

Engineering World-Class Collaboration

Modernization of the Fraser Duncan Auditorium Control System

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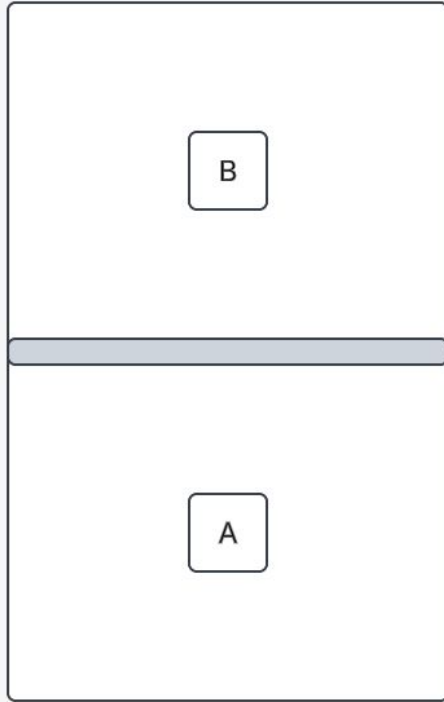
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What is the Fraser Duncan Auditorium?



Why this room matters?



Challenges

- Audio system was non functional
- Poor user interface
- Cameras system was not operational
- Screen casting system would consistently fail
- Only functional unit was the projector and projector screen



SNOLAB's Proposed Solution

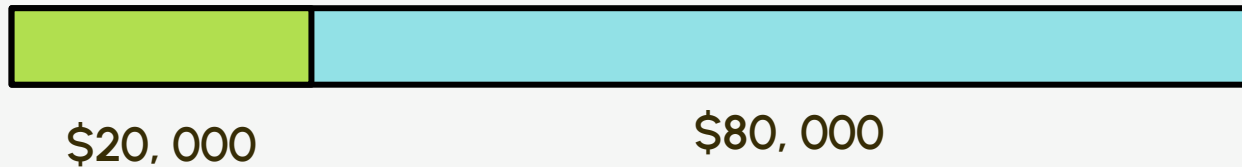
- An external vendor offered to replace the whole system for \$100, 000
- The project budget was approved



\$100, 000

My Proposed Solution

- Fix the existing system 
- Integrate Microsoft Teams 
- Design a UI 



Each Issue Became a Design Requirement

Unexpected sound system failure



Each Issue Became a Design Requirement

Unexpected sound system failure

Isolate the system

Isolate each
component

Reset and
reconfigure

Each Issue Became a Design Requirement



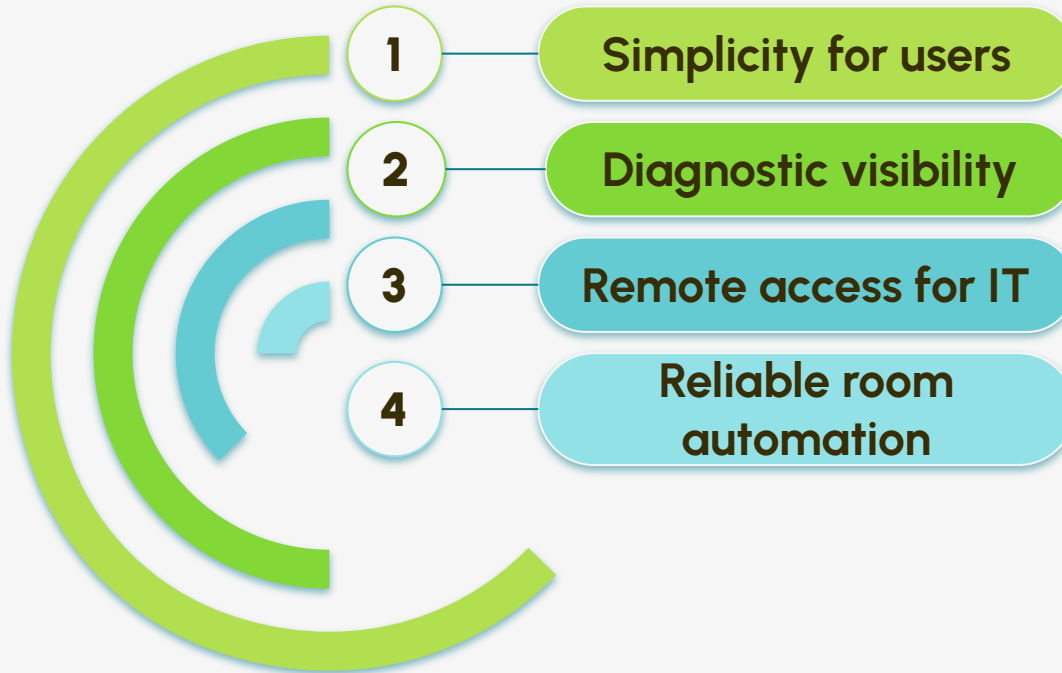
User Control UI

Event Scheduler

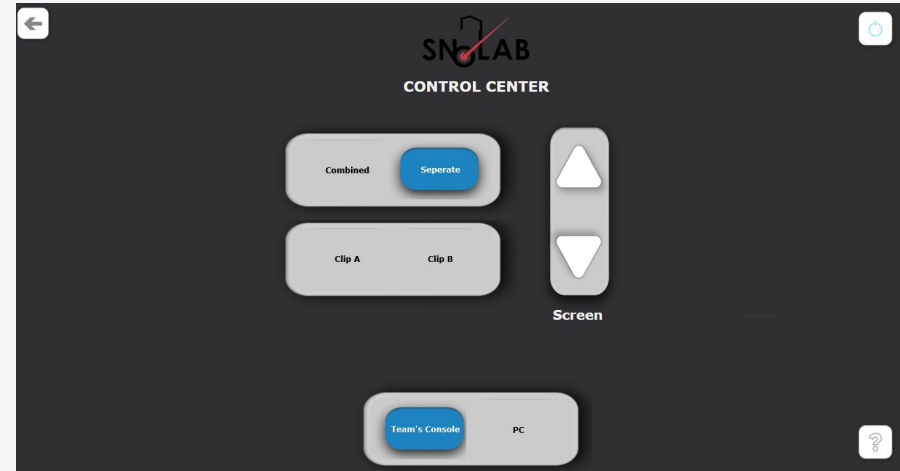
Remote Access

Control Interface and Automation

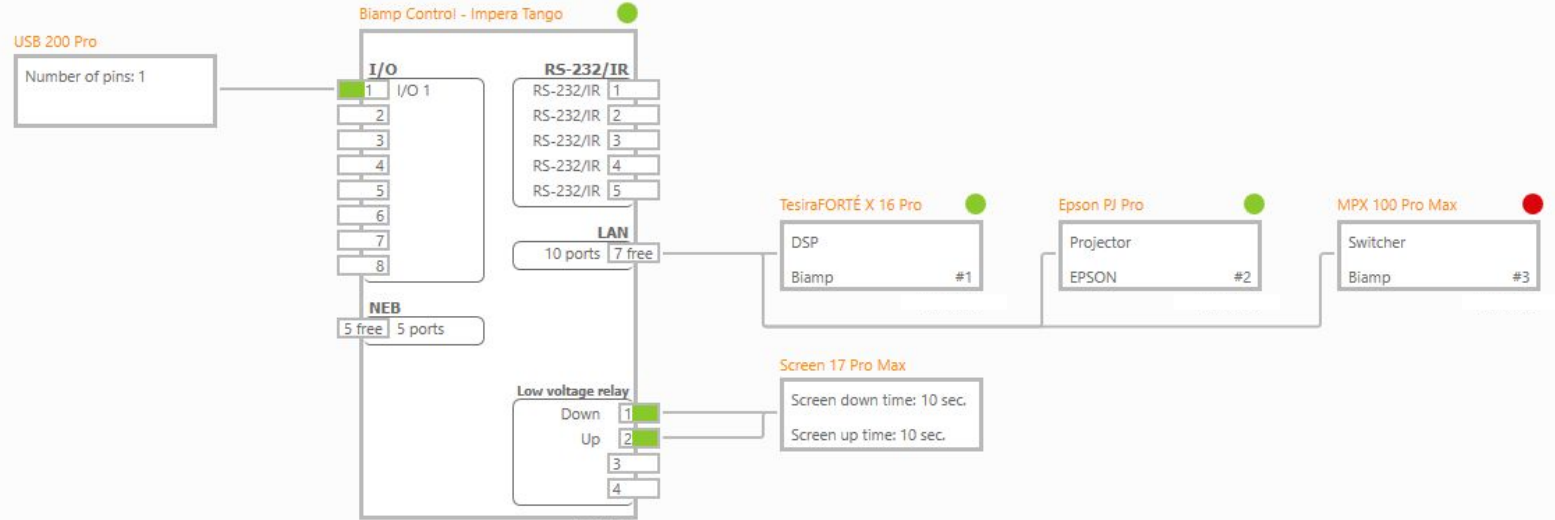
Designed around 4 main goals



Goal 1: Simple for Users



Goal 2: Built-in Diagnostics



Goal 3: Remote IT Support



Goal 4: Reliable Room Automation

EDIT EVENT

Event Info

Event Name
Monthly Safety Meeting

Event Preset
Auditorium

☒ Enabled

Scheduling

☒ Single ☐ Daily ☐ Weekly ☐ Monthly

Start Date
2026-08-06

Start Time
11:30 AM

DELETE

CANCEL

SAVE

Upgrades

Meeting Owls



Upgrades

Meeting Owls



Upgrades

Meeting Owls



Four 4K 360° cameras and
backup speakers/mics



Upgrades

New Teams Consoles



Upgrades

New Teams Consoles



Upgrades

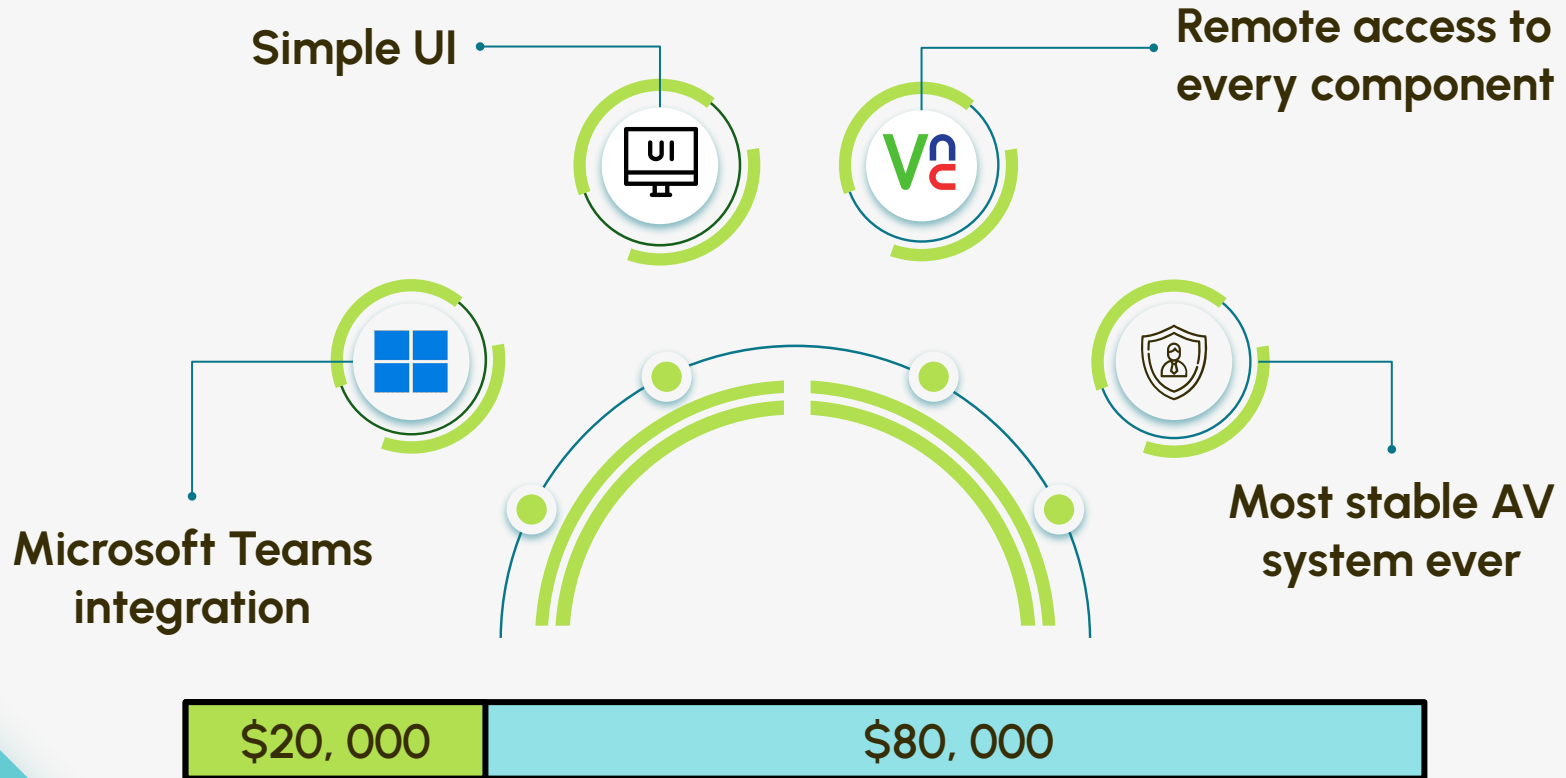
New Teams Consoles



One touch controls and
offline casting options



Where are we now?



Acknowledgments

Kipp Grose
James Hawkins
Paul Grylls
Dr. Stephen Sekula

IT Colleagues



Thank You!

Questions?