BUSINESS CONTINUITY

SYSTEMWIDE

Audit Report 10-75
May 6, 2011

Members, Committee on Audit

Henry Mendoza, Chair
Melinda Guzman, Vice Chair
Margaret Fortune  Steven M. Glazer
William Hauck   Hsing Kung   Linda Lang

Staff

University Auditor: Larry Mandel
Senior Director: Michelle Schlack
Audit Manager: Michael Zachary
Senior Auditors: Ann Hough, Dane MacDonald, Linda Rathfelder

BOARD OF TRUSTEES
THE CALIFORNIA STATE UNIVERSITY
# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>1</td>
</tr>
<tr>
<td>Introduction</td>
<td>2</td>
</tr>
<tr>
<td>Background</td>
<td>2</td>
</tr>
<tr>
<td>Purpose</td>
<td>4</td>
</tr>
<tr>
<td>Scope and Methodology</td>
<td>5</td>
</tr>
<tr>
<td>OBSERVATIONS, RECOMMENDATIONS, AND MANAGEMENT RESPONSES</td>
<td></td>
</tr>
<tr>
<td>Systemwide Policies and Procedures</td>
<td>6</td>
</tr>
</tbody>
</table>
APPENDICES

APPENDIX A: Personnel Contacted
APPENDIX B: Management Response
APPENDIX C: Chancellor’s Acceptance

ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC</td>
<td>Business Continuity</td>
</tr>
<tr>
<td>BCP</td>
<td>Business Continuity Plan(s)</td>
</tr>
<tr>
<td>CGC-1</td>
<td>Continuing Guidance Circular 1</td>
</tr>
<tr>
<td>COOP/COG</td>
<td>Continuity of Operations/Continuity of Government Plan</td>
</tr>
<tr>
<td>CSU</td>
<td>California State University</td>
</tr>
<tr>
<td>EO</td>
<td>Executive Order</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>OES</td>
<td>Office of Emergency Services</td>
</tr>
<tr>
<td>ORM</td>
<td>Office of Risk Management</td>
</tr>
<tr>
<td>RMPS</td>
<td>Risk Management and Public Safety</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

As a result of a systemwide risk assessment conducted by the Office of the University Auditor during the last quarter of 2009, the Board of Trustees, at its January 2010 meeting, directed that Business Continuity (BC) be reviewed. The Office of the University Auditor has not previously reviewed Business Continuity as a standalone subject, but certain aspects of BC were reviewed as part of the Disaster and Emergency Preparedness audits in 2006.

We visited five campuses from August 23, 2010, through December 16, 2010, and audited the procedures in effect at that time. Campus specific findings and recommendations have been discussed and reported individually.

Our study and evaluation did not reveal any significant internal control problems or weaknesses that would be considered pervasive in their effects on BC activities. However, we did identify a reportable weakness that is described in the executive summary and body of this report. In our opinion, the operational and administrative controls for BC activities in effect as of December 16, 2010, taken as a whole, were sufficient to meet the objectives stated in the “Purpose” section of this report.

As a result of changing conditions and the degree of compliance with procedures, the effectiveness of controls changes over time. Specific limitations that may hinder the effectiveness of an otherwise adequate system of controls include, but are not limited to, resource constraints, faulty judgments, unintentional errors, circumvention by collusion, and management overrides. Establishing controls that would prevent all these limitations would not be cost-effective; moreover, an audit may not always detect these limitations.

The following summary provides management with an overview of conditions requiring attention. Areas of review not mentioned in this section were found to be satisfactory. Numbers in brackets [ ] refer to page numbers in the report.

SYSTEMWIDE POLICIES AND PROCEDURES [6]

Timelines for the development and implementation of business impact analyses and business continuity plans that are determined by the campuses to provide mission critical functions had not been established.
INTRODUCTION

BACKGROUND

Business continuity (BC) is the ability of an organization to provide service and support for its customers and to maintain viability following a catastrophic event. BC is closely related to emergency preparedness, as they both involve substantial planning, risk assessment, and evaluation of impact to the business. However, the two areas differ in scope. The goal of emergency preparedness is to address the immediate impacts of a disaster and to respond as needed to end the emergency. In contrast, BC is a broader process of preparation that includes disaster, response, recovery, mitigation, risk reduction, prevention, and preparedness.

A business continuity plan (BCP) defines how business activities will be restored after an interruption. Key resources for guidance in creating such a plan include the Federal Emergency Management Agency Continuity Guidance Circular 1 (CGC-1), Continuity Guidance for Non-Federal Entities, which provides broad principles that are applicable to agencies and businesses nationwide. In addition, the Continuity of Operations/Continuity of Government Plan (COOP/COG), released by the California Office of Emergency Services (OES) (now the California Emergency Management Agency), provides guidance on applying the principles put forth in CGC-1 within the State of California.

The California State University (CSU) system has been involved in BC activities for many years. However, it was not until recently that the CSU established formal guidelines for BC activities. In early 2006, the CSU Office of Risk Management (ORM) requested that each campus prepare a written BCP in the event a pandemic influenza were to occur. The ORM distributed the Avian Pandemic Influenza Business Continuity Planning Guide to all CSU campuses in order to aid campus staff involved in emergency and restoration planning to develop their own BCP. To ensure the adequacy and consistency of pandemic influenza BCPs systemwide, the ORM commissioned James Lee Witt Associates, a part of GlobalOptions Group, Inc., to review all pandemic influenza BCP and report the results to the ORM. In August 2007, James Lee Witt Associates’ Pandemic Influenza Business Continuity Plan Assessment Final Report was issued, and it provided key recommendations in the form of strategic themes for each campus and the entire CSU system as a whole.

In October 2007, the CSU finalized and implemented Executive Order (EO) 1014, California State University Business Continuity Program. It models the California OES COOP/COG, though in a streamlined format, and is a fundamental guidance document for the chancellor’s office and the campuses as they develop and implement BCP for essential business units. EO 1014 clearly defines responsibility for BC, including significant roles at the campuses, and outlines specific procedures for the business impact analysis, risk assessment, and development of BCP, as well as testing and exercising of BCP, maintenance of BCP, required communications, training, and record retention. It also indicates that BC programs at campuses must include disaster recovery planning, and therefore necessitates BCP for significant information technology areas.

Under the plan, any business unit that a campus deems essential must develop a business impact analysis, which is defined in EO 1014 as:

A process designed to prioritize business functions by assessing the quantitative (financial) and qualitative (non-financial) impact that might result if an organization was to experience a catastrophic
event. The business impact analysis will identify essential functions and workflow, determine the qualitative and quantitative impacts of a vulnerability/threat to essential functions, prioritize and establish recovery time objectives for the essential functions, and, if appropriate, establish recovery point objectives for essential functions.

In addition, each of these business units must develop a risk assessment, which is defined in EO 1014 as:

A process of identifying risks to an organization, assessing the essential functions necessary for an organization to continue business operations, defining the controls in place to reduce organization exposure, and evaluating the cost for such controls. Risk analysis often involves an evaluation of the probabilities of a particular event. The risk assessment will identify vulnerabilities and threats that may impact the business units’ ability to fulfill the mission of the campus and define the controls in place to reduce the exposure to vulnerabilities/threats.
PURPOSE

Our overall audit objective was to ascertain the effectiveness of existing policies and procedures related to BC and to determine the adequacy of controls that ensure compliance with relevant governmental regulations, Trustee policy, Office of the Chancellor directives, and campus procedures.

Within the audit objective, specific goals included determining whether:

- Administration of BC incorporates a defined mission, stated goals and objectives, and clear lines of organizational authority and responsibility.

- The BC program as a whole coordinates and integrates with the emergency response plan, safety and health plans, or other related plans.

- Necessary contacts for essential business units have been identified.

- Policies and procedures around key aspects of BC programs have been documented and implemented.

- Business resumption and continuity strategies have been developed.

- Information backup procedures are sufficient to provide the availability of backup data subsequent to an emergency.

- Business impact analyses, risk assessments, and BCPs have been developed for each business unit identified as essential to operations continuity.

- Campuses have developed campuswide pandemic influenza BCPs, conducted periodic testing of the plans, and reviewed and updated the plans cyclically.

- BCPs are tested periodically, and test results and lessons learned are reviewed, documented, and applied.

- BCPs are adequately monitored and maintained.

- Ongoing communication of BC activities adequately provides oversight, monitoring, and feedback to involved management.

- A formalized BC training program exists, and all individuals responsible for developing and implementing BCP have been adequately trained.

- All BC records are maintained for no less than five years.
SCOPE AND METHODOLOGY

The proposed scope of the audit as presented in Attachment B, Audit Agenda Item 2 of the January 26 and 27, 2010, meeting of the Committee on Audit stated that BC includes program and facility readiness and resource planning for the recovery, within a predetermined time, from any catastrophic event, be it natural or man-made. Proposed audit scope would include review of Trustee policy, systemwide directives, and campus policies and procedures; a study of the essential functions or operations following a catastrophic event; business impact analysis and risk assessment; BC and disaster recovery plans; testing and exercising of plans; plan maintenance, communications, and training; and necessary retention of key records.

Our study and evaluation were conducted in accordance with the International Standards for the Professional Practice of Internal Auditing issued by the Institute of Internal Auditors, and included the audit tests we considered necessary in determining that accounting and administrative controls are in place and operative. This review emphasized, but was not limited to, compliance with state and federal laws, Board of Trustee policies, and Office of the Chancellor policies, letters, and directives. The audit focused on procedures in effect from August 23, 2010, through December 16, 2010.

A preliminary risk assessment of campus BC was used to select for our audit testing those areas or activities with highest risk. This assessment was based upon a systematic process using management’s feedback and professional judgments on probable adverse conditions and other pertinent information, including prior audit history in this area. We sought to assign higher review priorities to activities with higher risks. As a result, not all risks identified were included within the scope of our review.

Based upon this assessment of risks, we specifically included within the scope of our review the following:

- Organization and responsibilities for BC.
- Cooperative interaction between the BCP and other internal plans and policies.
- Strategies for business resumption and continuity.
- Policies and procedures documenting key aspects of BC programs.
- Existence of business impact analyses and risk assessments.
- Existence, review, and testing of BCP and pandemic influenza BCP.
- Sufficiency of information backup and recovery procedures for critical data.
- Monitoring and maintenance of BCP and pandemic influenza BCP.
- Sufficiency of BC communications both on and off campuses.
- BC training and formalized training programs.
- Recordkeeping for BC.

During the course of the audit, we visited five campuses: Bakersfield, Channel Islands, Los Angeles, San Diego, and San Jose. We interviewed campus personnel and audited procedures in effect at the time of audit.
OBSERVATIONS, RECOMMENDATIONS, AND MANAGEMENT RESPONSES

SYSTEMWIDE POLICIES AND PROCEDURES

Timelines for the development and implementation of business impact analyses and business continuity plans (BCP) that are determined by the campuses to provide mission critical functions had not been established.

Government Codes §13402 and §13403 state that management is responsible for establishing and maintaining a system of internal administrative controls, which includes documenting the system, communicating system requirements to employees, and assuring that the system is functioning as prescribed and is modified, as appropriate, for changes in conditions. Further, administrative controls are the methods through which reasonable assurance can be given that measures adopted by state agency heads to safeguard assets and promote operational efficiency are being followed.

EO 1014, California State University Business Continuity Program, dated October 8, 2007, states that each business unit that is determined by the university to provide essential functions shall conduct a business impact analysis and risk assessment. Additionally, each business unit that is determined by the university to provide essential functions shall develop a BCP that reflects sufficient forethought and detail to ensure a high probability of successful maintenance or restoration of essential functions following an unfavorable event.

The assistant systemwide risk manager, liability and property, risk management and public safety, stated that specific dates for implementation of business impact analyses, risk assessments, and BCPs had not been established because of the diverse needs and requirements for business continuity (BC) at each campus.

Failure to require documentation and implementation of significant BC program requirements by specific dates increases the risk that essential campus functions would be unable to effectively and quickly recover from a catastrophe or disaster.

Recommendation 1

We recommend that the chancellor’s office remind the campuses that BC planning is a prudent business practice and that presidents shall establish a timeline for the development and implementation of business impact analyses and BCPs that are determined by the campus to provide mission critical functions.

Management Response

We concur. Systemwide Risk Management and Public Safety will provide a reminder to the campuses that business continuity planning is a prudent business practice and that presidents shall establish a timeline for the development and implementation of business impact analyses and business continuity plans that are determined by the campus to provide mission critical functions. The timelines shall be completed by December 20, 2011, with a copy forwarded to the Office of Systemwide Risk Management and Public Safety.
## APPENDIX A:
### PERSONNEL CONTACTED

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Office of the Chancellor</strong></td>
<td></td>
</tr>
<tr>
<td>Benjamin F. Quillian</td>
<td>Executive Vice Chancellor and Chief Financial Officer</td>
</tr>
<tr>
<td>George Ashkar</td>
<td>Assistant Vice Chancellor/Controller, Financial Services</td>
</tr>
<tr>
<td>Mark Crase</td>
<td>Senior Director, Strategic Initiatives and Planning, Information Technology (IT)</td>
</tr>
<tr>
<td>Zachary Gifford</td>
<td>Assistant Systemwide Risk Manager, Liability and Property, Risk Management and Public Safety (RMPS)</td>
</tr>
<tr>
<td>Nate Johnson</td>
<td>Chief Law Enforcement Officer, RMPS</td>
</tr>
<tr>
<td>Charlene Minnick</td>
<td>Assistant Vice Chancellor, RMPS</td>
</tr>
<tr>
<td>John Rolon</td>
<td>Infrastructure Service Manager, Strategic Initiatives and Planning, IT</td>
</tr>
<tr>
<td>Cheryl Washington</td>
<td>Senior Director, Information Security Management, IT</td>
</tr>
<tr>
<td><strong>California State University, Bakersfield</strong></td>
<td></td>
</tr>
<tr>
<td>Horace Mitchell</td>
<td>President</td>
</tr>
<tr>
<td>Crystal Becks</td>
<td>Director of Housing</td>
</tr>
<tr>
<td>Kellie Garcia</td>
<td>Director, Human Resources</td>
</tr>
<tr>
<td>John Hultsman</td>
<td>Vice President of Student Affairs</td>
</tr>
<tr>
<td>Michael Neal</td>
<td>Vice President, Business and Administrative Services</td>
</tr>
<tr>
<td>Clark Sanford</td>
<td>Assistant Vice President, Information Technology</td>
</tr>
<tr>
<td>Juli Smith</td>
<td>Interim Director, Safety &amp; Risk Management</td>
</tr>
<tr>
<td>Doug Wade</td>
<td>Assistant Vice President, Fiscal Services</td>
</tr>
<tr>
<td><strong>California State University, Channel Islands</strong></td>
<td></td>
</tr>
<tr>
<td>Richard R. Rush</td>
<td>President</td>
</tr>
<tr>
<td>Joanne Coville</td>
<td>Vice President of Finance and Administration (At time of review)</td>
</tr>
<tr>
<td>Diana Enos</td>
<td>Human Resources Manager</td>
</tr>
<tr>
<td>Deborah Gravelle</td>
<td>Director, Leadership, Career, and Health Office</td>
</tr>
<tr>
<td>Edwin Lebiodia</td>
<td>Associate Vice President of Student Affairs</td>
</tr>
<tr>
<td>Justin Magruder</td>
<td>Administrator, Moorpark Family Medical Care Clinic</td>
</tr>
<tr>
<td>Anna Pavin</td>
<td>Interim Associate Vice President of Human Resources</td>
</tr>
<tr>
<td><strong>California State University, Los Angeles</strong></td>
<td></td>
</tr>
<tr>
<td>James M. Rosser</td>
<td>President</td>
</tr>
<tr>
<td>Kyle Button</td>
<td>Vice President of Institutional Advancement</td>
</tr>
<tr>
<td>Lisa Chavez</td>
<td>Vice President, Administration and Chief Financial Officer</td>
</tr>
<tr>
<td>Kim Clapp</td>
<td>Director, Office of Disabled Students</td>
</tr>
<tr>
<td>Stephen Fleischer</td>
<td>Director, Housing Services</td>
</tr>
<tr>
<td>Jose Gomez</td>
<td>Associate Vice President for Administration and Finance</td>
</tr>
<tr>
<td>Tanya Ho</td>
<td>University Auditor</td>
</tr>
<tr>
<td>Monica Jazzabi</td>
<td>Director, Student Health Center</td>
</tr>
<tr>
<td>Thomas Johnson</td>
<td>Director, Procurement and Contracts</td>
</tr>
<tr>
<td>Greg King</td>
<td>Director of Public Safety and University Police</td>
</tr>
<tr>
<td>Thomas Leung</td>
<td>University Controller</td>
</tr>
</tbody>
</table>
APPENDIX A: PERSONNEL CONTACTED

California State University, Los Angeles (cont.)
Vince Lopez Director, Admissions and Recruitment
Nancy Wada McKee Assistant Vice President, Student Affairs
Karen Melick Director, Administrative Technology
Tamie Nguyen Director, Financial Aid
Sheryl Okuno Director, ITS Security and Compliance
Chris Rapp Director, ITS Infrastructure
Sal Rodriguez Senior Auditor
Anthony Ross Vice President for Student Affairs
Lisa Sanchez Assistant Vice President, Human Resources Management
Mae Santos Assistant Vice President for Administration and Finance
Ashish Vaidya Provost and Vice President for Academic Affairs
Susan Varela Director of Human Resources Management
Matt Warren Fiscal Officer

California State Polytechnic University, Pomona
Lisa Dye Human Resources and Business Continuity Analyst, Human Resource Services

San Diego State University
Stephen L. Weber President (At time of review)
Scott Burns Associate Vice President, Financial Operations
Valerie Carter Audit and Tax Director, Business and Financial Affairs
Shawndalyn Duncan Dispatcher II, Public Safety
Chrys Dutton Director, Office of Financial Aid and Scholarships
Asami Guenther Tax Analyst, Business and Financial Affairs
Alicia Hokenson Manager, Information Systems
Nancy Lopez Assistant to the Vice President, Business and Financial Affairs
Catherine Love Employment Manager, Human Resources
Elvira McCalip Director of Human Resources
Chip Pierce Assistant Director, Systems, Office of Financial Aid and Scholarships
Debbie Richeson Director of Auxiliary Services, Public Safety
Sally Roush Vice President for Business and Financial Affairs
Lisa Winters Payroll and Benefits Manager, Human Resources

San José State University
Don Kassing Interim President (At time of review)
Ana Harris Administrative Services Coordinator, Administration and Finance Division (AFD)
Rose Lee Vice President and Chief Financial Officer, AFD
Ninh Pham-Hi Director, Internal Control, AFD
Dorothy Poole Assistant Vice President, AFD
MEMORANDUM

DATE:       June 28, 2011

TO:         Larry Mandel
            University Auditor

FROM:       Benjamin F. Quillian
            Executive Vice Chancellor and
            Chief Financial Officer

SUBJECT:    Management Response to Recommendation of Audit Report #10-75,
            Business Continuity, Systemwide

In response to the "Incomplete Draft" report dated May 19, 2011, we are providing the
enclosed management response. Please note that in the response, the department of
Risk Management and Public Safety will act on behalf of the chancellor’s office.
Should you have any questions, please feel free to contact Charlene Mnnick or myself.

BFQ:tlje

Attachment

c:        Charlene Mnnick, Assistant Vice Chancellor, Risk Management & Public Safety
BUSINESS CONTINUITY

SYSTEMWIDE

Audit Report 10-75

SYSTEMWIDE POLICIES AND PROCEDURES

Recommendation 1

We recommend that the chancellor’s office remind the campuses that BC planning is a prudent business practice and that presidents shall establish a timeline for the development and implementation of business impact analyses and BCPs that are determined by the campus to provide mission critical functions.

Management Response

We concur. Systemwide Risk Management & Public Safety will provide a reminder to the campuses that Business Continuity planning is a prudent business practice and that presidents shall establish a timeline for the development and implementation of business impact analyses and business continuity plans that are determined by the campus to provide mission critical functions. The timelines shall be completed by December 20, 2011 with a copy forwarded to the Office of Systemwide Risk Management and Public Safety.
July 13, 2011

MEMORANDUM

TO: Mr. Larry Mandel
University Auditor

FROM: Charles B. Reed
Chancellor

SUBJECT: Draft Final Report 10-75 on Business Continuity, Systemwide

In response to your memorandum of July 13, 2011, I accept the response as submitted with the draft final report on Business Continuity, Systemwide.

CBR/amd