UF Report

2025-08-20 to 2025-09-09

📊 Executive Summary

Robot deployment during 2025-08-20 to 2025-09-09 processed 112.0 total tasks, covering 543,935.0 square feet with 92.1 total running hours.

2 Total Robots	**543,935.0** Sq Ft Cleaned vs last: +35530.0 sq ft	**83.4%** Coverage vs last: +27.1%
92.1 Total Running Hours vs last: +63.0 hrs	**2.7** Avg Daily Hours/Robot vs last: -0.2 hrs/robot	**20/21** Days with Tasks vs last: +15.0 days
34.4 kWh Energy Used vs last: +23.6 kWh		

🎯 Key Achievements

- 112.0 total tasks processed during reporting period
- 543,935.0 square feet cleaned across all locations
- 2.0 robots actively deployed and monitored
- 121.0 charging sessions during the period

🤖 Individual Robot Performance

Robot ID	Location	Total Tasks	Completed	Area Cleaned	Avg Coverage	Days with Tasks	Running Hours
811135422060228	Building 43 Marston Science Library	45	31	292,495 sq ft	80.6%	20	51.8 hrs
811135422060216	Building 205 Dental Science	67	52	251,441 sq ft	87.0%	14	40.2 hrs

💰 Individual Robot ROI Analysis

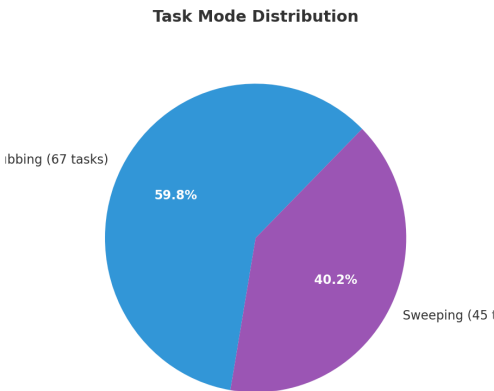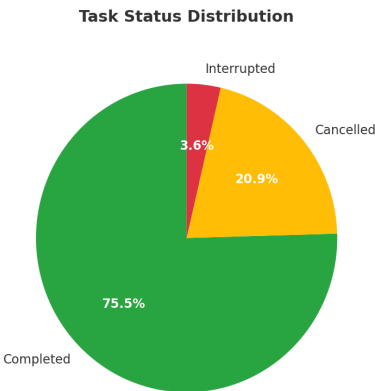Investment and ROI breakdown per robot based on $1500/month lease model.

Robot ID	Months	Investment	Savings	ROI
811135422060216	2	$3,000	$1,036	34.5%
811135422060228	2	$3,000	$1,168	38.9%

📋 Task & Schedule Performance

Task Management Efficiency

Task tracking across all facilities: 112 total tasks with 50,533 sq ft total coverage and 49.3 minutes average task duration.
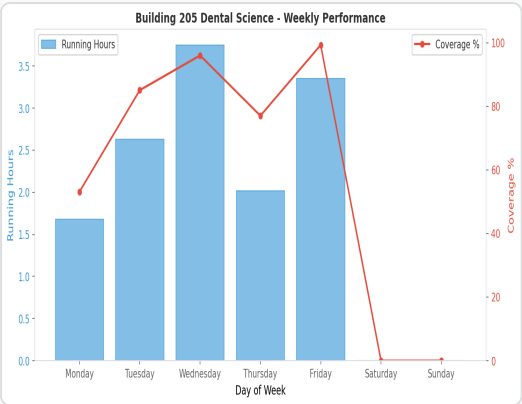
Metric	Total	Completed	In Progress	Average Duration
All Facilities	112	83	0	49.3 min (vs last: +6.7 min)

Task Status Distribution

Interrupted — 3.6%
Cancelled — 20.9%
Completed — 75.5%

Task Mode Distribution

bbing (67 tasks) — 59.8%
Sweeping (45 t — 40.2%

Task Efficiency by Location

Location-specific performance showing average operational metrics for each facility.

Building 205 Dental Science

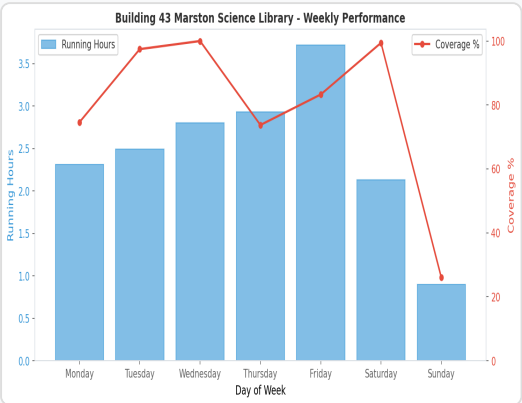|	
Task Mode:	**Scrubbing (67 tasks)**
Avg Duration:	**36.0 min** *(vs last: +8.1 min)*
Days with Tasks:	**14/21** *(vs last: N/A)*
Highest Coverage:	**Friday** *(vs last: Monday)*
Lowest Coverage:	**Thursday** *(vs last: Wednesday)*

Building 43 Marston Science Library

Task Mode:	**Sweeping (45 tasks)**
Avg Duration:	**69.1 min** *(vs last: -2.0 min)*
Days with Tasks:	**20/21** *(vs last: N/A)*
Highest Coverage:	**Wednesday** *(vs last: Monday)*
Lowest Coverage:	**Sunday** *(vs last: Wednesday)*

🏢 Facility-Specific Performance

Building 205 Dental Science

Performance metrics for Building 205 Dental Science: 67 total tasks, 251,441 sq ft total area cleaned, 87.0%

Building 43 Marston Science Library

Performance metrics for Building 43 Marston Science Library: 45 total tasks, 292,495 sq ft total area cleaned,

average coverage, 6248.4 sq ft/hour time efficiency, and 1.0 sq ft/fl oz water efficiency.

Metric	Performance	vs Last Period
Total Area Cleaned	251,441 sq ft	+171323.0 sq ft
Average Coverage	87.0%	+33.3%
Running Hours	40.2 hours	+27.7 hrs
Time Efficiency	6248.4 sq ft/hr	-139.9 sq ft/hr
Power Efficiency	18,076 sq ft/kWh	+772.0 sq ft/kWh
Water Efficiency	1.0 sq ft/fl oz	-0.2 sq ft/fl oz

80.6% average coverage, 5642.0 sq ft/hour time efficiency, and 0.0 sq ft/fl oz water efficiency.

Metric	Performance	vs Last Period
Total Area Cleaned	292,495 sq ft	+211124.0 sq ft
Average Coverage	80.6%	+21.4%
Running Hours	51.8 hours	+35.2 hrs
Time Efficiency	5642.0 sq ft/hr	+736.8 sq ft/hr
Power Efficiency	14,303 sq ft/kWh	+1050.0 sq ft/kWh
Water Efficiency	0.0 sq ft/fl oz	0 sq ft/fl oz

Map-Specific Performance

Coverage calculation: (actual area / planned area) × 100. Other metrics include area cleaned (sq ft), running hours, and efficiency ratios.

Building 205 Dental Science Maps

2#0#Bld205-Floor2

Coverage: 98.7%   vs last: +98.7%

15,978	**2.3**	**6871**	**19972**
Area Cleaned (sq ft)	Running Hours	Time Eff (sq ft/hr)	Power Eff (sq ft/kWh)
vs last: +15978.0 sq ft	vs last: +2.3 hrs	vs last: +6870.6 sq ft/hr	vs last: +19972.5 sq ft/kWh

1.6	**4**
Water Eff (sq ft/fl oz)	Days with Tasks
vs last: +1.6 sq ft/fl oz	vs last: +3.0 days

-1#0#Bld_205_Dental_Sci_Grd

Coverage: 94.4%   vs last: +19.1%

122,999	**17.6**	**6984**	**16942**
Area Cleaned (sq ft)	Running Hours	Time Eff (sq ft/hr)	Power Eff (sq ft/kWh)
vs last: +76220.0 sq ft	vs last: +10.7 hrs	vs last: +160.4 sq ft/hr	vs last: +866.9 sq ft/kWh

1.1	**14**
Water Eff (sq ft/fl oz)	Days with Tasks
vs last: -0.1 sq ft/fl oz	vs last: +9.0 days

1#1#dental_ground_elevator

Coverage: 82.2%   vs last: +5.7%

16,289	**4.1**	**3955**	**10577**
Area Cleaned (sq ft)	Running Hours	Time Eff (sq ft/hr)	Power Eff (sq ft/kWh)
vs last: +12919.0 sq ft	vs last: +3.3 hrs	vs last: -25.8 sq ft/hr	vs last: +665.0 sq ft/kWh

0.7	**13**
Water Eff (sq ft/fl oz)	Days with Tasks
vs last: -0.3 sq ft/fl oz	vs last: +10.0 days

1#0#Bld_205_Dental_Sci_1fl

Coverage: 78.4%   vs last: +40.1%

96,175	**16.2**	**5943**	**22314**
Area Cleaned (sq ft)	Running Hours	Time Eff (sq ft/hr)	Power Eff (sq ft/kWh)
vs last: +67019.0 sq ft	vs last: +11.6 hrs	vs last: -371.3 sq ft/hr	vs last: +57.7 sq ft/kWh

0.9

Water Eff (sq ft/fl oz)

vs last: -0.4 sq ft/fl oz

11

Days with Tasks

vs last: +7.0 days

Building 43 Marston Science Library Maps

1#1#43_Main_areaMarston_Library_F1

Coverage: **87.5%** vs last: N/A

50,164	**8.3**	**6042**	**13857**
Area Cleaned (sq ft)	Running Hours	Time Eff (sq ft/hr)	Power Eff (sq ft/kWh)
vs last: N/A	vs last: N/A	vs last: N/A	vs last: N/A

0.0	**8**
Water Eff (sq ft/fl oz)	Days with Tasks
vs last: N/A	vs last: N/A

2#0#43_Marston_library_2nd

Coverage: **84.8%** vs last: -15.2%

127,389	**22.9**	**5573**	**14969**
Area Cleaned (sq ft)	Running Hours	Time Eff (sq ft/hr)	Power Eff (sq ft/kWh)
vs last: +112367.0 sq ft	vs last: +20.2 hrs	vs last: +108.9 sq ft/hr	vs last: +241.6 sq ft/kWh

0.0	**17**
Water Eff (sq ft/fl oz)	Days with Tasks
vs last: 0 sq ft/fl oz	vs last: +15.0 days

5#0#Marston-5th-floor

Coverage: **80.8%** vs last: N/A

31,109	**4.9**	**6390**	**15400**
Area Cleaned (sq ft)	Running Hours	Time Eff (sq ft/hr)	Power Eff (sq ft/kWh)
vs last: N/A	vs last: N/A	vs last: N/A	vs last: N/A

0.0	**5**
Water Eff (sq ft/fl oz)	Days with Tasks
vs last: N/A	vs last: N/A

1#0#43_Marston_Library_F1

Coverage: **71.7%** vs last: +17.5%

83,834	**15.8**	**5302**	**13307**
Area Cleaned (sq ft)	Running Hours	Time Eff (sq ft/hr)	Power Eff (sq ft/kWh)
vs last: +17485.0 sq ft	vs last: +2.0 hrs	vs last: +507.6 sq ft/hr	vs last: +348.2 sq ft/kWh

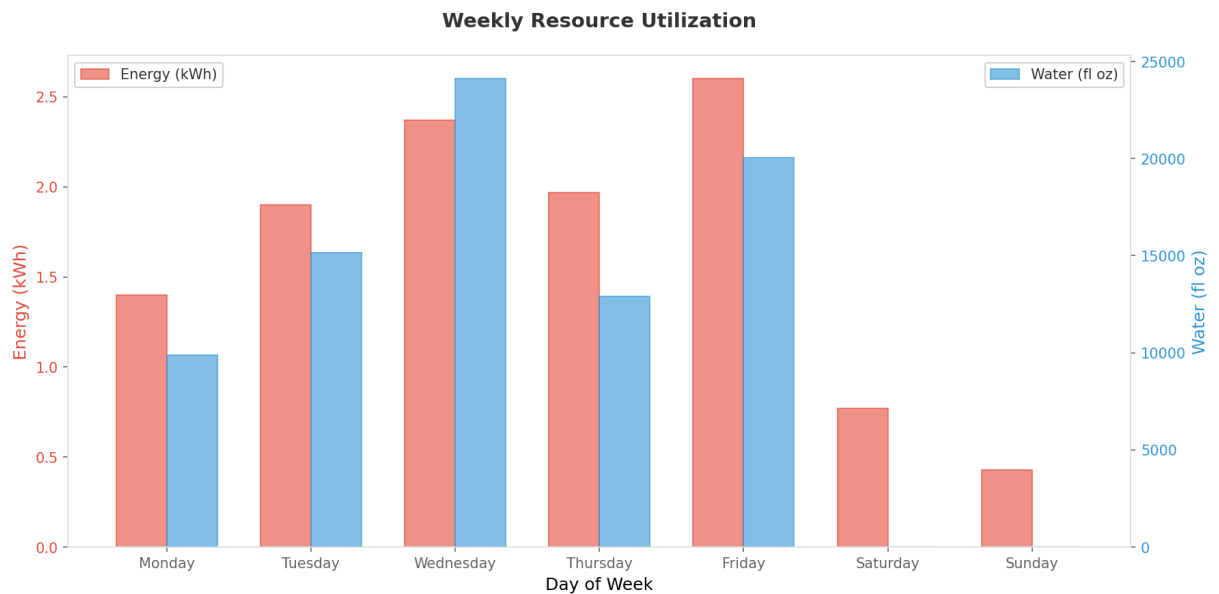| **0.0** | **9** |
| Water Eff (sq ft/fl oz) | Days with Tasks |
| vs last: 0 sq ft/fl oz | vs last: +4.0 days |

⚡ Resource Utilization & Efficiency

Resource Performance Overview

Resource utilization summary: 34.40 kWh total energy consumption, 246292 fl oz total water usage, 15830 sq ft per kWh energy efficiency, and 283 sq ft per gallon water efficiency.

Weekly Resource Utilization

Energy Usage by Facility

- **Building 205 Dental Science:** 13.9 kWh (vs last: +9.3 kWh)
- **Building 43 Marston Science Library:** 20.5 kWh (vs last: +14.4 kWh)

Water Usage by Facility

- **Building 205 Dental Science:** 246292 fl oz (vs last: +178433.0 fl oz)
- **Building 43 Marston Science Library:** 0 fl oz (vs last: 0 fl oz)

💰 Financial Performance

Financial analysis based on actual resource usage and lease model: $0.00/sq ft average cost per square foot, $0.00 total operational cost, 68.0 hours saved compared to manual cleaning, $1,699.80 in realized savings, and 36.7% return on investment based on $6,000.00 total lease investment.
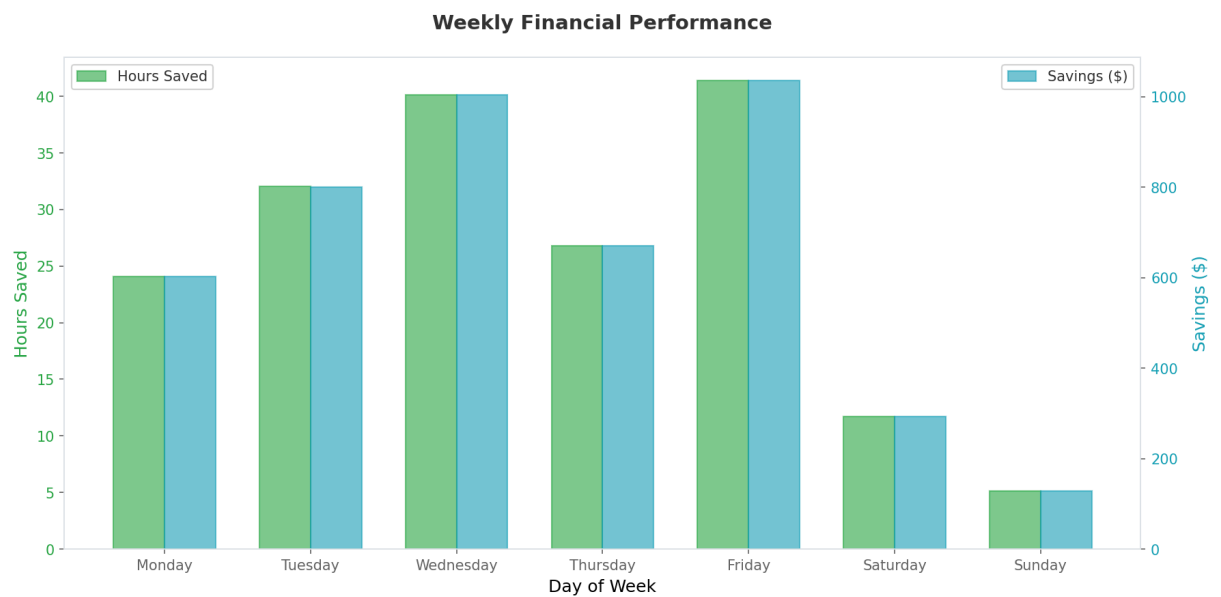
Operational Metric	Value	vs Previous Period	Notes
Cost per Sq Ft	$0.00/sq ft	0	Operational efficiency
Total Operational Cost	$0.00	0	Robot operational cost
ROI	36.7%	+19.9%	Return on Investment
Total Investment	$6,000.00	N/A	Cumulative lease investment
Cost Efficiency	100.0%	+0.0%	Improvement vs manual
Water Cost	$0.00	0	Water resource cost
Energy Cost	$0.00	0	Energy resource cost

💡 ROI Calculation Method

ROI Formula: Cumulative Savings ÷ Total Investment × 100

Investment: $1,500/month per robot × months elapsed (rounded up for billing)

Cumulative Savings: All-time savings from first robot task to end of reporting period

Weekly Financial Performance

💡 Financial Impact Summary

$1,699.80 Manual Cleaning Cost vs last: +1195.2	**$1,699.80** Savings Realized vs last: +1195.2	**68.0 hrs** Hours Saved vs Manual vs last: +47.8 hrs
$20,397.56 Annual Projected Savings vs last: +14341.7	**$2,204.45** Cumulative Savings vs last: +1699.8	**5.4 months** Payback Period vs last: 0 months
$1,102.22/month Monthly Savings Rate vs last: +597.6		

Financial calculations based on actual resource usage, $1,500/month lease model, and human cleaning benchmarks.
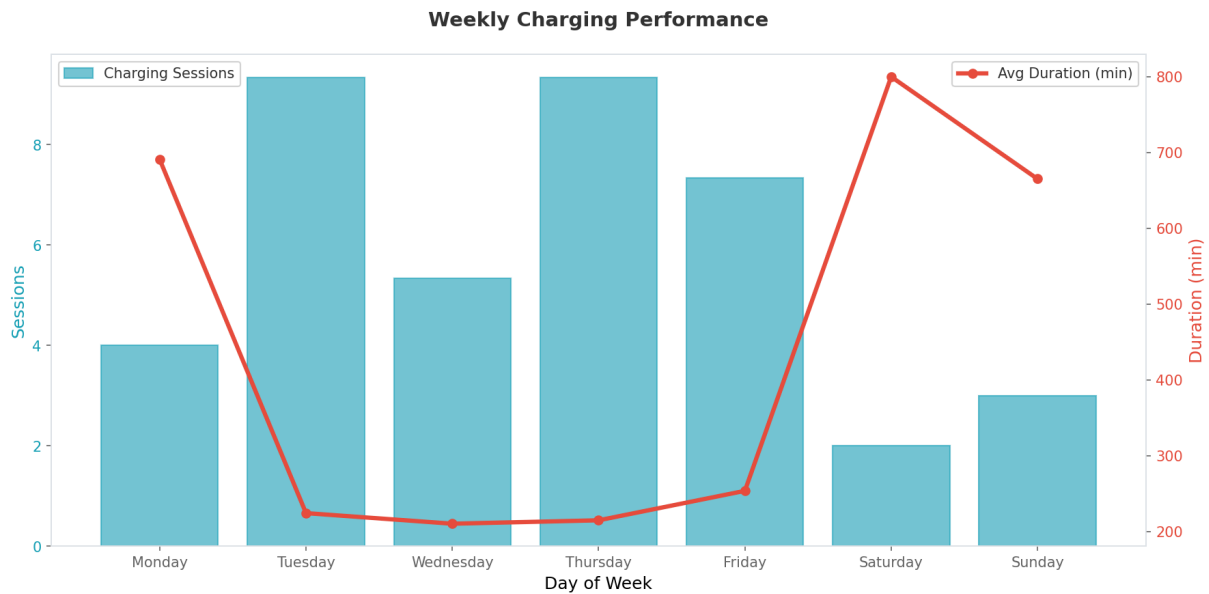
🔋 Charging Sessions Performance

Charging patterns and battery management during the reporting period: 121 total sessions, 350.7 minutes average duration, and 22.5% average power gain per session.

121 Total Charging Sessions vs last: +106.0 sessions	**350.7 min** Avg Charging Duration vs last: +303.5 min	**141.0 min** Median Charging Duration vs last: +130.0 min
+22.5% Avg Power Gain per Session vs last: +9.0%	**+15.0%** Median Power Gain per Session vs last: +10.0%	

Charging Performance Summary

Weekly average charging performance shows consistent battery management across all locations with typical session duration of 141.0 minutes and median power gain of 15.0% per session.

Weekly Charging Performance

Charging Patterns by Location

Location	Sessions	Avg Duration	Median Duration	Avg Power Gain	Median Power Gain
Building 205 Dental Science	70 vs last: +60.0 sessions	266.7 min vs last: +233.9 min	74.0 min vs last: +63.0 min	+17.0% vs last: +10.1%	+2.0% vs last: -1.5%
Building 43 Marston Science Library	51 vs last: +46.0 sessions	453.5 min vs last: +377.3 min	260.0 min vs last: +196.0 min	+29.9% vs last: +3.1%	+32.0% vs last: +27.0%

🎯 Conclusion

2025-08-20 To 2025-09-09 performance summary: 74.1% task completion rate across 2.0 robot(s), 112.0 tasks completed, 543,935.0 sq ft cleaned, 121.0 charging sessions, and 36.7% return on investment.