

Washington State
Department of Information Services

State Data Center Migration Project Charter

September 07, 2011

DRAFT

Document History

Version Number	Date	Description
Version 1.1	08/30/2011	Incorporated initial feedback from SDC exec committee
Version 1.0	8/30/2011	Initial draft

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Project Statement

This project includes:

1. Preparing and building out the State Data Center (SDC) facilities, physical security and operational procedures.
2. Implementing the core infrastructure such as the network, security/firewalls, storage devices and a private cloud computing environment needed to support systems.
3. Implementing a private cloud computing environment to be used as a landing pad for virtual server migrations. This includes operating procedures, provisioning process, cost model and the business processes required to operate a private cloud computing service similar to what is available from commercial service providers.
4. Migrating computer systems operating in Office Building 2 (OB2) to the SDC. This includes physically moving IT assets as well as migrating virtual servers.

Note: The physical migration of other agency data centers into the SDC will be addressed as a separate follow-on project. Planning will be coordinated with the Office of the CIO.

Background / Business Drivers

Information Technology (IT) computing across Washington State government is largely decentralized. The computing environment in Thurston County includes approximately 38 data centers, 8 mainframe computers and over 3,000 servers. This decentralized model drives IT costs up as it requires a lot unnecessary redundancy including:

- Multiple data center facilities
- Computing and electronic storage devices
- Security infrastructure
- System software
- Human resources to manage and operate each separate environment.

The State Legislature enacted Engrossed Substitute Senate Bill (ESSB) 5931 to address the high costs of IT services. This legislation requires certain IT equipment to be housed in the new SDC located in the 1500 Jefferson Building complex.

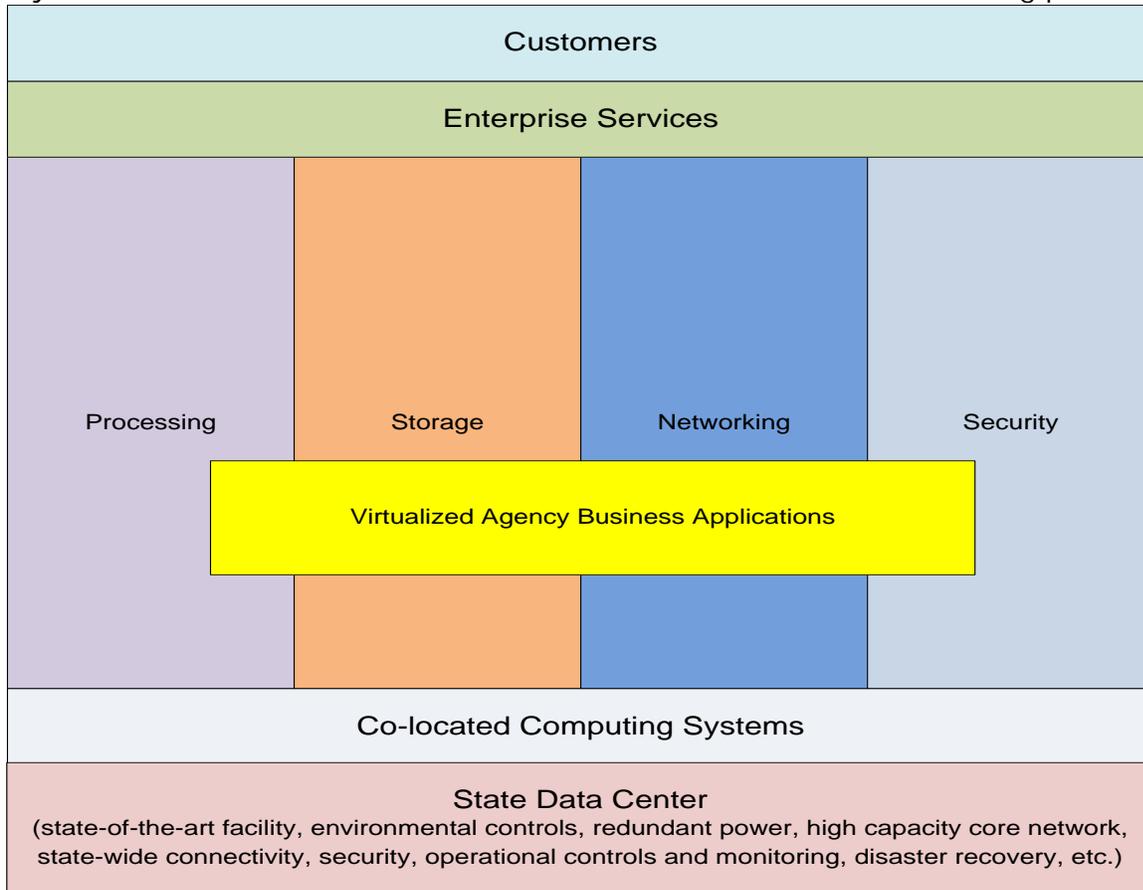
Effective October 1, 2011, the SDC will be operated by the newly created Consolidated Technology Services (CTS) agency. ESSB 5931 established CTS as the centralized provider and procurer of certain information technology services to maximize benefits to the state from advances in information technology. To successfully meet agency needs and meet its obligation as the primary service provider for these services, CTS must deliver high quality services to state agencies and other customers at the lowest possible cost to taxpayers.

This project facilitates the migration and consolidation of IT assets into the SDC in support of this legislation and the governor's directive to consolidate data centers. It also supports the effective management of enterprise services and the transition of how the state plans, develops, implements, funds, and maintains information technology. This project is financed through funds allocated by the legislature and construction bond fund savings.

Several vendors have assisted in the planning for the state data center to date. Several studies were performed and vendors responded to a Request for Information (RFI). INX Metagyre was hired to develop an implementation plan. This project is based on these studies and business drivers.

Vision

At the end of this project the SDC should be fully operational in a highly virtualized and agile environment. This will provide the framework and tools for CTS to achieve many of the objectives and mandates of ESSB 5931. This vision is shown in the following picture.



Goal Statement

1. Applicable equipment located in OB2 will be moved to the SDC within an approved project schedule.
2. Unplanned service disruptions will be minimized during the migration.
3. Pre-migration activities (e.g. virtualizing servers) will facilitate the move to the SDC.
4. Position the State closer to the private cloud "utility" model.
5. Security will be improved.
6. Operational costs will be reduced.
7. Service quality, availability and performance will be improved.

Objectives & Key Deliverables

Project Objectives & Key Deliverables		
Objective – Deliverable #	Description	Approval
Objective 1: Coordinate projects required to build-out and move to the SDC		
Deliverable 1.1	Project Management Plan and consolidated Schedule that includes all sub-projects and dependencies.	
Deliverable 1.2	Investment plan for the SDC Migration Project.	
Deliverable 1.3	Project management templates and processes for coordinating the subprojects and components within the project.	
Objective 2: Procure resources to assist the project in meeting its goals and objectives		
Deliverable 2.1	Procurement to obtain a Quality Assurance Vendor.	
Deliverable 2.2	Procurement to obtain a vendor to physically move equipment out of OB2 and into the SDC.	
Deliverable 2.3	Procurement to obtain a vendor to conduct performance benchmarks to compare system performance in OB2 to system performance in the SDC (before and after the move).	
Objective 3: Maximize efficiency and quality, while minimizing cost and risk through the use of repeatable processes to orchestrate the OB2 Move to the SDC		
Deliverable 3.1	Overall Systems Migration plan	
Deliverable 3.2	Standard strategies and migration plan for moving systems, applications, functions and equipment to the SDC.	
Deliverable 3.3	Standard templates and repeatable processes for moving equipment and systems to the SDC.	
Objective 4: Oversee and facilitate the development of service owner plans to move equipment to the SDC.		
Deliverable 4.1	Inventory of equipment, systems and applications located in the OB2 Data Center.	
Deliverable 4.2	Implementation plans for moving systems to the SDC.	
Deliverable 4.3	Benchmark report validating systems migrated successfully	
Objective 5: Establish a private cloud computing environment to support production systems.		

Deliverable 5.1	Procurement to obtain a private cloud vendor to design and implement a private cloud utility architecture and computing environment.	
Deliverable 5.2	A private cloud computing environment installed and validated.	
Deliverable 5.3	Policies and procedures for operating and managing the SDC private cloud utility environment.	
Deliverable 5.4	Tools and procedures for migrating virtual servers to the SDC private cloud utility environment.	
Objective 6: Remove obsolete and applicable equipment from the OB2 Data Center		
Deliverable 6.1	OB2 Decommission Plan	
Deliverable 6.2	List of items to remove	
Deliverable 6.3	Completed inventory of items removed, disposition verified with proper surplus forms	

Scope

In Scope

1. Develop business and technical requirements used to build out and operate the SDC. Requirements have been developed and submitted to the project.
2. Establish project management templates and repeatable processes to manage the SDC project that conform to industry best practices for program and project management.
3. Coordinate and monitor schedules and budgets of other functional programs and sub-projects to plan, build out, prepare and move into the SDC. This includes, but is not limited to:
 - o Data Center Facilities
 - o Network (TSD)
 - o Security
 - o Storage
 - o Mainframe
 - o Messaging
 - o Agency Technology Services
4. Design, Procure and install a private cloud environment as a foundation for the SDC computing environment.
5. Develop a disaster recovery plan for the private cloud environment. Note: Implementing the disaster recovery plan will be a separate project.

6. Migrate systems, applications and other services (physical and virtual) running on equipment in the OB2 Data Center to the SDC. This includes equipment in the:
 - o OB2 East Data Center
 - o OB2 West Data Center
 - o À la carte Expansion Area
7. Assist with the decommissioning of the OB2 Data Center. DIS will maintain a small presence in OB2 after the move is complete. The Campus Fiber Network (CFN) node and telephony PBX's will remain to support DSHS and other customers in OB2 and the Natural Resources Building. DSHS requires a small presence to maintain the OB2 LAN terminations currently in À la carte 2. The Wheeler Building project has the primary role for refurbishing the OB2 data center space.

Out of Scope

1. Moving people, workstations, and furniture.
2. Equipment in the following areas of OB2 are out of scope:
 - o Print area (cost center 4631)
 - o Office space, training rooms, command centers and employee workstations
3. Reengineering À la carte Customer Infrastructure. À la carte assets will be moved to the SDC as they exist at the beginning of the "OB2 Critical Changes Only" period. Reengineering À la carte Customer Infrastructure is not part of this project.
4. Planning, Designing and Building an Eastern Washington Data Center.
5. IT Service Management Project work including process development and related training for the purchase and deployment of application discovery and Event Management tools.
6. Wireless Networks: This includes office technology demonstration projects, wireless networks, voice over internet protocol (VOIP) projects and modular workstations.
7. Transforming existing systems to a new technology base during migration.
8. Planning and physically consolidating Thurston County agency data centers into the SDC. This will be addressed in another project in collaboration with the Office of the CIO.
9. Installing and accepting the Telemetry Network.
10. Installing and accepting the DIS Corporate Network.
11. Ongoing operations of the SDC.

Schedule (DRAFT)

The following DRAFT schedule includes high level activities and the approximate timeline.

SDC Migration Project Schedule

ID	Task Name	Duration	Start	Finish	10	2011		2012		2013		2014		2015		2016	
					H2	H1	H2										
1	SDC Network Infrastructure Projects	335 days	Mon 4/4/11	Fri 7/13/12													
5																	
6	SDC Raised Floor Preparation	187 days	Fri 7/15/11	Mon 4/2/12													
8																	
9	SDC Cloud Computing Project	185 days	Mon 7/18/11	Fri 3/30/12													
12																	
13	Start Initial Migration Phase to SDC	0 days	Fri 3/30/12	Fri 3/30/12													
14																	
15	Security Infrastructure	273 days	Wed 6/1/11	Fri 6/15/12													
23																	
24	Storage Infrastructure	224 days	Mon 8/1/11	Thu 6/7/12													
32																	
33	Full Production Migration to SDC	359 days	Mon 6/18/12	Thu 10/31/13													
35																	
36	Decommission OB2	85 days	Fri 11/1/13	Thu 2/27/14													
38																	
39	OB2 Move Completed	0 days	Thu 2/27/14	Thu 2/27/14													
40																	
41	* Agency Data Center Consolidation	760 days	Mon 6/18/12	Fri 5/15/15													

*** Agency Data Center Consolidation Planning and Implementation Tasks are out of scope and will be addressed in another project.**

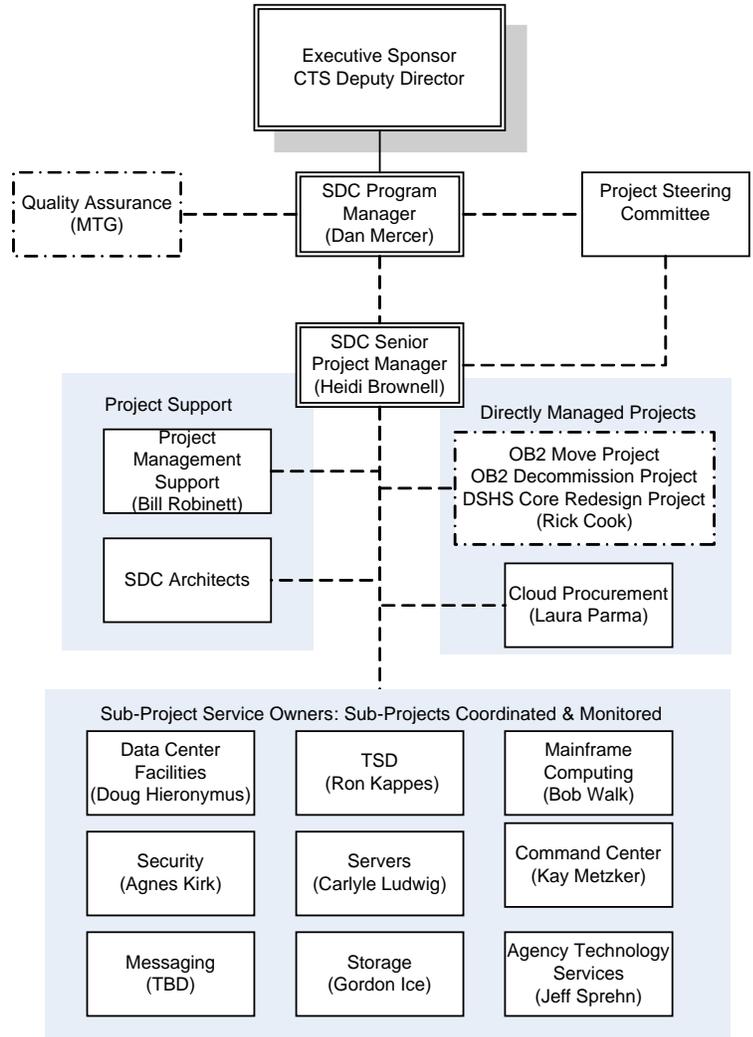
Project Governance

Project leadership expects project level decisions to be made and project activities to be completed at the lowest possible level within the project structure. Issues, regardless of where they come from or how they surface, will be reported to the appropriate sub-project managers to be logged and managed. Issues can be acted upon, including closure, by the Senior Project Manager. Risks affecting the project can be suggested and reported by anyone but require Senior Project Manager approval to officially open a project level risk.

Issue, risk, and change management will follow a standard process to be described in separate project documents. However these items will be escalated to the Steering Committee, the Program Manager and/or the Executive Sponsor for action by the Senior Project Manager depending on their severity, and time sensitivity.

The sub-projects schedules, budgets, and dependencies are coordinated and monitored by the SDC Migration Senior Project Manager and staff. Major sub-projects executed by the Service Owners include:

- SDC Network Infrastructure Projects
- SDC Raised Floor Preparation Projects
- SDC Cloud Computing Project
- Security Infrastructure Project
- Storage Infrastructure Project
- OB2 Move/Migration Project
- OB2 Decommission Project



Roles & Responsibilities

Role	Responsibility	Commitment
Executive Sponsor (Deputy Director)	<ul style="list-style-type: none"> • Champions the project and establishes its priority within the department • Provides executive leadership and guidance for the project • Approves utilization of planned resources and obtains alternative or additional resources as needed • Approves project scope, schedule and budget • Commits agency resources and project funds based on planned budget • Approves project management plan and its components plans • Reviews key deliverables • Resolves escalated issues, risks and decisions • Reviews and approve change orders. • Attends Steering Committee meetings 	2 hours / week
Steering Committee	<ul style="list-style-type: none"> • Provides strategic advice and direction • Approves and ensures availability of resources • Assists project team by making key policy and operational decisions • Supports project coordination and communication • Works through barriers and challenges encountered in order to meet project goals • Oversees adherence to project scope, schedule and budget and suggests course corrections • Reviews and recommends disposition of requests for budget increases, scope changes and schedule changes • Reviews key deliverables 	2 hours / week
SDC Program Manager	<ul style="list-style-type: none"> • Manages the SDC Program and SDC Migration Senior Project Manager (matrixed) • Facilitates Steering Committee meetings • Coordinates internal resources and provides direction to the project • Reviews and approves key deliverables • Resolves and escalates issues to Steering Committee or Executive Sponsor as needed • Facilitates project communications to executives and other governance (external agency) groups • Administers procurements and administrates associated contracts. • Develops program human resource plan to ensure the project team has the necessary skills to accomplish project tasks. 	10-40 hours / week when necessary
Quality Assurance	<ul style="list-style-type: none"> • Develops the QA approach and plan • Delivers monthly QA reports to the Program 	As needed

Role	Responsibility	Commitment
	<p>Manager and Executive Sponsor</p> <ul style="list-style-type: none"> • Provides routine QA briefings to Program manager and Executive Sponsor. • Keeps a log of findings and recommendations • Offers recommendations for course corrections • Attends project meetings as needed • Observes project activities • Observes project team meetings such as Core Team Project meetings • Reviews deliverables and work products 	
SDC Senior Project Manager	<ul style="list-style-type: none"> • Develops project planning and management documents • Develops a coordinated project schedule integrating subproject schedules • Manages and coordinates day to day project activities • Coordinates activities between vendors and functional organizations when necessary • Resolves and escalates issues to Steering Committee or Project Sponsor as needed • Coordinates the quality, timely completion, review, acceptance and approval of deliverables. • Facilitates project communications to all levels of project governance. • Identifies risks and develops mitigation plans. Escalates risk mitigation as appropriate. • Identifies and documents changes in scope, schedule, budget, and works with the program manager to assess and estimate change impact. • Delegates tasks as necessary. 	20 hours / week
OB2 Move Projects Coordinator	<ul style="list-style-type: none"> • Backs up the Senior Project Manager • Develops project planning and management documents • Develops OB2 Move schedule integrating with the overall consolidated project schedule • Manages and coordinates day to day project activities • Coordinates activities between vendors and functional organizations when necessary • Resolves and escalates issues to Senior Project Manager as needed • Coordinates the quality, timely completion, review, acceptance and approval of deliverables. • Facilitates project communications to all levels of project governance. • Identifies risks and develops mitigation plans. Escalates risk mitigation as appropriate. • Identifies and documents changes in scope, schedule, budget, and works with the program manager to assess and estimate change impact. 	40 hours / week

Role	Responsibility	Commitment
Project Managers (sub-projects)	<ul style="list-style-type: none"> • Develops project planning and management documents • Develops sub-project schedule integrating with the overall consolidated project schedule • Manages and coordinates day to day project activities • Coordinates activities between vendors and functional organizations when necessary • Resolves and escalates issues to Senior Project Manager as needed • Coordinates the quality, timely completion, review, acceptance and approval of deliverables. • Facilitates project communications to all levels of project governance. • Identifies risks and develops mitigation plans. Escalates risk mitigation as appropriate. • Identifies and documents changes in scope, schedule, budget, and works with the program manager to assess and estimate change impact. 	4 to 40 hours / week depending on sub-project
Project Management Support	<ul style="list-style-type: none"> • Develops project planning and management documents • Tracks project budget and other metrics • Manages project documentation, SharePoint sites, shared drives, scheduling and many of the communication duties • Coordinates activities between organizations when necessary • Maintains issues, risks, change, and other program and project registers and logs 	40 hours / week
SDC Architects	<ul style="list-style-type: none"> • Provides overall architectural support to the SDC Migration Project and sub-projects. • Ensures validation of SDC components such as security, connectivity, and architectural integrity. • Attends Core team meetings. 	4 to 40 hours / week when necessary
Core Team Members	<ul style="list-style-type: none"> • Represents their area of the organization • Develops plans and performs tasks in support of migrating their systems to the SDC • Provides SME resources to the sub-projects • Develops deliverables when appropriate • Reviews deliverables and work products produced in other projects and service areas that impact their projects. • Identifies and escalates risks, issues or changes using established processes • Keeps their division management up-to-date and informed about project as needed • Acts as the escalation point from subject matter experts for their areas related issues and risks 	4 to 40 hours / week when necessary

Approach

The approach used for this project includes the following:

1. The SDC Migration project will act as an umbrella project to coordinate activities across service owners to build out the SDC. The project will:
 - a. Develop and maintain the overall project plan and schedule.
 - b. Document and manage issues and risks across teams.
 - c. Establishing project management templates and repeatable processes to manage the SDC project.
 - d. Work with all service owners to plan, coordinate and facilitate the movement of their systems and equipment from OB2 to the SDC.
 - e. Establish standard migration strategies, templates and repeatable processes to make the move as efficient and low risk as possible.
 - f. Provide assistance with coordinating planning and providing a vendor to physically move equipment where appropriate.
2. The SDC Migration project will procure a vendor to design and oversee the private cloud utility environment, develop a disaster recovery plan, and recommend associated operations and business processes. This will include establishing processes for reporting and billing for usage.
3. Individual service owners will be responsible for planning, resourcing and managing the projects in their organization. This includes infrastructure projects to build out the data center and projects to move their equipment and systems to the SDC. The SDC Migration Project will coordinate with Service Owners and subproject managers, monitor schedules and budgets, assist with resolving issues and risks, and otherwise ensure a coordinated migration to the SDC. Service owners are responsible for the following as they relate to the move to the SDC:
 - a. Provide and maintain an inventory of their hardware and systems.
 - b. Select the appropriate move strategy.
 - c. Work with the designated vendor to establish performance baselines prior to the move and compare them to baselines after the move.
 - d. Resource and perform the majority of the activities required to make the move happen.
 - e. Perform verification and validation after the system is moved.
 - f. Fix problems if they occur.
4. Pre-migration activities must be performed to facilitate the move. Virtualizing as much as possible is an example of a pre-migration activity that would facilitate the move.
5. In-flight technology changes must be avoided as much as possible. Migration to the SDC must use low risk and thoughtful approaches to avoid unplanned outages.
6. The private cloud environment is expected to provide the platform and tools for many of the virtual to virtual migrations.
7. A vendor will be procured to physically move equipment.
8. Product vendors will be used to move equipment and systems where required. Equipment such as mainframes and other devices that require vendor involvement to maintain system maintenance agreements.

9. Decommissioning OB2 will be planned with other groups after the majority of the equipment and systems are migrated to the SDC.

Dependencies, Assumptions, Risks & Constraints

Dependencies

This section identifies dependencies with other activities or projects that may pose a risk to the successful completion of this project. These activities or projects are beyond the scope of this project.

1. Campus Fiber Network Project: The successful migration from OB2 to the SDC will require the extension of the CFN to the SDC.
2. SDC Facilities: The SDC facilities must be ready to receive systems. This includes but not limited to:
 - a. Tech laboratory,
 - b. Physical security,
 - c. Storage and loading dock areas
 - d. Operating procedures
3. VLAN numbers must be managed and changed to eliminate duplicates across state agencies.

Assumptions

1. Adequate levels of resources are allocated to the project. This includes resources from all impacted service areas represented by Core Team members.
2. Service owners will own the movement of their equipment and systems in collaboration with the OB2 Move project. This also applies to other agencies with equipment in the OB2 data center.
3. A vendor will design and guide the implementation of private cloud computing environment for the SDC.
4. Vendors will be used to move mainframes and other special devices that require vendor involvement to maintain maintenance agreements.
5. The budget is available. There is a gap in the funding available and funding needed. A supplemental budget decision package or other funding vehicle is required to secure necessary funding.
6. The SDC network will be extended to OB2 to facilitate the migration.
7. IP Addresses will not significantly change when cutting over to the SDC.
8. In-flight technology changes will be avoided where possible.
9. The agency is going through significant change with CTS, DES and Office of CIO. This will cause disruption that must be managed.

Risks:

The project will use a Quality Assurance vendor to continually evaluate and assess project risks. The project will manage risks using standard risk management practices and take actions to mitigate the risks. Risks will be logged and managed through the project SharePoint site. Sub-project risks will be escalated to the SDC Senior Project Manager if they potentially impact the overall project scope, schedule or budget.

Constraints

1. DIS staff is already under intense demands to support existing operations and project work.
2. Funding allocated by the Legislature and Construction Bond Fund savings may not be enough to support all the sub-projects required to build-out and migrate to the SDC.
3. There are a limited number of tools available to assist in the planning and operation of the SDC. A configuration management data base is an example of a tool that the project and ongoing operations could use to manage configurations. Other tools are planned but staff do not have much experience using them and will require a learning curve.

Performance Measures / Outcomes

1. All sub-projects are coordinated and tracked. Investment Plan commitments for Scope, Schedule and Budget will be measured.
 - 1.1. Measurement: Monthly and at project closure, a project dashboard update will be generated that tracks progress and expenditures against the scope, schedule and budget baselines.
 - 1.2. ISB Project Outcome Stoplight Criteria will be utilized.
 - 1.3. Measurement: Progress made by the installation of infrastructure related sub-projects such as:
 - 1.3.1. Server Racks
 - 1.3.2. Network Core
 - 1.3.3. Cabling Plant
 - 1.3.4. Physical Security
 - 1.3.5. Network related security components
 - 1.3.6. Data storage devices
2. Resources necessary to complete project are under contract. Standard contract management measures will be used for:
 - 2.1. Quality Assurance Vendor
 - 2.2. OB2 move vendor
 - 2.3. Benchmarking vendor

3. Efficient, repeatable plans and processes are used to ensure the SDC is ready to accept systems for production operation:

3.1. Measurement: The percentage of identified templates and processes completed.

4. Applicable equipment and systems located in OB2 are moved to the SDC with minimal unplanned service disruptions.

4.1. Measurement: The number of server racks with equipment that are moved and the number of systems moved to the SDC.

4.2. Measurement: The number of unplanned service disruptions, the duration and severity.

4.3. Measurement: The percentage of systems with benchmark scores equal or better than before the move.

5. A Cloud Computing environment is established to run production systems.

5.1. Measurement: Progress made by the completion of phases to implement a cloud computing environment:

5.1.1. Procurement

5.1.2. Installation

5.1.3. Pilot implementation and testing

5.1.4. Production ready support and management processes

6. Obsolete equipment is removed from the OB2 data center and properly disposed.

6.1. Measurement: Progress made in removing identified equipment.

6.2. Measurement: The completed inventory of removed items reconciles with the OB2 Decommission Plan.

Acceptance

The project charter has been reviewed and accepted as written. Approval is given to move forward with the project as outlined in this document.

Christy Ridout
Executive Sponsor

Dan Mercer
SDC Program Manager

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Steering Committee Chairperson

xxx
Project Manager