### Business processes

Are there complex business processes in this function?  
- **Yes**: [ ]  
- **No**: [X]  

If yes, what are the complex processes? (just name them)  

If a process is complex, is there a written description?  
- **Yes**: [X]  
- **No**: [ ]

### Staff: Management / chain of command

Is it absolutely necessary to have supervisory / management structure for this function?  
- **Yes**: [X]  
- **No**: [ ]

If it's important, is management know-how distributed, or concentrated in one manager?  
- **Concent'd**: [ ]  
- **Distrib'd**: [X]  

Can this function be restored if the current management / chain of command is not available?  
- **Yes**: [X]  
- **No**: [ ]

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### Staffing: specialized employees

Does this function have specialized tasks that can only be done by specialized employees?  
- **Yes**: [X]  
- **No**: [ ]

If yes, what are those specialized tasks? (just name them)

If yes, are there cross-trained employees to do these tasks as backups?  
- **Yes**: [X]  
- **No**: [ ]

Can this function be restored if the current specialized employees are not available?  
- **Yes**: [X]  
- **No**: [ ]

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### Equipment, hardware

Are there specialized equipments and hardware without which the EU cannot function?  
- **Yes**: [X]  
- **No**: [ ]

If yes, are they hard to replace?  
- **Yes**: [ ]  
- **No**: [X]  

Can this function be restored if some essential data and applications are not available?  
- **Yes**: [X]  
- **No**: [ ]

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### Data, and Applications

Are there specialized applications and data without which the EU cannot function?  
- **Yes**: [X]  
- **No**: [ ]

If yes, what are they? (just name the application or database)

Are the essential applications difficult to reinstall?  
- **Yes**: [ ]  
- **No**: [X]  

Are the essential data difficult to recover or to re-load?  
- **Yes**: [ ]  
- **No**: [X]  

Can this function be restored if some essential data and applications are not available?  
- **Yes**: [X]  
- **No**: [ ]

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### Facility / location

Does this function have special requirements for location or facility?  
- **Yes**: [X]  
- **No**: [ ]

If yes, what are they? (give brief description of requirements)

Can this function be restored if it must move to another location?  
- **Yes**: [ ]  
- **No**: [X]  

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### What are the most likely "failure to restore" scenarios (describe the obvious ones that come immediately to mind)

A most likely failure to restore would be damage to the Fiber/copper connectivity serviceing the campus and power availability in the Computer Center Data Center room and MacQuarrie MPOE.
ASSESSMENT OF RESILIENCY OF EACH FUNCTIONS/SERVICES WITHIN AN ESSENTIAL UNIT (EU)

The purpose of this form is to assess the resiliency of the services or functions of the Essential Units that must restored after a disruptive disaster

Name of Essential Unit (EU): UTS
Name of function/service being assessed below: Network Services - Campus Connectivity

Business processes

Are there complex business processes in this function? ___________________________________________ yes no

If yes, hat are the complex processes? (just name them)

If a process is complex, is there a written description? yes no

Staff: Management / chain of command

Is it absolutely necessary to have supervisory / management structure for this function? yes no

If it's important, is management know-how distributed, or concentrated in one manager? concentr'd distrib'd

Can this function be restored if the current management / chain of command is not available? yes no

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

Staffing: specialized employees

Does this function have specialized tasks that can only be done by specialized employees? yes no

If yes, what are those specialized tasks? (just name them)

If yes, are there cross-trained employees to do these tasks as backups? yes no

Can this function be restored if the current specialized employees are not available? yes no

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

Equipments, hardware

Are there specialized equipments and hardware without which the EU cannot function? yes no

If yes, are they hard to replace? yes no

If they are hard to replace, is there redundancy planning for them? yes no

Can this function be restored if some of the current equipments and hardware are not available? yes no

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

Data, and Applications

Are there specialized applications and data without which the EU cannot function? yes no

If yes, what are they? (just name the application or database)

Are the essential applications difficult to reinstall? yes no

Are the essential data difficult to recover or to re-load? yes no

Can this function be restored if some essential data and applications are not available? yes no

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

Facility / location

Does this function have special requirements for location or facility? yes no

If yes, what are they? (give brief description of requirements)

Can this function be restored if it must move to another location? yes no

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

What are the most likely "failure to restore" scenarios (describe the obvious ones that come immediately to mind)

A most likely failure to restore would be damage to the Fiber/copper connectivity between buildings and data closets
## SJSU BUSINESS CONTINUITY PLANNING
### ASSESSMENT OF RESILIENCY OF EACH FUNCTIONS/SERVICES WITHIN AN ESSENTIAL UNIT (EU)

The purpose of this form is to assess the resiliency of the services or functions of the Essential Units that must restored after a disruptive disaster.

<table>
<thead>
<tr>
<th>Name of Essential Unit (EU):</th>
<th>UTS Systems Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of function/service being assessed below:</td>
<td>Operating Systems</td>
</tr>
</tbody>
</table>

### Business processes

Are there complex business processes in this function?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If yes, what are the complex processes? (just name them)

If a process is complex, is there a written description?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

### Staff: Management / chain of command

Is it absolutely necessary to have supervisory / management structure for this function?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If it's important, is management know-how distributed, or concentrated in one manager?  

<table>
<thead>
<tr>
<th>Concentrated</th>
<th>Distributed</th>
</tr>
</thead>
</table>

Can this function be restored if the current management / chain of command is not available?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### Staffing: specialized employees

Does this function have specialized tasks that can only be done by specialized employees?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If yes, what are those specialized tasks? (just name them)

Installation of specific OS parameters for systems.

If yes, are there cross-trained employees to do these tasks as backups?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

Can this function be restored if the current specialized employees are not available?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### Equipments, hardware

Are there specialized equipments and hardware without which the EU cannot function?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If yes, are they hard to replace?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If they are hard to replace, is there redundancy planning for them?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

Can this function be restored if some of the current equipments and hardware are not available?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### Data, and Applications

Are there specialized applications and data without which the EU cannot function?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

Are the essential applications difficult to reinstall?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

Are the essential data difficult to recover or to re-load?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

Can this function be restored if some essential data and applications are not available?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### Facility / location

Does this function have special requirements for location or facility?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If yes, what are they? (give brief description of requirements)

Can this function be restored if it must move to another location?  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### What are the most likely "failure to restore" scenarios (describe the obvious ones that come immediately to mind)

1. Not having enough hardware.  
2. No having the appropriate media and data to load the systems.
### Business Continuity Planning

**Assessment of Resiliency of Each Functions/Services Within an Essential Unit (EU)**

The purpose of this form is to assess the resiliency of the services or functions of the Essential Units that must restored after a disruptive disaster.

<table>
<thead>
<tr>
<th>Name of Essential Unit (EU):</th>
<th>UTS Systems Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of function/service being assessed below:</td>
<td>Active Directory</td>
</tr>
</tbody>
</table>

#### Business processes

Are there complex business processes in this function?  
- Yes [ ]  
- No [ ]

If yes, what are the complex processes? (just name them)

If a process is complex, is there a written description?  
- Yes [ ]  
- No [ ]

#### Staff: Management / chain of command

Is it absolutely necessary to have supervisory / management structure for this function?  
- Yes [ ]  
- No [ ]

If it's important, is management know-how distributed, or concentrated in one manager?  
- Concentrated [ ]  
- Distributed [ ]

Can this function be restored if the current management / chain of command is not available?  
- Yes [ ]  
- No [ ]

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

#### Staffing: specialized employees

Does this function have specialized tasks that can only be done by specialized employees?  
- Yes [ ]  
- No [ ]

If yes, what are those specialized tasks? (just name them)

Instalation of specific AD parameters for systems. This can be completely restored if backups are available.  
- Yes [ ]  
- No [ ]

Can this function be restored if the current specialized employees are not available?  
- Yes [ ]  
- No [ ]

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

#### Equipments, hardware

Are there specialized equipments and hardware without which the EU cannot function?  
- Yes [ ]  
- No [ ]

If yes, are they hard to replace?  
- Yes [ ]  
- No [ ]

If they are hard to replace, is there redundancy planning for them?  
- Yes [ ]  
- No [ ]

Can this function be restored if some of the current equipments and hardware are not available?  
- Yes [ ]  
- No [ ]

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

#### Data, and Applications

Are there specialized applications and data without which the EU cannot function?  
- Yes [ ]  
- No [ ]

If yes, what are they? (just name the application or database)

Are the essential data difficult to recover or to re-load?  
- Yes [ ]  
- No [ ]

Can this function be restored if some essential data and applications are not available?  
- Yes [ ]  
- No [ ]

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

#### Facility / location

Does this function have special requirements for location or facility?  
- Yes [ ]  
- No [ ]

If yes, what are they? (give brief description of requirements)

Can this function be restored if it must move to another location?  
- Yes [ ]  
- No [ ]

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### What are the most likely "failure to restore" scenarios (describe the obvious ones that come immediately to mind)

1. Not having appropriate hardware.  
2. No having the appropriate media and data to load the systems.
**ASSESSMENT OF RESILIENCY OF EACH FUNCTIONS/SERVICES WITHIN AN ESSENTIAL UNIT (EU)**

The purpose of this form is to assess the resiliency of the services or functions of the Essential Units that must restored after a disruptive disaster

<table>
<thead>
<tr>
<th>Name of Essential Unit (EU):</th>
<th>UTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of function/service being assessed below:</td>
<td>Network Services - Server Farm Connectivity</td>
</tr>
</tbody>
</table>

### Business processes

Are there complex business processes in this function? **yes** | **no**

If yes, what are the complex processes? (just name them)

If a process is complex, is there a written description? **yes** | **no**

### Staff: Management / chain of command

Is it absolutely necessary to have supervisory / management structure for this function? **yes** | **no**

If it's important, is management know-how distributed, or concentrated in one manager? **concentr'd** | **distrib'd**

Can this function be restored if the current management / chain of command is not available? **yes** | **no**

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### Staffing: specialized employees

Does this function have specialized tasks that can only be done by specialized employees? **yes** | **no**

If yes, what are those specialized tasks? (just name them)

If yes, are there cross-trained employees to do these tasks as backups? **yes** | **no**

Can this function be restored if the current specialized employees are not available? **yes** | **no**

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### Equipments, hardware

Are there specialized equipments and hardware without which the EU cannot function? **yes** | **no**

If yes, are they hard to replace? **yes** | **no**

If they are hard to replace, is there redundancy planning for them? **yes** | **no**

Can this function be restored if some of the current equipments and hardware are not available? **yes** | **no**

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

No Alternative

### Data, and Applications

Are there specialized applications and data without which the EU cannot function? **yes** | **no**

If yes, what are they? (just name the application or database)

Are the essential applications difficult to reinstall? **yes** | **no**

Are the essential data difficult to recover or to re-load? **yes** | **no**

Can this function be restored if some essential data and applications are not available? **yes** | **no**

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### Facility / location

Does this function have special requirements for location or facility? **yes** | **no**

If yes, what are they? (give brief description of requirements)

Can this function be restored if it must move to another location? **yes** | **no**

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

### What are the most likely "failure to restore" scenarios (describe the obvious ones that come immediately to mind)

A most likely failure to restore would be damage to the Fiber/copper connectivity within the Computer Room and power not being available in the Computer Center room and MacQuarrie MPOE.
SJSU BUSINESS CONTINUITY PLANNING

ASSESSMENT OF RESILIENCY OF EACH FUNCTIONS/SERVICES WITHIN AN ESSENTIAL UNIT (EU)

The purpose of this form is to assess the resiliency of the services or functions of the Essential Units that must restored after a disruptive disaster

Name of Essential Unit (EU): UTS Telecom Group
Name of function/service being assessed below: PBX - Voice Services

Business processes

Are there complex business processes in this function? yes no
If yes, what are the complex processes? (just name them)
If a process is complex, is there a written description? yes no

Staff: Management / chain of command

Is it absolutely necessary to have supervisory / management structure for this function? yes no
If it's important, is management know-how distributed, or concentrated in one manager? concentr'd
Can this function be restored if the current management / chain of command is not available? yes no
If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

Staffing: specialized employees

Does this function have specialized tasks that can only be done by specialized employees? yes no
If yes, what are those specialized tasks? (just name them)
Programming of the disaster solution would require specialized employees and/or vendor technical support.
If yes, are there cross-trained employees to do these tasks as backups? yes no
Can this function be restored if the current specialized employees are not available? yes no
If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

Equipments, hardware

Are there specialized equipments and hardware without which the EU cannot function? yes no
If yes, are they hard to replace? yes no
If they are hard to replace, is there redundancy planning for them? yes no
Can this function be restored if some of the current equipments and hardware are not available? yes no
If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")
Associated PRI trunks for making toll calls would need to be replaced and/or rerouted.

Data, and Applications

Are there specialized applications and data without which the EU cannot function? yes no
If yes, what are they? (just name the application or database)
The operating system and the latest copy of the database would be essential.
Are the essential applications difficult to reinstall? yes no
Are the essential data difficult to recover or to re-load? yes no
Can this function be restored if some essential data and applications are not available? yes no
If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

Facility / location

Does this function have special requirements for location or facility? yes no
If yes, what are they? (give brief description of requirements)
Can this function be restored if it must move to another location? yes no
If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")
If the Computer Center is destroyed it would be impractical to implement a new PBX solution remotely. Go with VoIP solution.

What are the most likely “failure to restore” scenarios (describe the obvious ones that come immediately to mind)

1. If the processor/s fail replace them 24-72 hours. Cost of $25,000 to $100,000 depending on problem.
2. If Computer Center is destroyed to the point of all associated communication cables are unusable then the most logical answer is to replace PBX technology with a VoIP solution. IP to analog gateways required and alternate copper paths for emergency telephones.
CMS
### Staff: Management / chain of command

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Theoretical</th>
<th>Some</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it absolutely necessary to have supervisory / management structure for this function?</td>
<td></td>
<td></td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>If it's important, is management know-how distributed, or concentrated in one manager?</td>
<td></td>
<td></td>
<td>concent'd</td>
<td>distr'd</td>
</tr>
<tr>
<td>Can this function be restored if the current management / chain of command is not available?</td>
<td></td>
<td></td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>If not, what is the theoretical alternate solution? (give quick description, or say &quot;no alternative&quot;)</td>
<td></td>
<td></td>
<td>see above</td>
<td></td>
</tr>
</tbody>
</table>

### Staff: Specialized employees

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Theoretical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does this function have specialized tasks that can only be done by specialized employees?</td>
<td></td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>If yes, what are those specialized tasks? (just name them)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If yes, are there cross-trained employees to do these tasks as backups?</td>
<td></td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>Can this function be restored if the current specialized employees are not available?</td>
<td></td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>If not, what is the theoretical alternate solution? (give quick description, or say &quot;no alternative&quot;)</td>
<td></td>
<td></td>
<td>see above</td>
</tr>
</tbody>
</table>

### Equipment, Hardware

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there specialized equipments and hardware without which the EU cannot function?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>If yes, are they hard to replace?</td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>If they are hard to replace, is there redundancy planning for them?</td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>Can this function be restored if some of the current equipments and hardware are not available?</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

### Data, and Applications

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there specialized applications and data without which the EU cannot function?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>If yes, what are they? (just name the application or database)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the essential applications difficult to reinstall?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Are the essential data difficult to recover or to re-load?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Can this function be restored if some essential data and applications are not available?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>If not, what is the theoretical alternate solution? (give quick description, or say &quot;no alternative&quot;)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### City / location

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does this function have special requirements for location or facility?</td>
<td></td>
<td>yes</td>
</tr>
<tr>
<td>If yes, what are they? (give brief description of requirements)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can this function be restored if it must move to another location?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>If not, what is the theoretical alternate solution? (give quick description, or say &quot;no alternative&quot;)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**City / location**

- Must be able to access CMS & FTS servers & databases

**Most likely "failure to restore" scenarios**

- Describe the obvious ones that come immediately to mind.
ASSESSMENT OF RESILIENCY OF EACH FUNCTIONS/SERVICES WITHIN AN ESSENTIAL UNIT (EU)

The purpose of this form is to assess the resiliency of the services or functions of the Essential Units that must restored after a disruptive disaster.

Name of Essential Unit (EU): Systems - DBA

Name of function/service being assessed below: Administration

Business processes

Are there complex business processes in this function? yes no

If yes, what are the complex processes? (just name them)

If a process is complex, is there a written description? yes no

Staff: Management / chain of command

Is it absolutely necessary to have supervisory / management structure for this function? yes no

If it's important, is management know-how distributed, or concentrated in one manager? concentr'd distrib'd

Can this function be restored if the current management / chain of command is not available? yes no

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

Staffing: specialized employees

Does this function have specialized tasks that can only be done by specialized employees? yes no

If yes, what are those specialized tasks? (just name them)

Oracle RAC Administration, Database Administration, RMAN Administration

If yes, are there cross-trained employees to do these tasks as backups? yes no

Can this function be restored if the current specialized employees are not available? yes no

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

Hire Consultants with Specialized Skills

Staff, hardware

Are there specialized equipments and hardware without which the EU cannot function? yes no

If yes, are they hard to replace? yes no

If they are hard to replace, is there redundancy planning for them? yes no

Can this function be restored if some of the current equipments and hardware are not available? yes no

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

Data, and Applications

Are there specialized applications and data without which the EU cannot function? yes no

If yes, what are they? (just name the application or database)

Oracle Control Files, Database Backups

Are the essential applications difficult to reinstall? yes no

Are the essential data difficult to recover or to re-load? yes no

Can this function be restored if some essential data and applications are not available? yes no

If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

Do without missing data and reload what we can

Facility / location

Does this function have special requirements for location or facility? yes no

If yes, what are they? (give brief description of requirements)

Network Connectivity

Can this function be restored if it must move to another location? yes no

"not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

What are the most likely "failure to restore" scenarios (describe the obvious ones that come immediately to mind)

Backup Media Unusable, Hardware Destruction, and Inability to Get Fast Replacement, Power/Network Disruption, Loss of Configuration, Documentation which resides on servers, Human Resource Unavailability
### Business processes

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<tr>
<th>Question</th>
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</tr>
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### Staff: Management / chain of command

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### Staffing: Specialized employees

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### Equipment, hardware

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<tr>
<td>Are there specialized equipments and hardware without which the EU cannot function?</td>
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<td>If yes, are they hard to replace?</td>
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### ITA, and Applications

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<td>Are there specialized applications and data without which the EU cannot function?</td>
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</tr>
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<td>If yes, what are they? (just name the application or database)</td>
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<td></td>
</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Are the essential data difficult to recover after a disruptive disaster?</td>
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### Utility / Location

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<tr>
<td>Does this function have special requirements for location or facility?</td>
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<td></td>
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<tr>
<td>If yes, what are they? (give brief description of requirements)</td>
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**SJSU BUSINESS CONTINUITY PLANNING**

**ASSESSMENT OF RESILIENCY OF EACH FUNCTION/SERVICES WITHIN AN ESSENTIAL UNIT (EU)**

The purpose of this form is to assess the resiliency of the services or functions of the Essential Units that must restored after a disruptive disaster.

**Name of Essential Unit (EU):** Administrative Systems

**Name of function/service being assessed below:** Desktop/Server Support

---

### Business processes

- **Are there complex business processes in this function?**
  - Yes [ ] No [ ]

  
  If yes, what are the complex processes? (just name them)

- **If a process is complex, is there a written description?**
  - Yes [ ] No [ ]

---

### Staff: Management / chain of command

- **Is it absolutely necessary to have supervisory / management structure for this function?**
  - Yes [ ] No [ ]

  
  If it’s important, is management know-how distributed, or concentrated in one manager?

  - Concentrated [ ] Distributed [ ]

- **Can this function be restored if the current management / chain of command is not available?**
  - Yes [ ] No [ ]

  
  If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

  Management is necessary if Financial Purchase (replacement hardware) is necessary, and if Arbitration is necessary

---

### Staffing: specialized employees

- **Does this function have specialized tasks that can only be done by specialized employees?**
  - Yes [ ] No [ ]

  
  If yes, what are those specialized tasks? (just name them)

- **Install server hardware/OS/ Applications, Install Desktop hardware/Software/Applications**

  - Yes [ ] No [ ]

  
  If yes, are there cross-trained employees to do these tasks as backups?

  - Yes [ ] No [ ]

  
  Can this function be restored if some of the current specialized employees are not available?

  - Yes [ ] No [ ]

  
  If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

  **If people with comparable expertise are available, either from Campus/CSU or outside vendor**

---

### Environmental control systems, Building

- **Are there specialized equipments and hardware without which the EU cannot function?**
  - Yes [ ] No [ ]

  
  If yes, are they hard to replace?

  - Yes [ ] No [ ]

  
  If they are hard to replace, is there redundancy planning for them?

  - Yes [ ] No [ ]

  
  Can this function be restored if some of the current equipments and hardware are not available?

  - Yes [ ] No [ ]

  
  If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

  Alternatives include consolidation; virtual servers

---

### Data, and Applications

- **Are there specialized applications and data without which the EU cannot function?**
  - Yes [ ] No [ ]

  
  If yes, what are they? (just name the application or database)

  **UPD: Tracknet, SLETS, Flexpark, FD&O (TMA, Environmental, Key systems), Division: (CMS, FTS, Cashnet, OneCard)**

  
  Are the essential applications difficult to reinstall?

  - Yes [ ] No [ ] some need Vendor

  
  Are the essential data difficult to recover or to re-load?

  - Yes [ ] No [ ]

  
  Can this function be restored if some essential data and applications are not available?

  - Yes [ ] No [ ]

  
  If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

  Some systems could be done manually with considerable degradation, Flexpark, CMS are off-campus hosted systems

---

### Facility / location

- **Does this function have special requirements for location or facility?**
  - Some [ ]

  
  If yes, what are they? (give brief description of requirements)

  **Environmental control systems, Building key systems.**

  
  Can this function be restored if it must move to another location?

  - Yes [ ] No [ ]

  
  If not, what is the theoretical alternate solution? (give quick description, or say "no alternative")

  Some servers could be implemented off site, with propere network setup and probably some degradation

---

**What are the most likely "failure to restore" scenarios (describe the obvious ones that come immediately to mind)**

  - Networking cannot be restored or seriously disabled
  - Replacement Equipment not available
  - Power not available
  - Manpower expertise not available
Incomplete self assessments by I.T.
### Administrative Systems Core Services as of October, 2011

#### CMS
- Helpdesk support for CMS-related systems (HCM, FTS, CFS, Cognos, SADW)
- Maintain my.sjsu.edu web site
- Teach/train customers to use systems
- Create/maintain detailed business process guides
- Manage listserv

#### Administrative Applications
- Program PeopleSoft reports and self-service functionality
- Program/Maintain Finance Transaction Services
- Participate in system upgrades
- Program interfaces between systems
- Update/convert data programmatically
- Troubleshoot/Resolve technical/data issues

#### Administrative Technology
- Procure and install hardware/software/operating systems
- Install/configure/maintain servers/desktop computers/storage area networks
- Provide end user computing support
- Serve as liaisons with networking staff in UTS
- Resolve issues reported through helpdesk tickets
- Apply security patches
- Administer security

#### Administrative Databases
- Install/upgrade/configure Oracle database software
- Manage application of updates/fixes to PeopleSoft software components
- Administer databases that support critical campus systems
- Back up/Safeguard/Restore data stored in Oracle databases
- Test/Schedule/Apply Oracle security patches
- Resolve issues reported through helpdesk tickets
Ninh Pham-Hi <ninh.phamhi@sjsu.edu>

Business Continuity Resiliency Assessment Phase 2

Mike Dunefsky <mike.dunefsky@sjsu.edu>
To: Ninh Pham-Hi <Ninh.PhamHi@sjsu.edu>

Wed, Oct 26, 2011 at 9:31 AM

Ninh:

Do you have a preferred format for the presentation of information on systems supported by my area, or will the format from my excerpt below meet your needs:

System:

File Servers housing shared data for HR, University Police, Facilities, Accounting, Budgets, Accounts Payable, Procurement, Bursar’s Office and Database Administrators.

Risk of failure: medium – business offices have file shares with documents that are needed in the course of their day to day business. Some of these files and databases may contain sensitive information. Risks fall into 2 categories – hardware failure vs data breach. Hardware failure is likely and has occurred before.

Recovery: Physical data recovery is relatively straightforward, although some of the backup media covering a specific period could be off site at the time the file(s) recovery is needed. If the data is not required immediately we could wait for the next tape rotation. If we require a specific media to be returned to campus, our media is intermingled with other media in a locked container that is shipped off site by the computer center. With collaboration we could get the media returned off cycle to use for data recovery. Risk of breach is also medium if a machine that is connected to the file share becomes infected by a Trojan or Worm. Recovery would involve cleaning the infected machine and verifying that files are not infected. In the event that a file becomes unrecoverable the last backup could be used to restore the file.

Mike Dunefsky
Sr Director Admin Systems
San Jose State University
408-924-1672
System:

**Oracle RAC database** - this system provides the back end database for Facilities Management TMA system, FTS, Towercard.

**Risk of failure:** low – server is on a storage area network that will continue to function when individual hard drives fail. The Oracle RAC infrastructure provides replicated rdbms services.

**Recovery:**

If data becomes corrupted there is a nightly backup which will restore data as of a point in time. There is also an RMAN backup with transaction logs that will permit restoration of data to a point in time. The RMAN backup also captures transaction logs that are backed up to a local hard drive and to tape. These logs will recover the database to the point in time that a failure occurs. In the event of facility destruction there may be some data loss resulting from missing transaction logs and/or uncommitted transactions.

The risk of this appears to be low barring a major earthquake or an act of terrorism. Typically data is recoverable. Data that has already fed into CFS is already in the system of record, and the loss of FTS data for these transactions would simply cause a loss of part of an audit trail, but would not be business impacting. If the entire system fails, full recovery time including operating system restoration is 1 – 2 business days.

**OPERATIONS:**

**MySJSU web page:**

In the event of an emergency requiring notification to students, get informational updates to one of the 4 people with access to update the MySJSU web site with appropriate information.

Have people with access to send messages to all students send a message if public relations requests this. There are people in every central office – Enrollment Services, Financial Aid, Bursar’s Office, Admissions and CMS who can send messages to populations of students using the SJSU Messaging system.

**CMS Helpdesk:**

In the event of an incident in which helpdesk staff should not be on campus, several people in CMS including the director can change the message on the phone line to direct people to the appropriate web page/informational telephone number for updated information/statuses.
Access to information on staff, faculty, students, and applicants:

In the event of an emergency in which an email notification needs to be sent to people who interact with the campus, several people have back end access to pull information from PeopleSoft that could then be passed to public relations or UPD. Programmers in enrollment services can pull information on students and applicants; HR can pull this information on faculty and staff, and subject matter experts and managers in CMS/Administrative Systems can pull information. UPD also has access to look up information on individuals in PeopleSoft. UTS also has access to a table of email addresses for all staff, faculty, students, and applicants.
SJSU Business Continuity Planning (BCP)
Resiliency/Vulnerability Assessment of Essential BCP Units

**Background:**
- The Essential BCP Units (EUs) were identified in the Business Impact Analysis (BIA) Phase.
- Each EU was then asked to fill out a Self-Assessment Questionnaire (Questionnaire Q1) in which they evaluate their ability to restart after a disaster, for the following factors:
  - Complexity of Business Process
  - Staffing, Equipments & Hardware
  - Data & Applications
  - Facilities & Location
  - Most likely Scenarios of Failure to Restart
- On the next page is the full list of Essential BCP Units of SJSU that have returned their self-assessment.
- Based on the returns of that 1st Questionnaire, the Business Continuity Steering Committee (BCSC) has selected the following 2 classes of risk to address in the current BCP cycle: (a) Scenarios of Failure to Restart, and (b) IT risks.
- This Questionnaire Q2 is to follow up on risk (a) “Scenarios of Failure” (we will address “IT risks” later in a separate questionnaire).
- This is a drilling down into the issues in more details, it is not a duplicate of Q1.
- The BCSC Representatives will gather the responses from the EUs, compile them into a Divisional Summary and get the OK by the Divisional VPs before submitting the summary to BCSC. The upcoming BCP’s Solution Design Phase will be based on that summary.

**Questionnaire Q2**
- Please describe the most likely scenarios according to which your Essential Unit would not be able to restart after a major regional disaster.
- As manager of your Essential Unit, you know best as to what would prevent this Essential Unit from being restarted.
- As an example, consider the following questions: Would it be because of issues related to Staffing? Or Facilities/Location/Building? Or Hardware/Equipment, or Regulatory Requirements, ...?
- For the purpose of this Questionnaire, do not consider IT risks (since that risk will be addressed separately, in conjunction with UTS and CMS/Admin Tech ... )
- Concentrate only on the high probability scenarios (if you don’t see any, say “no risk of failure to restart”)
- Also describe how such failure to restart would impact other campus operations.

Please describe your scenarios below, in details, in a short paragraph (maybe 3 to 6 lines)

<table>
<thead>
<tr>
<th>NAME OF REPORTING ESSENTIAL UNIT =&gt; UTS – Network Services</th>
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<tbody>
<tr>
<td>Narrative of scenario of failure to restart: ...</td>
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**Internet Connectivity**
Internet connectivity is a critical service that will impact many other Essential Units if not available. There are two redundant connectivity paths into the campus. If the inbound infrastructure to campus from our service provider is completely damaged due to some catastrophic disaster and all copper and fiber facilities are damaged, we would not be able to provide Internet service to the campus. This would impact all network traffic inbound/outbound to the campus. To get this back and operational we would be dependant on Service provider resources and internal UTS network staff.

**Campus Connectivity**
Campus connectivity is a critical service that will impact other Essential Units if not available. There are redundant connectivity paths between buildings. We would have to have a major disaster to our campus fiber infrastructure, network hardware and servers for this service to be interrupted long term. If partial or all campus
network connectivity is interrupted, campus operations that rely on network connectivity would be interrupted. The likelihood of failure to restart is low.

**Server Farm Connectivity**

Server farm connectivity is a critical service that will impact other Essential Units if not available. There is redundant server farm networking equipment. The most likely event that would prevent us from restarting this service would be complete loss of existing production network equipment, spares and/or the inability to get replacement equipment. If server farm network connectivity is interrupted, campus operations that rely on network connectivity would be interrupted. The likelihood of failure to restart is low. Trained staff familiar with environment would be needed.

*(What would most likely prevent this Essential Unit from restarting? How probable is this scenario of failure to restart? What other campus operations would be held-up by this failure?)*
SJSU Business Continuity Planning (BCP)
Resiliency/Vulnerability Assessment of Essential BCP Units

**Background:**

The Essential BCP Units (EUs) were identified in the Business Impact Analysis (BIA) Phase.

- Each EU was then asked to fill out a Self-Assessment Questionnaire (Questionnaire Q1) in which they evaluate their ability to restart after a disaster, for the following factors:
  - Complexity of Business Process
  - Staffing, Equipments & Hardware
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- On the next page is the full list of Essential BCP Units of SJSU that have returned their self-assessment.
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  - For the purpose of this Questionnaire, do not consider IT risks (since that risk will be addressed separately, in conjunction with UTS and CMS/AdminTech ...)
  - Concentrate only on the high probability scenarios (if you don’t see any, say “no risk of failure to restart”)
  - Also describe how such failure to restart would impact other campus operations.

Please describe your scenarios below, in details, in a short paragraph (maybe 3 to 6 lines)

**NAME OF REPORTING ESSENTIAL UNIT => UTS - Telecom**

Narrative of scenario of failure to restart: . . .

**UTS PBX Services**

UTS Telecom Group provides all voice connectivity to the campus. The most likely event that would prevent this essential unit from restarting is if the PBX or Data Center was destroyed. All campus operations that require voice services to conduct business would be impacted. The probability of this scenario of failure to restart is low.

*What would most likely prevent this Essential Unit from restarting?*
*How probable is this scenario of failure to restart?*
*What other campus operations would be held-up by this failure?*