

# Sample A3 Proposal

## Freezer Monitoring A3

Title: Campus Freezer Monitoring

Sponsor: Facilities Services

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Revision:

Team: Dean Shehu, UCSF Lockshop, UCSF IT, Lab Managers Steering Committee.

Last update:

### 1. Background: *What problem are you talking about and why are you talking about it now?*

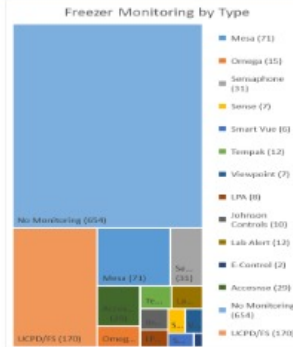
- The current freezer monitoring application that Facilities services offers is costly, has a long lead time and is managed without visibility to the freezer owner.
- It's important to address this issue at this moment in time due to the unreliability of our electric infrastructure in San Francisco.
- The system that Facilities Service (FS) currently offers works in collaboration with UCPD and has existed for over 10 years.
- Only 40% of labs are currently monitoring their freezers through a remote monitoring system. This is an issue because 60% of freezers are not being monitored.
- Millions of dollars of research and years of research is being stored in these freezers. FS and the University have not made it easy, cost effective, or convenient to implement and maintain a system that works for labs.
- Freezers contain valuable research & often samples in these freezers are not replicable.
- Improving access to freezer monitoring will help reduce potential loss.
- A recent risk claim for a failed freezer estimated \$50,000 worth of samples. However, UCSF does not insure research from Risk Management.

### 2. Current Conditions: *Where do things stand now?*

- Inconsistent monitoring.** Out of 1,100 -80°C freezers, 60% don't have any remote monitoring device installed. In some instances, labs object to the amount of upfront and annual fees required for a system.
- Incompatibility.** Some systems aren't compatible with UCSF's WiFi infrastructure. As a result, many labs have purchased and returned incompatible systems.
- Ineffectiveness.** About 15% of labs that have installed temperature probes monitored by UCPD (Manitou system), whereby the first alert goes to the UC Police Department, who then contact the individual(s) listed as responsible for freezer emergencies.
  - 55 out of 88 participants interviewed for the SOP pilot indicated that they would be interested in testing a freezer monitoring sensor and software. Move to current condition.

#### Problem Statement:

In FY2019, 60% of ULT freezers at UCSF did not have temperature monitoring. This results in a high risk of sample loss which is a due to inappropriate temperatures. A loss of research samples jeopardizes the institutional reputation, cost potentially millions of dollars, and sets research back years.



### 3. Target Conditions (Goals): *What specific outcomes is desired?*

- Target: 100% of labs are provided the option of monitoring their freezers at a low cost by June FY2010.
- All lab freezers are on a central software system with reliable hardware and the system is managed by lab users. Criteria for the system/hardware includes ease to install, low cost, monitoring for freezer temperature, sensor tech support, and UCSF IT compatible.

### 4. Gap Analysis: *Why does the problem exist?*

- The root cause of the problem is that lab assets are individually managed at UCSF.
- The UCSF current monitoring system also is outdated and is not dynamic in its ability to provide freezer data, real time temperature information, or automated alerts.
- Barriers to success are as follows: *IT support, behavior change and acceptance with the recommended product,*

### 5. Experiments: *What countermeasures do you propose and why?*

The countermeasures are as follows:

- Assemble a committee to develop a system that meets the needs of campus which includes the biorepository team, FS, SCM, Lab managers, IT, etc.
- Continue to test pilot the two software applications (Monnit & Tempatic) until Feb, 2020.
- These countermeasures are working to address buy-in, application acceptance, and program governance/structure.

### 6. Action Plan: *How will you implement?*

#### Document actions, steps, outcomes, timelines, and roles.

- WHAT:** Requirements for a system need to be solidified by stakeholders. Once a scope is agreed on with stakeholders, an RFP needs to be developed, followed by the selection of a vendor. After the vendor is selected, the committee needs to decide about the implementation and roll out will be managed and sustained. This process includes installation, ongoing support, hardware management, software management, IT support, etc.
- WHO:** A Lab Services team committee and coordinator will assist with the above tasks. We will also contract with a lab service provider such as unity labs.
- WHERE:** Mission Bay Campus will roll out first.
- WHEN:** Formulate committee and agree on scope by December 15<sup>th</sup>. Select lab service provider by Jan 1<sup>st</sup>. Build RFP by Feb 2020. Develop logistics plan for roll out by March 2020. Roll out to campus by June 2020.
- HOW:** UCSF Facilities in coordination with SCM and the Lab Services Committee will manage the logistics.

### 7. Study, Reflect, Plan Next Steps: *How will you assure ongoing PDSA?*

#### Commit to regular reviews to study the progress of implementation and make necessary adjustments.

- The target goal of this project is for the University to be able to offer every lab a subsidized freezer monitoring system.
- Once a system is selected, a clear communication campaign to campus will help inform lab researchers of the new system and opportunities to participate.
- During the monitoring rollout, we will track the number of lab users adopting the application.
- We will track user satisfaction through a Qualtrics survey and follow up interactions to ensure issues or modifications are being addressed.
- The Lab Services coordinator & external provider will help monitor and track the ongoing success and feedback.