Phase 2A. Refer to Section 2 for additional information.

### Project Work Plan

The project team will maintain a work plan to monitor and track work tasks and schedule. The project work plan will be developed at either the third or fourth task levels, depending on the level of detail needed to monitor the work being performed. See Section 12 for detailed information.

## Major Deliverables

The project team will be responsible for developing the following deliverables:

- Requirements and Priorities – This document will contain all known requirements, priority for completion and release, and estimated hours to complete. (Section 5)
- Requirements Verification Traceability Matrix (RVTM) – This document traces each requirement from the beginning of design through testing.
- Conceptual Design – Graphical flow diagrams that relate requirements to modules and processes. Business process flows will also be verified and updated with user involvement. (Section 5)
- Analysis and recommendation document to present scope to project sponsor and management. (Section 5)
- Detail Design – Documents that describe, in 'lay-persons' language, the additions or changes to be made (requirements) in a primary category. (Section 5)
- Technical Specifications – These documents provide the programmers with the details of how to modify or create source code. (Section 5)
- Programmer and Unit Test Checklist – Programmers will use the Technical Specifications to unit test their own code. The Checklist is used to document the results. (Section 6)
- Code/Unit Test Walk Through Scripts (referred to as System Test) – Scripts will be developed and used to prove the functionality of the code against the stated requirement.
- Initial Testing Scripts and Results – Test scripts will be developed and used to test the integration of primary categories and the core application.
- Final Test Scripts and Results – Initial test scripts are used as a starting point to test the release in a production-type environment. The results are documented once testing is complete. (Section 7)
- Implementation Plan – This plan will define implementation management, training, conversion, database growth strategy and strategy for rollover (preparation cycle) for each release. (Section 11)
- Documentation – The project team will prepare Data Entry Guide and System Administrator documentation updates for SABRS as described in Section 11.

### External Quality Assurance Approach

DAS IRMD's policy requires an outside quality assurance contractor for projects over \$500,000. The original contract with DHK & Associates for Phase 2A provided for extension of the contract for Phase 2B. The ORBITS project will continue with DHK & Associates as the QA contractor. The contract has been amended to reduce the scope from the original proposal to provide for: a ORBITS Project Plan review, project monitoring and reporting, and technical assistance.

### Internal Quality Control Approach

Both quality measures and quality reviews will be initiated during the major project deliverables. Quality measures include conducting surveys on user satisfaction (before and after start of Phase 2B) and comparing the estimation methodology (Section 5) calculations with actual hours (on-going). Quality reviews will be conducted by scheduling walk through sessions during strategic points during the design and code/unit test processes. These reviews will provide oversight that the work being completed meets the expectations of the users.

## **Interfaces Development Plan**

Section 3 describes how interfaces will be developed in Phase 2B. Interfaces are generally grouped into distinct categories: 1) Inbound, outbound, or interactive; 2) Batch, real time, or near real time; 3) One time, as required, or regular; and 4) Inquiry, update, create, or delete. For example, an outbound, one-time batch interface (extract) requires far less planning and control than a real-time inbound update interface. Interfaces are identified during Conceptual Design, then categorized and defined during Design.

## **Environment**

Section 4 describes the technical environment utilized by ORBITS. The DAS Information Resources Management Division's General Government Data Center (GGDC) provides the technical platform for ORBITS. ORBITS is a client server application developed in Power Builder with an Oracle DBMS. ORBITS adheres to GGDC security protocols and is deployed to all state agencies through Citrix XP software, which web-enables the application. The Citrix deploys ORBITS to a variety of agency desktops, including Windows 2000, NT, 98, and 95, and Macintosh. Six (6) separate instances will be maintained during Phase 2B. Operational ORBITS uses production, training, testing, and development instances. 2B ORBITS uses development and testing instances.

## Design

Section 5 defines the steps and deliverables needed to move from high level priorities to detail requirements defined in technical specifications.

### Requirements Confirmation

At the start of Phase 2A, requirements were identified by stakeholders and prioritized as Core, Critical or Desired. All requirements identified as "Core" in Phase 2A have been implemented. The remaining requirements identified at the start of Phase 2A as 'Critical' or 'Desired' are the starting point for Phase 2B. Additional requirements have been identified during the course of Phase 2A and are identified separately.

BAM and LFO management will set high-level priorities. These priorities will drive the development of each release in Phase 2B. Users will then confirm and further define the detail requirements, which will be assigned to a release. Budget and Management Division will maintain a list of requirements not scheduled for inclusion in 2B for possible later (future) enhancements.

Once the requirements have been finalized, any new items will be captured as Change Requests. These could be the result of policy changes, legislative mandates, or desired enhancements to the system. The change requests will be prioritized for inclusion or deferral according to the Change Request process (Section 9). A design document and technical specification will be developed for each Change Request once it is approved for inclusion.

### Design Approach

Design is comprised of two distinct processes: Conceptual Design and Detail Design (sometimes referred to as Technical Design). The Conceptual Design process relates requirements to business functions at a high level. During Detail Design, requirements must be adequately defined to determine whether it is a change or addition to the existing application. These details are communicated to programming staff in the technical specification with sufficient detail to ensure that the requirement will be satisfactorily met. The estimation methodology is established and applied to each requirement. This methodology documents how hours are estimated for each requirement during Design, Code and Unit Test, and Testing.

A Requirements Verification Traceability Matrix (RVTM) will be developed during the Design phase. The RVTM provides an assessment tool to track requirements through the development process. It will follow the same process used in Phase 2A. Each Phase 2B release will have an RVTM.

## Code & Unit Test

Section 6 defines how the Code and Unit Test tasks will be accomplished by using state resources and outside contractors. The management of these resources will require additional coordination and monitoring. To ensure that the programmers understand the technical specifications, programmers will first diagram the coding solution and conduct a walkthrough with the team. Programmer tasks will generally be assigned by primary category. The programmer QA's the code by unit testing each technical specification. The assigned analyst then QA's the results of the Unit Test.

## Testing

Once a primary category is complete, the programmer will conduct a walk through with the assigned analyst. Since an outside development contractor will not be used in Phase 2B, the walk through will take the place of System Test.

Initial Test will test a release as a whole rather than component primary category parts. Final Test will be in a production-type environment and will have users involved in the testing process to replicate all the current and proposed processes in what will be the new version of the application. Performance Testing will also be conducted during this activity.

## Change Management

Application version control is handled manually. The application source code is grouped into functional areas. Programmers generally work on distinct programs within those areas. Multiple programmers are not assigned to work on the same programs within an area.

Change management activities are more complex because the ORBITS project is managing migration for production and Phase 2B activities. Bug fixes or change requests for the core ORBITS application (Phase 2A) will be made in BAMDEV, tested in BAMTEST, and migrated to BAMPROD. Periodically, BAMPROD programs are migrated to BAMTRNG (as training only occurs at specified periods of time). A separate 2BDEV and 2BTEST region will be created to code and test all Phase 2B changes.

## Change Requests & Problem Reports

Separate databases are maintained for change control and problem reports. Section 9 outlines the Change Request processes. Section 10 outlines Problem Report processes.

## Implementation & User Documentation

The Phase 2A Implementation Plan will be used as the starting point for implementation during Phase 2B. Separate work plans will be developed for each release to closely manage activities. These plans will address training, conversion, database maintenance, database growth strategy, strategy for rollover to future preparation cycles, and other issues unique to this type of implementation.

The ORBITS team will produce data entry guides and system administration documentation for new features within each release. In Phase 2A, ORBITS produced all user and system documentation for the SABRS Section.

## Project Work Plan and Schedule

A Project Work Plan will be developed and approved by the project sponsor prior to the official start of Phase 2B. The work plan will be reviewed and revised on a periodic basis throughout Phase 2B. The project schedule will be maintained through a combination of Microsoft Project and Excel spreadsheets. Schedule progress will be tracked weekly and included (at a high level) in the monthly project status report.

## Project Close Out

A formal process will be developed to close out the ORBITS project pending final review by the Legislature. Any development activities past Phase 2B will be included in Budget and Management Division's operational plan.