#edspaces

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College Ratings

Comparing Classrooms with the Learning Space Rating System

Tuesday, November 7 2:30-3:3:30

Learning Objectives

01

Introduce the LSRS as a classroom evaluation tool to improve the physical and social well-being of students.

02

Discuss the similarities and differences of classroom inventories across institutional types and section capacities.

03

Analyze your inventory for quick wins to bolster student belonging and academic success within your learning spaces.

04

Develop renovation strategies to make your classrooms safer, healthier, more active, and more equitable across building types and disciplines.

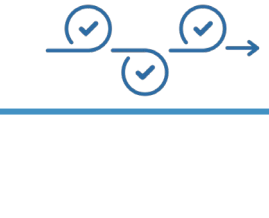
Agenda

01 The Evolving Classroom 

02 Best Practices 

03 Learning Space Rating System 

04 LSRS in Action 



01 The Evolving Classroom

The Evolving University

Birth of the University

INDUSTRY
INTELLIGENCE

First Industrial Revolution
Second Industrial Revolution

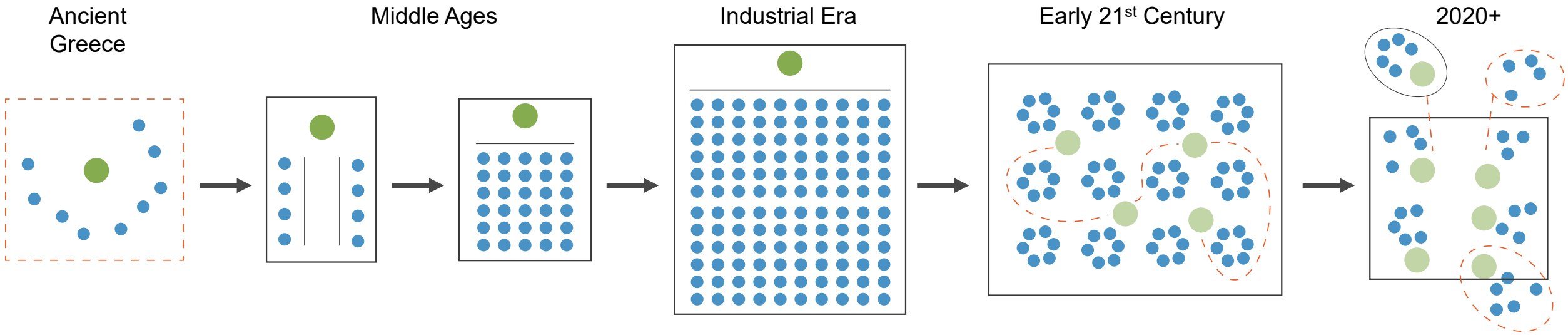
FACTORY
MASS
PRODUCTION

Third Industrial Revolution

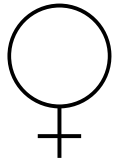
TECHNOLOGY
AUTOMATION:
CONNECT
PEOPLE

Fourth Industrial Revolution

IMMERSIVE TECHNOLOGY
INTEGRATION:
CONNECT EXPERIENCES

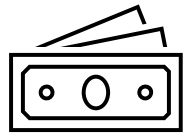


The Evolving College Student



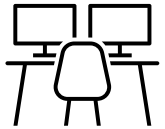
6/10
identify as female

4/10
identify as a minority



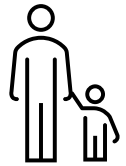
4/10
receive pell grants

5/10
first-generation

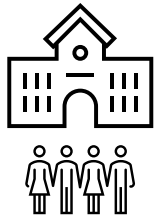


6/10
employed part-time

4/10
part-time student



2/10
are parents

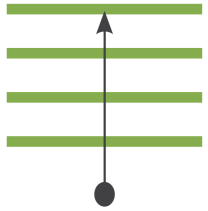


4/10
attend community college

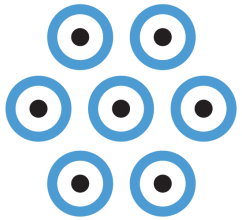
Source: Bill and Melinda Gates Foundation, 2019

The Evolving Curriculum

Traditional College Classrooms



Whole Person Educational Environments



Instruction Delivered
In static environments

Learning Facilitated
in high-energy spaces

Teacher-Centered

Learner-Centered

Passive Learning
lectures and scripted labs

Active Learning
skills-based and experiential

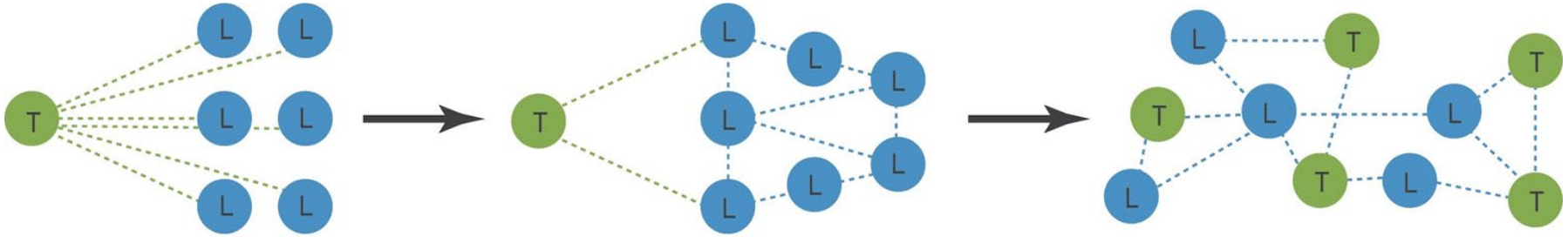
Segmented Curriculum
Singular subjects, Carnegie-based

Integrated Curriculum
experience extends beyond classroom

Students Memorize Material
focus on regurgitation

Students Create Material
focus on application

The Evolving Delivery



Knowledge DELIVERED
Passive
Teacher as Dispenser of Knowledge

Knowledge SHARED
Active
Learners as Dispensers of Knowledge

Knowledge NETWORKED
Active and Problem Based
Learner as Creator of Knowledge

The Evolving Classroom

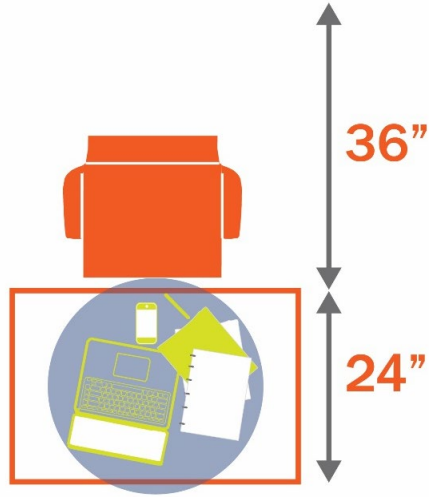
Traditional College Classrooms

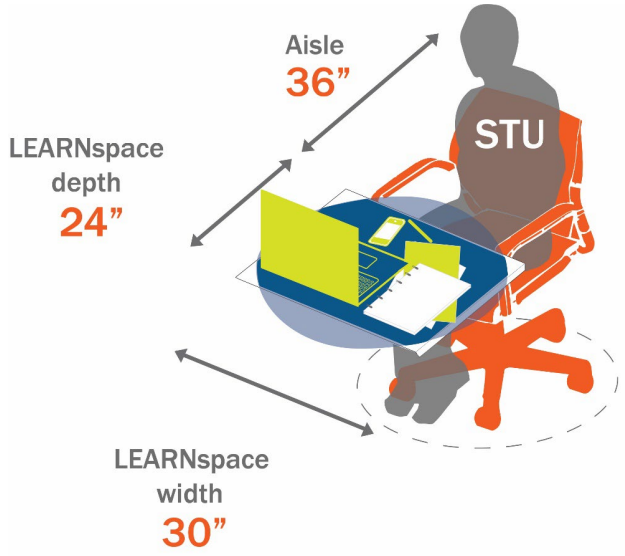
VS.

Whole Person Educational Environments

10-20 NASF

25-35 NASF

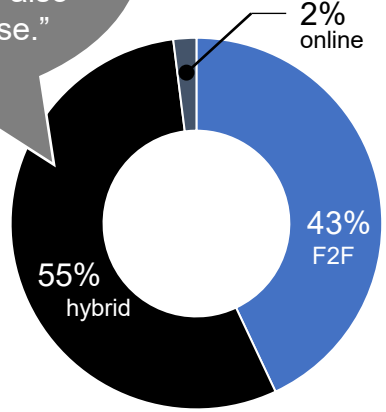




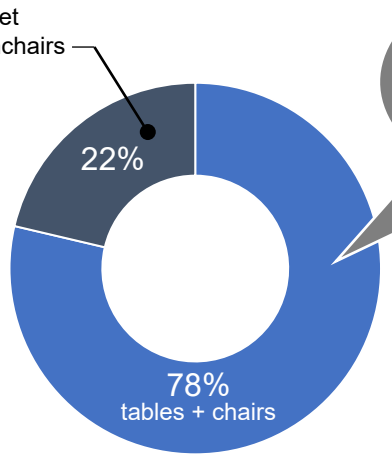
02 Best Practices

Engagement

"Give us the options to succeed. Accommodations for the small minority of us also helps everyone else."

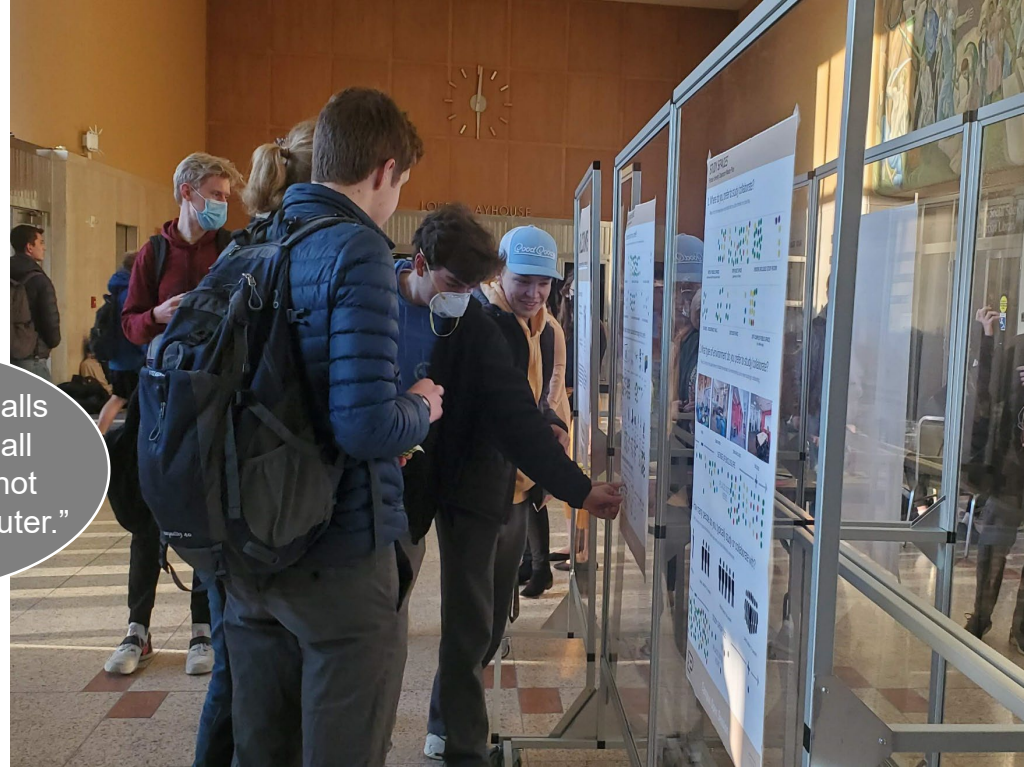


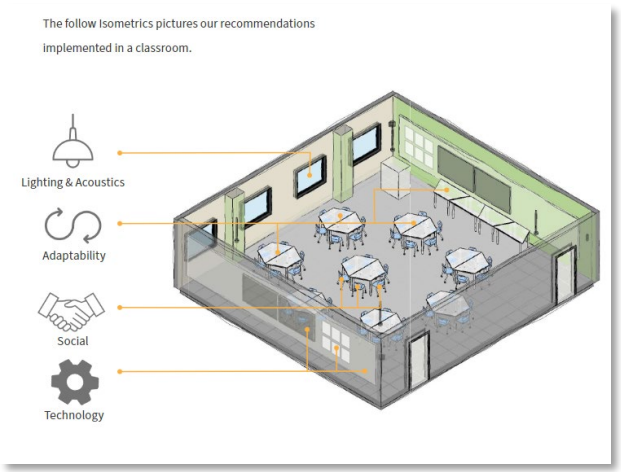
Course Delivery Preferences

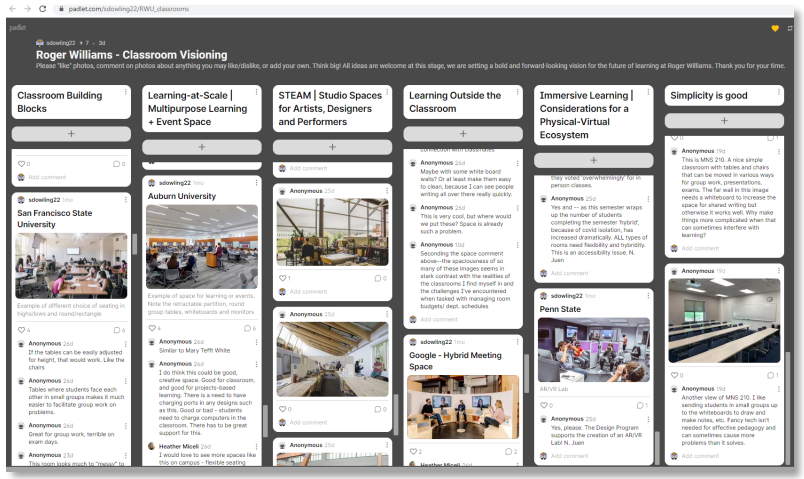


Furniture Preferences

"Some lecture halls have super small desks that cannot even fit my computer."







Recurring Themes

INVENTORY

Quantity of space
Quality of space

ACCESSIBILITY

Path to room
Path within room
Seating options
Visibility
Acoustics

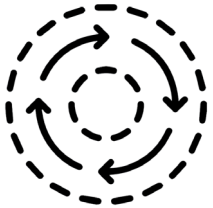
PEDAGOGY

Modalities
Reach and teach
Student-centered

TECHNOLOGY

Plug and play
Training
Intentionally hybrid
Available power

CONSISTENCY



Quality
Layout
Density
Physiological needs

Learning Space Best Practices

1. Instructional Proxemics
2. Proportions
3. Physiological Needs

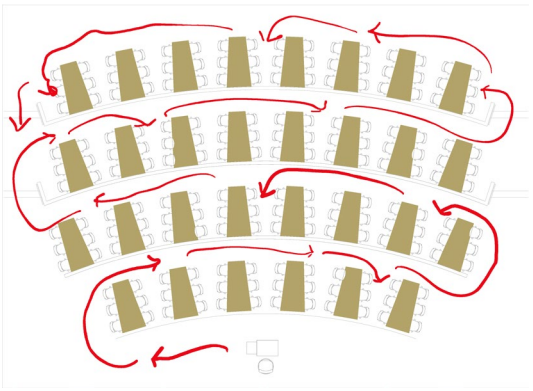
Learning Space Best Practices: Instructional Proxemics

Turn and Learn

- Collaboration - Students can face each other to discuss and work together on in-class activities
- Security – Students feel more comfortable when they can see who is speaking or moving

Movement

- Users (students and instructors) can completely circulate the room
  - Flat floors or ramps allow users with physical disabilities to reach all spaces



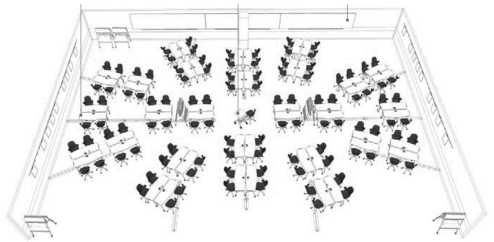
Instructor Distance

- Ability to approach any student for a one-on-one conversation
  - Limit seating to about 6-8 students between aisles

Learning Space Best Practices: Proportions

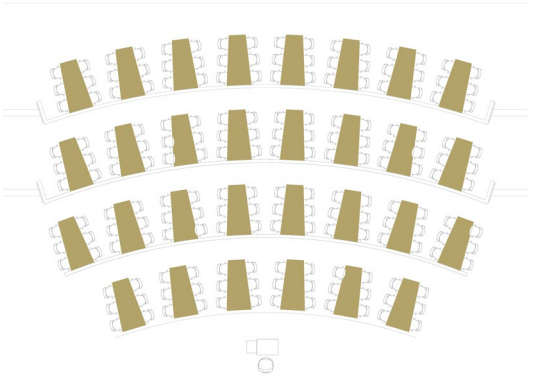
Aspect Ratio

- Depth - width aspect ratio should not exceed 1:1.5



Orientation

- If fixed seating is needed, orient furnishings in a horizontal manner to keep students closer to the instructor



Storage

- Adjacent storage spaces give instructors the ability to manipulate furnishings and store props and technology

Learning Space Best Practices: Physiological Needs

Lighting

- Access to natural light
- Lighting that provides even illumination + minimizes glare
- Ability to dim lights

Acoustics

- Microphones + speakers
- Acoustic wall, ceiling, and floor materials
- Accommodations for students or faculty with hearing impairments

Sightlines

- Ability to see instructor and peers
- Ability to see teaching materials (screens, whiteboards)
- Ability to see entries

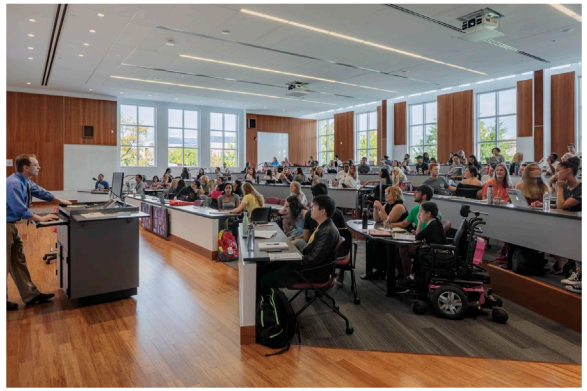
Learning Space Best Practices: Inclusion & Belonging

Writing Surface

- Ideally, students should have 24” deep writing surface
- Ensure a minimum of 18”
- For turn-and-learn, consider the belongings of both rows of students

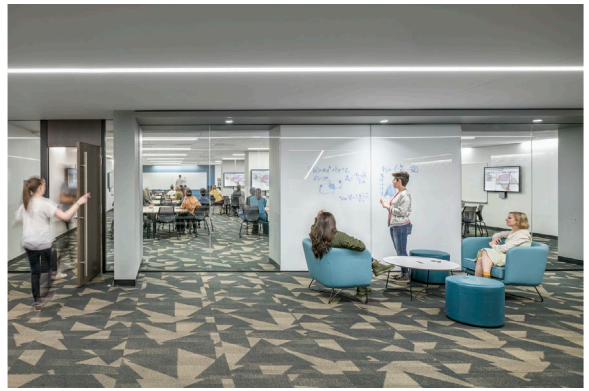
Inclusion

- Utilize ramps, flat floors, and mobile furnishings whenever possible to accommodate students with physical disabilities



Informal Spaces

- Complement large spaces with adjacent smaller breakout spaces = 3-5 sf/seat



Design Standards: Baseline

- Appropriately sized visual displays
- Acoustic finish materials
- 12’ min. writing surface unobstructed by the screen
- Lighting and thermal controls
- Unobstructed view of instructor
- Seating that accommodates a range of body sizes
- Min 5% accessible seating
- Min 20 asf/student

Design Standards: Active

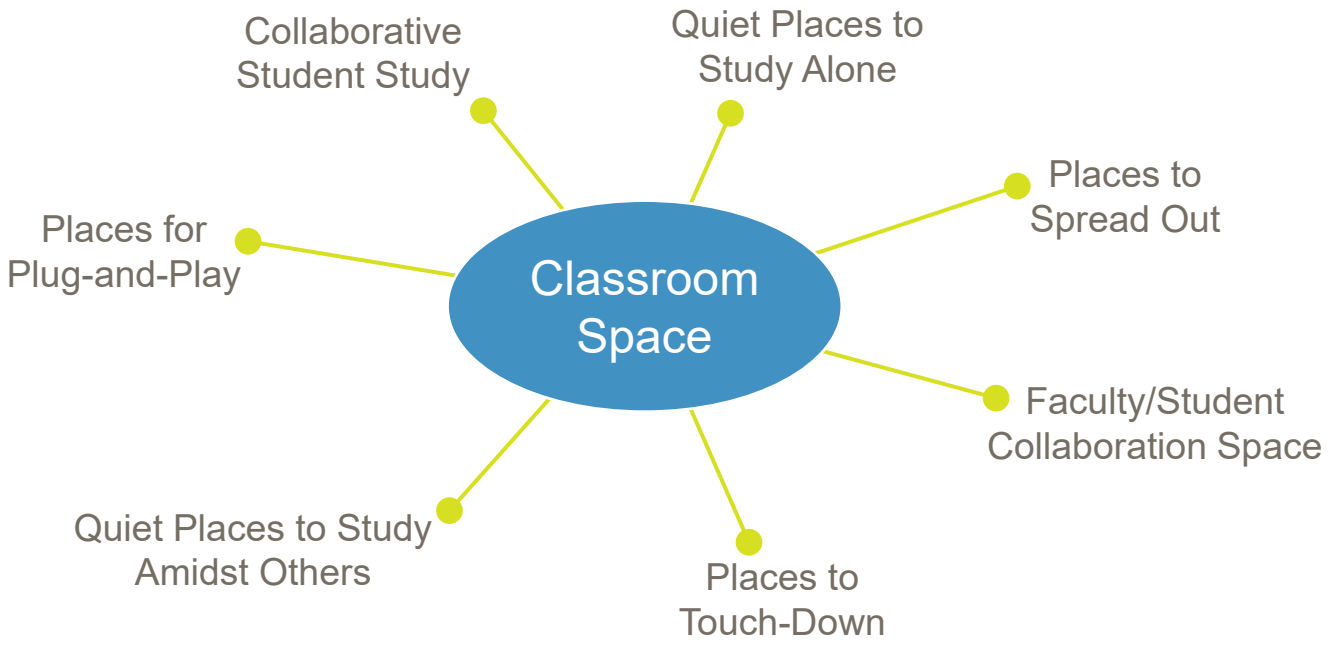
- Multiple fronts of room
- Access to informal space
- Mobile furniture
- Sufficient horizontal surface
- Instructor can reach and teach all student
- Increased min asf/student
- Outlets and recording capabilities

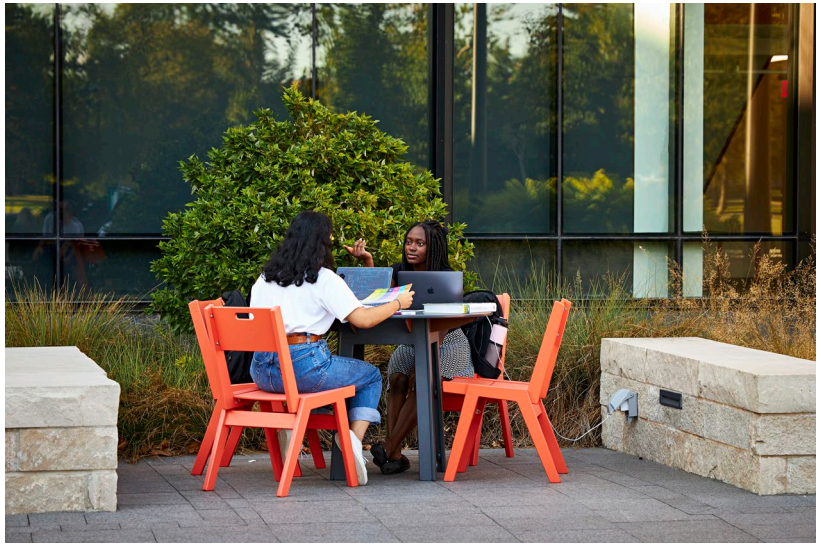
Classroom Sizing Rules of Thumb

Capacity Range	Minimum ASF/Seat Guideline	Guideline translated to Classrooms	Rule of Thumb
0 - 40 Seats	30+ ASF per Seat	40 seats X 30 ASF = 1,200 ASF	Rooms 1,200 ASF or smaller should have 30 ASF/seat
41 - 100 Seats	25+ ASF per Seat	100 seats X 25 ASF = 2,500 ASF	Rooms 1,201 - 2,500 ASF should have 25 ASF/seat
101 - 150 Seats	22+ ASF per Seat	150 seats X 22 ASF = 3,300 ASF	Rooms 2,501 - 3,300 ASF should have 22 ASF/seat
151+ Seats	20+ ASF per Seat		Rooms 3,301+ ASF should have 20 ASF/seat

Informal Learning Space

Learning happens everywhere! A classroom study is not complete without looking at the **adjacent spaces** where **informal learning** takes place.



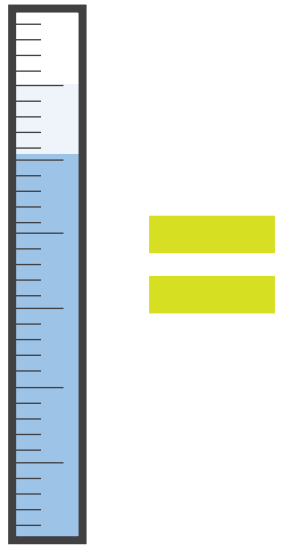


Informal Learning Space

For every **seat inside the classroom** or **instructional lab** in an academic building, best practices suggest **3-5 ASF of informal space** to support a 24/7 in-person learning experience

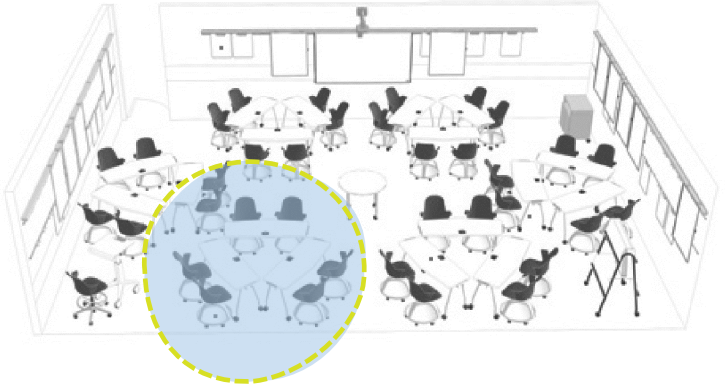
- Locate near circulation paths and on the way to instructional spaces
- If possible, locate on every floor where instruction occurs
- Stackable informal space = visual opportunity on the outside of a building + comfort and belonging on the inside

25-30 ASF
inside the instructional space

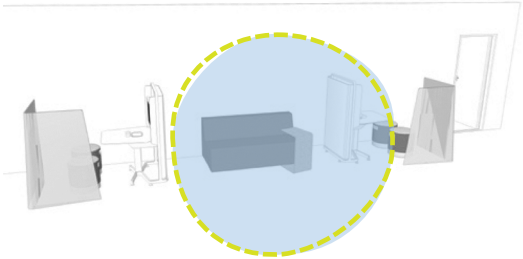


3-5 ASF
outside the instructional space

5-8 desks
inside the instructional environment



1 study space
outside the instructional environment



03 Learning Space Rating System

Learning Space Rating System

LSRS provides a framework of **measurable criteria (credits)** to evaluate the potential of a formal learning space to support a broad range of higher education's diverse learning and teaching practices.

Environmental Quality

- Daylight, views to nature, lighting and thermal controls, acoustics, and clear sightlines

Layout and Furnishing

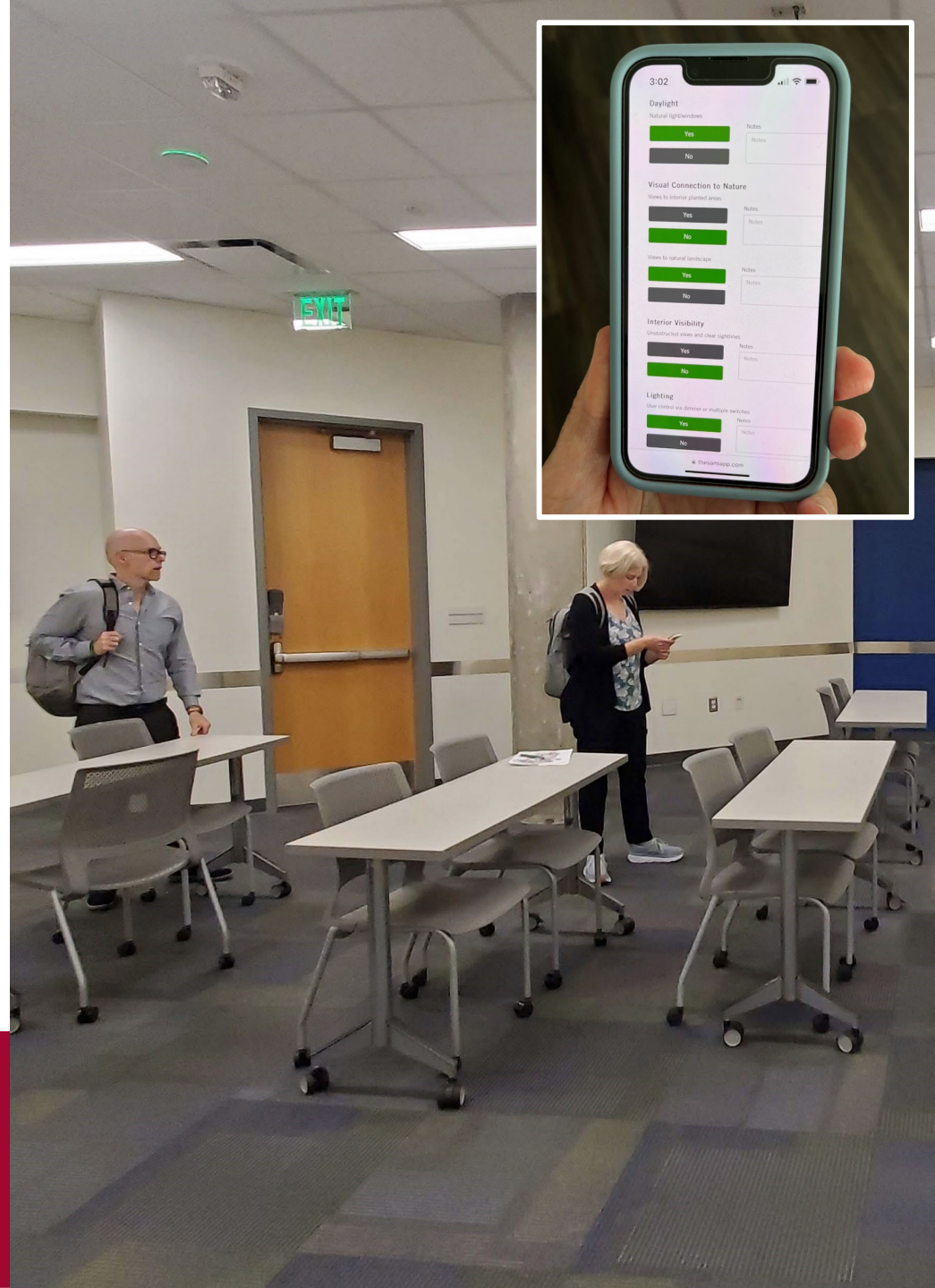
- Density of seating, flexibility and comfort of furnishings, teaching walls, ability to move throughout the room, and access to informal areas

Tools & Technology

- Electrical power, sound amplification, and projected displays

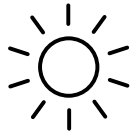
Inclusion

- For individuals with mobility challenges



EDUCAUSE

Environmental Quality

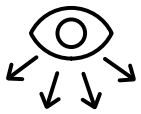


Daylight

- 1 pt = Access to daylight via window or skylight

Visual Connection to Nature

- 1 pt = Views to natural landscape elements
- 1 pt = Views to interior planted areas



Visibility

- 1 pt = Unobstructed views for all participants to see one another and writable surfaces

Lighting Control

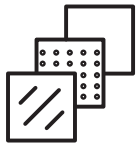
- 1 pt = Dimming controls

Thermal Comfort and Control

- 1 pt = Operable windows, thermostat, or fan
- 1 pt = Ability to increase air movement such as with a ceiling fan

Acoustic Quality

- 1 pt = Elements such as carpet, acoustic ceiling tile, or acoustic wall treatments



Materials, Patterns, and Forms

- 1 pt = Natural materials, patterns, or forms such as wood

Layout and Furnishings

Proximity

- 1 pt = students can face each other, and instructor can be within 15 ft of each student

Movement

- 1 pt = users can circulate through room

Density

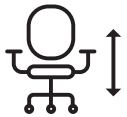
- 1 pt = >25 NASF/student
- Or 2 pts = >30 NASF/student

Furniture Configuration

- 1 pt = chairs with casters
- 1 pt = tables with casters
- 1 pt = Stackable chairs
- 1 pt = height adjustable furniture

Work Surfaces

- 1 pt = each student has a work surface of at least 24x30



Seating Comfort

- 1 pt = seating is adjustable in at least two ways

Transparency

- 1 pt = views into the room
- 1 pt = shades to control transparency

Access to Informal Areas

- 1 pt = informal space nearby

Writable Surfaces

- 1 pt = multiple teaching walls
- 1 pt = mobile whiteboards

Physical Storage

- 1 pt = storage for auxiliary equipment or furniture

Adaptability

- 1 pt = infrastructure is designed to adapt to changing uses

Tools and Technology

Electrical Power

- 1 pt = safe and convenient access to electrical power for student use throughout classroom

Visual Displays

- 1 pt = visual display appropriate to size and capacity of room
- Or 2 pts = ability to project from multiple sources simultaneously
- Or 3 pts = multiple visual displays capable of supporting small group and collaborative activity

Sound Amplification

- 1 pt = microphones and speakers for amplification (or small room)
- 1 pt = Hearing Loop

Inclusion

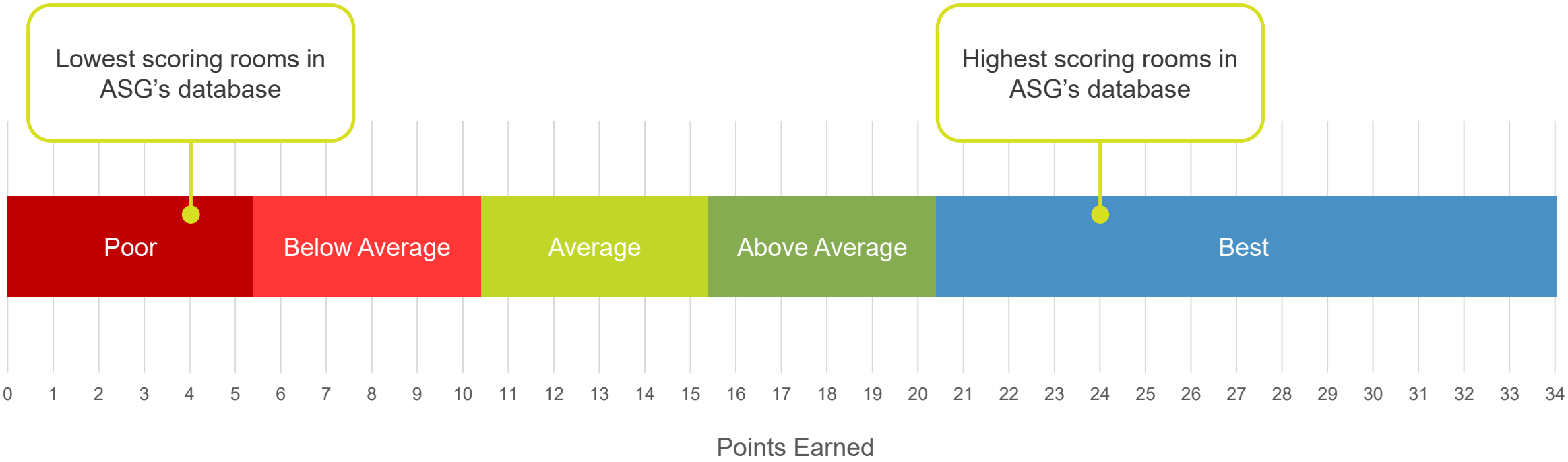
Physical Inclusion and Universal Design

- 1 pt = student in wheelchair has station in classroom
- Or 2 pts = student in wheelchair can occupy any station in classroom

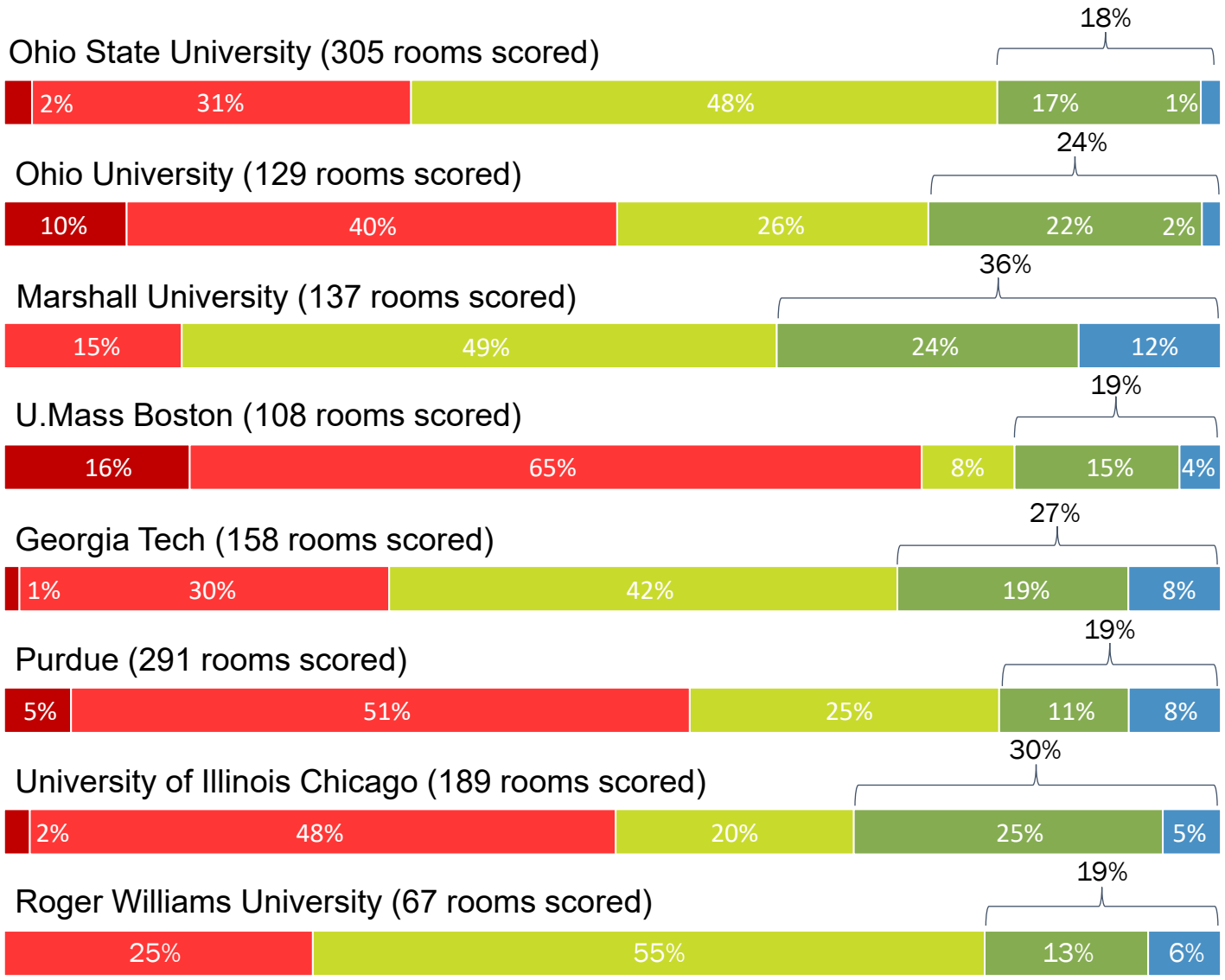
Range of Scores

34 Points Possible

No single room will earn all 34 points!



Benchmarking



ASG has rated

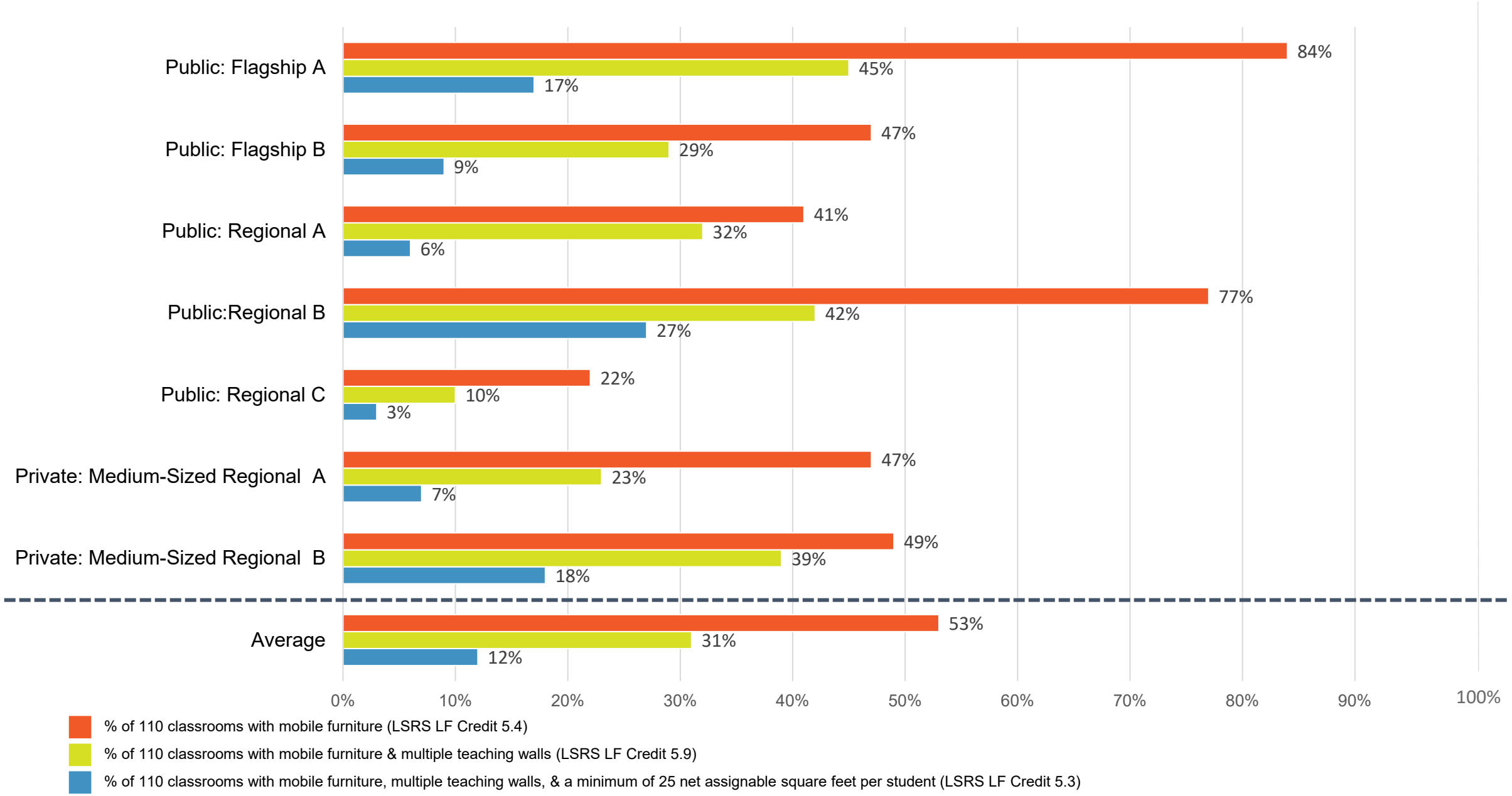
>1,500 classrooms

in the last two years.

Here's some of what we've found.

- Best (21+ pts)
- Above Average (16 – 20 pts)
- Average (11 – 15 pts)
- Below Average (6 – 10 pts)
- Poor (0 – 5 pts)

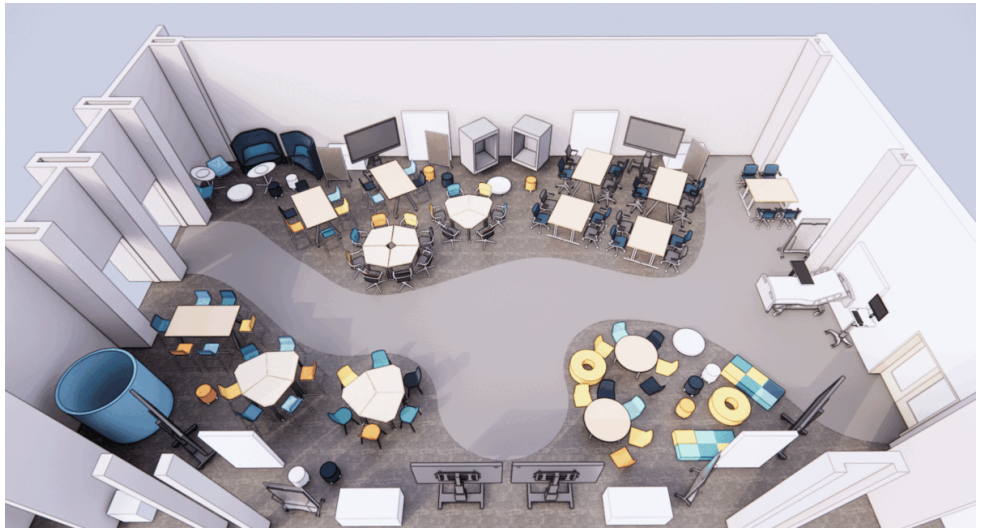
Active Learning Attributes (Existing Conditions)



Now Let’s Try It!

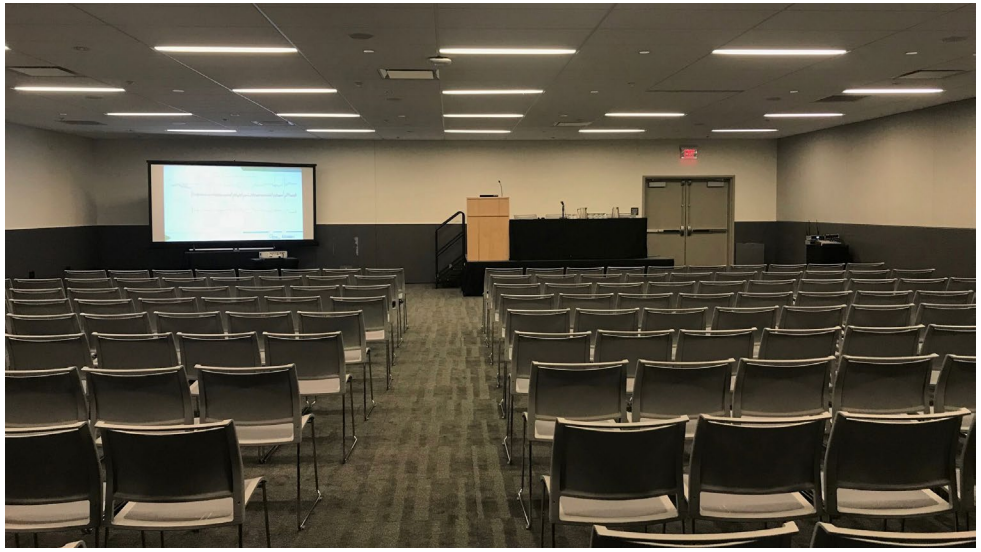
Score Results

- Best (21+ pts)
- Above Average (16 – 20 pts)
- Average (11 – 15 pts)
- Below Average (6 – 10 pts)
- Poor (0 – 5 pts)



21 Points

Best



Compared to a typical convention center layout…

10 Points

Below Average

What would you do to improve this room?

Daylight

Views to nature or biophilic design

More seats that are adjustable?

Hearing loop

What’s missing from LSRS?

Finish condition

Aspect ratios

Storage metrics

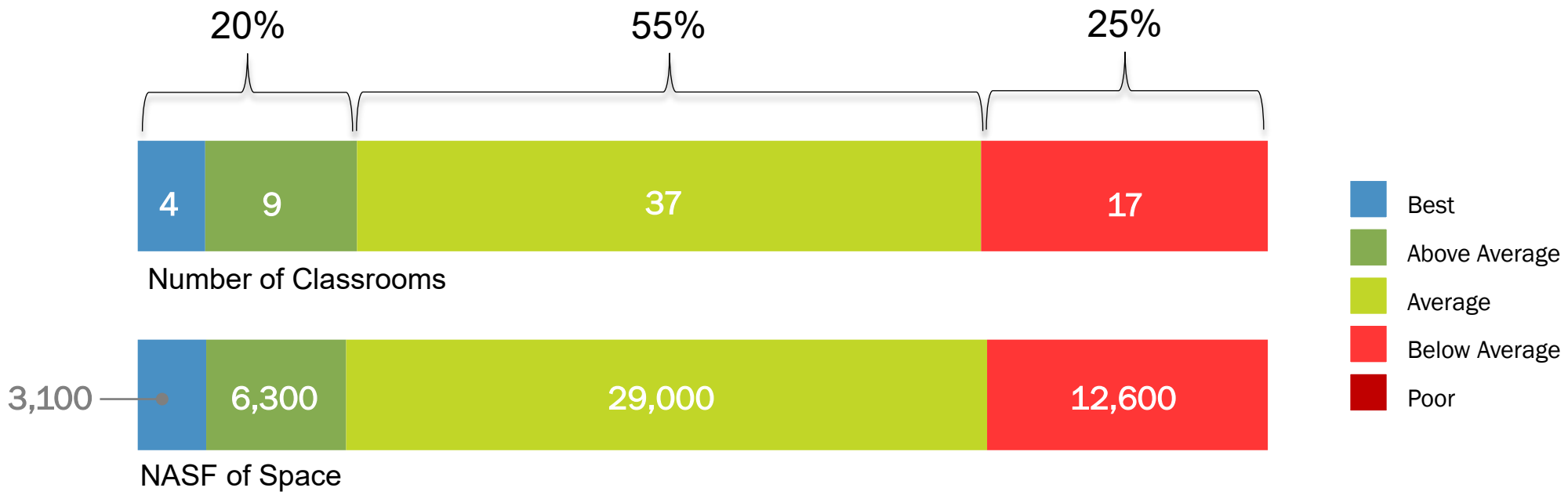
Others?

04 LSRS in Action

Roger Williams University - LSRS

67
classrooms

51k
NASF



Room for Improvement:
Density/Overcrowding within Rooms
Mobility
Consistency/Equity

Finishes

Furniture

Scoping Relative to LSRS

In-House
near term

Pricing – Level 1 (Low):

- Add additional whiteboards
- Add additional outlets/access to power

Pricing – Level 2 (Low):

- Level 1 scope
- **Update finishes, window shades + lighting**

Contractor
long term

Pricing – Level 3 (Medium):

- Level 1 & 2 scope
- **Reconfigure/combine flat-floor classrooms**
- **Minor electrical/HVAC scope**

Pricing – Level 4 (High):

- Level 1 & 2 scope
- **Replace fixed furniture w mobile furnishings**
- **Level tiered floors or convert classroom space to informal space**
- **Greater electrical/HVAC scope**

	Level 0	Level 1	Level 2	Level 3	Level 4	TOTAL
# of rooms	13	5	27	13	9	67
NASF	10,639	4,667	17,073	6,908	11,777	51,064
Renovation	0	$15,000	$2.5-3.4 mil	$3.1-3.5 mil	$5.7-6.4 mil	$11.3-13.3m
Furniture	$237,000	$18,000	$715,000	(included)	(included)	$970,000
Technology	0	0	$690,000	(included)	(included)	$690,000
TOTAL	**$237,000**	**$33,000**	**$3.9-4.7 mil**	**$3.1-3.5 mil**	**$5.7-6.4 mil**	**$13-$14.8 mil**

Implementation Plan

2024

Goal: $1mil

Immediate Impact

6 rooms
4,215 sf
level 2 renos
FCAS
MNS

Estimated Cost: $1mil

2025

Goal: $1.3mil

Bigger Investments

2 rooms
7,824 sf
level 4 renos
FCAS
GHH

Estimated Cost: $1.3mil

2026

Goal: $1.3mil

Multiple Quick Wins

13 rooms
8,486 sf
level 1,2 renos
ELS, FCAS, GSB,GHH
MNS, NCRH, SC

Estimated Cost: $1.3mil

2027

Goal: $1.3mil

Rightsizing Inventory

10 rooms
6,034 sf
level 0,3 renos
ELS
GHH

Estimated Cost: $700k

2028

Goal: $1.3mil

Rightsizing Inventory

4 rooms
2,379 sf
level 3 renos
FCAS

Estimated Cost: $1.1mil

2029

Goal: $1.3mil

Rightsizing Inventory

6 rooms
3,554 sf
level 3 renos
FCAS

Estimated Cost: $1.7mil

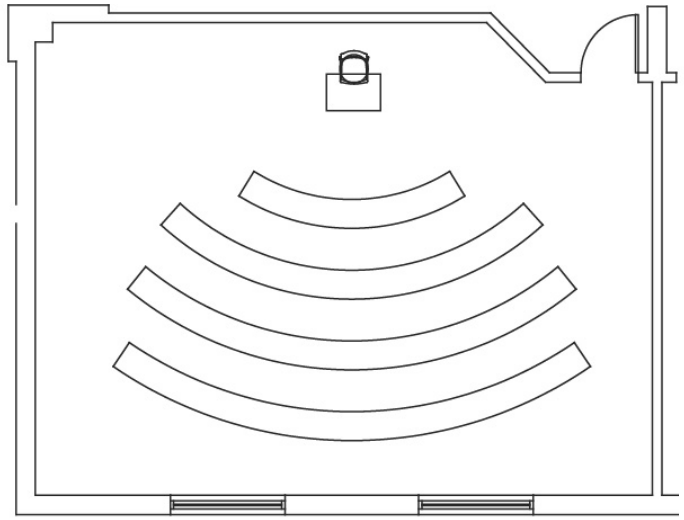
Implementation

2024

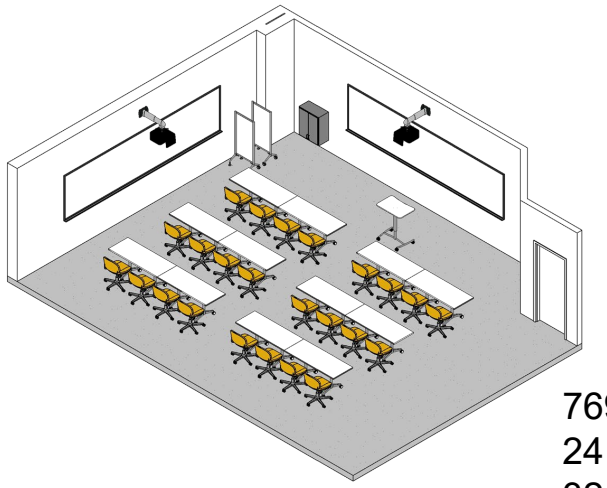
Immediate Impact

$1mil

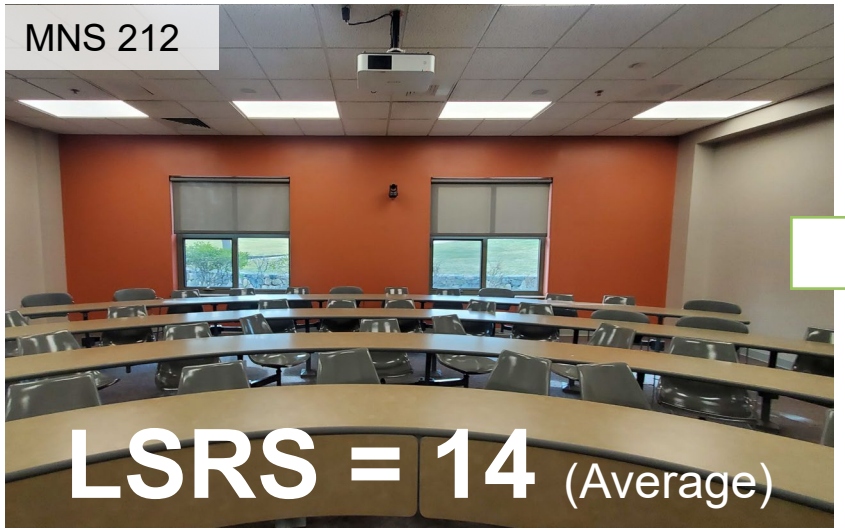
2 buildings
6 rooms
4,215 sf
level 2 renovations



769 NASF
40 seats @
22 sf/student



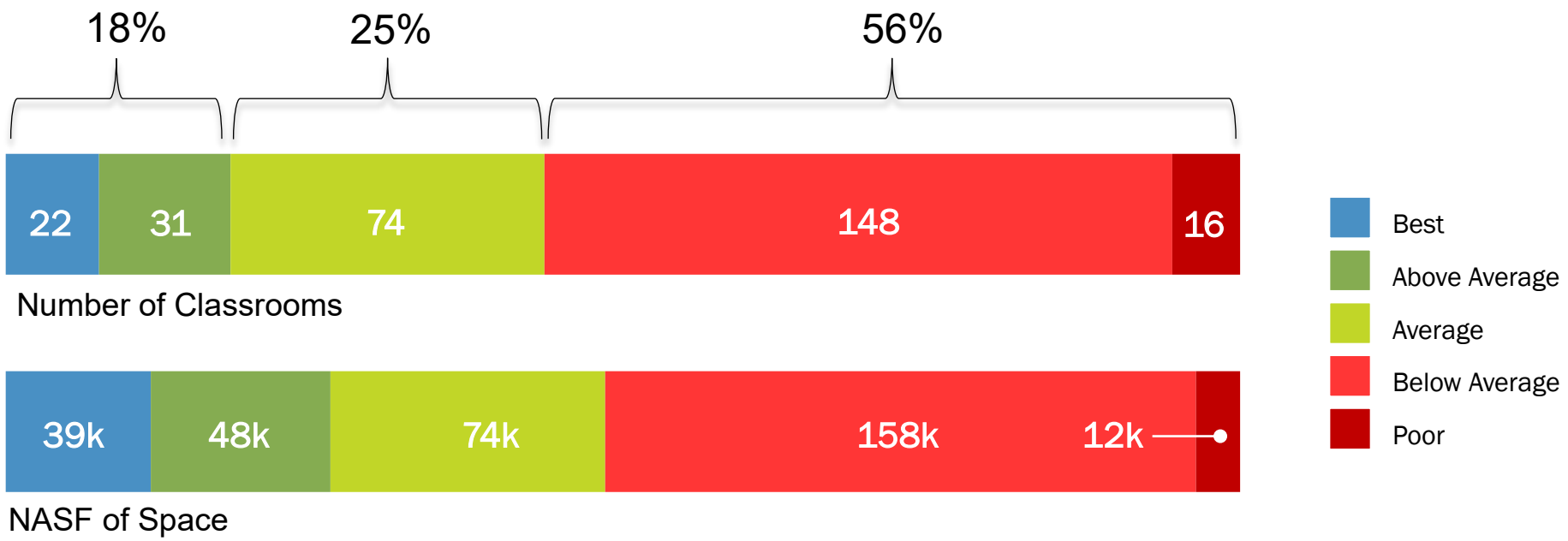
769 NASF
24 seats @
32 sf/student



Purdue University - LSRS

291
classrooms

331k
NASF



Room for Improvement:
Density/Overcrowding within Rooms
Seating Comfort
Work Surface

Finishes

Furniture

31% of the inventory (90 rooms!) looked like this. Where do you begin?










83% needed zero- or low-cost improvements

Layout and Furnishings

- Removing furniture
- Replacing furniture
- Adding whiteboards

Implementation

Planned Demolition of Existing Buildings

17 classrooms

Classrooms in Larger Planned Building Renovations

145 classrooms

Optimize Existing Inventory

92 classrooms

2023

Low LSRS, small rooms, easy wins

- **38 rooms total**
- Budget $1.4 - 1.8M

2024

Average LSRS, medium rooms, some major construction

- **16 rooms total**
- Budget $1.7 – 2.4M

2025

Average-good LSRS, larger rooms, some major construction

- **14 rooms total**
- Budget $1.6 – 2.2M

2026

Highest LSRS, modest upgrades

- **24 rooms total**
- Budget $1.6 – 2.0M


Thank you for your time!
Any questions?

#edspaces

Thank You!

Please scan the QR code to provide session feedback.

SCAN ME