

# COMPUTING AND NETWORK INFRASTRUCTURE CONSOLIDATION BUSINESS CASE EVALUATION

Report of the Joint Finance and Technology Subcommittee  
July 12, 2004

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## Action Requested

The Joint Finance and Technology Subcommittees request that the Computing and Network Infrastructure Consolidation (CNIC) Governing Board accept its report on the evaluation of the CNIC Business Case.

## Summary

The following report describes the evaluation and findings of the Joint Finance and Technology Subcommittee regarding the CNIC Business Case. The joint subcommittee's evaluation finds that the business case criteria, adopted by the CNIC Governing Board were substantially met. The business case demonstrates that the State could realize substantial strategic and financial benefits by consolidating its computing and network infrastructure. Principal among these are:

- A consolidated data center and enterprise network can result in the same or better service for less cost to the public.
- A consolidated data center and enterprise network will position the State to more effectively coordinate and make strategic investments in State information technology resources.
- The current physical security and cybersecurity conditions in the State's computing and network infrastructure present an unacceptably high risk for state operations and public safety. A consolidated computing and network infrastructure better positions the State to effectively address security, disaster recovery, and business continuation planning.
- A consolidated data center and enterprise network positions the State to realize even greater benefits through hardware and software standardization.

Consolidation of Oregon's computing and network infrastructure is a complex task that is complicated by the diverse businesses and financing structure of the 12 participating CNIC agencies. Throughout this report, the joint subcommittee has identified critical problems that must be fully solved in the design phase and documented in an implementation plan before consolidation begins.

## **Recommendation**

The joint subcommittee recommends that the Governing Board find the business case “compelling” and that the Board recommend the Governor’s approval to proceed with the design phase of the project.

## **Analysis**

### **Methodology**

The business case was evaluated by a joint committee comprised of the CNIC Finance and Technology Subcommittees, using criteria that were developed by the Finance Subcommittee and adopted by the CNIC Governing Board at its June 14<sup>th</sup> meeting. In addition to the information provided in the business case presentation materials, the joint committee engaged the business case contractor (Accenture) in a series of meetings and discussions to clarify the presentation materials and to request and receive additional information.

In its evaluation, the joint committee used the most conservative estimate of benefits and was more liberal in estimating costs.

The joint subcommittee sought to validate the financial, “in scope” technology, facilities, and human resources information that the contractor used in developing the business case. The joint committee only considered data that could be validated in determining whether or not the business case met the criteria adopted by the Board.

A summary of the joint committee’s findings as well as specific findings are presented in this report.

### **Summary of Findings**

Table 1 shows a summary of the Subcommittees’ findings for each of the eight criteria adopted by the CNIC Governing Board. The business case meets seven of the eight criteria adopted by the Board. The joint subcommittee’s analysis shows that the “one-time” cost payback period could exceed the 36 month criterion adopted by the Board. The joint subcommittee’s analysis estimated the payback period to be 51 months. Nonetheless, the conservative nature of the joint subcommittee’s analysis makes it probable that additional operating savings will be identified in the design and implementation phase of the project resulting in a reduction in the payback period.

Table 1.

**Summary of Findings**

Criteria	Threshold	Finding
<p><b>1.0</b> At least one of the business models, described in the business case, clearly shows a compelling reduction in the “current state” data center operating budget.</p>	<p>The “future state” operating budget should clearly show a 15 percent or more reduction in the “current state” operating budget.</p>	<p>The single data center “future state” business model (CNCA1) meets this criterion (16.23 percent).</p> <p>The two data center “future state” business model (CNCA2) does not meet this criterion (10.39 percent).</p>
<p><b>2.0</b> “One-time” costs of implementing the “future state” business model(s) must be recovered in a short period of time.</p>	<p>“One-time” costs must be recovered in less than 36 months after the “future state” business model is fully operational.</p>	<p>The CNCA1 “future state” business model does not meet this criterion (51 months).</p> <p>The CNCA2 “future state” business model does not meet this criterion (71 months).</p>
<p><b>3.0</b> The business case must clearly describe a credible strategy for preventing degradation to the performance of “in scope” systems, applications and connectivity to other systems.</p>	<p>The CNIC Technology and Finance Subcommittees judge the strategy as credible and that the business case reasonably estimates the cost of the strategy.</p> <p>Assumes performance thresholds that meet or exceed “as is” performance.</p>	<p>The business case meets this criterion.</p>
<p><b>4.0</b> The “one-time” and “recurring” facility cost of implementing the “future state” model includes the “one-time” and “recurring” costs of facility(ies) acquisition and operation.</p>	<p>The CNIC Finance Subcommittee judges that facility(ies) costs have been reasonably estimated, properly classified, and evaluated appropriately.</p>	<p>The business case meets this criterion.</p>

Criteria	Threshold	Finding
<b>5.0</b> The business case concludes that there are no federal funds (OMB Circular A-87) barriers that are insurmountable.	The Finance Subcommittee judges that the business case has considered any significant federal funds issues and that the risk of proceeding to the “implementation planning phase” is reasonable.	The business case meets this criterion.
<b>6.0</b> The business case includes an estimate of the “one-time” and “recurring” human resources expenditures in the transitional and “future state” business models.	The CNIC Finance and Human Resources Subcommittees judge the assumptions and mitigating strategies to be credible and that the costs are reasonably estimated and properly classified.	The business case meets this criterion.
<b>7.0</b> The business case proposes a credible “future state” business model(s) and methods for classifying and analyzing information.	The CNIC Finance and Technology Committees judge the business case to be based on adequate information; that the information is properly classified; and that the analytic methods used are generally acceptable.	The business case meets this criterion.
<b>8.0</b> The business case includes a risk analysis which includes risk mitigation strategies.	The business case clearly and discretely identifies risks and classifies each risk as high, medium, or low. Cost estimates of risk mitigation are included and clearly classified as “transition” or “future state” risks.	The business case meets this criterion.

## **Specific Findings**

### **Criterion #1**

The business case shows an annual operating savings of \$10 million for the single consolidated data center “future state” business model and \$8.6 million for the two consolidated data center model. In the business case analysis, \$1.8 million estimated annual debt service costs were not offset against the savings. The joint subcommittee’s analysis offsets this cost against the operating savings for both “future state” business models. Further, based on current “in scope” staffing counts (7/9/04), the joint subcommittee’s analysis reduces the estimated annual operating savings, attributable to staffing, by \$3.2 million in both “future state” business models. The net effect of the joint subcommittee’s analysis is to reduce the estimated annual operating savings to \$5 million for the single data center model and to \$3.2 million for the two data center model.

The joint subcommittee’s treatment of debt service charges and adjustments to personal services savings results in an estimated annual operating budget reduction of 16 percent for the single data center and 10 percent for the two data centers model.

The joint subcommittee concludes that the single data center “future state” business model meets Criterion #1 and that the two data center model does not.

### **Criterion #2**

The business case shows “one-time” costs of the single data center and the two data centers models as \$11.8 million to \$15.3 million and \$12.9 million to \$16.9 million respectively. The payback periods for the “one-time” costs that were identified in the business case are 27-31 months and 31-37 months.

The joint subcommittee identified additional “one-time” costs of \$2.85 million (estimated). The additional costs include: the Accenture consulting contract (through the implementation design phase); additional costs of expert advice in resolving federal funds chargeback issues; additional costs of external (non-state employee) labor; and the cost of independent quality assurance oversight. Taken together with the reduction in estimated annual operating savings (cf. Criterion #1), these additional “one-time” costs extend the estimated payback period to 51 months for the single data center model and 71 months for the two data center model. In addition, the “one-time” cost of labor to backfill in state operations during the transition from “current state” to “future state” could be as much as \$2.2 million. In the worst case, the additional costs of labor would extend the payback period to 55 months (single data center) and 76 months (two data centers).

The joint subcommittee concludes that neither “future state” business model meets Criterion #2.

### **Criterion #3**

The joint committee considered whether or not the business case presented credible strategies for: a) preventing degradation of systems performance during transition from the current to the future state business model; and, b) insuring the same or better level of systems performance once the consolidated data center is operational. With respect to preventing performance degradation during the transition period, the joint committee found that the proposed strategies were credible and that the costs of the proposed strategies were included in the business case. With respect to systems performance, once the consolidated data center is operational, the joint committee found that it will be essential to establish service level agreements between the data center and its customers prior to certifying that the consolidated data center is ready for operations. These service level agreements will establish the metrics for evaluating systems performance and holding data center management accountable to its customers. This will be a crucial function of the “future state” governance model.

The joint subcommittee concludes that the business case meets Criterion #3.

### **Criterion #4**

The business case was reviewed, by the Facilities Subcommittee, to determine whether or not criterion #4 was met. The Facilities Subcommittee found that the criterion was met without specific findings. Further, the Department of Administrative Services’ Facilities Division and the Facilities Subcommittee believes that building a new facility, built to “right-sized” specifications, on State-owned land, in Salem could substantially reduce the facilities costs estimated in the business case.

### **Criterion #5**

The CNIC Finance Subcommittee found that business case presentation did not contain sufficient information to determine whether or not the business case met criterion #5. A working group of the Subcommittee conferred with Ken Hoffman, an expert on federal funds and who is familiar with Oregon’s finance structure (arranged by the business case contractor). Mr. Hoffman concluded that, in his opinion, there were not insurmountable federal funds barriers. He has provided an expert opinion letter to this effect.

Based on the conference with Mr. Hoffman, the Joint Finance and Technology Subcommittee concluded that federal funds issues, while significant, can be resolved in the design phase. However, the joint subcommittee also concluded that the business case “one-time” cost of for design and implementation of a chargeback model were significantly underestimated (\$100,000). In the judgment of joint subcommittee members the “one-time” cost for design and implementation of a chargeback model that would comply with U.S. Office of Management and Budget Circular A-87 could be as much as five times (\$500,000) the business case estimate.

The joint committee’s cost estimate extends the “one-time” cost payback period by less than one month.

The joint subcommittee concludes that Criterion #5 has been met.

### **Criterion #6**

Based on the information available, the joint subcommittee found that any unallocated “one-time” or “recurring” costs of human resources would not substantively influence the conclusions contained in the business case. However, the joint subcommittee emphasizes its concern that a comprehensive program to mitigate the employee impact of transition to the “future state” business model should be a first order of business in the design phase of the consolidation project.

The joint subcommittee concludes that Criterion #6 has been met.

### **Criterion #7**

The joint subcommittee concluded that the business case met this criterion. The business case contractor provided the joint subcommittee with an oral presentation and materials that describe the “future state” business model that was envisioned in making cost and benefit comparisons between the “current state” and “future state” (consolidated data center and network) business models. Additionally, the business case contractor provided the joint committee references supporting the industry staffing models used in the “future state” business model. Based on this information, the joint committee found the assumptions underlying the “future state” business model to be reasonable and credible.

The joint subcommittee concludes that Criterion #7 has been met.

### **Criterion #8**

The joint subcommittee concludes that the business case met this criterion with no specific findings.

### **Other Findings and Recommendations**

In addition to the specific findings listed above, the joint committee presents the following findings.

#### **Governance Model**

The consolidated data center and network is a cooperative business model that requires active involvement and direction from its governing board. The joint committee recommends that the CNIC Governing Board immediately set about the work of establishing a governance model for the consolidated data center and network. In particular, the joint committee recommends that the governance model: a) clearly defines the roles of the data center management and their line of accountability to the governing board; b) clearly defines the roles and relationships between the data center management, the State Chief Information Officer, state agency chief information officers, and the governing board; and, c) provides the governing board with independent information technology audit and, financial and policy analysis capability.

#### **Service Level Agreements**

The joint committee found that service level agreements between the data center and its customers are crucial for performance accountability and effective governance of the consolidated

data center and network. Prior to achieving operational capacity, the consolidated data center and network management should provide the governing board with negotiated service level agreements. The governing board should review and adopt the service level agreements as metrics for evaluating the performance of the consolidated data center and network.

### **Agency Participation**

In the implementation design phase of the CNIC project, the relative cost-benefit of individual agency participation, in the consolidated data center and network, should be evaluated and considered by the CNIC Governing Board in design and phasing implementation.

### **Updated Business Case**

The joint committee recommends that the CNIC Governing Board request that the business case contractor update the original business case analysis by incorporating the findings of this report.

## **Submitted**

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This report is submitted to the CNIC Governing Board on July 12, 2004.

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