



3. Lab Utility Criticality Assessment - Guidelines

BACKGROUND

To protect research assets through the assurance of essential utilities within the laboratory environment during disruptive or emergency events (i.e. power outage, flood). Information provided through the Criticality Assessment by the Principal Investigator (PI) will be used so that Facilities Management can develop strategies and risk reduction recommendations to mitigate potential losses.

STEPS

Using the [3a. Research Utility Criticality Assessment Form](#), complete the following steps:

Step 1: Complete the administrative information. If research is conducted in more than one location, please state all locations.

Step 2: Identify utilities in the Loss of Utility column that support your research.

Step 3: Using the Risk to Research column, craft a cause and effect statement that describes the specific impact to your research that a loss of the utility would create. Try to be as specific as possible; for example, if a consistent temperature is necessary in your research indicate to what degree, or what range of variation, could negatively impact your research. If you have more than one research location, ensure that all risk statements include reference to the relevant location.

Step 4: Mark (X) all relevant risk categories that a loss of the specific utility would negatively impact.

- Academic: Ability to conduct research
- Financial: Financial loss
- Hazard: Health and safety
- Reputational: Negative perception of UBC by one or more key constituents

Step 5: Determine the *Recovery Time Objective* (RTO). This is defined as the period of time that a limited/partial/complete recovery of your processes can be on hold while the University is focusing on other critical priorities. In other words, the RTO is the duration of time that a process must be partially or fully restored to avoid undesired consequences associated with a break in University continuity.

| Recovery Time Objective (RTO) | Rating |
|-------------------------------|--------|
| No Interruption | 5 |
| > 5 minutes | 4 |
| > 6 hours | 3 |
| > 24 hours | 2 |
| > 1 week | 1 |



Step 6: Determine the *Severity of Impact* using the rating legend for Type of Impact (below).

Severity of Impact range: 1 - Minimal, 2 - Minor, 3 - Significant, 4 - Major, 5 – Massive

Add this number to the Severity of Impact column.

| Type of Impact | | | | | |
|----------------|-------------|-------------------------------|--|---|---|
| | Severity | Financial | Reputation | Hazard | Academic |
| 1 | Minimal | < 5% of research budget | No (one day or less) negative impact on public perception within the relevant community | Limited health and safety concerns, requiring little or non-time sensitive corrective actions). | No (one day or less) negative impact on ability to deliver on education and/or research |
| 2 | Minor | > 5 < 10% of research budget | Very brief (one or two weeks) negative impact on public perception within the relevant internal or external communities | Localized health and safety concerns (e.g. advisory warning – water quality), disruptions of services may lead to a potential for minor injuries / illness. | Very brief (one or two weeks) negative impact on ability to deliver on education and/or research |
| 3 | Significant | > 15 < 20% of research budget | Short term (one to six months) negative impact on public perception within the relevant internal or external communities | Health concerns requiring University wide actions (e.g. quarantine), service disruption may lead to serious illness / injuries. | Short term (one to six months) negative impact on ability to deliver on education and/or research |
| 4 | Major | > 20 < 25% of research budget | Medium term (six months to one year) negative impact on public perception within the relevant internal or external communities | Health concerns, with the potential that may lead to a fatality (e.g. explosion, exposure). | Medium term (six months to one year) negative impact on ability to deliver on education and/or research |
| 5 | Massive | > 25% of research budget | Long term (more than one year) negative impact on public perception within the relevant internal or external communities | Health concerns, with the potential that may lead to mass casualties (e.g. large or multiple explosions, viral outbreak). | Long term (more than one year) negative impact on ability to deliver on education and/or research |



Criticality Rating: this automatic rating is a result of multiplying the *Recovery Time Objective* and the *Severity of Impact*, and is shows a prioritization of processes.

| Criticality | Overall Rating |
|-------------|----------------|
| Immediate | 16-25 |
| Urgent | 12-15 |
| Necessary | 8-11 |
| Deferred | 1-7 |

Step 7: In the *Unit Controls / Risk Mitigation Measures* column list in a numerical sequence the controls, measures, or procedures, you currently have in place to prevent against the loss of the specific utility.

Ensure that all risk mitigation measures include reference to the specific location.

Step 8. Email completed Assessment Form to Facilities Management (facilities.ok@ubc.ca) and Health, Safety & Environment (hse.ok@ubc.ca).