UF Report

2025-09-01 to 2025-09-22

📊 Executive Summary

Robot deployment during 2025-09-01 to 2025-09-22 processed 63.0 total tasks, covering 336,831.0 square feet with 56.5 total running hours.

2 Total Robots	**336,831.0** Sq Ft Cleaned vs last: -13414.0 sq ft	**88.0%** Coverage vs last: +17.2%
56.5 Total Running Hours vs last: -27.5 hrs	**2.5** Avg Daily Running Hours per Robot (hrs/robot) vs last: -0.4 hrs/robot	**15/23** Days with Tasks vs last: -1.0 days
22.6 kWh Energy Used vs last: -8.3 kWh		

🎯 Key Achievements

- 63.0 total tasks processed during reporting period
- 336,831.0 square feet cleaned across all locations
- 2.0 robots actively deployed and monitored
- 80.0 charging sessions during the period

🤖 Individual Robot Performance

Robot ID	Location	Total Tasks	Tasks Completed	Total Area Cleaned	Average Coverage	Days with Tasks	Running Hours
811135422060228	Building 43 Marston Science Library	25	20	173,240 sq ft	87.0%	13	30.8 hrs
811135422060216	Building 205 Dental Science	38	31	163,591 sq ft	89.1%	10	25.7 hrs

💰 Individual Robot ROI Breakdown

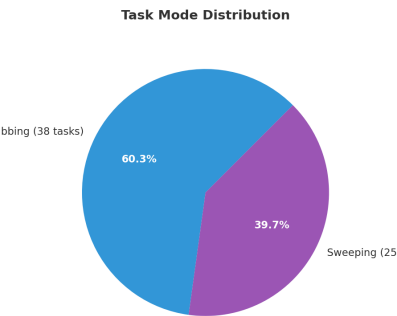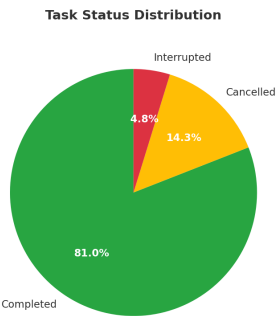Investment and ROI analysis per robot based on lease model and operational savings.

Robot ID	Months Deployed	Total Investment	Cumulative Savings	ROI
811135422060216	2	$3,000.00	$1,248.58	41.6%
811135422060228	2	$3,000.00	$1,307.82	43.6%

📋 Task & Schedule Performance

Task Management Efficiency

Task tracking across all facilities: 63 total tasks with 31,292 sq ft total coverage and 53.8 minutes average task duration.
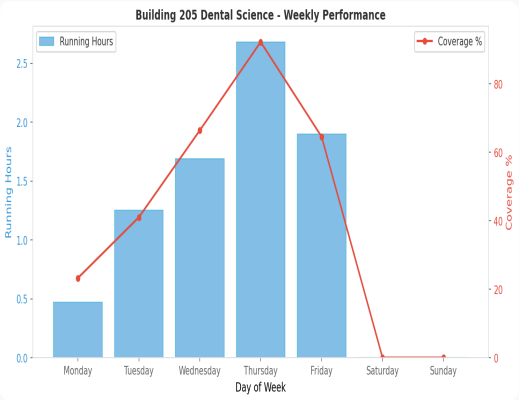
Metric	Total	Completed	In Progress	Average Duration
All Facilities	63	51	0	53.8 min (vs last: +8.0 min)

Task Status Distribution

Interrupted
Cancelled
4.8%
14.3%
81.0%
Completed

Task Mode Distribution

bbing (38 tasks)
60.3%
39.7%
Sweeping (25

Task Efficiency by Location

Daily task performance showing running hours and coverage efficiency patterns for each location. Each chart displays actual operational data to identify location-specific performance trends.
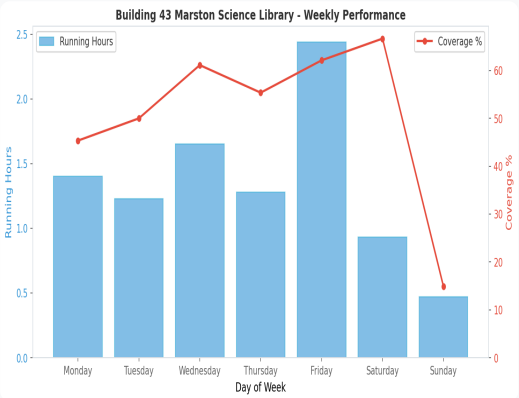
Building 205 Dental Science

Building 205 Dental Science - Weekly Performance

Task Mode:	**Scrubbing (38 tasks)**	
Avg Duration:	**40.6 min**	*(vs last: +8.0 min)*
Days with Tasks:	**10/23**	*(vs last: -3.0 days)*
Highest Coverage:	**Wednesday**	*(vs last: Friday)*
Lowest Coverage:	**Tuesday**	*(vs last: Tuesday)*

Building 43 Marston Science Library

Building 43 Marston Science Library - Weekly Performance

Task Mode:	**Sweeping (25 tasks)**	
Avg Duration:	**74.0 min**	*(vs last: +5.0 min)*
Days with Tasks:	**13/23**	*(vs last: -3.0 days)*
Highest Coverage:	**Tuesday**	*(vs last: Saturday)*
Lowest Coverage:	**Sunday**	*(vs last: Sunday)*

🏢 Facility-Specific Performance

Building 205 Dental Science

Performance metrics for Building 205 Dental Science:

Building 43 Marston Science Library

Performance metrics for Building 43 Marston Science

38 total tasks, 163,591 sq ft total area cleaned, 89.1% average coverage, 6363.4 sq ft/hour time efficiency, and 1.4 sq ft/fl oz water efficiency.

Library: 25 total tasks, 173,240 sq ft total area cleaned, 87.0% average coverage, 5621.2 sq ft/hour time efficiency, and 0.0 sq ft/fl oz water efficiency.

Metric	Performance	vs Last Period
Total Area Cleaned	163,591 sq ft	-72364.0 sq ft
Average Coverage	89.1%	+18.0%
Running Hours	25.7 hours	-12.3 hrs
Time Efficiency	6363.4 sq ft/hr	+152.7 sq ft/hr
Power Efficiency	17,801 sq ft/kWh	+87.0 sq ft/kWh
Water Efficiency	1.4 sq ft/fl oz	+0.4 sq ft/fl oz

Metric	Performance	vs Last Period
Total Area Cleaned	173,240 sq ft	-72022.0 sq ft
Average Coverage	87.0%	+16.6%
Running Hours	30.8 hours	-15.2 hrs
Time Efficiency	5621.2 sq ft/hr	+292.0 sq ft/hr
Power Efficiency	12,957 sq ft/kWh	-970.0 sq ft/kWh
Water Efficiency	0.0 sq ft/fl oz	0 sq ft/fl oz

Map-Specific Performance

Coverage: (actual area / planned area) × 100. Area Cleaned: sum of actual cleaned area converted to sq ft. Running Hours: sum of task durations converted from seconds. Power Efficiency: area cleaned / energy consumption. Time Efficiency: area cleaned / running hours. Water Efficiency: area cleaned / water consumption. Days with Tasks: unique dates when tasks occurred.

Building 205 Dental Science Maps

2#0#Bld205-Floor2

Coverage: 98.9%   vs last: +98.9%

19,937	2.9	6860	19546
Area Cleaned (sq ft)	Running Hours	Time Efficiency (sq ft/hr)	Power Efficiency (sq ft/kWh)
vs last: +19937.0 sq ft	vs last: +2.9 hrs	vs last: +6860.3 sq ft/hr	vs last: +19545.9 sq ft/kWh

1.6	5
Water Efficiency (sq ft/fl oz)	Days with Tasks
vs last: +1.6 sq ft/fl oz	vs last: +4.0 days

-1#0#Bld_205_Dental_Sci_Grd

Coverage: 97.2%   vs last: +11.4%

71,589	10.4	6910	16805
Area Cleaned (sq ft)	Running Hours	Time Efficiency (sq ft/hr)	Power Efficiency (sq ft/kWh)
vs last: -53226.0 sq ft	vs last: -7.5 hrs	vs last: -57.8 sq ft/hr	vs last: +118.4 sq ft/kWh

1.3	10
Water Efficiency (sq ft/fl oz)	Days with Tasks
vs last: +0.2 sq ft/fl oz	vs last: -3.0 days

1#1#dental_ground_elevator

Coverage: 89.8%   vs last: +13.6%

9,890	2.4	4163	10989
Area Cleaned (sq ft)	Running Hours	Time Efficiency (sq ft/hr)	Power Efficiency (sq ft/kWh)
vs last: -3536.0 sq ft	vs last: -1.1 hrs	vs last: +329.7 sq ft/hr	vs last: +1189.4 sq ft/kWh

0.9	9
Water Efficiency (sq ft/fl oz)	Days with Tasks
vs last: +0.1 sq ft/fl oz	vs last: -2.0 days

1#0#Bld_205_Dental_Sci_1fl

Coverage: 78.8%   vs last: +19.0%

62,175	10.1	6177	20656
Area Cleaned (sq ft)	Running Hours	Time Efficiency (sq ft/hr)	Power Efficiency (sq ft/kWh)
vs last: -34727.0 sq ft	vs last: -6.3 hrs	vs last: +251.8 sq ft/hr	vs last: -1367.3 sq ft/kWh

1.7

Water Efficiency (sq ft/fl oz)

vs last: +0.7 sq ft/fl oz

6

Days with Tasks

vs last: -5.0 days

Building 43 Marston Science Library Maps

1#1#43_Main_areaMarston_Library_F1

Coverage: **95.1%**   vs last: +28.4%

47,727 Area Cleaned (sq ft) vs last: +33395.0 sq ft	**7.9** Running Hours vs last: +5.5 hrs	**6022** Time Efficiency (sq ft/hr) vs last: +110.5 sq ft/hr	**11500** Power Efficiency (sq ft/kWh) vs last: -1894.3 sq ft/kWh
0.0 Water Efficiency (sq ft/fl oz) vs last: 0 sq ft/fl oz	**7** Days with Tasks vs last: +4.0 days		

2#0#43_Marston_library_2nd

Coverage: **90.9%**   vs last: +5.5%

75,111 Area Cleaned (sq ft) vs last: -14722.0 sq ft	**13.8** Running Hours vs last: -2.3 hrs	**5438** Time Efficiency (sq ft/hr) vs last: -142.2 sq ft/hr	**13657** Power Efficiency (sq ft/kWh) vs last: -1265.8 sq ft/kWh
0.0 Water Efficiency (sq ft/fl oz) vs last: 0 sq ft/fl oz	**10** Days with Tasks vs last: -2.0 days		

1#0#43_Marston_Library_F1

Coverage: **80.8%**   vs last: +20.8%

41,238 Area Cleaned (sq ft) vs last: -77914.0 sq ft	**8.0** Running Hours vs last: -15.7 hrs	**5147** Time Efficiency (sq ft/hr) vs last: +118.7 sq ft/hr	**12689** Power Efficiency (sq ft/kWh) vs last: -594.6 sq ft/kWh
0.0 Water Efficiency (sq ft/fl oz) vs last: 0 sq ft/fl oz	**4** Days with Tasks vs last: -7.0 days		

5#0#Marston-5th-floor

Coverage: **59.5%**   vs last: -35.5%

9,163 Area Cleaned (sq ft) vs last: -12782.0 sq ft	**1.1** Running Hours vs last: -2.7 hrs	**8584** Time Efficiency (sq ft/hr) vs last: +2810.0 sq ft/hr	**19496** Power Efficiency (sq ft/kWh) vs last: +5337.8 sq ft/kWh

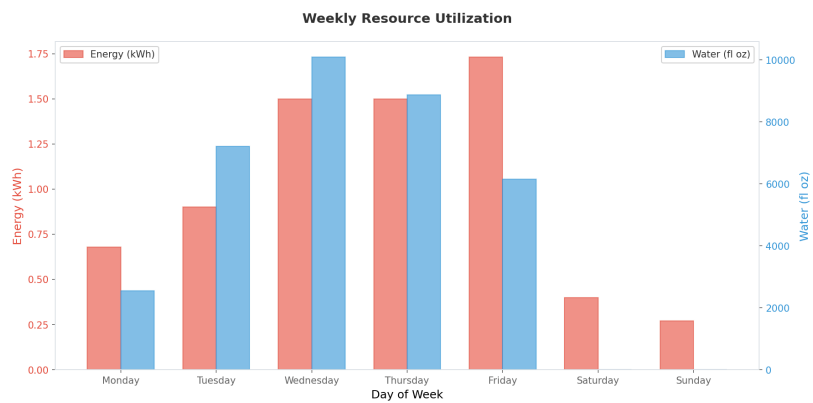| 0.0	2
Water Efficiency (sq ft/fl oz) vs last: 0 sq ft/fl oz	Days with Tasks vs last: -1.0 days

⚡ Resource Utilization & Efficiency

Resource Performance

Resource utilization: 22.60 kWh total energy consumption, 114280 fl oz total water usage, 14930 sq ft per kWh energy efficiency, and 377 sq ft per gallon water efficiency.

Energy Usage by Facility

- **Building 205 Dental Science:** 9.2 kWh (vs last: -4.1 kWh)
- **Building 43 Marston Science Library:** 13.4 kWh (vs last: -4.2 kWh)

Water Usage by Facility

- **Building 205 Dental Science:** 114280 fl oz (vs last: -116161.0 fl oz)
- **Building 43 Marston Science Library:** 0 fl oz (vs last: 0 fl oz)

💰 Financial Performance

Financial analysis based on actual resource usage: $0.00/sq ft average cost per square foot, $0.00 total operational cost, 42.1 hours saved compared to manual cleaning, and $1,052.60 in realized savings.

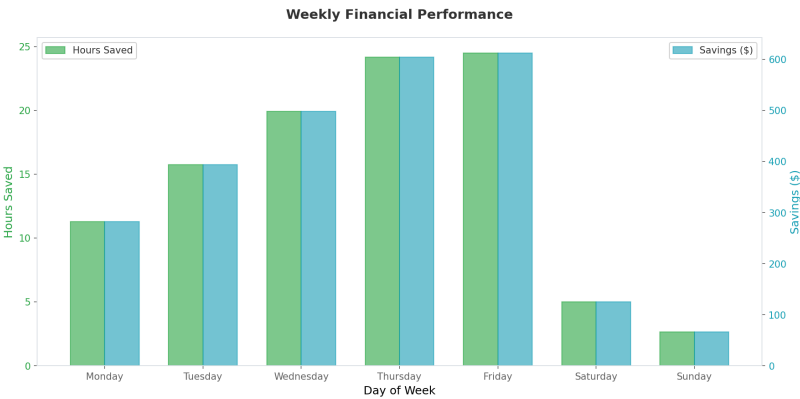| Operational Metric	Value	vs Previous Period	Notes
Cost per Sq Ft	$0.00/sq ft	0	Operational efficiency (water + energy cost per area)
Total Operational Cost	$0.00	0	Robot operational cost this period
ROI	42.6%	+16.5%	Return on Investment (cumulative savings ÷ total investment × 100)
Total Investment	$6,000.00	N/A	Cumulative lease investment ($1500/month per robot)
Cost Efficiency Improvement	100.0%	+0.0%	Efficiency improvement vs manual cleaning
Water Cost	$0.00	0	Water resource cost component
Energy Cost	$0.00	0	Energy resource cost component

💡 **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

Chart Note: ROI trend shows daily cumulative values (not weekly averages, as ROI is cumulative by nature)
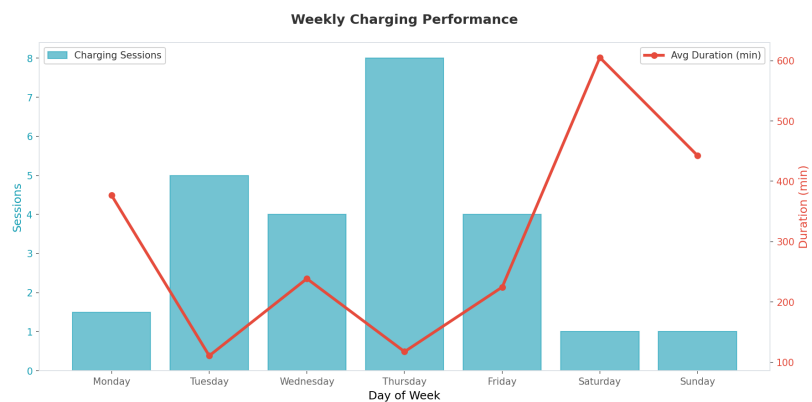
Weekly Financial Performance

💡 Financial Impact Summary

$1,052.60	**$1,052.60**	**42.1 hrs**
Manual Cleaning Cost	Savings Realized	Hours Saved vs Manual
vs last: -451.2	vs last: -451.2	vs last: -18.1 hrs
$12,631.16	**$2,556.40**	**4.7 months**
Annual Projected Savings	Cumulative Savings	Payback Period
vs last: -5414.5	vs last: +988.8	vs last: 0 months
$1,278.20/month		
Monthly Savings Rate		
vs last: +494.4		

Financial calculations based on actual resource usage, lease model, and human cleaning speed benchmarks.

🔋 Charging Sessions Performance

Charging patterns and battery management during the reporting period: 80 total sessions, 339.5 minutes average duration, and 20.8% average power gain per session.

80	**339.5 min**	**81.0 min**
Total Charging Sessions	Avg Charging Duration	Median Charging Duration
vs last: +8.0 sessions	vs last: +32.7 min	vs last: -60.0 min
+20.8%	**+8.0%**	
Avg Power Gain per Session	Median Power Gain per Session	
vs last: -1.6%	vs last: +1.0%	

Weekly Charging Performance

Charging Patterns by Location

Location	Total Sessions	Avg Duration	Median Duration	Avg Power Gain	Median Power Gain
Building 205 Dental Science	44 vs last: +5.0 sessions	258.5 min vs last: +1.2 min	16.0 min vs last: -91.0 min	+12.9% vs last: -6.4%	+1.0% vs last: -5.0%
Building 43 Marston Science Library	36 vs last: +3.0 sessions	422.8 min vs last: +61.5 min	192.0 min vs last: +20.5 min	+30.6% vs last: +4.4%	+31.0% vs last: +14.0%

🎯 Conclusion

2025-09-01 To 2025-09-22 performance summary: 81.0% task completion rate across 2.0 robot(s), 63.0 tasks completed, 336,831.0 sq ft cleaned, 80.0 charging sessions, and 42.6% return on investment.