



State Data Center and Wheeler Office Facility Business Plan

For

The State of Washington

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2.0 Background

2.1 Purpose of the Study

In the 2010 Supplemental Operating Budget, the Legislature has required the Office of Financial Management to conduct a technical and financial analysis of the state's plan for the consolidated State Data Center and office building and develop a strategic plan outlining the various options for use of the site that maximize taxpayer value [See Engrossed Substitute Senate Bill 6444, Section 129 (7); see LEAP website:

<http://leap.leg.wa.gov/leap/Budget/Detail/2010/coBill0413.pdf>. The budget proviso also states the following concerning the analysis: "The technical and financial analysis of the state's plan for the consolidated State Data Center and office building must consist of, at a minimum, an assessment of the following issues:

- The total capital and operational costs for the proposed data center and office building;
- The occupancy rate for the consolidated State Data Center, as compared to total capacity, that will result in revenue exceeding total capital and operating costs;
- The potential reallocation of resources that could result from the consolidation of State Data Centers and office space; and
- The potential return on investment for the consolidated State Data Center and office building that may be realized without impairing any existing contractual rights under the terms of the financing lease and related agreements."

The purpose of this study is to fulfill this budget proviso in addition to informing the 2011-13 budget development of statewide information technology activities.

2.2 Overall Approach

The Office of Financial Management (OFM) and Department of Information (DIS) worked closely with Excipio Consulting LLC to undertake a strategic business plan analysis that incorporated the following major steps:

- Clarify current state operating costs and future expected operating and one-time costs associated with the new State Data Center and Wheeler office facility and the transition to these facilities;
- Optimize those expected future costs and their timing, where possible;
- Maximize the use and value of the new facilities and quantify their expected financial impacts;
- Create a high level business plan to carry out those strategies; and,
- Determine the specific financial impacts to the individual state agencies through the development of cost recovery strategies.

The rest of this document will detail the analysis and results from these steps.

2.3 Excipio Role

The State of Washington contracted with Excipio to help fulfill the budget proviso related to the new State Data Center and Wheeler office complex. Excipio was involved in two prior studies related to the data center consolidation and transition, so it has specific State of Washington background, industry knowledge, and analytical experience to assist the state with the analysis.

2.4 Excipio's Background

Excipio Consulting, LLC (www.excipio.net pronounced ex-sip-ee-o) is a business solutions provider that delivers analytical resources and a proven methodology to radically improve technology-related decisions. Excipio's clients include Fortune 1000 enterprises, government agencies, and vertical market industries. Excipio's proven, proprietary Economic Analysis Modeling and Methodology (EAMMSM) process and toolset have helped clients make informed technical strategy decisions based on accurate analysis, risk, measures, and solid technical recommendations. Excipio leverages people, process, and technology to define optimal solutions for clients based on business value, need, and supportability.

Excipio is a firm of highly competent individuals with excellent analytical and business management experience. Excipio was started in 1999 with the idea of helping senior management understand the value of technology investment decisions. To assist with this, Excipio created an analysis methodology and toolset to accurately capture and communicate costs and benefits. As most of Excipio's consultants are former senior executives (CEO, CFO, CIO, VP of IT, etc.) with real-world experience, they are able to bridge the gaps among information technology, business, and finance to drive profitable business decisions.

3.0 Executive Summary

The new State Data Center will provide a much more secure and robust data center capability that will better protect state data and information technology (IT) assets and reduce overall risk for the state. The new office complex provides efficient and environmentally-friendly office space that will support the merger and consolidation of state shared services. This new office and data center infrastructure comes with higher costs, but also with the opportunity to reduce the state's overall IT infrastructure and administrative operating costs through consolidation of resources, standardization, and implementation of new technologies and processes.

The business plan is focused on optimizing the costs and value of these new facilities and realizing the vision of a more efficient state IT infrastructure through the following six key strategies:

- Consolidating data center-related resources across the state and optimizing costs;
- Executing the facility construction and transition projects on schedule and on (or below) budget;
- Marketing the excess data center capacity to realize the full value of the new data center;
- Continuing server virtualization efforts and positioning for "cloud services;"
- Evaluating sourcing alternatives to achieve the other key strategies mentioned above; and,
- Conducting a total cost of ownership study to understand all IT costs and identify additional future cost reduction strategies.

The following financial summary provides an overview of the current and future costs for the office space and data center capacity. It also includes the financial impacts from the business plan strategies that will be pursued to reduce costs and/or optimize the value of the new facilities. Here are the key financial highlights:

- Office space costs will increase by \$30.4 million over the 2011-2017 period.
- Data center costs will increase by \$97.8 million (includes \$53.3 million one-time transition costs) over the 2011-2017 period.
- Key business plan strategies will contribute \$101.7 million over the same period in reduced costs and/or additional value that will offset the increase in costs highlighted above.

- The business plan strategies begin to generate a net positive annual impact in Fiscal Year 2016 and continues forward (\$1.9 million in Fiscal Year 2016 and \$3.7 million in Fiscal Year 2017) as the state moves past the transition phase and into a more steady state operating mode.

Summary Financial Model

Office Space Cost

Cost Components	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Total
Current Office Space Cost	5,195,907	5,195,907	5,195,907	5,195,907	5,195,907	5,195,907	5,195,907	36,371,352
Future Office Space Cost	5,809,493	10,639,285	9,029,114	8,655,519	10,868,231	10,868,065	10,870,004	66,739,709
Total Cost Impact - Office Space	(613,585)	(5,443,377)	(3,833,206)	(3,459,611)	(5,672,323)	(5,672,158)	(5,674,096)	(30,368,357)

Data Center Cost

Cost Components	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Total
Current Data Center Cost (excluding labor)	3,263,010	3,263,010	3,263,010	3,263,010	3,263,010	3,263,010	3,263,010	22,841,071
Future data center cost (excluding labor)	4,720,540	18,959,665	13,349,000	27,507,969	19,722,737	18,821,777	17,608,599	120,690,286
Wheeler data center operating costs (excluding labor)	784,613	13,946,037	16,250,679	16,248,033	16,251,325	16,247,367	16,249,429	95,977,483
Transition and other one-time costs	3,935,927	17,013,628	13,698,321	11,259,936	3,471,412	2,574,410	1,359,170	53,312,803
Reserve funds from DIS fund balance	-	(12,000,000)	(16,600,000)	-	-	-	-	(28,600,000)
Total Cost Impact - Data Center	(1,457,529)	(15,696,655)	(10,085,990)	(24,244,959)	(16,459,727)	(15,558,767)	(14,345,589)	(97,849,215)

Total Cost Impact (Office Space and Data Center)	(2,071,115)	(21,140,032)	(13,919,196)	(27,704,570)	(22,132,050)	(21,230,924)	(20,019,685)	(128,217,573)
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Key Strategies (Reduce Costs Or Add Value)

Strategy	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Total
DIS cost reductions	-	7,167,841	7,167,841	7,167,841	7,167,841	7,167,841	7,167,841	43,007,046
Generate revenue from available data center capacity (Hall 2)	-	-	750,000	1,500,000	2,250,000	3,000,000	3,000,000	10,500,000
Generate revenue from data hall shell capacity (Halls 3 & 4)	-	-	600,000	600,000	1,200,000	1,800,000	2,400,000	6,600,000
Lease excess office space capacity to other tenants	-	1,014,821	1,183,006	1,183,054	1,183,017	1,182,915	1,183,172	6,929,986
Reduce labor costs for 21 agencies (centralize and optimize)	-	-	2,193,921	4,387,842	6,581,763	8,775,684	8,775,684	30,714,893
Capture additional FTE savings from small agencies (assume 10% of large agency savings)	-	-	-	-	658,176	877,568	877,568	2,413,313
Consolidate storage hardware	-	-	151,410	278,595	388,345	357,277	328,695	1,504,322
Total state-wide reduced cost or additional value	-	8,182,662	12,046,178	15,117,332	19,429,142	23,161,285	23,732,960	101,669,560

Overall Cost Impacts (After Key Strategies)	(2,071,115)	(12,957,370)	(1,873,018)	(12,587,239)	(2,702,908)	1,930,361	3,713,275	(26,548,013)
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The cost increases will be funded through the following three mechanisms during the 2011-13 budget period:

- Increases in office space costs will be distributed to the state agencies occupying the new Wheeler office facility.
- Incremental State Data Center related costs (approximately \$27.39 million) will be allocated to all state agencies based on the number of server instances per agency.
- DIS service rate and allocation-related reductions of approximately \$17 million for fiscal years 2012 – 2013 will be implemented, reflecting DIS reduced operating costs. The Governor's 2011-13 budget includes reductions of \$11.77 million in state agency budgets where a clearly identifiable agency customer beneficiary of the rate reduction could be identified. The other approximately \$5.32 million in rate reductions are for leasing and brokering services where state agency customer usage of the service cannot be forecasted.

All the individual strategies that make up the business plan must be executed for the state to achieve the expected business plan results. Also, some of the strategies have specific schedule interdependencies that must be managed to keep the overall schedule on track. Therefore, it is expected that the strategies be managed as an overall integrated program.

4.0 State Data Center and Wheeler Office Building – Cost Model

4.1 Office Space Cost

The following tables show the current and expected future costs for the Wheeler office complex and the percentage split among the three participating agencies.

Office Space Costs

Cost Components	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Total
Current Office Space Cost	5,195,907	5,195,907	5,195,907	5,195,907	5,195,907	5,195,907	5,195,907	36,371,352
DIS	2,836,713	2,836,713	2,836,713	2,836,713	2,836,713	2,836,713	2,836,713	19,856,991
DOP	1,392,216	1,392,216	1,392,216	1,392,216	1,392,216	1,392,216	1,392,216	9,745,511
OFM	966,979	966,979	966,979	966,979	966,979	966,979	966,979	6,768,850
DIS - Future Office Space Cost	3,189,156	6,593,089	5,365,777	4,955,404	6,226,408	6,225,869	6,227,222	38,782,925
DIS - Current office space capacity cost	2,836,713	1,648,481	460,248	-	-	-	-	4,945,442
DIS - Wheeler office space cost (net of rent revenue)	352,443	5,341,165	6,226,348	6,226,599	6,226,408	6,225,869	6,227,222	36,826,055
Construction savings		(396,557)	(1,320,819)	(1,271,196)				(2,988,572)
DOP - Future Office Space Cost	1,536,102	2,395,417	2,018,201	2,038,381	2,557,111	2,557,663	2,557,799	15,660,674
DOP - Current office space capacity cost	1,392,216							1,392,216
DOP - Wheeler office space cost	143,886	2,557,306	2,557,409	2,557,330	2,557,111	2,557,663	2,557,799	15,488,503
Construction Savings		(161,889)	(539,207)	(518,949)				(1,220,045)
OFM - Future Office Space Cost	1,084,235	1,650,779	1,645,135	1,661,733	2,084,712	2,084,533	2,084,983	12,296,111
OFM - Current office space capacity cost	966,979							966,979
OFM - Wheeler Office Space Cost	117,256	1,782,750	2,084,692	2,084,776	2,084,712	2,084,533	2,084,983	12,323,702
Construction savings		(131,971)	(439,557)	(423,042)				(994,570)
Total Impact - Office Space	(613,585)	(5,443,377)	(3,833,206)	(3,459,611)	(5,672,323)	(5,672,158)	(5,674,096)	(30,368,357)
DIS impact	(352,443)	(3,756,376)	(2,529,064)	(2,118,691)	(3,389,695)	(3,389,156)	(3,390,509)	(18,925,934)
DOP impact	(143,886)	(1,003,201)	(625,985)	(646,166)	(1,164,895)	(1,165,447)	(1,165,584)	(5,915,163)
OFM impact	(117,256)	(683,800)	(678,157)	(694,755)	(1,117,734)	(1,117,554)	(1,118,004)	(5,527,261)

By Agency Office Space Square Footage

Agency	Office Square Footage	Agency Share of Retail Space	Total Agency Square Footage	Agency Percentage of Total Office Space
DIS	137,065	2,187	139,252	57.44%
DOP	55,955	893	56,848	23.45%
OFM	45,614	728	46,342	19.11%
Total	238,634	3,807	242,441	100.00%
Retail Space	3,807			
Total Office Plus Retail Square Footage	242,441			

Additional office space cost assumptions include:

- The Wheeler office space is expected to be available by July 2011. Agencies will move into the new facility in the first quarter of Fiscal Year 2012.
- DIS will carry existing office space cost until the space can be repurposed. DIS will have to retain the OB2 facility office space through Fiscal Year 2013 and the other non OB2 space through the 2nd quarter of Fiscal Year 2012.
- Office space construction savings are based on a total net savings of \$5,203,187. This amount will be distributed to each of the three participating agencies based on their percentage share of the Wheeler office space. Construction savings may only be applied to offset the bond principal, so the savings are spread over several years.

4.2 Data Center Cost

The following tables show the current and expected future costs for the State Data Center.

State Data Center Cost

Cost Components	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Total
Current Data Center Cost	3,263,010	3,263,010	3,263,010	3,263,010	3,263,010	3,263,010	3,263,010	22,841,071
Current data center cost (excluding labor) for DIS	1,488,316	1,488,316	1,488,316	1,488,316	1,488,316	1,488,316	1,488,316	10,418,212
Current data center cost (excluding labor) for other 20 largest agencies (Thurston County)	1,774,694	1,774,694	1,774,694	1,774,694	1,774,694	1,774,694	1,774,694	12,422,859
Future Data Center Cost	4,713,040	55,269,480	32,370,617	28,307,088	17,322,708	16,569,503	16,571,565	171,124,002
OB2 operating Cost	1,488,316	1,488,316	1,488,316	744,158	101,844	101,844	101,844	5,514,639
Other existing data center capacity for 20 largest agencies	1,774,694	1,774,694	1,331,021	887,347	220,292	220,292	220,292	6,428,631
Cost to repurpose data center space (non OB2) (\$10 sq/ft for leased, \$30 sq/ft for owned space)			291,402	291,402	292,277			875,080
Wheeler data center operating cost	784,613	13,946,037	16,250,679	16,248,033	16,251,325	16,247,367	16,249,429	95,977,483
Data center transition cost (SDC core, OB2 move, service infrastructure refresh)	665,417	38,060,434	13,009,200	10,136,148	456,970	-	-	62,328,169
Additional Funding Sources	(7,500)	36,309,816	19,021,617	799,119	(2,400,028)	(2,252,274)	(1,037,034)	50,433,716
Construction savings (Used to buy transition related assets)		12,772,312						12,772,312
COP funding (for assets associated with Wheeler and OB2 Transition)	-	11,375,527	1,806,413	285				13,182,225
Depreciation (for assets that are COP funded above)	(7,500)	(793,857)	(2,562,713)	(2,737,146)	(2,730,299)	(2,252,274)	(1,037,034)	(12,120,821)
Wheeler Bond Funds (Capitalized Interest savings applied to principal)		955,833	3,177,917	3,535,980	330,270			8,000,000
Reserve funds from DIS fund balance		12,000,000	16,600,000					28,600,000
Net Data Center Cost								
(Future Data Center Cost less Additional Funding Sources)	4,720,540	18,959,665	13,349,000	27,507,969	19,722,737	18,821,777	17,608,599	120,690,286
Net Data Center Impact								
(Current Cost less Future Cost plus Additional Funding Sources)	(1,457,529)	(15,696,655)	(10,085,990)	(24,244,959)	(16,459,727)	(15,558,767)	(14,345,589)	(97,849,215)

Additional data center cost assumptions include:

- Current data center costs for DIS are based on actual DIS expenses for Fiscal Year 2010.
- Current data center costs for the other 20 largest agency data centers within Thurston County are estimates from the Unisys/Excipio Data Center Study done in December 2009.
- Future State Data Center costs for OB2 assumes DIS moves out of OB2 during Fiscal Year 2013 and decommissions the space for other use by the end of the second quarter of Fiscal Year 2014. On-going costs beyond Fiscal Year 2014 reflect retention of 600 square feet of data center space for network and telephone equipment.
- Future State Data Center costs for the 20 largest agencies assume transition to the State Data Center and decommissioning the space for other use during Fiscal Year 2013 and Fiscal Year 2014. On-going costs beyond Fiscal Year 2014 reflect retention of approximately 200 square feet of data center space per site for network and telephone equipment.
- Data center transition costs of \$62.3 million are based on the OB2 Transition Plan developed by INX Incorporated and the agency transition plan developed in the Unisys/Excipio study. The original INX OB2 Transition Plan estimate was reduced by DIS and OFM by adjusting the scope, approach, and

other assumptions. In addition, it is assumed that 70% of the incremental (state provided) transition labor specified in the INX transition plan can be sourced through existing DIS and agency staff that are already included in DIS' and state agency budgets.

- o Estimated savings of approximately \$12.8 million associated with the construction of the State Data Center are being used to fund the purchase of assets required to complete the data center core infrastructure (i.e. cabling, server cabinets, etc.).
- o Additional transition-related asset purchases above the \$12.8 million funded with construction savings will be funded by COP funds. The associated depreciation of these assets is shown in the table above.
- o There is approximately \$8 million in capitalized interest savings that will be used to offset bond principal payments during Fiscal Year 2012 through Fiscal Year 2015.
- o There is \$28.6 million in DIS reserve funds that will be used to offset the transition costs in Fiscal Years 2012 and 2013.

4.3 Capacity Analysis

4.3.1 State Data Center Capacity Analysis

The State Data Center that is now under construction is made up of four data halls, which represent separate, but integrated, data center space. Each data hall provides approximately 12,500 square feet of usable data center capacity. Data Halls 1 and 2 are being completely built out and will provide a total of 25,000 square feet of usable data center capacity. Data Halls 3 and 4 will not be fully completed, since the original plan called for them to be reserved for future growth. They will only provide a data center shell that will require additional investment to make them fully functional as data center capacity.

In the previous Unisys/Excipio Data Center Study completed in December 2009, server, storage, and network inventory data (within Thurston County) was collected for the largest 21 state agencies. During August and September of 2010, that inventory data was updated to reflect the current infrastructure expected to move to the State Data Center. The following table provides a high level data center space requirement estimate extrapolated from the server inventory using Excipio capacity estimating methods.

Data Center Space Requirement Estimate

Current Physical Servers (Sept 2010)	Current Server Instances (Sept 2010)	Current Virtualization %	Target Virtualization %	Target Virtual Servers Per Physical Server	Target Physical Servers	Target Servers Per Rack	Target Racks	Square Footage Per Rack	Total Server Square Footage	Estimated Capacity for Non Server Requirements (as % of Server)	Additional Capacity for Non Server Infrastructure (Square Feet)	Total Capacity Requirements
A	B	C = (B-A)/B	D	E	F = (B * (1-D)) + (B * D/E)	G	H = F/G	I	J = H * I	K	L = J * K	M = J + L
3,529	5,380	34%	60%	25	2,281	13	175	28	4,913	30%	1,474	6,387

Based on this estimating method, the current scope of infrastructure planned to move to the new State Data Center could fit into approximately 6,400 square feet of the new data center, or roughly half of Data Hall 1.

Listed below are additional factors for consideration:

- o This estimate was based on a 60% server virtualization target based on industry standards. The agencies have set a goal to reach 85% server virtualization. If the agencies were able to achieve their goal, the space requirements would be reduced to less than 4,000 square feet of data center capacity.
- o The estimate above assumes 25 virtual servers per physical server based on Excipio's experience. The state's Shared Server Operations Team has estimated approximately 50 virtual servers per physical server. Achieving this higher density level would also reduce space requirements.

- This estimate assumes a very efficient utilization of the data center with relatively full racks and no wasted space. Given the disparate customer base and security requirements to segregate some agency infrastructure, the state will likely not achieve this ideal utilization.
- The storage and tape infrastructure is likely to require more capacity initially until the state can consolidate and share the hardware more efficiently. This will have to be phased in over time as hardware assets reach end of life.
- The estimate above does not factor in additional agency growth in servers or storage.
- Technology will continue to advance with servers becoming more powerful and energy efficient and data storage achieving even greater density. Physical tape systems will continue to phase out in favor of virtual tape systems that will also free up data center capacity. All of these improvements will reduce data center space requirements in the future.

Given the various factors above that could either increase or decrease the data center space requirements, it is difficult to provide a definitive estimate for future space requirements. However, with current space requirements at approximately 50% utilization of Data Hall 1, it is assumed that the state could comfortably operate for years utilizing only Data Hall 1.

4.3.2 Opportunities to Optimize the Use of the State Data Center

Based on the data center capacity analysis above, Data Halls 2, 3, and 4 will not be utilized by the 21 largest agencies for a very long time. Data Hall 2 will be fully built out and ready for use as a data center (except for server cabinets to be purchased when needed) and provide 12,500 usable square feet of data center capacity. Data Halls 3 and 4 would provide an additional 25,000 square feet of data center “shell” capacity. To make this space usable as data center space would require additional investment of roughly \$60 million to \$70 million.

The 63-20 public/private financing method for the data center and office building complex restricts the state’s use of the facility to primarily government or non-profit related activity. The state may only utilize up to 10% of the facility for private sector (for profit) activity. This limits the options for utilizing the excess data center capacity. The proposed approach to leverage the existing investment in the facility focuses on the following two strategies:

- Data Hall 2 - The 12,500 square feet of data center space in Data Hall 2 will be used to support additional public sector/non-profit demand from the following potential customer segments:
 - Additional data center requirements for the 21 largest agencies beyond those identified in Thurston County as well as general growth should it exceed the requirements of Data Hall 1;
 - Additional demand from the smaller state agencies; and,
 - Additional demand from other public government entities such as county or local government, education organizations, or other non-profit organizations.
- Data Halls 3 and 4 – This space will be leased to a third party service provider to make the additional investment required to utilize the space as data center capacity. Since the state’s investment in Data Halls 3 and 4 is under 10% of the total asset value, the third party would not be restricted in its use of the data center space and could market it to private sector organizations.

The business plan section below quantifies the value of these strategies and provides further details of the strategies to realize the value.

4.3.3 Office Space Capacity Analysis

The Wheeler office space capacity was highlighted in the table titled “By Agency Office Space Square Footage” in Section 4.1. The total of 242,441 square feet of Wheeler office space is expected to be fully utilized by the DIS, OFM and DOP agencies, as well as a potential fourth state agency of which the space programming is underway.

5.0 Cost Recovery and Rate Strategy

5.1 Overview

The cost model for the new State Data Center and Office Facility shows that operating costs for the new SDC will be greater than existing facilities costs and one-time transition costs will be significant. In addition, these costs will be incurred over the next several years before the SDC is fully in use. Likewise, DIS has planned for cost reductions that will partially offset some of these costs. An overall rate strategy has been developed to ensure full cost recovery during the current and next biennium (2011-2013). The high level cost recovery/rate strategy is comprised of the following three key components as discussed below.

5.2 Office Space Cost Recovery

The incremental office space costs will be distributed to each agency that will occupy the Wheeler office space based on their proportionate share of the office space.

5.3 New State Data Center Allocation

The second component is focused on recovering the incremental costs for the new SDC through a new State Data Center Allocation. This new allocation will be distributed based on the number of virtual server instances for each agency. In 2011-13, the total incremental cost to state agencies is \$27.39 million. The following tables show the calculation for the allocation by server image as well as the planned distribution of costs by agency for the State Data Center.

State Data Center Allocation Calculation

Component	FY 2011 + FY 2012	FY 2013	Total
State Data Center Allocation Balance	17,154,184	10,238,262	27,392,446
Total Servers Included (Large Agencies)	5,391	5,391	
Total Servers Included (Small Agencies)	634	634	
Total Servers Included	6,025	6,025	
Cost Per Server	2,847	1,699	
Large Agency Share	15,349,080	9,160,908	24,509,988
Small Agency Share	1,805,104	1,077,354	2,882,458
	17,154,184	10,238,262	27,392,446

State Data Center Allocation for Fiscal Years 2011 – 2013 (Large Agencies)

Agency	Agency Name	Total Physical Servers	Total Server Instances	Servers Managed by DIS	Total Instances	Include (Y or N)	Total Servers Included	FY 2012	FY 2013	Total
ATG	Office of the Attorney General	46	70	1	71	Y	71	202,149	120,650	322,799
DFI	Department of Financial Institutions	44	83		83	Y	83	236,315	141,042	377,357
DFW	Department of Fish and Wildlife (DFW)	31	46	1	47	Y	47	133,817	79,867	213,684
DIS	Division of Information Services	341	420		420	Y	420	1,195,810	713,705	1,909,515
DNR	Department of Natural Resources	167	322	2	324	Y	324	922,482	550,572	1,473,054
DOC	Department of Corrections	234	273		273	Y	273	777,277	463,908	1,241,185
DOH	SOW, Department of Health	169	193	6	199	Y	199	566,586	338,160	904,746
DOL	Dept. of Licensing (DOL)	196	266		266	Y	266	757,347	452,013	1,209,359
DOP	Department of Revenue	22	77	57	134	Y	134	381,520	227,706	609,226
DOR	Department of Revenue	121	193		193	Y	193	549,503	327,964	877,468
DOT	Department of Transportaiton	387	607		607	Y	607	1,728,231	1,031,473	2,759,704
DRS	Department of Retirement Systems	70	70		70	Y	70	199,302	118,951	318,252
DSHS	Dept. of Social & Health Services	783	1,002		1,002	Y	1,002	2,852,862	1,702,695	4,555,557
ECY	Ecology Headquarters & SW Regional Office	115	183	3	186	Y	186	529,573	316,069	845,642
ESD	Department of Employment Security	191	379		379	Y	379	1,079,076	644,033	1,723,110
HCA	Health Care Authority	19	19		19	Y	19	54,096	32,287	86,383
LIQ	Liquor Control	32	119		119	Y	119	338,813	202,216	541,029
LNI	Department of Labor and Industries (L&I)	195	436	100	536	Y	536	1,526,082	910,823	2,436,905
OFM	Office of Financial Management	41	181	2	183	Y	183	521,032	310,971	832,003
OSPI	Superintendent of Public Instruction	41	121		121	Y	121	344,507	205,615	550,122
WSP	Washington State Patrol	100	159		159	Y	159	452,700	270,188	722,888
Totals		3,528	5,219	172	5,391		5,391	15,349,080	9,160,908	24,509,988

State Data Center Allocation for Fiscal Years 2011 – 2013 (Small Agencies)

Agency	Agency Name	Total Physical Servers	Total Server Instances	Servers Managed by DIS	Total Instances	Include (Y or N)	Total Servers Included	FY 2012	FY 2013	Total
PARKS	State Parks and Recreation Commission	49	49		49	Y	49	139,511	83,266	222,777
CTED	Dept. of Community, Trade and Economic Developme	41	41	4	45	Y	45	128,123	76,468	204,591
GMB	Gambling Commission	36	36		36	Y	36	102,498	61,175	163,673
SAO	Auditor s Office	35	35		35	Y	35	99,651	59,475	159,126
GA	Dept. of General Administration	34	34		34	Y	34	96,804	57,776	154,580
DEL	Dept. of Early Learning	31	31		31	Y	31	88,262	52,678	140,940
AGR	Dept. of Agriculture	28	28		28	Y	28	79,721	47,580	127,301
OAH	Administrative Hearings Board	25	25		25	Y	25	71,179	42,482	113,662
PRT	Dept. of Printing	22	22		22	Y	22	62,638	37,385	100,022
OST	Office of State Treasurer	21	21		21	Y	21	59,791	35,685	95,476
RCFB	Recreation and Conservation Funding Board	20	20		20	Y	20	56,943	33,986	90,929
JNS	Office of Insurance Commission	18	18		18	Y	18	51,249	30,587	81,836
SIB	Investment Board	18	18		18	Y	18	51,249	30,587	81,836
LOT	Washington State Lottery	17	17		17	Y	17	48,402	28,888	77,290
UTC	Utilities and Transportatation Commission	17	17		17	Y	17	48,402	28,888	77,290
DVA	Dept. of Veteran Affairs	15	15	1	16	Y	16	45,555	27,189	72,743
IND	Industrial Insurance Appeals Board	15	15		15	Y	15	42,708	25,489	68,197
CTC	State Convention and Trade Center	14	14		14	N	0	-	-	-
PDC	Public Disclosure Commission	14	14		14	Y	14	39,860	23,790	63,650
WHS	Wa. State Historical Society	14	14		14	Y	14	39,860	23,790	63,650
CJT	Criminal Justice Training Comm.	13	13		13	Y	13	37,013	22,091	59,104
MIL	Military Department	12	12		12	Y	12	34,166	20,392	54,558
SFB	State School for the Blind	12	12		12	Y	12	34,166	20,392	54,558
SFD	State School for the Deaf	12	12		12	Y	12	34,166	20,392	54,558
SIRTI	Spokane Intercollegiate Research Tech Institute	12	12		12	N	0	-	-	-
PSP	Puget Sound Partnership	11	11		11	Y	11	31,319	18,692	50,011
PERC	Public Employment Relations Commission	9	9		9	Y	9	25,625	15,294	40,918
CRAB	County Road Administration Board	8	8		8	Y	8	22,777	13,594	36,372
DSB	Services for the Blind	8	8		8	Y	8	22,777	13,594	36,372
SCC	Conservation Commission	8	8		8	Y	8	22,777	13,594	36,372
HUM	Human Rights Commission	6	6		6	Y	6	17,083	10,196	27,279
ACB	Board of Accountancy	5	5		5	Y	5	14,236	8,496	22,732
DAHP	Dept. of Archaeological and Historical	5	5	5	10	Y	10	28,472	16,993	45,465
OMWBE	Office of Minority and Women Bus. Enterprises	5	5		5	Y	5	14,236	8,496	22,732
ART	Arts Commission	4	4		4	Y	4	11,389	6,797	18,186
SGC	Sentencing Guidelines Commission	4	4		4	Y	4	11,389	6,797	18,186
TIB	Transportation Improvement Board	4	4		4	Y	4	11,389	6,797	18,186
BTA	Tax Appeals Board	3	3		3	Y	3	8,542	5,098	13,639
CJC	Commission on Judicial Conduct	3	3		3	Y	3	8,542	5,098	13,639
WTECB	Workforce Training and Education Coord. Board	3	3		3	Y	3	8,542	5,098	13,639
EHO	Environmental Hearings Office	2	2		2	Y	2	5,694	3,399	9,093
HCQA	Home Care Quality Authority	2	2		2	Y	2	5,694	3,399	9,093
SRB	Indeterminate Sentence Review Board	2	2		2	Y	2	5,694	3,399	9,093
STS	Traffic Safety Commission	2	2		2	Y	2	5,694	3,399	9,093
APA	Asian-American Affairs Commission	1	1		1	Y	1	2,847	1,699	4,546
CAA	African-American Affairs Commission	1	1		1	Y	1	2,847	1,699	4,546
CHA	Hispanic Affairs Commission	1	1		1	Y	1	2,847	1,699	4,546
COS	Citizens Commission on Salaries for Elected	1	1		1	Y	1	2,847	1,699	4,546
CRG	Columbia River Gorge Commission	1	1		1	Y	1	2,847	1,699	4,546
ERFC	Economic and Revenue Forecast Council	1	1		1	Y	1	2,847	1,699	4,546
FIR	Board for Volunteer Firefighters	1	1		1	Y	1	2,847	1,699	4,546
GMHB	Western WA Growth Management Hearings Board	1	1		1	Y	1	2,847	1,699	4,546
INA	Indian Affairs	1	1		1	Y	1	2,847	1,699	4,546
LEOFF	LEOFF Plan 2 Retirement Board	1	1		1	Y	1	2,847	1,699	4,546
PLI	Pollution Liability Insurance Agency	1	1		1	Y	1	2,847	1,699	4,546
CFC	Caseload Forecast Council	0	0		0	Y	0	-	-	-
HRC	Horse Racing Commission	0	0		0	Y	0	-	-	-
MAR	Marine Employees Commission	0	0		0	Y	0	-	-	-
		650	650	10	660		634	1,805,104	1,077,354	2,882,458

5.4 DIS Rate Reductions

The third component of the rate strategy is DIS service rate and allocation reductions. In the 2011-13 biennium, the State Data Center Allocation is offset by a \$17 million dollar rate reduction as depicted in the table below, resulting in a net state impact of \$10.3 million dollars. Rate reductions are possible because of the approximately \$7.2 million per year in DIS planned cost reductions. In addition, DIS is able to absorb the incremental cost of its office space in the Wheeler office building (~\$3.1 million/year) and its share of the State Data Center allocation (~\$950,000/year).

DIS Rate and Allocation Reductions

Service Area	FY 2011	FY 2012	FY 2013	Total FY 2011 - 2013
Rate Reductions				
Leasing	-	(2,635,814)	(1,045,328)	(3,681,142)
Brokering	-	(1,336,352)	(1,589,386)	(2,925,738)
Backup/Archival Storage	-	(227,048)	(227,048)	(454,096)
Data Center Access	-	(84,646)	(84,646)	(169,292)
s/390 Mainframe Services	-	(2,256,083)	(2,256,083)	(4,512,166)
Total Rate Reductions	-	(6,539,943)	(5,202,491)	(11,742,434)

Service Area	FY 2011	FY 2012	FY 2013	Total FY 2011 - 2013
Revolving Fund Reductions (Cost Allocation Charges)				
IT Policy (MOSTD)	-	(1,859,000)	(1,859,000)	(3,718,000)
Access Washington	-	(350,000)	(350,000)	(700,000)
Enterprise Security Allocation	-	(240,000)	(240,000)	(480,000)
Gateway Allocation	-	(225,000)	(225,000)	(450,000)
Total Revolving Fund Reductions	-	(2,674,000)	(2,674,000)	(5,348,000)
Total Rates Plus Allocations		(9,213,943)	(7,876,491)	(17,090,434)

Net Statewide Impacts (For All DIS Customers)

	FY 2011	FY 2012	FY 2013	Total FY 2011 - 2013
State Data Center Allocation	1,457,529	15,696,655	10,238,262	27,392,446
Total Rate Reductions	-	(9,213,943)	(7,876,491)	(17,090,434)
Net Statewide Cost Increase	1,457,529	6,482,712	2,361,771	10,302,012
Move FY 2011 SDC Allocation to FY 2012	(1,457,529)	1,457,529	-	-
Adjusted - Net Statewide Cost Increase	-	7,940,241	2,361,771	10,302,012

The Governor's 2011-13 Proposed Operating Budget includes reductions of \$11.77 million in state agency budgets where a clearly identifiable agency customer beneficiary of the rate reduction could be identified. The other approximately \$5.32 million in rate reductions are for leasing and brokering services where state agency customer usage of the service cannot be forecasted. Therefore, the net impact on the governor's 2011-13 from a combination of rate reductions and SDC cost allocation increases is \$15.6 million.

Net Statewide Impacts (In Governor's 2011-13 Budget)

Fee for Service Rate Reductions	FY 2011	FY 2012	FY 2013	Total FY 2011 - 2013
Rate Reductions				
Leasing	-	(744,389)	(691,416)	(1,435,805)
Brokering	-	-	-	-
Backup/Archival Storage	-	(227,048)	(227,048)	(454,096)
Data Center Access	-	(84,646)	(84,646)	(169,292)
s/390 Mainframe Services	-	(2,256,083)	(2,256,083)	(4,512,166)
Total Fee for Service Rate Reductions	-	(3,312,166)	(3,259,193)	(6,571,359)

Service Area				
Revolving Fund Reductions (Cost Allocation Charges)				
IT Policy (MOSTD)	-	(1,815,000)	(1,816,000)	(3,631,000)
Access Washington	-	(339,000)	(340,000)	(679,000)
Enterprise Security Allocation	-	(238,000)	(239,000)	(477,000)
Gateway Allocation	-	(207,000)	(207,000)	(414,000)
Total Revolving Fund Reductions	-	(2,599,000)	(2,602,000)	(5,201,000)
TOTAL Rate Reductions	-	(5,911,166)	(5,861,193)	(11,772,359)

Net Statewide Impacts (in 11-13 Governor's Budget)

	FY 2011	FY 2012	FY 2013	Total FY 2011 - 2013
State Data Center Allocation	1,457,529	15,696,655	10,238,262	27,392,446
Total Rate Reductions	-	(5,911,166)	(5,861,193)	(11,772,359)
Net Statewide Cost Increase on the FY 11-13 Budget	1,457,529	9,785,489	4,377,069	15,620,087
Move FY 2011 SDC Allocation to FY 2012	(1,457,529)	1,457,529		
Adjusted - Net Statewide Cost Increase on the FY 11-13 Budget	-	11,243,018	4,377,069	15,620,087

6.0 Business Plan

6.1 Business Plan Overview

The new State Data Center will provide a much more secure and robust data center capability that will better protect state data and IT assets and reduce overall risk. This new data center capability comes with higher costs, but also with the opportunity to reduce the state's overall IT infrastructure operating costs through consolidation of resources, standardization, and implementation of new technologies and processes.

The business plan is focused on optimizing the value of these new facilities and realizing the vision of a more efficient state IT infrastructure through the following six key strategies:

- Consolidating data center related resources across the state and optimizing costs;
- Executing the Wheeler facility construction and transition projects on schedule and on (or below) budget;
- Marketing the excess data center capacity to realize the full value of the new data center;
- Continuing server virtualization efforts and positioning for "Cloud Services";
- Evaluating sourcing alternatives to achieve the other key strategies above; and,
- Conducting a total cost of ownership study to understand all IT costs and identify additional cost reduction strategies.

6.2 Consolidate Resources and Optimize Costs

6.2.1 Overview

This area of the business plan is comprised of three strategies as follows.

6.2.2 DIS Cost Reductions

DIS has plans for implementing \$7.2 million per year of cost reductions within the current DIS organization to help it be more cost competitive with market alternatives. These plans are expected to be implemented in Fiscal Year 2011, with the cost reductions being realized in Fiscal Year 2012 and beyond. This enables DIS rate reductions in the 2011 – 2013 biennium as specified in section 5.4 above.

6.2.3 Data Center Related Support Staff Consolidation

This strategy focuses on achieving staff savings through the consolidation of support teams across the agencies. The staff savings will be achieved through the elimination of redundant staff requirements and the adoption of industry best practices that allow the consolidated team to operate more efficiently. The following table shows a summary of the current and future required staffing levels and total burdened staffing costs for the 21 largest agencies in Thurston County that are planning to move to the new State Data Center. The \$8.8 million in targeted annual savings from this strategy is expected to be phased in over several years starting in Fiscal Year 2013 when the agencies move their IT infrastructure to the new State Data Center.

In addition, the state will achieve additional savings once the smaller agencies are consolidated to the State Data Center. Staffing data was not gathered for the smaller agencies. However, server data was available from a recent IT Portfolio report. This data indicated that the smaller agencies represent about 10% of the server infrastructure of the 21 largest agencies. Assuming that staffing ratios would be consistent with larger agencies,

it was assumed the state would achieve an additional 10% savings from the consolidation of the smaller agency support resources.

Resource Consolidation

Function	Current FTE's	Total Burdened Cost (FY 2010)	Unit Cost	Target FTEs (FY 2015)	FTE Variance	Total Burdened Cost (Future)	Variance	Comments
Data Center Facilities	17.5	\$1,517,439	\$86,810	9.0	-8.5	\$781,290	-\$736,149	2 FTEs per shift plus supervisor
Operations - Change Management	17.0	\$1,397,178	\$82,187	17.0	0.0	\$1,397,178	\$0	Maintain current staff level
Operations - Enterprise Command Center	21.0	\$1,629,072	\$77,575	20.0	-1.0	\$1,551,497	-\$77,575	5 FTEs per shift
Ops - Network Operations Center	45.1	\$4,182,876	\$92,850	20.0	-25.1	\$1,856,993	-\$2,325,884	5 FTEs per shift
Server	128.1	\$12,033,346	\$93,937	87.0	-41.1	\$8,172,530	-\$3,860,816	60 instances per FTE (based on ~5225 servers)
Storage	17.3	\$1,655,895	\$95,716	9.0	-8.3	\$861,448	-\$794,447	150 TBs per FTE (based on ~1,400 TBs of storage)
Backup	15.5	\$1,450,103	\$93,858	5.0	-10.5	\$469,289	-\$980,814	Based on 50% of storage FTEs
Grand Total	261.4	\$23,861,800		167.0	-94.4	\$15,090,225	-\$8,775,684	

6.2.4 Storage Hardware Consolidation

This strategy focuses on eliminating excess storage inventory across the 21 largest agencies through the physical consolidation of storage hardware assets. The savings from this strategy are driven from consolidating and centrally managing storage to reduce the amount of excess storage on hand, thereby reducing the total storage hardware requirements. Currently, the state's storage capacity requirements are growing by over 30% per year. The state is currently maintaining 38% excess inventory to accommodate new demand. This is extraordinarily high due to the current distributed storage approach. With centralized storage assets and a more actively managed storage management process, the state could reduce the storage on hand to 15% of total storage. This assumes the state would buy additional storage every six months to meet the agency demand for additional storage. The following table summarizes the various assumptions used to quantify the value of the storage consolidation strategy.

Storage Consolidation Key Assumptions

Key Assumption	Value
Current Total Storage Capacity (Gigabytes)	2,293,161
Total Storage In Use (Gigabytes)	1,425,435
Excess Capacity (Gigabytes)	867,726
% of Excess Capacity	38%
Annual Storage Growth Rate	30%
Required storage inventory (assuming purchase storage every 6 months to meet growth requirements)	15%
Current Storage Acquisition Cost Per Gigabyte	\$ 4.50
Storage Hardware Annual Price Depreciation Rate	8%

Based on the assumptions above, the following chart shows the calculation of the value of the storage. The consolidation of storage would be phased in over three years as storage assets are due for technical refresh. This calculation assumes that storage hardware prices will drop 8% per year.

Storage Consolidation Value

Formula Components	FY 2010	FY 2011	FY2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Total Storage (gigabytes)	2,293,161	2,293,161	2,293,161	2,293,161	2,293,161	2,293,161	2,293,161	2,293,161
Unused Storage Capacity In Gigabytes (= 38% of total storage)	867,726	867,726	867,726	867,726	867,726	867,726	867,726	867,726
Required Reserves in Gigabytes (@15%)	343,974	343,974	343,974	343,974	343,974	343,974	343,974	343,974
Excess Storage Capacity Gigabytes (above 15% inventory required)	523,752	523,752	523,752	523,752	523,752	523,752	523,752	523,752
Acquisition Price per Gigabyte (Price drops 8% per year)	\$ 4.50	\$ 4.14	\$ 3.81	\$ 3.50	\$ 3.22	\$ 2.97	\$ 2.73	\$ 2.51
Average Annual Cost per Gigabyte (Price/4 year asset life)	\$ 1.13	\$ 1.04	\$ 0.95	\$ 0.88	\$ 0.81	\$ 0.74	\$ 0.68	\$ 0.63
Percent of Storage Environment Consolidated	0%	0%	0%	33%	66%	100%	100%	100%
Excess Storage Purchase Avoided (gigabytes)				172,838	345,676	523,752	523,752	523,752
Potential Realized Cost Savings (Total cost of acquiring excess storage above 15% required)				\$ 151,410	\$ 278,595	\$ 388,345	\$ 357,277	\$ 328,695
Total Value of Storage Consolidation								\$ 1,504,322

6.3 Execute Facility Construction and Transition Projects

6.3.1 Overview

This part of the business plan addresses completion of the Wheeler facility, the transition of staff to the office building, and the transition of all of the data center assets to the new State Data Center. The plan is broken into several discrete projects as defined below.

6.3.2 Construction Project

The Wheeler facility construction includes completing the office facility and the network, telephones, furniture and other infrastructure necessary to support the state employees moving to the facility. The data center part of the construction project includes the completion of Data Halls 1 and 2 and all the power and mechanical infrastructure necessary to support data center activity. This project is scheduled to be completed in June 2011 for the office building and data hall shells and December 2011 for the full infrastructure build out for data halls 1 and 2. The total project construction budget is \$305 million, per the schedule below:

Wheeler Facility Construction Budget

Cost Components of Both Facilities	Data Center	Office and Garage	Total
Shell and Core	44,868,000	90,592,000	135,460,000
Tenant Improvements	72,155,000	25,350,000	97,505,000
Subtotal	117,023,000	115,942,000	232,965,000
Contingencies			17,324,000
Other Miscellaneous			11,518,000
Subtotal			28,842,000
Capital Interest			43,193,000
Total Borrowed			305,000,000

As of the end of October 2010, the construction project is under budget by \$29,115,499 (see the table below).

Estimated Construction Savings

Savings Components	Total Savings	Savings Attributed to the Data Center	Savings Attributed to the Office Building
Tenant Projected Savings Under T. I. (100% DIS)	1,731,135		1,731,135
Projected Shell & Core Savings for DIS (DIS's share)	17,260,741	9,666,015	7,594,726
Other DIS Capital Costs borrowed - Data Center*	3,958,297	3,958,297	
Other DIS Capital Costs - Office Building*	2,865,326		2,865,326
Contingency (from project budget) (100% DIS)	3,300,000	1,848,000	1,452,000
Total Savings	29,115,499	15,472,312	13,643,187

6.3.3 State Data Center (SDC) Core Build-Out and Data Center Transition

This project involves building-out the data center core comprised of the power distribution, cabling, cabinet, network, security, and monitoring systems necessary to support data center activity. It also involves the physical transition of the IT infrastructure currently located in the OB2 Data Center and the decommissioning of the OB2 Data Center.

A high level design and project plan for the SDC Core Build-Out and OB2 Move were developed using an outside consulting company (INX Inc.). The approach calls for leveraging an outside integration company to build the data center core and help facilitate the data center transition from OB2 (see section 5.6 below). In addition, the plan assumes that approximately 70% of the state employee resources required by the plan can be sourced from existing DIS and agency IT staff (\$5.76 million in labor cost).

SDC Core Build Out and OB2 Move Cost

Cost Component	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Total
DIS Project Staff	-	364,498	364,498	364,498	-		1,093,493
Other Staff	-	-	2,904,610	2,904,610	2,420,508		8,229,729
Hardware	-	-	21,592,627	1,604,550	8,161		23,205,338
Maintenance	-	-	752,674	1,406,586	1,598,618	404,477	4,162,354
Other	3,000	60,492	4,525,500	3,119,336	1,987,862	44,232	9,740,423
Services	-	240,427	6,466,528	4,781,881	5,779,731	8,261	17,276,828
Software	28,500	-	2,767,428	421,089	-		3,217,017
Software Maint	-	-	85,500	78,375	26,125		190,000
Training	-	-	275,796	3,002	9,500		288,298
Subtotal	31,500	665,417	39,735,161	14,683,927	11,830,504	456,970	67,403,479
Existing Labor (Already in budget)		-	(2,033,227)	(2,033,227)	(1,694,356)	-	(5,760,810)
Total	31,500	665,417	37,701,934	12,650,700	10,136,148	456,970	61,642,669

6.3.4 Agency Data Center Transition

This strategy includes the physical move of the agency IT infrastructure located in the various agency data centers. It does not include the decommissioning of those data centers, which will be the responsibility of the various agencies. A high level approach and phasing strategy for agency transitions was completed through a Unisys/Excipio study conducted in December 2009. This approach will need to be revisited as the transition date gets closer. Agency progress with server virtualization, technical refresh timing or other agency projects and priorities are all factors that may cause the optimal sequencing of agency transitions to change.

A total of \$717,000 was included in the model to support the physical move cost for agency IT infrastructure to the new State Data Center. An additional \$875,080 was included to pay for repurposing agency data center capacity. Project management resources are included in the SDC Core Build-Out and OB2 Transition Project to coordinate transition activities across agencies. Agency staff required to support the transition to the State Data Center, including project management of the agency specific move activities, have not been included in the model. The assumption is that agencies will leverage existing resources and they are already included in agency budgets.

6.4 Leverage the Excess Data Center Capacity

As described in section 4.3, the 21 largest agencies will be able to consolidate their current data centers into Data Hall 1 with room for growth. Therefore, one component of this strategy is focused on utilizing the 12,500 square feet of usable data center space within Data Hall 2 to consolidate additional smaller state agencies, additional demand from larger agencies operating outside Thurston County, and other governmental entities. This strategy would also require DIS to establish a marketing capability to pursue additional government or non-profit entities to fill up Data Hall 2.

The other component of this strategy is to lease Data Halls 3 and 4 to a third party data center provider who would complete the build out of the data center space. The third party would be free to use the data center capacity to serve both public and private customers.

There are several options for getting outside parties involved with the State Data Center. One approach is to market only Data Halls 3 and 4 to a prospective data center provider. The potential buyers would value the available space strictly as a data center facility and compare it to options they have for acquiring additional data center capacity.

Another strategy for marketing Data Halls 3 and 4 is to bundle them with data center-related services into a larger opportunity. This would attract different buyers who would potentially value the data center space in the context of an opportunity to significantly increase services to the state and drive revenue and profitability. The state would potentially gain more value for the data center capacity as well as reduce costs on core data center services.

The business plan is focused on evaluating both strategies above to identify the greatest value to the state. The next section provides more detail around the strategy to evaluate sourcing alternatives.

6.5 Evaluate Sourcing Alternatives

6.5.1 Overview

The following sections describe five areas where the state plans to evaluate outsourcing options.

6.5.2 State Data Center (SDC) Core Design and Build

The scope of this outsourcing analysis is centered on the project to build the State Data Center (SDC) core infrastructure. The scope and high level design for building out the SDC core was developed in the INX study completed in July 2010. The state is considering outsourcing this project to gain critical knowledge and expertise in designing the data center core IT infrastructure, and acquiring additional resources required for a large and time sensitive project.

6.5.3 Data Center Transition Services

This scope includes project management and technical expertise in support of transitioning computer hardware from the OB2 Data Center and/or the agency data centers to the new State Data Center. DIS and agency IT groups are expecting to provide many of the IT staff required for the transition activities, so the scope for an outside vendor will be limited.

6.5.4 Leasing of Data Halls 2, 3, and 4

The scope for this outsourcing evaluation will focus on leasing the capacity of Data Halls 2, 3, and 4. The outside party would be expected to market and manage the Data Hall 2 capacity as well as invest in the data center infrastructure required to make Data Halls 3 and 4 usable as data center capacity. Outsourcing the data halls would enable the state to gain the marketing capability to leverage the excess data center capacity and realize the full value of the State Data Center. It would also shift the cost and investment risk for fully building out Data Halls 3 and 4 to a third party.

6.5.5 On-going Data Center Services

The scope of this outsourcing evaluation would include more traditional outsourcing of on-going services including:

- Data center management, enterprise command center, and disaster recovery support (not infrastructure);

- Mainframe, server, storage, and tape/backup;
- Data center network core only;
- E-mail and SharePoint (collaborative document sharing tool);
- Security operations (firewall management, intrusion detection, vulnerability and virus management, and secure access); and,
- Future “cloud” services (highly standardized, virtualized, and automated server and storage platforms and related services).

Outsourcing this scope of services has the potential to help the state reduce operating costs, accelerate the transformation to a standard “utility” model for services, provide additional technology skills and capabilities to advance the “cloud computing” vision, provide additional financing mechanisms to the state to smooth out some of the transition and transformation costs, and reduce and/or shift risk from the state to a third party.

6.5.6 Telecommunications Services

DIS is currently providing long distance services through the state’s internal State Controlled Area Network (SCAN) infrastructure versus leveraging telecommunications vendor capabilities that are much more cost effective. In addition, DIS’ costs for providing asset management and billing administrative services for the telecommunications area are relatively high compared to vendor solutions. Outsourcing this scope to an external vendor could significantly reduce telecommunications operating costs. The proposed scope represents the areas organizations typically bundle into volume based telecommunications contracts including:

- Long distance telephone, audio and web conferencing, and calling cards;
- Centrex services (vendor-provisioned telephone services);
- Telecommunications voice and data circuits ; and,
- Telecommunications administration and billing.

6.5.7 Outsourcing Evaluation Approaches

There are different approaches for pursuing the evaluation of outsourcing options outlined above. An ideal scenario would be to bundle the State Data Center (SDC) core build out, data center transition support, data hall capacity, and the on-going data center services into one request for proposal (RFP) evaluation. This scenario (Option A) would optimize the potential cost savings, the value of the data halls, and the opportunity to amortize any one-time costs. In addition, it would allow the future vendor selected to provide on-going services the opportunity to design the SDC core consistent with its standard technologies, tools, and processes.

With the State Data Center building construction expected to be completed by July 1, 2011, there is insufficient time to conduct the full RFP analysis outlined above and still be ready to begin the SDC core build-out starting in July 2011. The alternative approach (Option B) would be to break the scope into two separate, but concurrent evaluations. The first evaluation would consist of an RFP evaluation for just the SDC core design and build-out. This evaluation would be conducted on a schedule to ensure the SDC core design and build process would begin in July 2011. The second RFP evaluation would include the transition services, data halls, and on-going services. In either scenario above, the telecommunications area would be addressed through a separate RFP process.

In addition, during the same timeframe used to conduct the RFP processes outlined above, additional market analysis will be conducted to evaluate public entity demand for Data Hall 2 and other options for leasing Data Halls 3 and 4 to an outside entity. This will allow the state to understand all the options for leveraging the available data center capacity.

At this point, additional analysis is required to determine the best approach for evaluating the outsourcing options (Option A or Option B). The plan is to begin gathering and defining the RFP requirements for each area, while continuing to analyze the two options for engaging vendors outlined above. A decision on the best approach will be made by mid-January 2011 to ensure the remaining evaluation activities can occur in a timely fashion.

6.6 Conduct a Total Cost of Ownership Study

The “total cost of ownership” study planned for the state will focus on the following four key objectives:

- Identify all the IT related costs across all the state agencies;
- Categorize costs by IT function to understand agency and overall state performance relative to industry metrics;
- Identify additional consolidation and optimization strategies to further reduce total IT state spending; and,
- Provide OFM with additional detailed cost information to inform future state budgeting efforts.

The information provided by this study will help identify future targets for consolidation to the State Data Center and provide the foundation for establishing other state-wide IT initiatives. OFM will lead this initiative and will be seeking external vendor support to execute the strategy. All state agencies will be expected to participate in providing input to the study.

6.7 Continue with Server Virtualization and Cloud Computing Development

6.7.1 Overview

The 21 largest agencies have been actively pursuing server virtualization strategies over the last several years. As of September 2010, the 21 largest agencies have virtualized about 34% of the current server environment. This compares to approximately 28% virtualization roughly a year earlier. The overall business plan calls for agencies to reach 60% server virtualization by the time they are ready to transition to the new State Data Center. This higher virtualization level will help the state reduce infrastructure support costs and future costs to transition infrastructure to the SDC.

For the most part, agencies have been pursuing these server virtualization strategies independently. Recently, a Shared Server Operations Team was formed to work on server and storage standards and research “cloud computing” technologies and alternatives. To help focus and enhance this on-going strategy toward virtualization and cloud technologies, the following three strategies are planned.

6.7.2 State-wide standards for hardware, software, and server image configuration

Establishing state-wide standards for hardware, software, and server image configuration will ensure that agency efforts to move forward with server virtualization are done in the most efficient manner possible and will simplify and accelerate future consolidation efforts once agency infrastructure is transitioned to the SDC. The key to this strategy is getting the standards adopted quickly before the majority of agencies have virtualized their environments. Additional priority will be given to this effort so that the standards are implemented early enough to provide the most value to the state.

6.7.3 Agency strategy to achieve 60% – 85% server virtualization

As mentioned above, the agencies have already committed to pursue additional server virtualization to both reduce operating and transition costs and simplify the transition to the SDC. Additional oversight and coordination will be provided to ensure each agency has a plan for virtualization and is utilizing the new state-wide standards for any new virtualization activity.

6.7.4 Shared infrastructure to consolidate small agencies

For smaller agencies, investing in server virtualization knowledge and infrastructure is not cost effective. A new strategy is planned to provide a shared infrastructure environment to consolidate small agency server environments to pursue cost savings for the smaller agencies and facilitate the transition to the SDC. This small shared server and storage infrastructure will also provide the working environment to pursue other “cloud-related” technologies, tools, and processes to further optimize the state’s server and storage environments.

6.8 Schedule Overview

The attached High Level Schedule (Appendix A) provides an overview of the timeframes expected for each of the key components of the business plan. More detailed plans for each of the individual strategies need to be developed once key leaders are in place for each strategy.

The current schedule still reflects two different options for pursuing the outsourcing evaluation as described in section 5.6. The areas within the plan that show both an Option A and Option B schedule are the activities that are impacted by the approach to the outsourcing evaluation. Once a decision has been made on the approach (targeted for January 2011), the overall schedule can be updated to reflect the chosen strategy. Project timeframes should be shortened wherever the corresponding results will drive more value for the state or expected results can be achieved sooner.

The Total Cost of Ownership (TCO) analysis is scheduled to be a concurrent activity to many of the other strategies. The TCO initiative is an independent body of work that could be scheduled later if resource conflicts or other factors require the schedule be adjusted. However, there were several benefits considered when scheduling the TCO study in parallel to the other strategies, including the following:

- Detailed information gathered in the TCO initiative would be useful in any subsequent RFP developed around the data center services.
- The data and analysis available from the TCO study would be useful when working through the RFP responses and determining an overall sourcing strategy.
- Having the results of the TCO study done in the proposed timeframe would allow adequate time for leaders across the state to discuss the results of the study before the next biennium budget cycle.

6.9 Management of the Business Plan

All the individual strategies that make up the business plan must be executed for the state to achieve the expected business plan results. Also, some of the strategies have specific schedule inter-dependencies that must be managed to keep the overall schedule on track. Therefore, it is expected that the strategies be managed as an overall integrated program.

7.0 Appendix A – High Level Schedule

Appendix A - High Level Schedule

Project Area	Primary Leader	Duration	FY	2011				2012				2013				2014				2015				2016			
			Qtr	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Wheeler Construction																											
Office Space	Sally Alhadeff	7 - 8 mos.																									
Data Center Space	Sally Alhadeff	7 - 8 mos.																									
Office Space Move																											
DIS	Sally Alhadeff	2 - 3 mos.																									
OFM	Sally Alhadeff/Agency TBD	2 - 3 mos.																									
DOP	Sally Alhadeff/Agency TBD	2 - 3 mos.																									
GA	Sally Alhadeff/Agency TBD	2 - 3 mos.																									
Decommission DIS Office Space (Non OB2)	Sally Alhadeff/Agency TBD	3 - 4 mos.																									
Decommission DIS OB2	Sally Alhadeff/Agency TBD	3 - 6 mos.																									
Vendor Analysis (Data Center Related)																											
Option A - Single RFP Initiative																											
RFP Process (SDC Core, Transition, On-going Services, Data Halls)*	Mike Davis/Utility Director	12 - 13 mos.																									
Option B - Two RFP Initiatives																											
RFP Process (SDC Core Design and Build)	Mike Davis	5 - 6 mos.																									
RFP Process (Transition, On-going Services, Data Halls)*	Mike Davis/Utility Director	12 - 13 mos.																									
Data Center Core Design and Build																											
Option A - Single RFP Initiative																											
Data center core design and build	Mike Davis	6 - 7 mos.																									
Option B - Two RFP Initiatives																											
Data center core design and build	Mike Davis	6 - 7 mos.																									
Data Center Transition																											
Option A - Single RFP Initiative																											
OB2 Transition	Mike Davis	12 mos.																									
Agency Transition	Utility Director	12 mos.																									
Option B - Two RFP Initiatives																											
OB2 Transition	Mike Davis	12 mos.																									
Agency Transition	Utility Director	12 mos.																									
Vendor Analysis (Telecommunications Related)																											
RFP Process	TBD	6 - 9 mos.																									
Total Cost of Ownership																											
Planning	Tristan Wise	1 mos.																									
Data Gathering	Tristan Wise	3 mos.																									
Analysis	Tristan Wise	2 mos.																									
Deliverable	Tristan Wise	2-3 mos.																									
Consolidation and Cost Optimization																											
DIS Cost Optimization Strategies	Utility Director	6 - 10 mos.																									
DIS and Agency Staff Consolidation	OFM Director	24 - 48 mos.																									
Storage Hardware Consolidation	OFM Director	24 - 48 mos.																									
Server Virtualization and Cloud Strategy																											
Establish State-Wide Standards		3 - 4 mos.																									
Agency Virtualization (Achieve 60 - 85%)	Agency CIOs	18 - 25 mos.																									
Implement Small Agency "Cloud" Shared Service	Utility Director	3 - 4 mos.																									

*Plans for on-going services and data hall transitions have not been defined beyond the RFP process