University of Alaska Southeast
FY21 Facilities Benchmarking & Analysis
Comprehensive Facilities Intelligence Solutions

- **FACILITIES BENCHMARKING & ANALYSIS**: Take control of your facilities and make the case for change without the guesswork.
- **FACILITIES ASSESSMENT & PLANNING**: Plan and execute capital investment plans that are inclusive, credible, flexible, affordable and sustainable.
- **SPACE UTILIZATION**: Ensure your space is working up to its full potential.
- **SUSTAINABILITY SOLUTIONS**: Measure and improve environmental stewardship.

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Vocabulary for Facilities Benchmarking & Analysis

**Annual Stewardship**
The annual investment needed to ensure buildings will properly perform and reach their useful life “Keep-Up Costs”.

**Asset Reinvestment**
The accumulation of repair and modernization needs and the definition of resource capacity to correct them “Catch-Up Costs”.

**Operational Effectiveness**
The effectiveness of the facilities operating budget, staffing, supervision, and energy management.

**Service**
The measure of service process, the maintenance quality of space and systems, and the customers opinion of service delivery.

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Asset Value Change  Operations Success
# University of Alaska – Southeast Peer Institutions

Return on Physical Assets (ROPA+) includes all space at UAS totaling 556,487 GSF

<table>
<thead>
<tr>
<th>Facilities Peer Institutions</th>
<th>Location</th>
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<tr>
<td>University of Maine at Fort Kent</td>
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<td>Lock Haven, PA</td>
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<td>University of Maine at Augusta</td>
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**Comparative Considerations**

Size, technical complexity, region, geographic location, and setting are all factors included in the selection of peer institutions.
Core Campus Observations

**Space**
UAS’s space profile is different than peer institutions in several key areas:
- Younger, lower risk space than peers due to new construction and renovation, especially at Ketchikan campus
  - UAS is in an advantageous situation to manage their campus age and remain at, or above, their Space KPI target of 50% of space being younger than 25 years old
- Lower population density
  - UAS has seen enrollment decrease in greater magnitude than peers. Creative strategies will need to be implemented to hit the density KPI target of 250

**Capital**
- Investment focus on existing space has historically managed age and deferred maintenance need but has decreased in recent years
- The historically reliable one-time sources of capital that helped achieve funding targets have dropped in recent years
- UAS can manage deferred maintenance through divestment and demolition of space to maintain high performing FCI compared to KPI target

**Operations**
- Historically operated with a higher budget than peers, but decreased below peer levels in recent years
- UAS has increased PM spending in recent years and spends a larger percentage of operation budget on PM compared to peers
- Staffing levels, supervision, and materials fluctuate across trades shops, but results are consistent and competitive
UAS’s Technical Complexity is On-Par With Peers

Technical Complexity

Areas Impacted by Tech Rating
- Energy Consumption
- Maintenance Staffing
- Replacement Values
- Stewardship Targets
- Operational Demand

Tech Rating Distribution

Institutions arranged by Technical Complexity
UAS' Campus has Grown Similar to Peers in GSF

However, total enrollment has decreased by 82%, while peers saw a 27% decrease
UAS has a Lower Density Campus than Peers

Density factor measures the busyness of campus

*Density is calculated using On-Campus Student FTEs, Faculty FTE, and Staff FTE

Institutions arranged by Density Factor

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UAS Step to Reach Target

UAS can add FTE’s, decrease usable square footage, or both to reach target

**Total on Campus FTE’s by Density GSF**

1. Decrease total GSF by 200,000
2. Increase total FTE’s by 500 (no space Changes)
3. Use a targeted approach to decrease GSF, which includes:
   - Demolish the NSRL: 17,591 GSF
   - Demolish Mattocks House: 1,200 GSF
   - Sell and/or recategorize Mathisen House GSF: 1,604.00
     - Should Mathisen be included in Density calculations?
   - Adjust Density GSF at Donald Sperl Joint Use to 27,707 (50%)
     - What portion of building is not-useable by UAS?
   - Remove Fitzgerald house from building inventory: 2,279.00

   **Total GSF removed from Density – 50,381.5**
   - Still requires adding 400 FTE’s

- **Are there other buildings that are underutilized, which could have increased utilization allowing for more demolition of space?**

*Density is calculated using On-Campus Student FTEs, Faculty FTE, and Staff FTE*
Building and Grounds Intensity

UAS’ smaller buildings and compact grounds space produces challenges in efficiency for staff.
UAS Carries a Significantly Younger Campus Age

UAS has started renovating buildings which offsets aging

Construction vs. Renovation Age

UAS’s Renovation Age is 10.5 years less than Peers

Age dropped due to renovations of the Student Housing Units A, B, D & G

UAS Construction Age  UAS Renovation Age  Peers Construction Age  Peers Renovation Age
Ketchikan & Juneau are Younger through Renovations

These two campuses have firmly reduced their age through full building renovations

Campus Age by Category

- **Juneau**
- **Ketchikan**
- **Sitka**
- **Peers**

- **Construction Age**: ▲
- **Renovation Age**: □

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UAS Has More Low Risk Space Than Peers

Lower risk affords the opportunity to plan ahead for future needs.

Campus Renovation Age by Category

- **UAS**
  - Under 10 - Low Risk: 23%
  - 25 to 50 - Higher Risk: 37%
  - Over 50 - Highest Risk: 12%

- **Peer Average**
  - Under 10 - Low Risk: 28%
  - 10 to 25 - Medium Risk: 27%
  - 25 to 50 - Higher Risk: 18%
  - Over 50 - Highest Risk: 41%

**Operational Demands:**

- **Over 50**
  - React as Needed: Issues in components past the end of their lifecycles will demand reactive maintenance.

- **25-50**
  - Balance PM and Reactive Maintenance: Younger components still require PM.

- **10-25**

- **Under 10**
  - Medium Risk: Life cycles coming due in core building components.

**Capital Risk:**

- **Over 50**
  - Focus on PM: Significant need for PM in young systems.

- **25-50**
  - Low Risk: "Honeymoon" period – little need for capital reinvestment.
Understanding Campus Age

Renovations at Ketchikan make systems younger

Campus Age by Category

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<thead>
<tr>
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<th>Ketchikan</th>
<th>Sitka</th>
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- **Juneau**
  - Construction Age: 76%
  - Renovation Age: 24%
- **Ketchikan**
  - Construction Age: 28%
  - Renovation Age: 72%
- **Sitka**
  - Construction Age: 53%
  - Renovation Age: 47%
UAS Has Flexibility of Managing a Young Campus

UAS will continue to meet or exceed KPI space target, regardless of approach.
Understanding the Impact of Age on Future Need

Different construction waves will have competing life cycle needs in the future.

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<td>Electrical</td>
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Wave 1 Needs

Wave 2 Needs

Year in which building space was constructed/renovated
Capital Funding Sources
Increased Focus on Existing Space in Recent Years

Existing Space investment decreased in recent years, but has seen high investment.
Defining an Annual Investment Target

Annual Funding Target: $4.5M

FY21 Annual Investment Target

Replacement Value: $332.1 M

3% Replacement Value is one of the standard depreciation models used to determine the expected total dollars needed to be put into assets annually to sustain them.

Life Cycle Need represents the total dollars needed to replace components & systems as they come due without accounting for modernization.

Life Cycle needs are discounted to account for intentional deferral, functional obsolescence and extended life cycles based on effective maintenance programs.

3% Replacement Value

Life Cycle Need

Annual Investment Target

$10.0

$4.9

$3.7

$1.7

$2.8

Envelope/Mechanical

Space/Program

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Recurring Capital Spending Falls Short of Target

In FY19, FY20, and FY21 UAS has increased its backlog

Total Capital Investment vs. Funding Target

- Decreasing Backlog & Risk
- Maintaining Backlog & Risk
- Increasing Backlog & Risk

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<th>Year</th>
<th>Annual Stewardship</th>
<th>Asset Reinvestment</th>
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Juneau Capital Spending Sets the Trend

Unlike the combined spending trend, Juneau’s trend begins to decrease in FY18
Ketchikan Capital Spending Frequently Meets Target

In FY18, Ketchikan spent $3.7 Million into the Maritime Center

Ketchikan Campus’ Total Capital Investment vs. Ketchikan Funding Target

- Annual Stewardship
- Asset Reinvestment
- Annual Investment Target
- Life Cycle Need

Fund 1 Projects: Annual Stewardship
Funds 2-9 Projects: Asset Reinvestment
Sitka’s Lower Capital Spending Increases Backlog and Risk

In FY13 $1.6 Million went into Campus Completion, capital targets missed since FY15
Historic Annual Stewardship Higher at UAS

Asset reinvestment, or one-time, sources of funding close the gap to reach capital targets

Total Capital Investment as a Percent of Funding Target

- *University of Alaska – Southeast*
- *Peer Institutions*

Target: 90% for University of Alaska – Southeast; 69% for Peer Institutions
Total Need is Greater than Peers

Total need based on FY21 Facilities Condition Assessment

Total Asset Reinvestment Need $/GSF
Regionally Adjusted

<table>
<thead>
<tr>
<th>Year</th>
<th>University of Alaska – Southeast</th>
<th>Peer Institutions</th>
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<td>2021</td>
<td>$80</td>
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</table>
The Effect of Demolitions and Divestment on FCI

UAS can greatly improve FCI by completing planned divestment and demolition.

FCI by Age Category

- FY21 FCI: 0.09
- FY21 FCI: NSRL Demolition: 0.09
- FY21 FCI: Mattocks Demolition: 0.04
- FY21 FCI: Gordian Recommendation: 0.02

Gordian recommends demolition or divestment of:
- Mattock House
- Knode House
- NSRL
- Mathisen (Sell)

Target: 0.15

Space Under 25, Space Over 25
Gordian D&D Plan Reduces Capital Need by $1.6 M

The NSRL demolition accounts for a $1 Million reduction in capital need

Identified Needs by Timeframe

<table>
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<th>Timeframe</th>
<th>Total Need, $ in millions</th>
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<td>10-Year Needs</td>
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<td>Need after D&amp;D</td>
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Identified Needs by Timeframe

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<th>Timeframe</th>
<th>Total Need, $ in millions</th>
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<td>Timeframe C (8-10 years)</td>
<td>$10.48</td>
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# of projects | 498

65 58 162 213

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Facilities Operating Expenditures vs. Peers

UAS has reduced its Daily Service expenditures in recent years below peer average.

Facilities Operating Actuals
Regionally Adjusted

University of Alaska - Southeast

Peer Institutions

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</table>
Budget Cuts Limit Purchasing Power

2021 difference amounts to $2.1M less buying power than 2006 budget

Facilities Operating Actuals
Juneau’s Decreasing Budget Follows University Trend

2021 difference amounts to $1.6M less buying power than 2006 budget

Facilities Operating Actuals

|$/GSF


Daily Service  PM  Inflation
Ketchikan Budget Emphasizes PM in Recent Years

Investments into PM will extend building lifecycles and decrease capital need

Facilities Operating Actuals

$/GSF


Daily Service  PM  Inflation

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Sitka’s Recent Budget Lacks Purchasing Power of Past Years

Sitka’s operational spending decreased 41% since 2006, accounting for inflation.

Facilities Operating Actuals
Facilities Operating Expenditures vs. Peers

UAS has decreased its daily service expenditures, while Peer spending has increased

Facilities Operating Actuals
Regionally Adjusted

$/Gsf

A  B  C  D  E  UAS FY10  UAS FY15  UAS FY21  F  G  H

Daily Service  PM  Peer Average FY21  Peer Average FY15  Peer Average FY10

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UAS Allocates More Resources to PM than Peers

Recent increases in PM spending result in UAS approaching “Best Practice Range”
Utility Operating Expenditures Compared to Peers

UAS versus Peer Utility $ per GSF
Regionally Adjusted

$ per GSF

University of Alaska - Southeast

Peer Institutions

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Total Energy Consumption

UAS has seen consumption increase since FY19, but it is still well below peers
Total Energy Consumption

When normalizing by degree day, UAS’ decrease in consumption is more pronounced.

Total Energy Consumption vs. Peers

*Normalized by Degree Days*

- **University of Alaska – Southeast**
  - Yearly data from 2006 to 2021
  - **2006**: 10.93 BTU/GSF/DD
  - **2020**: 8.00 BTU/GSF/DD

- **Peer Institutions**
  - Yearly data from 2006 to 2020
  - **2006**: 10.35 BTU/GSF/DD
  - **2020**: 9.50 BTU/GSF/DD
Energy Expenses Fluctuate in Consistent Manner

UAS’ total energy costs continues to be well below peer average

![Total Energy Cost vs. Peers Regionally Adjusted](chart.png)

*University of Alaska – Southeast*

- $47.07

*Peer Institutions*

- $55.74

Fossil | Electric | Average
Differences in Unit Costs are Growing vs. Peers

Both Fossil and Electric unit costs are lower than peers, when regionally adjusted.
Maintenance Staffing Coverage

Coverage ratios have begun to increase in recent years, due to decreases in FTE’s.
Maintenance Metrics

UAS has fewer maintenance supervisors, but more staff and material spend.
Custodial Staffing Coverage

Custodial staff coverage has returned to FY18 levels
Custodial Metrics

UAS has more custodial supervisors, but less custodial staff, equivalent material spend

Custodial Staffing

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Custodial Supervision

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Custodial Materials

Regionally Adjusted

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Cleanliness

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Institutions arranged by Density Rating

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Grounds Staffing Coverage

Coverage stayed mostly steady until a notable increase happened in recent years.
Grounds Metrics

UAS has the highest grounds intensity, which correlates with lower rates of coverage.

Grounds Staffing

Grounds Supervision

Grounds Materials

Regionally Adjusted

Grounds Inspection Score

Institutions arranged by Grounds Intensity

Peer Average
Key Takeaways

- UAS’ young space profile benefits from proactive capital and operational approaches – because of this UAS can be flexible in their management of campus space. However, UAS should consider what spaces are under utilized, in order to take space offline and increase user density.

- Capital spending should continue to focus on reinvesting into existing space. The good condition of younger buildings allows UAS the opportunity to target invest into older, higher FCI buildings. However, recent decreasing trends in capital investment could lead to more reactive funding predicaments.

- Small buildings and small grounds space produces efficiency challenges for maintenance and grounds staff, requiring more FTEs to tackle problems effectively. Identifying buildings to divest resources from will ease this operational strain challenge.