ASSOCIATION FOR LEARNING ENVIRONMENTS
Enhancing the Educational Experience

From Assessment to Action:

A Strategic Guide to Modernizing Aging Facilities

April 2, 2026

Speakers

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Agenda

01
Introductions

02
Kentucky School for the Blind

03
Design Strategies

04
Phased Approach

05
Costs & Incentives

06
Q&A

Learning Objectives

- **Explore** the role of financial decision-making, including considerations like LCCA and operation and maintenance costs, in extending the longevity of campus facilities for future generations.

- **Apply** effective strategies for planning, designing, and scheduling campus renovations to meet tight schedule and budget constraints while minimizing disruptions to the learning environment.

- **Identify** the benefits of geothermal central energy plants in addressing the diverse needs of multi-building campuses, ensuring efficiency, sustainability, and utility cost savings.

- **Examine** how infrastructure upgrades directly influence academic success by supporting faculty, staff, and students.

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KSB
KENTUCKY SCHOOL for the BLIND

Our Mission
The mission of the Kentucky School for the Blind is to provide comprehensive educational services to all Kentucky students who are blind and visually impaired.

Our Vision
Empowering Students who are Blind and Visually Impaired to Command their Future

184
Years of Service

60+
Students

20+
Teachers

History of Kentucky School For The Blind

The **Kentucky Institution for the Blind** was founded in 1842, opening in downtown Louisville, KY.

In 1855, it moved to its present location on Frankfort Avenue in the Clifton neighborhood of Louisville and was renamed the **Kentucky School for the Blind**.

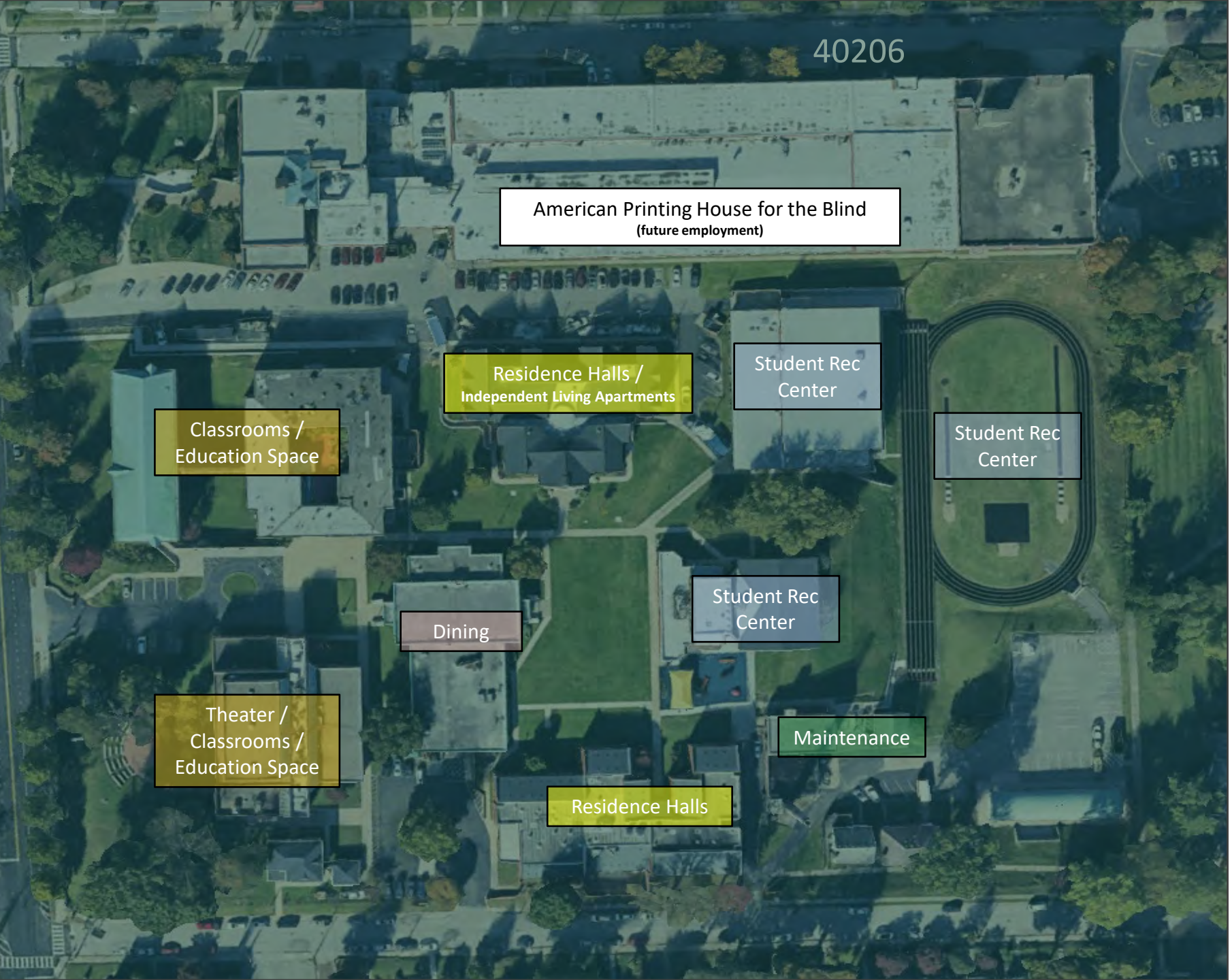
In 1967, the original building was razed to make way for a **modern facility** that would better serve students with visual impairments.

By 2023, the aging campus needed to make another **investment in facility upgrades** to continue its mission.

Project Challenges

How can we modernize our infrastructure while also….

- Staying within budget constraints
- Minimizing disruptions to learning
- Improving operational efficiencies
- Reduce operational costs



Campus Overview

- KSB was founded in 1839
- American Printing House was founded in 1854
- Two dorms for residential students
- Two recreation buildings
  - Gyms
  - Pool
  - Bowling Alley
  - "Living Room"
- Dining hall
- Arts/Theater
- Maintenance building
- Admin/classrooms

KSB Existing Steam Plant

Funding & Operation

- **2008: Transitioned from State Agency to KDE**
  - $375,000 Operational Budget
  - Difficult to keep multi-designed systems operational
- **2015: Legislative Proposal for Increased Funding**
  - Statewide facility review for KY Legislature
  - Identify needs/forecasting and budget analysis

Kentucky Department of EDUCATION

"When I started at KSB, people (faculty & staff) thought my job was to close the campus" - T

Funding & Operation

Dual Programming

Supports 1300+ students enrolled in their local schools.

Students maintain their local school enrollment. Resources sent from KSB to their school

Integrates with existing school curriculum.

Supports learning within a traditional academic setting.

KSB Includes both boarding and non-boarding students.

Accommodates students with different living arrangements.

Short Course Program

Students attend for a few weeks at a time.

Short-term attendance for focused learning.

Focus on skills for independent living and preparation for daily life.

Develops practical life skills for autonomy.

Designed for students with blindness or low vision.

Specifically targets visually impaired learners.

Campus Real World Scenario Lab

Project Goals

- **Maximize Financial Resources**
  - Dependent on state funding
  - How to prioritize which buildings to renovate
- **Optimize Operational Efficiency**
  - Energy efficient systems = lower utility costs
  - Reduce operation & maintenance needs
- **Minimize Learning Disruptions**
  - Renovate systems without interrupting the learning environment
  - Maintain residence life operation

Table Discussion

What solution(s) would you come up with based on these challenges?

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Where did we start?

Campus Assessment

- 12 Buildings on Campus were assessed
- Score & rate each system for condition and remaining useful life
- Identify cost effective solutions to address most pressing issues

	Building SF	Electrical	Tele/Data & Security/Access Controls	Fire Alarm	Fire Protection	Plumbing	HVAC	Indoor Air Quality	Building Summary
Lydia A. Scoggan Classroom Building	40,357	2.0	4.0	3.0	0.0	3.5	2.7	2.4	2.4
Helen K. McDaniel Classroom Building	24,336	1.8	4.0	3.0	3.0	3.5	2.7	2.4	2.8
Paul Langman Gymnasium	32,442	1.8	2.3	3.0	0.0	3.2	2.2	1.0	2.0
John Gregory Recreation Center	10,078	1.6	3.3	0.0	3.0	3.4	2.3	2.4	2.1
Samuel Richie Auditorium	33,600	2.3	3.1	0.0	3.0	3.5	2.3	2.4	2.3
L.P Howser Hall Dormitory	45,075	4.0	4.0	5.0	5.0	4.4	4.5	4.5	4.5
Daniel Begley Maintenance Building	4,163	2.3	2.0	0.0	0.0	2.8	1.7	N/A	1.4

^ denotes building not in study's purview, at direction of DECA
^^ denotes building is in process of renovation

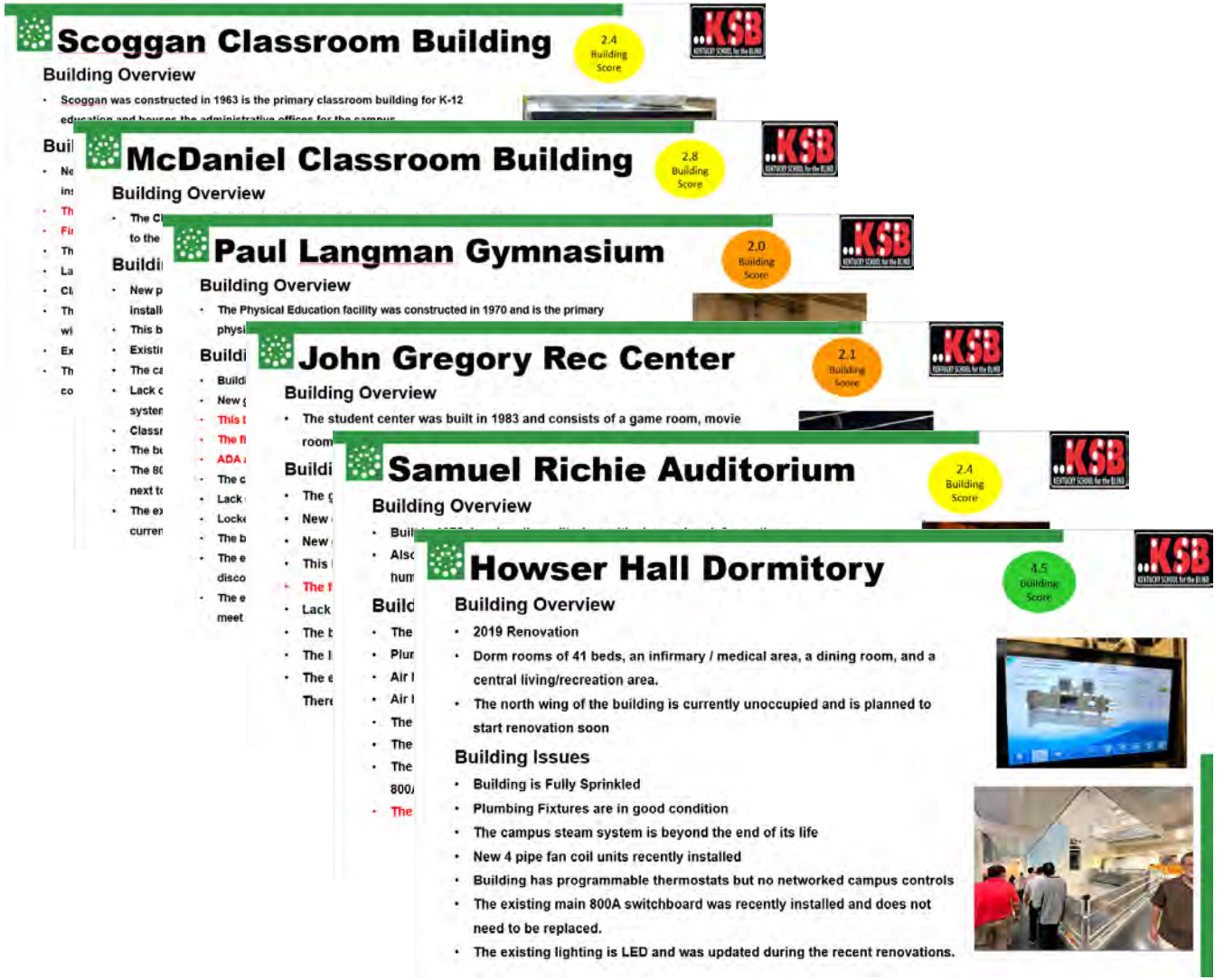
Indoor air quality is weighted by 40% for ventilation direct to space, 25% for dehumidification capability, and 35% for space filtration & local heating/cooling capacities.

N/A	Not Applicable
0	Life safety OR occupancy code issue - repair/replacement immediately
1	Urgent need of repair/replacement - recommended NOT to delay more than 2 years
2	Approaching need of repair/replacement - recommended within 4 years
3	Moderate need of repair/replacement - recommended within 7 years
4	Minor / Like New - little need of repair/replacement recommended within 9+ years
5	Recently Completed

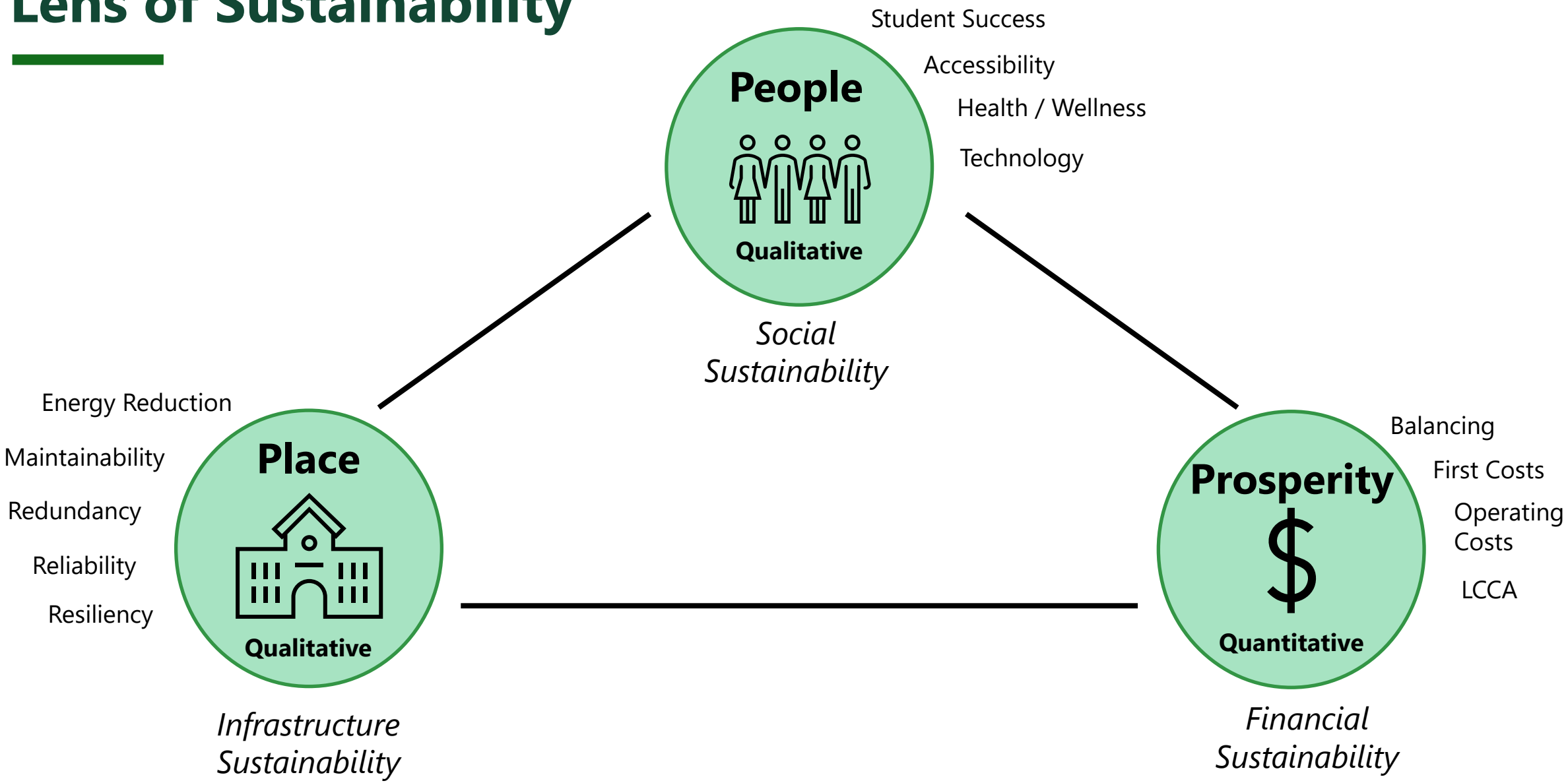
Existing Systems

General Findings

- Buildings without Cooling Capacity
- Buildings without Sprinkler Systems
- Building Envelope needs improvements
- Campus Equipment Not Standardized
- Campus Heated Through Old Steam Plant
- No Central Building Automation System



Lens of Sustainability



Future Casting of Challenges for Students & Infrastructure

Students

- Residential / day students
- Blind / low vision
- Medically fragile students
- Blind clinic
- Short course

Infrastructure

- Aging buildings / multiple outdated systems
- Limited resources
- Taking buildings offline / limited summer schedule

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Decision Making Process

Building Assessment

Review Findings with KSB and DECA

Fund Allocations

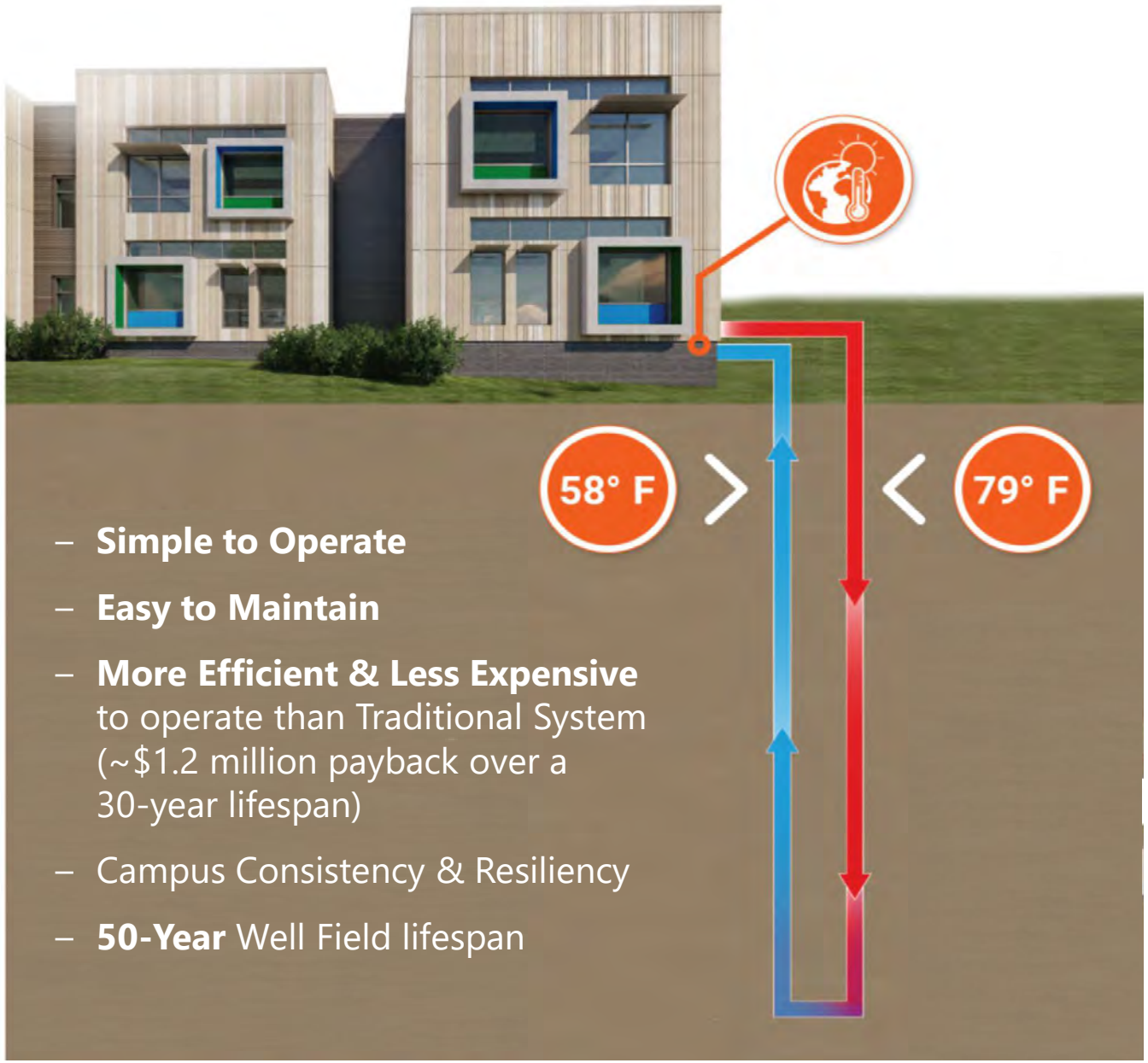
KDE / DECA Uses these findings to gather appropriate funding for Project

High Performance MEP Systems

Fully electrified, heat pumps, improved IEQ

Geothermal Systems

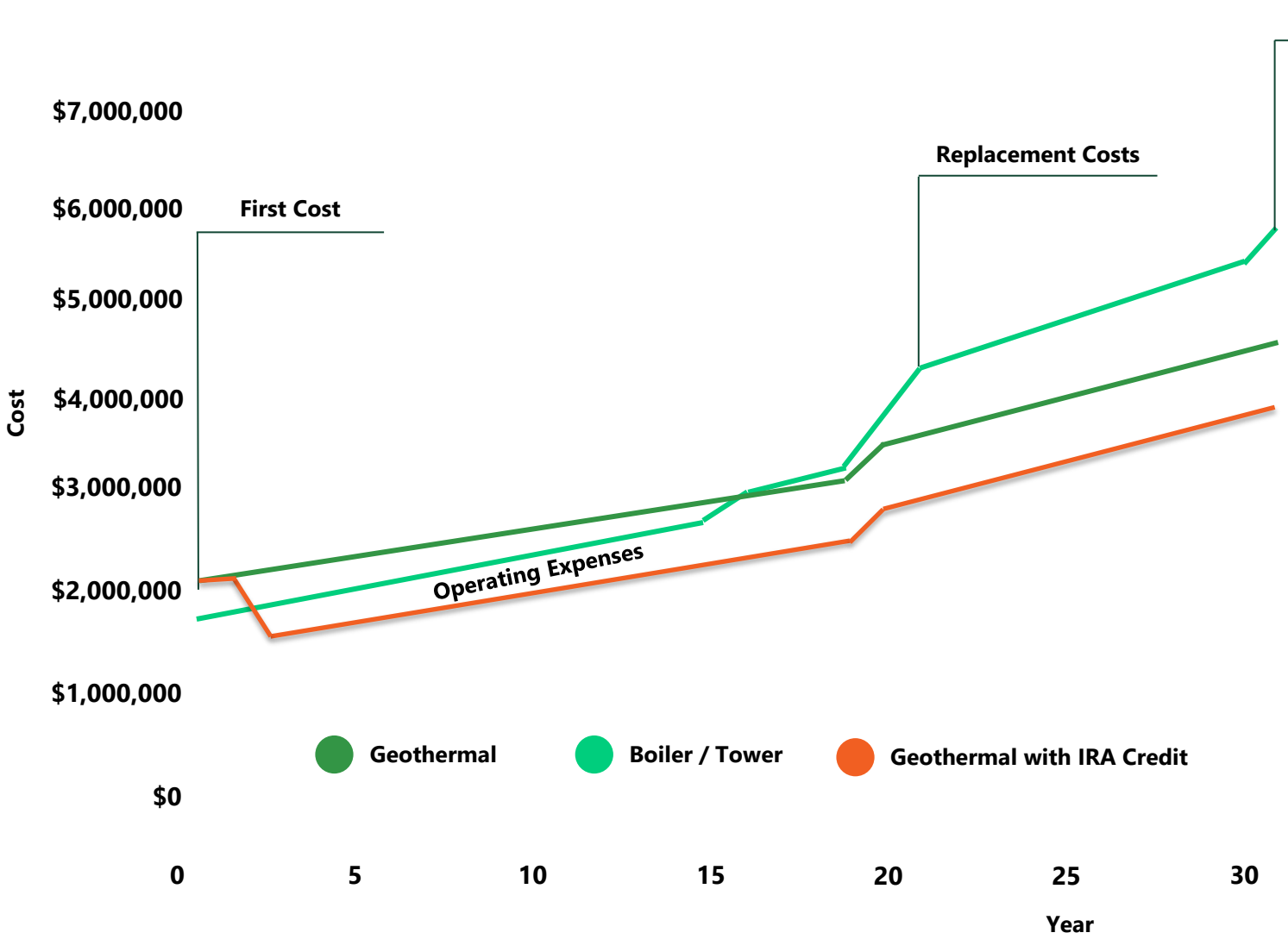
- **Campus Geothermal Central Plant** significantly reduces number of items to maintain
- **Localized heat pump units** eliminate the risk of a campus wide outage if equipment fails
- **Campus Central Plant** allows for reduced first cost by leveraging diversity of all buildings



KSB Geothermal Site Plan

Geothermal

LCCA



$1,209,987 Savings

LCCA Input Metrics:

2.5% Annual Inflation Rate

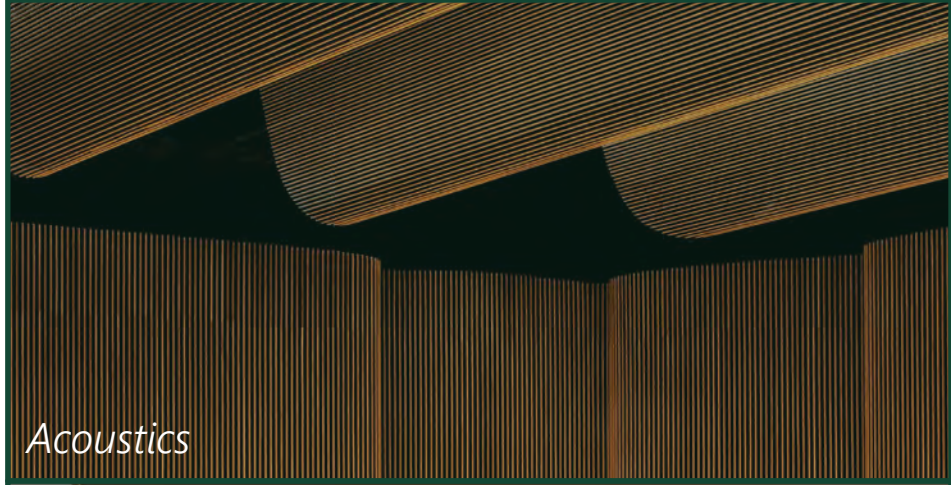
Life Cycle Period: 30 Years

Replacement Cycle: 20 Years

Holistic Design Strategies

How can we optimize the building for both operation and occupants?

- Maintain existing infrastructure that the campus has already invested in
- Lighting replacements with visually impaired students in mind
- Select Heat Pumps for low acoustical impact



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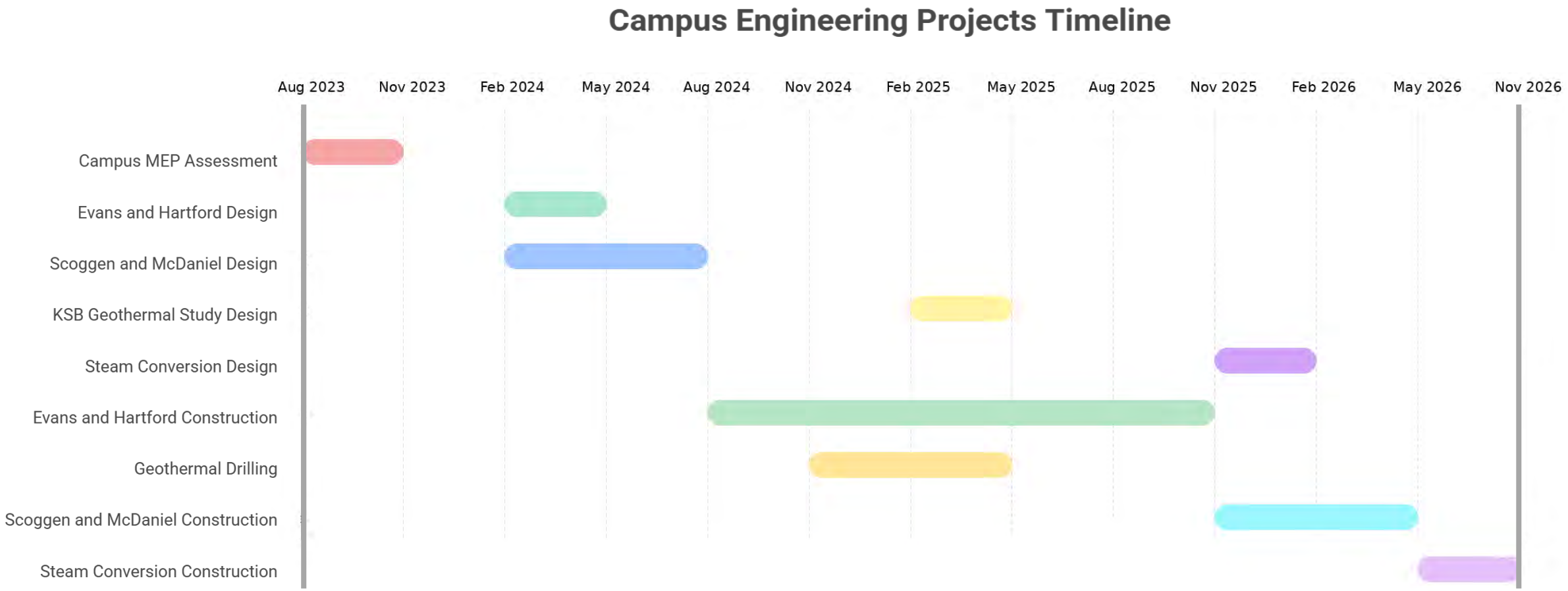
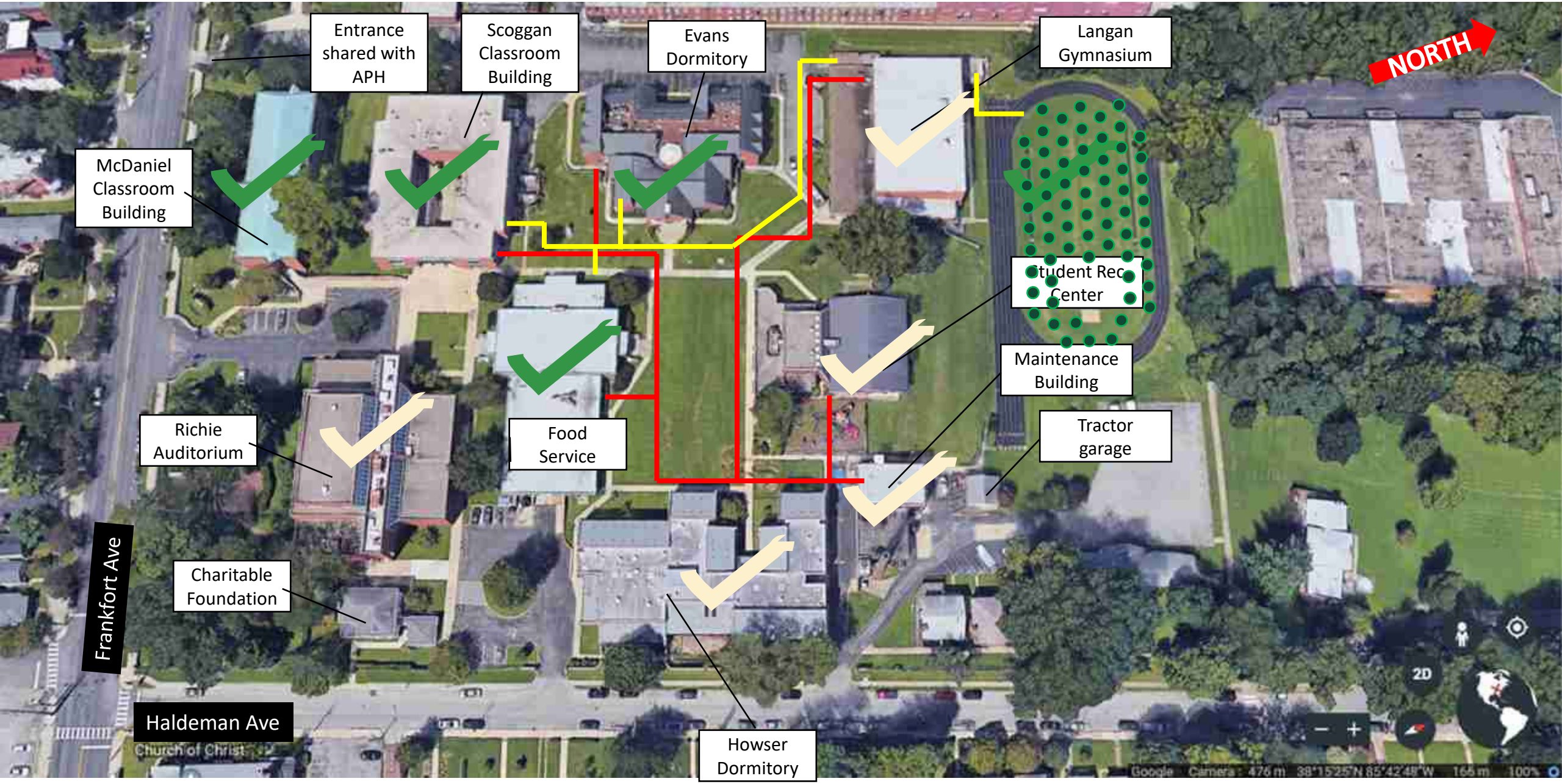
Minimize Disruptions

How can we protect the learning environment while modernizing infrastructure?

- Property Line Coordination with neighboring Printing House
- Coordination of geothermal well field installation with special Olympics
- Phasing of project to allow for continual housing of students
- Coordination with Summer School

Schedule Constraints




Entrance shared with APH
Scoggan Classroom Building
Evans Dormitory
Langan Gymnasium
NORTH
McDaniel Classroom Building
Student Rec Center
Maintenance Building
Richie Auditorium
Food Service
Tractor garage
Frankfort Ave
Charitable Foundation
Haldeman Ave
Church of Christ
Howser Dormitory
2D

Infrastructure & Academic Success

How do these upgrades impact academic success?

- Improvements to indoor air quality without replacing equipment in Scoggan
- Providing fresh air to administrative spaces that did not previously have fresh air
- Providing localized control to the classrooms
- Lighting / Lighting controls Replacements in Scoggan

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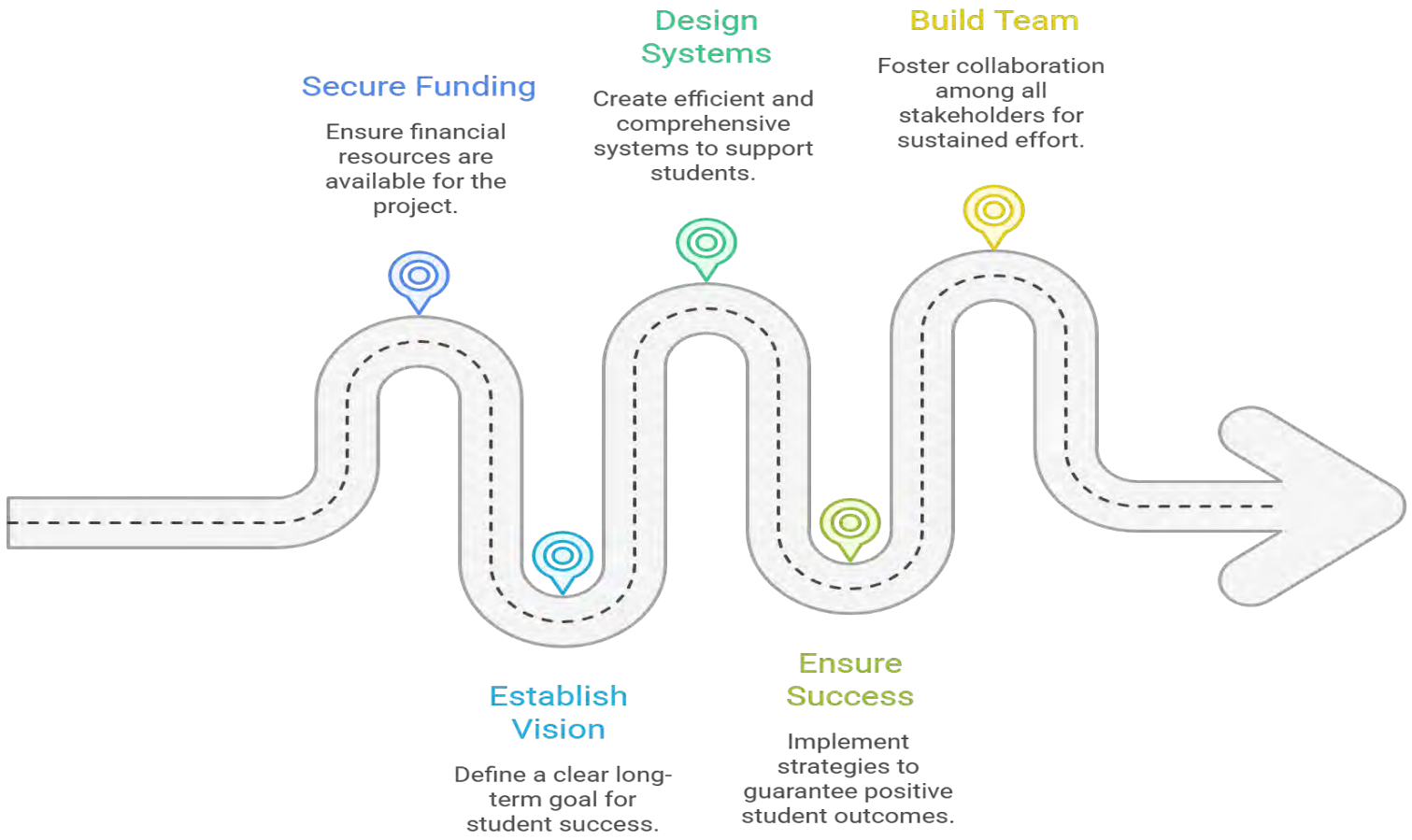
Process Roadmap



The project's goal is to **maximize STUDENT investment** through the built environment and by minimizing campus operating costs.

Q&A

Thank You!