

Z - ALTITUDE RESEARCH (FICTITIOUS DEPT.)
Business Continuity Plan

Most recent update: November 12, 2008

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1. General Information

Business unit: Natural Sciences and Mathematics

Number of personnel (approximate headcount):

- 17 Faculty and other academic appointees
- 10 Staff (full-time)
- 2 Staff (part-time, excluding students)
- 16 Student-staff
- 18 Other

Location(s): Boettcher Center West, F.W. Olin Hall

Any rented space? Yes

Location(s) of rented space? Research facilities in Empire Building, 123 Main St., Leadville, Colorado

Comment: "Other" staff is the crew of the exploration lab -- 5 FTE plus 13 seasonal employees.

Critical Functions performed by this unit (functions that are essential to the conduct of DU's teaching, research & public service activities during a major crisis):

- Classroom instruction
- Research
- Payroll
- Purchasing
- Donor Relations

Extraordinary functions (special functions that this unit may need to perform during a time of crisis):

Functions judged to be non-critical:

- Publish quarterly Mountain Research Journal
- Education tours for public in off-season

Contact person(s) for this business continuity plan: Scott Wiggans

2. Preparation Phase (pre-disaster)

"An ounce of prevention is worth a pound of cure."

The most effective way to handle a major disaster is to act ahead of time to reduce (mitigate) the potential impacts. Our business continuity plan identifies a number of such mitigative actions. We call them **ACTION ITEMS**.

Some of these Action Items may be doable now. Others may require additional resources. Still others may be within the province of another unit, or of the campus as a whole. Taken together, these Action Items are the most important outcome of business continuity planning – a "To Do List" for disaster readiness.

1. Do periodic trail-recoveries of servers/applications

Supports critical function: Information Technology
 Estimated cost: \$1,000 - \$10,000
 Cost one-time or annual: Annual
 Within whose scope: My unit together with other units on campus
 Status: In progress

2. Have department IT manager discuss work-from-home issues at faculty meeting

Supports critical function: Information Technology
 Estimated cost: Less than \$100
 Cost one-time or annual: One-time
 Within whose scope: My unit itself
 Status: Completed

3. Make mutual arrangements with other departments to borrow technical staff if needed during recovery

Supports critical function: Information Technology
 Estimated cost: Don't know
 Cost one-time or annual:
 Within whose scope: The campus
 Status: In progress

4. Request faculty committee to develop strategy for secure storage of non-electronic research materials.

Supports critical function: Faculty Preparedness
 Estimated cost:
 Cost one-time or annual:
 Within whose scope:
 Status:

5. Develop plan for alternate space in case some classrooms are not usable

Supports critical function: Classroom instruction
 Estimated cost: \$100 - \$1,000
 Cost one-time or annual: One-time
 Within whose scope: The campus
 Status: In progress

6. Request faculty committee to develop strategy for alternate-channel delivery of courses (in case there is a temporary shortage of classrooms post-disaster)

Supports critical function: Classroom instruction
 Estimated cost: \$100 - \$1,000
 Cost one-time or annual: One-time
 Within whose scope: My unit together with other units on campus
 Status: Not yet begun

7. Cross train 2 staff-members to process dept. payroll and Banner transactions (serve as backup)

Supports critical function: Payroll
 Estimated cost: Less than \$100
 Cost one-time or annual: Annual
 Within whose scope: My unit itself
 Status: In progress

8. Investigate whether P-card limits & restrictions can be lifted for recovery period

Supports critical function: Purchasing
Estimated cost: Less than \$100
Cost one-time or annual: One-time
Within whose scope: My unit together with other units on campus
Status: Completed

9. Obtain 2 additional P-cards

Supports critical function: Purchasing
Estimated cost: Less than \$100
Cost one-time or annual: One-time
Within whose scope: My unit itself
Status: Completed

10. Design departmental networks to allow faculty & students to connect remotely (e.g. from home) in case office/lab is damaged.

Supports critical function: Research
Estimated cost: Don't know
Cost one-time or annual: One-time
Within whose scope: My unit together with other units on campus
Status: Needs further discussion

11. Develop a fund for emergency grants to faculty & graduate students to cover expenses of conducting research in alternate ways or at alternate locations.

Supports critical function: Research
Estimated cost: Don't know
Cost one-time or annual: Annual
Within whose scope: The campus
Status: Not yet begun

12. Develop a plan for alternate office space for faculty & graduate students in case normal office space is not usable.

Supports critical function: Undergraduate Instruction
Estimated cost: Less than \$100
Cost one-time or annual: One-time
Within whose scope: My unit together with other units on campus
Status: Not yet begun

13. Prioritize course list on Registrar's web site each semester

Supports critical function: Undergraduate Instruction
Estimated cost:
Cost one-time or annual:
Within whose scope:
Status:

3. Information & Strategies for Operating During Crisis

(how to continue or resume our critical functions)

- A. Critical Functions
- B. Information Technology
- C. Faculty Preparedness
- D. Key People & Resources

3-A. Critical Functions

1. **Classroom instruction:** Undergraduate & graduate instruction, including staff support of faculty.
 - Section or unit that performs this function (if applicable): N/A
 - Responsible person(s): Faculty instructors
Graduate student instructors
 - Upstream dependencies (units or systems whose failure-to-perform will affect us): Registrar's Office (undergrad registration, course & classroom scheduling)
Financial Aid office (undergrad financial aid)
Graduate Division Office (grad student registration & financial aid)
Facilities Management (space)
Media Services (classroom electronics)
Campus Bookstore (book ordering & sales)
 - Downstream dependencies (units or systems that will be affected by our failure-to-perform): Students
 - Peak periods: January, April, September
start of quarters
 - Space - How to perform this function if the usual space is not available: - We will depend on the campus to handle space issues.
- In the event that sufficient classroom space is not available, the Chair has provided to the Registrar (in advance of each quarter) a prioritization of courses for post-disaster resumption. Courses of lower priority for which classroom space is not available either will be held at an informal location chosen by the Faculty Instructor, or will be cancelled.
 - Equipment - How to perform this function if the usual equipment is not available: The equipment most necessary for classroom instruction are
- textbooks
- computers (faculty & student)
- library materials.
Classes could begin in the absence of any one of these three, perhaps even two of the three. However, all three would be need to be available by the end of the first month of instruction. If the interruption were to occur partway through the quarter, functioning in the absence of any of the three would be more difficult.
 - Staff - How to perform this function if faculty/staff absenteeism averages 50% for two months (e.g. during pandemic flu): --- Staff: We could prioritize staff work and share tasks among those who are at work. We would need to cross-train in advance for this to succeed.
--- Faculty: We could tap graduate student instructors to fill in for absent faculty. Temporary lecturers might also be obtained from the Rocky Mountain Institute. The Chair's list of potential faculty recruits could also be a source of names.
 - Unique skills - Personnel with unique skills, knowledge, or files whose absence would create difficulty: Faculty. See above.
 - Working at home - Can this critical function be performed with some (or all) staff working from home? Equipment, supplies, and arrangements that would be needed?: --- Staff can work from home if their computers are adequate & if they have broadband connections (cable, DSL). Some staff currently work from home. We use Windows Remote Desktop.
--- Some faculty could work from home using podcast technology. Most could not.
 - Data networks - How to perform this function if computer networks are not available: Classes could be held in the absence of computer networks for about one month, but would require the networks to function after that time. If the interruption occurs partway through a semester, tolerance for non-functioning networks would be lower.
 - Show Stoppers (resources that cannot be replaced, substituted, or done without): Most faculty
Most graduate student instructors.
 - Campus closure - If campus closure were declared, would it be POSSIBLE to stop doing this critical function for a month or two? Yes
 - Comment: Exception is if the Vail mountain pass or Eisenhower tunnel are inaccessible
 - Risks generated by using alternate procedures: Primary risk is that students would be unable to take desired courses.
 - Policy exceptions needed for alternate procedures (& who can grant these exceptions): Changes in curriculum & academic calendar. Need approval by Dean, Executive Vice Chancellor, and Academic Senate.
 - Timing - when must this function restart, to enable the campus to meet its 30-day goal for restarting teaching and research? 30 days post-disaster (simultaneous with teaching/research)

- Additional vulnerabilities (other things that could prevent continuing this function, or restarting it on time):
None that we can think of.
- Records that will be vital for restarting this function:

Name of Records: Student Course Rosters
 Medium: Paper
 Owner: Other dept. or school is owner
 Location: 453 Higgins Hall
 Backup details: No backup-destruction would pose great difficulty

Name of Records: Student Folders
 Medium: Paper
 Owner: My own dept or school owns these records
 Location: 234 Higgins Hall
 Backup details: Duplicates are kept in separate location

- Consequences - if this function is not restarted on time, these harmful consequences might result:

Possible Harmful Consequence	How long after the disaster might this harm begin to occur?						Comment
	0-2 days	1 wk	2 wks	3 wks	4 wks	>4 wks	
Disruption of teaching			x				more than 2 weeks without classes is hard to recover from.
Disruption of research							
Loss of faculty							
Loss of staff							
Loss of students							
Well-being of faculty/staff							
Well-being of students							
Payment deadlines unmet by campus							
Loss of revenue to campus			x				lost tuition if students leave
Legal obligations unmet by campus							
Legal harm to university							
Impact on other campus unit(s)							
Impact on important bus partner(s)							
Other							

- Key Documents: See Appendix.

2. **Research:** Faculty research & graduate student research, including staff support

- Section or unit that performs this function (if applicable): N/A
- Responsible person(s): Faculty
- Upstream dependencies (units or systems whose failure-to-perform will affect us): --- Campus libraries
--- Campus IT networks
--- Facilities Management (space)
--- Sponsored Projects Office (communication with grantors)
- Downstream dependencies (units or systems that will be affected by our failure-to-perform): Faculty
Graduate students
- Peak periods: April, May, November, December
Peak periods are typically connected with the fall & spring research expeditions
- Space - How to perform this function if the usual space is not available: --- We will depend on the Campus to handle space issues.
--- In the event that the usual office space for faculty & graduate students is not available, faculty & grad students will be encouraged & assisted to work from home (see action items below).
- Equipment - How to perform this function if the usual equipment is not available: The equipment most necessary for research in the field of Altitude Research are

- computers
- equipment & measuring instruments
- library materials.

A short-term alternative if campus computer networks are down would be to work elsewhere (e.g. home). A short-term alternative if campus libraries are closed would be to use other libraries (even if travel were required – see action items below). It is anticipated that individual faculty and graduate students would devise their own best (temporary) solutions.

- Staff - How to perform this function if faculty/staff absenteeism averages 50% for two months (e.g. during pandemic flu): Affected research projects might have to delay their schedules. Substitutes are generally not feasible for faculty & graduate students engaged in research.
- Unique skills - Personnel with unique skills, knowledge, or files whose absence would create difficulty: See "staff" section above. Research skills are not easily replaced.
- Working at home - Can this critical function be performed with some (or all) staff working from home? Equipment, supplies, and arrangements that would be needed?: --- Faculty & staff & students can work from home if their computers are adequate & if they have broadband connections (cable, DSL). Some staff currently work from home. We use Windows Remote Desktop.
--- Support from our IT staff would be necessary to iron out problems.
- Data networks - How to perform this function if computer networks are not available: Faculty could conduct their research projects in whatever fashion possible. It is anticipated that individual faculty and graduate students would devise their own best (temporary) solutions.
- Show Stoppers (resources that cannot be replaced, substituted, or done without): Computer networks and libraries (except for short-term).
- Campus closure - If campus closure were declared, would it be POSSIBLE to stop doing this critical function for a month or two? Yes
- Comment: --- Professors would typically continue their research in any fashion possible. Few faculty would see themselves as "shut down."
- Risks generated by using alternate procedures: If research projects are unable to continue for extended periods of time, funding could be threatened by lack-of-performance. To control this risk, communication with granting agencies should be established ASAP after the crisis hits.
- Policy exceptions needed for alternate procedures (& who can grant these exceptions): Granting agencies might be asked to alter/waive conditions of grants to allow recovery periods.
- Timing - when must this function restart, to enable the campus to meet its 30-day goal for restarting teaching and research? 30 days post-disaster (simultaneous with teaching/research)
- Additional vulnerabilities (other things that could prevent continuing this function, or restarting it on time): None.
- Records that will be vital for restarting this function:

Name of Records: Student Course Rosters
 Medium: Paper
 Owner: Other dept. or school is owner
 Location: 453 Higgins Hall
 Backup details: No backup-destruction would pose great difficulty

Name of Records: Student Folders
 Medium: Paper
 Owner: My own dept or school owns these records
 Location: 234 Higgins Hall
 Backup details: Duplicates are kept in separate location

- Consequences - if this function is not restarted on time, these harmful consequences might result:

Possible Harmful Consequence	How long after the disaster might this harm begin to occur?						Comment
	0-2 days	1 wk	2 wks	3 wks	4 wks	>4 wks	
Disruption of teaching							
Disruption of research	x						
Loss of faculty							
Loss of staff							
Loss of students							
Well-being of faculty/staff	x						
Well-being of students							

Payment deadlines unmet by campus									
Loss of revenue to campus									Possible loss of grant funding
Legal obligations unmet by campus									
Legal harm to university									
Impact on other campus unit(s)									
Impact on important bus partner(s)									We have several corporate research partners.
Other									

- Key Documents: See Appendix.

3. Payroll: Processing of payroll information for all departmental personnel (campus has central payroll system to which departmental payroll assistant submits information).

- Section or unit that performs this function (if applicable): Departmental Business Office
- Responsible person(s): Mary Jones, Budget Officer
Harry Chan, Payroll Assistant
- Upstream dependencies (units or systems whose failure-to-perform will affect us): Central IT (all payroll systems are web-based).
- Downstream dependencies (units or systems that will be affected by our failure-to-perform): Central Payroll
Faculty & staff who might receive incorrect (or no) paychecks.
- Peak periods:
No peak periods. Load is somewhat lighter in summer due to fewer student employees.
- Space - How to perform this function if the usual space is not available: --- We will depend on the Campus to handle space issues.
--- If Campus does not quickly provide alternate space, the Budget Officer will arrange alternate location for payroll assistant to work (telecommute if possible).
--- In the event that departmental payroll processing cannot be done in a timely fashion, campus Central Payroll has committed to re-issuing the former period's payroll checks to all personnel (then making corrections later).
- Equipment - How to perform this function if the usual equipment is not available: The equipment needed for the payroll function are
--- a computer for the payroll assistant (plus network connection)
--- staff personnel files (paper).
If computer or network are not available, Central Payroll has committed to furnish (paper) data-gathering forms to all departments for manual submission of payroll changes. If staff personnel folders are not available, payroll information contained therein is available from on-line Campus HR Information System whenever networks are restored. For personnel for whom a repeat of last period's paycheck would not suffice (e.g. new employees), Central Payroll has committed to manual production of checks (though a time delay on manually-cut checks would probably occur).
- Staff - How to perform this function if faculty/staff absenteeism averages 50% for two months (e.g. during pandemic flu): At present, the payroll assistant (Harry Chan) is the only person trained in payroll issues. Two other staff will be cross-trained (see action item later).
- Unique skills - Personnel with unique skills, knowledge, or files whose absence would create difficulty: See commentary about cross-training above.
- Working at home - Can this critical function be performed with some (or all) staff working from home? Equipment, supplies, and arrangements that would be needed?: --- Staff can work from home if their computers are adequate & if they have broadband connections (cable, DSL). Some staff currently work from home. We use Windows Remote Desktop.
--- Support from our IT staff would be necessary to iron out problems.
- Data networks - How to perform this function if computer networks are not available: If computer networks are not available, Central Payroll has committed to furnish (paper) data-gathering forms to all departments for manual submission of payroll changes .
- Show Stoppers (resources that cannot be replaced, substituted, or done without): No
- Campus closure - If campus closure were declared, would it be POSSIBLE to stop doing this critical function for a month or two? No
- Comment: We would have to ensure that paychecks keep flowing. Work-from-home by our payroll assistant or his backup would help, and Central Payroll would have to do its part.

- Risks generated by using alternate procedures: Risk of delayed paychecks. Central Payroll states that worst case would be a 2 week delay.
- Policy exceptions needed for alternate procedures (& who can grant these exceptions): No policy exceptions at department level. Central Payroll will obtain any needed exceptions at its level.
- Timing - when must this function restart, to enable the campus to meet its 30-day goal for restarting teaching and research? 10 days post-disaster
- Additional vulnerabilities (other things that could prevent continuing this function, or restarting it on time):
 - Failure of Central Payroll
 - Prolonged absence of both payroll assistant and backup substitutes.
- Records that will be vital for restarting this function:

Name of Records: Student Course Rosters
 Medium: Paper
 Owner: Other dept. or school is owner
 Location: 453 Higgins Hall
 Backup details: No backup-destruction would pose great difficulty

Name of Records: Student Folders
 Medium: Paper
 Owner: My own dept or school owns these records
 Location: 234 Higgins Hall
 Backup details: Duplicates are kept in separate location

- Consequences - if this function is not restarted on time, these harmful consequences might result:

Possible Harmful Consequence	How long after the disaster might this harm begin to occur?						Comment
	0-2 days	1 wk	2 wks	3 wks	4 wks	>4 wks	
Disruption of teaching							
Disruption of research							
Loss of faculty							
Loss of staff							
Loss of students							
Well-being of faculty/staff		x					
Well-being of students		x					student employees
Payment deadlines unmet by campus		x					
Loss of revenue to campus							
Legal obligations unmet by campus		x					
Legal harm to university							
Impact on other campus unit(s)							
Impact on important bus partner(s)							
Other							

- Key Documents: See Appendix.

4. Purchasing: Procuring all departmental supplies & equipment. Department purchasing assistant uses one of three processes to make a purchase:

- Campus purchasing card (P-Card).
- Purchase Order created by purchasing assistant within Banner.
- Purchase Requisition created by created by purchasing assistant within Banner and sent to Purchasing Services who converts to a Purchase Order.

- Section or unit that performs this function (if applicable): Departmental Business Office
- Responsible person(s): Mary Jones, Budget Officer
George Rudzinski, Purchasing Assistant
- Upstream dependencies (units or systems whose failure-to-perform will affect us): Purchasing Services Banner

EXTERNAL VENDORS

- Downstream dependencies (units or systems that will be affected by our failure-to-perform): Faculty, staff, students in Department of Altitude Research
- Peak periods: May, June
There is usually a May-June peak load in purchasing due to end-of-fiscal-year deadline
- Space - How to perform this function if the usual space is not available: --- We will depend on the Campus to handle space issues.
--- If Campus does not quickly provide alternate space, the Budget Officer will arrange alternate location for purchasing assistant to work (telecommute if possible).
- Equipment - How to perform this function if the usual equipment is not available: The equipment most necessary for purchasing are
--- Computer for purchasing assistant and access to Banner
--- Phone for purchasing assistant
--- P-Card
All three are very important. In the short term, a phone and BluCard would suffice for most purchases (see below).
- Staff - How to perform this function if faculty/staff absenteeism averages 50% for two months (e.g. during pandemic flu): --- At present, the purchasing assistant (George Rudzinski) is the only person trained in purchasing issues. Two other staff will be cross-trained (see action item later).
--- At present, only George has a P-Card (a P-Card is assigned only to an individual). An additional P-card should be obtained for one of the cross-trained staff members.
- Unique skills - Personnel with unique skills, knowledge, or files whose absence would create difficulty: See commentary about cross-training above.
- Working at home - Can this critical function be performed with some (or all) staff working from home? Equipment, supplies, and arrangements that would be needed?: --- Staff can work from home if their computers are adequate & if they have broadband connections (cable, DSL). Some staff currently work from home. We use Windows Remote Desktop.
--- Support from our IT staff would be necessary to iron out problems.
- Data networks - How to perform this function if computer networks are not available: Use P-Card for purchases until networks are re-established. Will require increased upper limit on P-Cards (see action item below).
- Show Stoppers (resources that cannot be replaced, substituted, or done without): Phone for purchasing assistant.
- Campus closure - If campus closure were declared, would it be POSSIBLE to stop doing this critical function for a month or two? Yes
- Comment: It is possible, but could seriously hinder research. Better alternative would be to have purchasing assistant work from home.
- Risks generated by using alternate procedures: Risk of P-Card abuse if upper limit is raised. Control this by requiring Budget Officer to authorize purchases in advance if possible.
- Policy exceptions needed for alternate procedures (& who can grant these exceptions): Raise limit on P-Cards. Lift restricted-item rules on P-Cards. These exceptions need approval by Controller and by Purchasing Services.
- Timing - when must this function restart, to enable the campus to meet its 30-day goal for restarting teaching and research? 15 days post-disaster
- Additional vulnerabilities (other things that could prevent continuing this function, or restarting it on time): No.
- Records that will be vital for restarting this function:
 - Name of Records: Student Course Rosters
 - Medium: Paper
 - Owner: Other dept. or school is owner
 - Location: 453 Higgins Hall
 - Backup details: No backup-destruction would pose great difficulty

 - Name of Records: Student Folders
 - Medium: Paper
 - Owner: My own dept or school owns these records
 - Location: 234 Higgins Hall
 - Backup details: Duplicates are kept in separate location
- Consequences - if this function is not restarted on time, these harmful consequences might result:

Possible Harmful Consequence	How long after the disaster might this harm begin to occur?						Comment
	0-2 days	1 wk	2 wks	3 wks	4 wks	>4 wks	
Disruption of teaching					x		
Disruption of research					x		
Loss of faculty							
Loss of staff							
Loss of students							
Well-being of faculty/staff	x						
Well-being of students	x						
Payment deadlines unmet by campus					x		Inability to pay vendors
Loss of revenue to campus							
Legal obligations unmet by campus					x		Inability to pay vendors
Legal harm to university							
Impact on other campus unit(s)							
Impact on important bus partner(s)					x		Inability to pay vendors
Other							

- Key Documents: See Appendix.

5. Donor Relations: Over the past decade, the Department of Altitude Research has benefited significantly from the interest shown by two donors. Both benefactors (an individual and a family foundation) continue to express active interest in Departmental affairs, and in continuing their financial support. It is important to keep them informed and engaged in departmental activities.

- Section or unit that performs this function (if applicable): Chair's office
- Responsible person(s): Chair of Department (Jane Diaz)
- Upstream dependencies (units or systems whose failure-to-perform will affect us): none
- Downstream dependencies (units or systems that will be affected by our failure-to-perform): Department of Altitude Research
- Peak periods:
No peak periods
- Space - How to perform this function if the usual space is not available: Not an issue.
- Equipment - How to perform this function if the usual equipment is not available: Not an issue.
- Staff - How to perform this function if faculty/staff absenteeism averages 50% for two months (e.g. during pandemic flu): If Chair cannot maintain communication with donors, she will assign a senior faculty member to do so.
- Unique skills - Personnel with unique skills, knowledge, or files whose absence would create difficulty: Not an issue.
- Working at home - Can this critical function be performed with some (or all) staff working from home? Equipment, supplies, and arrangements that would be needed?: Yes. Telephone or email is sufficient.
- Data networks - How to perform this function if computer networks are not available: Telephone.
- Show Stoppers (resources that cannot be replaced, substituted, or done without): No.
- Campus closure - If campus closure were declared, would it be POSSIBLE to stop doing this critical function for a month or two? No
- Comment: There would be no reason to cease contact with donors.
- Risks generated by using alternate procedures: No.
- Policy exceptions needed for alternate procedures (& who can grant these exceptions): None.
- Timing - when must this function restart, to enable the campus to meet its 30-day goal for restarting teaching and research? Not needed for restarting teaching or research, but will be critical later on

- Additional vulnerabilities (other things that could prevent continuing this function, or restarting it on time):
No

- Records that will be vital for restarting this function:

Name of Records: Student Course Rosters
 Medium: Paper
 Owner: Other dept. or school is owner
 Location: 453 Higgins Hall
 Backup details: No backup-destruction would pose great difficulty

Name of Records: Student Folders
 Medium: Paper
 Owner: My own dept or school owns these records
 Location: 234 Higgins Hall
 Backup details: Duplicates are kept in separate location

- Consequences - if this function is not restarted on time, these harmful consequences might result:

Possible Harmful Consequence	How long after the disaster might this harm begin to occur?						Comment
	0-2 days	1 wk	2 wks	3 wks	4 wks	>4 wks	
Disruption of teaching							
Disruption of research							
Loss of faculty							
Loss of staff							
Loss of students							
Well-being of faculty/staff							
Well-being of students							
Payment deadlines unmet by campus							
Loss of revenue to campus							Benefactors are very important stakeholders.
Legal obligations unmet by campus							
Legal harm to university							
Impact on other campus unit(s)							
Impact on important bus partner(s)							
Other							

- Key Documents: See Appendix.

3-B. Information Technology

1. Recovery Details for Applications (that support critical functions)

- Departmental Faculty Roster & database

Type: Desktop
 Functional owner: Dept of Altitude Research
 Technical owner: Dept of Altitude Research
 Technical expert: Sally Robertson
 Person responsible for recovery: Sally Robertson
 Is this a database application? Yes
 Does this application move data to-or-from core campus systems? No
 If so, what systems?
 Departments impacted by failure of this application: our own department
 Backup frequency: Daily
 Backup medium: Other
 Backup auto or manual? Automatic
 Onsite storage location:
 Offsite storage location: Iron Mountain, Colorado Springs
 Offsite storage frequency: Weekly
 Installation disks and documentation location: Higgins 372
 Successful recovery been done? Yes
 Comment: Backed up to a network server that is co-located in Campus Data Center

- Departmental P-Card Log

Type: Desktop
 Functional owner: Dept of Altitude Research
 Technical owner: Dept of Altitude Research
 Technical expert: Jake McGuirk
 Person responsible for recovery: Jake McGuirk
 Is this a database application? No
 Does this application move data to-or-from core campus systems? No
 If so, what systems?
 Departments impacted by failure of this application: our own department
 Backup frequency: Daily
 Backup medium: Other
 Backup auto or manual? Automatic
 Onsite storage location:
 Offsite storage location: Iron Mountain, Colorado Springs
 Offsite storage frequency: Weekly
 Installation disks and documentation location: Higgins 372
 Successful recovery been done? Yes
 Comment: This is simply an Excel file, manually updated. Nightly backup to Campus Data Center via DUBackup

- Departmental Student Roster & Database

Type: Desktop
 Functional owner: Dept of Altitude Research
 Technical owner: Dept of Altitude Research
 Technical expert: Sally Robertson
 Person responsible for recovery: Sally Robertson

Is this a database application? Yes
 Does this application move data to-or-from core campus systems? No
 If so, what systems?
 Departments impacted by failure of this application: our own department
 Backup frequency: Daily
 Backup medium: Other
 Backup auto or manual? Automatic
 Onsite storage location:
 Offsite storage location: Iron Mountain, Colorado Springs
 Offsite storage frequency: Weekly
 Installation disks and documentation location: Higgins 372
 Successful recovery been done? Yes
 Comment: Backed up to network server that is co-located in Campus Data Center

- Mountain Mapper

Type: Client-Server Application
 Functional owner: Dept of Altitude Research
 Technical owner: Dept of Altitude Research
 Technical expert: Helen Jefferson
 Person responsible for recovery: Helen Jefferson
 Is this a database application? Yes
 Does this application move data to-or-from core campus systems? No
 If so, what systems?
 Departments impacted by failure of this application: Bureau of Land Management
 National Park Service
 Backup frequency: Daily
 Backup medium: Other
 Backup auto or manual? Automatic
 Onsite storage location:
 Offsite storage location: Iron Mountain, Colorado Springs
 Offsite storage frequency: Weekly
 Installation disks and documentation location: Higgins 372
 Successful recovery been done? Yes
 Comment: This is a mountain mapping application used by our deptment as well as by government partners. Major source of funding for deptment projects. Extremely critical, pace-setting application in this field.

2. Recovery Details for Servers

- Avalanche

Type: Application server
 Explanation: Runs critical mountain mapping application used by government partners.
 Server software: Apache/Unix
 Technical expert: James Nguyen
 Person responsible for recovery: James Nguyen
 Applications impacted by failure of this server: MountainMapper
 Departments impacted by failure of this server: Our deptment
 National Forest Service
 Bureau of Land Management
 several other universities
 If so, what systems?
 Departments impacted by failure of this application: our own department
 Backup frequency: Daily
 Backup medium: Other (describe)
 Backup auto or manual? Automatic

Onsite storage location: Higgins 377

Offsite storage location: Iron Mountain, Colorado Springs

Offsite storage frequency: Weekly

Installation disks and documentation location: Higgins 372

Successful recovery been done? Yes

Comment: Dual backup -- onsite backup server in Higgins plus colocated server in Campus Data Center.

• Cliffhanger

Type: Web server

Explanation: student web sites

Server software: Apache/Unix

Technical expert: Carol Brown

Person responsible for recovery: Carol Brown

Applications impacted by failure of this server: student web sites

Departments impacted by failure of this server: our own department

If so, what systems?

Departments impacted by failure of this application: our own department

Backup frequency: Daily

Backup medium: Local tape

Backup auto or manual? Automatic

Onsite storage location: Higgins 377

Offsite storage location: None

Offsite storage frequency: No offsite storage

Installation disks and documentation location: Higgins 372

Successful recovery been done? No

Comment: Backup is to local tape.
Considered to be a non-critical server

• Fourteener

Type: Web server

Explanation: Runs both dept. and faculty websites plus various instructional applications used in courses.

Server software: Windows Server 2003

SQL Server 2003

Technical expert: Jerry Winsley

Person responsible for recovery: Jerry Winsley

Applications impacted by failure of this server: All instructional applications used in undergraduate courses.

Departments impacted by failure of this server: our own department

If so, what systems?

Departments impacted by failure of this application: our own department

Backup frequency: Daily

Backup medium: Remote backup server

Backup auto or manual? Automatic

Onsite storage location:

Offsite storage location: Iron Mountain, Colorado Springs

Offsite storage frequency: Weekly

Installation disks and documentation location: Higgins 372

Successful recovery been done? No

Comment:

• Mountain Top

Type: File server

Explanation: department file server

Server location: Windows Server 2008
 Technical expert: James Nguyen
 Person responsible for recovery: James Nguyen
 Applications impacted by failure of this server: All dept. desktop applications
 Departments impacted by failure of this server: our own dept.
 If so, what systems?
 Departments impacted by failure of this application: our own department
 Backup frequency: Daily
 Backup medium: Other (describe)
 Backup auto or manual? Automatic
 Onsite storage location:
 Offsite storage location: Iron Mountain, Colorado Springs
 Offsite storage frequency: Weekly
 Installation disks and documentation location: Higgins 372
 Successful recovery been done? Partial
 Comment: Backup is to Campus Data Center via DUBackup

3. Backup of Workstations - computer users in this unit backup their workstations as follows:

Backup method	% using method	Comment
User's files stored on dept server, which is backed up	95%	
DU Backup (by Central Computing Services)		
Local backup by user (automatic)		
Local backup by user (manual)		
Other		
No backup		
Don't know	5%	One professor on sabbatical - will check on her return

Workstation support is performed by:

Comment:

4. IT Strategies

- Purchasing - How to purchase new hardware quickly: If campus Procurement Dept. is functioning, purchase through them to get campus special pricing. If not, buy direct from manufacturer via web or phone. (IBM/Lenovo is preferred vendor, Dell & HP also OK) (ask for higher-education pricing).
- Disks and documentation - Location of software & documentation that will be needed by technicians to rebuild workstations and servers: Higgins 372
- Special environmental needs for IT equipment: Server room needs air conditioning.
- Technical staff - Will your technical support staff be adequate in numbers & skills to rebuild your systems quickly? If not, what to do? Have 5 programmer/analysts plus manager. If entire Altitude Research Dept. had to relocate to new quarters, could take 1-2 weeks to rebuild all desktops & servers (after new hardware arrives). Worse if any of the IT team is not here. Possible solutions: outside vendor / temporary hire / borrow staff from other dept. on campus.
- Obstacles - Potential obstacles that could hinder the quick re-establishment of critical IT services:
 - Inability to purchase new hardware quickly.
 - Inability to obtain additional IT support technicians.
 - Need Central IT to re-establish central campus networks & applications.
- Work from home - IT strategies that will enable & support users to work from home (e.g. during

pandemic, or post-earthquake): This depends what level of support the Dept. wants us to offer. To offer full support to all faculty/staff would require travelling to some of their homes to troubleshoot problems (in violation of contagion-avoidance policy!) Phone support is more do-able. Best strategy would be to set up key users NOW, encourage some telecommuting to keep the work-from-home arrangement working, and that way we enter the crisis with a working system.

- Systems that lack workarounds: Systems or applications that could NOT be replaced temporarily by "workarounds": --- The MountainMap application certainly has no workaround. Conceivably, we could get it running at a remote site if one were offered.
--- Administrative applications & files can generally be worked-around.
--- The instructional applications that we support would generally have no workarounds. Faculty would have to adapt their pedagogy in order to temporarily teach without these.

3-C. Faculty Preparedness

Departmental plan to promote faculty preparedness:

1. Do the previous sections of this plan (Critical Functions and Information Technology) contain action items related to the preparedness of individual faculty?

Yes.

2. Comment?

3. Are there any other Action Items you would like to add?

Action Item: Request faculty committee to develop strategy for secure storage of non-electronic research materials.

3-C. Key People and Resources

1. Communication Resources:

- Resource: Emergency home contact list (faculty & staff)
 Question: Who keeps printed copies?
 Description: Staff emergency contact list
 Who: all central office staff
 Location: home and office
 Comment:
- Resource: Emergency home contact list (faculty & staff)
 Question: Who keeps printed copies?
 Description: Faculty emergency contact list
 Who: Chair, Budget Officer, all faculty
 Location: home and office
 Comment:
- Resource: Emergency home contact list (faculty & staff)
 Question: Who maintains it?
 Description: Faculty emergency contact list
 Who: Alicia Torres
 Location: Higgins 452
 Comment: updated each semester
- Resource: Emergency home contact list (faculty & staff)
 Question: Who maintains it?
 Description: Staff emergency contact list
 Who: Jaren Chan
 Location: Rogers Hall 125
 Comment: updated immediately with each staff changes
- Resource: Important email lists
 Question: Who holds these?
 Description: donor list
 Who: Jane Gallegos
 Location: Higgins 357
 Comment:
- Resource: Important email lists
 Question: Who holds these?
 Description: Student e-mail list
 Who: Jane Gallegos
 Location: Higgins 357
 Comment:
- Resource: Lists of students
 Question: Who holds these?
 Description: Student Roster
 Who: Irene Watanabe
 Location: Undergrad Advising Office
 Comment:
- Resource: Passwords used by several people (e.g. department email account)
 Question: What are these and who knows them?
 Description: all shared passwords
 Who: all central office staff
 Location: Higgins 357 - in "Office Affairs" folder
 Comment: kept up to date by Budget Officer
- Resource: Passwords used by student-employees
 Question: What are these and who knows them in case the student is not available?

Description: student passwords
 Who: several student employees
 Location: Higgins 357
 Comment: password is in "Office Affairs" folder

Resource: Recorded message on department phone line(s)
 Question: Who has access & knowledge to record these?
 Description: both incoming lines -- 2-5693 and 2-5694
 Who: any central office staff
 Location: Higgins 357
 Comment: password is in "Office Affairs" folder

Resource: Message posted on departmental web sites
 Question: Who has access & skills to post these?
 Description: x
 Who: Tran Vuong, Sue Lincoln, Jack Guerrero
 Location: Roberts 129
 Comment: web support staff

Resource: Text-messaging
 Question: Which faculty and staff do text-messaging on their cell phones?
 Description: text messaging
 Who: not known at present
 Location:
 Comment: we will investigate

2. Working From Home:

Name	Position	Adequate Home Computer	Current Broadband Connection	Current Use of Campus Fileservers from Home	Current Use of Campus Database Applications from Home	Comment
Cathy Wilson	Faculty	Probably	Probably	Probably	Probably not	will check when she returns from sabbatical
Irene Watanabe	Staff	Yes	Yes	Yes	Yes	Irene telecommutes regularly.
James Scott	Faculty	Yes	Yes	Yes	Yes	
Jorge Escobar	Staff	No	No	No	No	Jorge is payroll backup - we should get him enabled to work from home.
Wilma Gutteriez	Faculty	Yes	Yes	Yes	Probably	

3. Key Staff:

Name: Jorge Escobar
 Title or function:
 Special skill: payroll backup, also has web skills
 Essential:
 Comment:

Name: Josephine Casteneda
 Title or function: Chair
 Special skill: former provost
 Essential:
 Comment:

Name: Mary Jones
 Title or function: Budget Officer
 Special skill:
 Essential:
 Comment:

Name: Harrv Chan

Title or function: Payroll Assistant
 Special skill:
 Essential:
 Comment: long term staff member, knows most business functions

Name: Jerry Sanchez
 Title or function: IT Manager
 Special skill:
 Essential:
 Comment: Jerry is our main contact with campus central computing

4. Key Staff of Other Campus Units:

Name: Steve Brown
 Department: UTS
 Work address: Floral Building
 Work phone: 303-123-1234
 Cell phone: 970-123-1234
 Fax:
 Email: steveyboybrown@du.edu
 Comment: expert on student database

Name: Sara Chang
 Department: College of Letters & Science
 Work address: 206 Careron Hall
 Work phone: 303-321-4321
 Cell phone: 970-321-4321
 Fax:
 Email: sarachachaching@du.edu
 Comment: HR Manager

5. Key Off-Campus Partners:

Name: Alice El-Baradei
 Organization: Colorado State University
 Work address: 123 Main St
 Fort Collins, CO 80111
 Work phone: 303-112-2233
 Cell phone: 970-333-2222
 Fax:
 Email: abc@csu.edu
 Comment: expert on student database

Name: Raymond Sanford
 Organization: Summit Foundation
 Work address: 6509 Delaware St.
 Sante Fe, NM 66213
 Work phone: 612-123-1234
 Cell phone: 612-321-3211
 Fax:
 Email: raymondmyman@summit.org
 Comment: expert on student database

6. Key Vendors:

Name: Stephanie Shabazz
 Organization: Xerox
 Work address: 675 Broadway
 Denver, CO
 Work phone: 303-112-2233
 Cell phone: 970-321-4321
 Fax:
 Email:
 Comment: expert on student database
 Alternate Vendor(s): yes, GTP Office Services, Ft Collins, CO

Name: Tomas Rodriguez
 Organization: TerrainSoft, Inc.
 Work address: 42 Yarley Terrace
 Atlanta, GA 44267
 Work phone:
 Cell phone:
 Fax:
 Email: tomasr@tsoft.com
 Comment: expert on student database
 Alternate Vendor(s): no easy substitutes - unique product, indutry leader

7. Key Others (donors, stakeholders, clients, customers - DU or external) who may need to be contacted of kept informed:

Name: Henry Nguyen
 Organization: Nguyen Securities
 Work address: 34 Wall St.
 New York, NY 10047
 Work phone: 212-212-2121
 Cell phone: 212-232-2121
 Fax:
 Email: noogie@nguyen.com
 Comment: graduate and banefactor of Dept of Altitude Research

Name: Teresa Chu
 Organization: Acme Holdings, Inc.
 Work address: 45 Holden Way
 Redlands, CA 34278
 Work phone: 475-212-2121
 Cell phone: 475-345-3456
 Fax:
 Email: choochu@acme.com
 Comment: benefactor

8. Office & IT Equipment:

Listed here are SOME items that will be needed to resume all if the critical functions in this plan.

Item	Mininum Required	Comment
Workstation (including computer, network connection, table, chair)	27	one per FTE, including faculty
Laptop computer & car charger	16	for key staff - faculty have their own
Telephone (hard-wired or cell)	27	
Printer	4	3 for Higgins Hall 1 for Rogers Hall
Fax	1	
Copier	1	
Scanner	0	
Server	6	

9. Other Equipment (EXCLUDING classroom equipment, lab equipment, and consumables):

Dept. pickup truck is needed to prepare the research ship (MV California) for expeditions.

10. Supplies (Consumables - including inventory strategy):

Mainly office supplies. We keep a 2-week inventory but plan to increase that to 6 weeks.

11. Facilities (special space or facilities needs that are in addition to office-classroom-lab needs):

12. Other Resources (that will be needed to resume critical functions):

4. Plan History

1. Original Plan Completed:

Date: 01/15/08
Person Entering Date: Scott Wiggans
Comment: From Berkeley Sample Plan

2. Most Recent Update:

Date: 02/29/08
Person Entering Date: Scott Wiggans
Comment: updated action items

3. Most Recent Exercise/Test:

Date: 01/31/08
Person Entering Date: Scott Wiggans
Comment: internal review

4. Most Recent Unit Head Review:

Date: 02/27/08
Person Entering Date: Scott Wiggans
Comment: approved

5. Unit Head: Craig Woody, VC- Business & Financial Affairs

5. Plan Users

Scott Wiggans

Stacie Trexel

Appendix

1. List of key documents:

- Name: Current Course List
Owner: Susan Brown
Printed copy location: 234 Higgins Hall
Digital copy in duContinuity? Yes
Comment: Reconstruct from Registrar's Office if necessary
- Name: Current list of funded research projects
Owner: Harriette Madison
Printed copy location: 238 Higgins Hall
Digital copy in duContinuity? Yes
Comment:
- Name: List of Pending Grant applications
Owner: Harriette Madison
Printed copy location: 238 Higgins Hall
Digital copy in duContinuity? Yes
Comment:
- Name: Payroll Procedures & Guidelines - Dept of Altitude Research
Owner: Harry Chan
Printed copy location: Higgins 455
Digital copy in duContinuity? Yes
Comment: Very clear set of instructions for processing payroll
- Name: Purchasing Procedures & Guidelines
Owner: George Rudzinski
Printed copy location: Higgins 455
Digital copy in duContinuity? No
Comment: on DU website - purchasing link