



Powering Building Performance

*Incorporating "Right Tech" Tools
& Processes with "Right Touch"
Employee and Staff Engagement*

.....
Managing Building Performance in
Healthcare



Industry Trends

- Major healthcare organizations like Kaiser Permanente, Cleveland Clinic and Adventist HealthCare are investing resources in environmental sustainability initiatives as a key strategy to reduce Op-Ex.

Kaiser has recently pledged to build all future facilities to LEED Gold standards or better.

- CEO's are becoming aware of endless possibilities for both new and existing facilities to realize greater operational efficiencies and environmental performance in "Getting to Net Zero".

A 2012 Commonwealth Fund report concluded that hospitals have a \$15.2 billion savings opportunity over 10 years simply by using energy resources more efficiently, generating less waste, and through effective sustainability programs.

- 68% of healthcare CEOs are prioritizing investments in energy efficiency to drive savings that can be diverted to direct patient care.

"...With a surge of patients expected when coverage expands in 2014 and 32 million more people can seek health care, there is an increased need to find cost savings in hospital construction and elsewhere—and an ongoing debate how best to achieve it." Healthcare Facilities Management, February 2011

Agenda

INTEGRATED BUILDING PERFORMANCE

TECHNOLOGY

INNOVATION & THOUGHT LEADERSHIP

ENVIRONMENT OF CARE

BUILDING PERFORMANCE DASHBOARD

What We Do

We believe Buildings Matter. AtSite provides solutions that help healthcare organizations transform their hospitals into high performing assets.

Building Performance Consulting

We provide a variety of consulting services to help create, transform, and improve buildings & extend their useful life.



Turn-Key Building Technology Integration

We design, integrate, deploy and operate innovative technology solutions to enable smarter decisions.



Building Performance Managed Services

We provide a tailored suite of managed services that powers collaborative teams with technology and information to optimize performance.



Technology



Getting Started with Building Technology

Buildings are **data rich environments** ... it's easy to become overwhelmed with massive amounts of unintelligible data.

The first step is to **establish the desired outcome**; then follow a proven implementation methodology to success.

It's about asking the *right questions*, implementing the **right technology** to make the *right decisions*.

Implementation – Existing Systems

Assess the existing systems, understand their current capabilities both from a mechanical perspective as well as from an integration perspective.

AtSite is technology agnostic. We'll integrate with any provider. If we can get data or information out, we can utilize those points and add them into the overall solution approach

Consider the following:

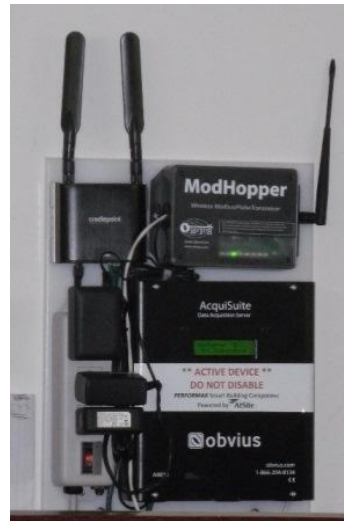
- Building automation systems
- Resource management systems
- Utility meters, bills, systems
- Mechanical systems
- Financial tools
- Rent and space utilization systems
- Facilities and preventive maintenance systems



Implementation – New Components

If necessary, the addition of sensors, data collectors or data aggregators can be added to provide a richer data set.

Typically, sensors can provide data in any density that is required to meet the objectives.



Right Technology

Building technology is about providing us with feedback.

It's a tool to help us make the right decision.

There are a lot of good decisions. The question we ask is ...

Did we make the best decision?

Innovation



Innovations in Building Technology

Smarter Buildings

with

“Big Data” and Analytics

drive

Faster, More Accurate Decisions

Smarter Buildings

- Smarter Integration
 - More Intelligent Automation Systems
 - Ability to Link Core Building Systems
- Smarter Energy Use
 - Renewables
 - Cogeneration
 - Procurement
- Smarter Operations
 - Enhanced Decision Making
 - Increase Staff Productivity
 - Risk Mitigation
- Smarter Insights
 - Advanced Reporting
 - Decision making with “Real Time” Information
 - Predictive Analytics
 - Fault Detection and Diagnostics



Source: USGBC

Example: Fault Detection and Diagnostics



Cyclical Process to Automate Fault Detection

- Collect Data Points
- “Tag” with Data Characteristics
- Write Rules to Identify Faults
- Establish Boundary Conditions
- Determine Lens
- Exercise and Refine Rules
- Identify Escalation Policy



Big Data and Analytics

- Accuracy of Data
 - Better Sensors
 - Greater Reading Frequency
 - Smarter Systems
- Accessibility of Data
 - Advances in Automation
 - Integrated Data “Tsunami”
- Variety of Data
 - Disparate Data Sources
 - Increased Quantity of Data Types
- Velocity of Data
 - Near Real-Time
 - Speed of Delivery

Faster, More Accurate Decisions

- The 'Real' Innovation ...
 - Making Informed Data-Driven Decisions Faster
 - Better Prioritization and Focused Efficient Resources
 - Confirmation and Validation of Results
- Leads to ... **Greater Efficiency, More Savings and Better Operations**

The Environment of Care Driving Building Performance to the Bed Side



Driving Building Performance to the Bed Side

Market competition drives a renewed focus on the patient experience and capital improvements to the environment of care. About 35% of the capital spend for facilities improvements is focused on the patient experience.

- **How do we collaborate with staff to identify the environment of care needs?**
- **How do we justify the funding for EoC improvements compared to other capital needs?**
- **How do we measure success?**

At Adventist Healthcare, here's how we are meeting these challenges

Functionality and Experience Indexes

Developed by THE INNOVA GROUP

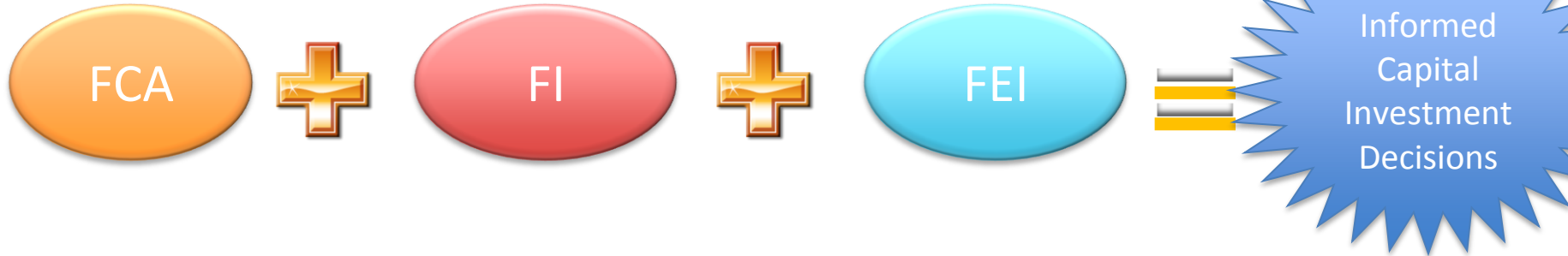
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Driving Building Performance to the Bed Side



Facility Condition Assessment objectively assesses the current and projected *condition of a building's infrastructure and projected replacement costs*.

Functionality Index evaluates and scores the facility on its *usefulness and potential for efficient delivery* of healthcare

Examples

- Adjacencies
- Room Sizes
- Support Space
- Walking Distances

Facility (Patient) Experience Index evaluates and scores the facility's ability to *support a positive patient experience*

Examples:

- Furniture/Finishes
- Lighting
- Positive Distractions
- Way finding

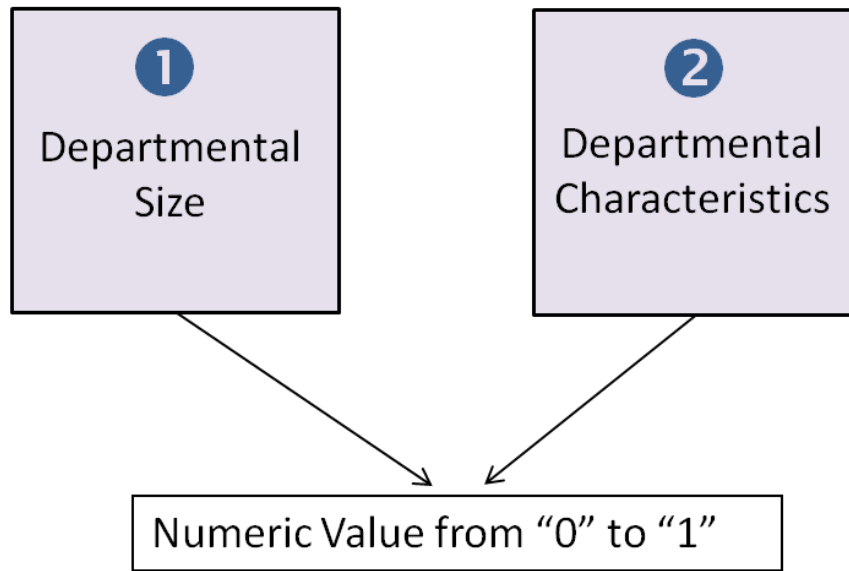
Purpose of the Functionality and Experience Indexes

- Measure how the built environment supports operations & a positive patient experience
- Key component of master plan: target vs. actual size comparison
- Facility investment analysis and disposition tool
- Refine planning & design standards; audit use of standards
- Post occupancy evaluation



Driving Building Performance to the Bed Side

Functionality Index



Sample questions: (think LEAN)

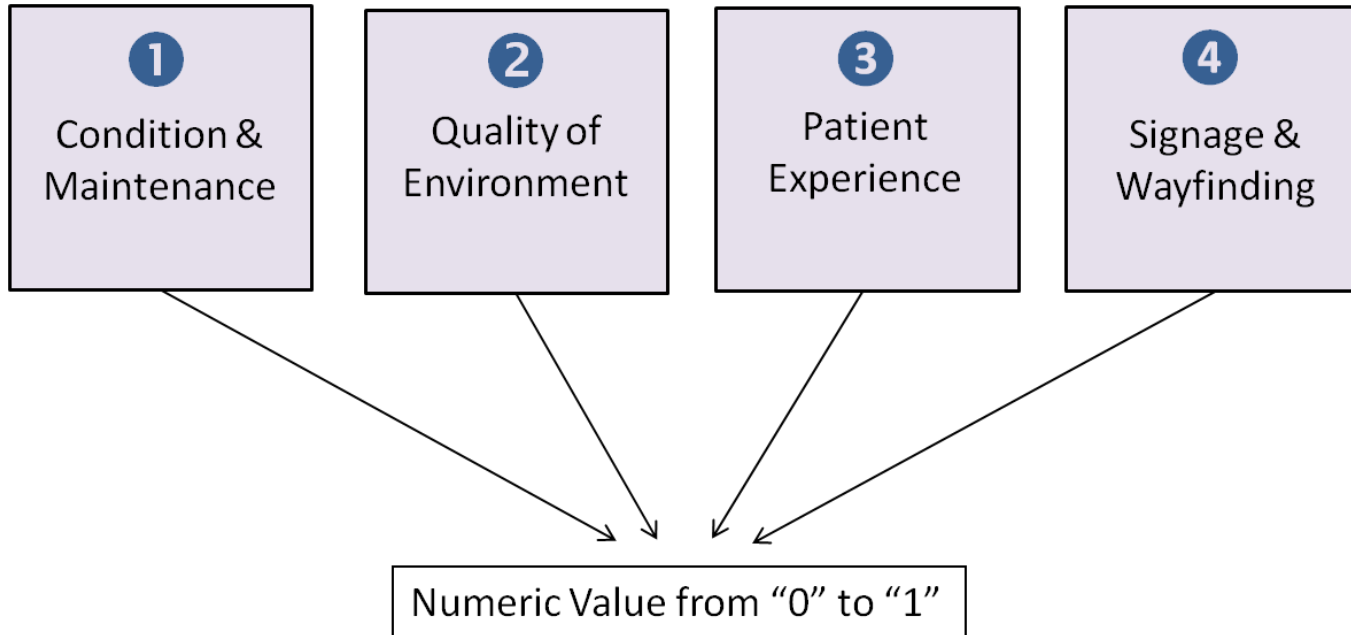
Is the staff circulation separated from the patient?

How many exam rooms are available to each provider?

Distance from the waiting room to furthest exam room?

Driving Building Performance to the Bed Side

Facility Experience Index



Sample questions about: (think TJC or HCAHPS)

Clutter

Color palette

Condition of furniture

Condition of fabrics

Real Results with Real Value

	Department Functional Index	Department Facility Experience Index
Clinical Operations		
Wound Care Clinic	0.58	0.26
Pre Admit Clinic	0.36	0.15
2A Inpatient Unit - Medical	0.11	0.14
2B Inpatient Unit - Oncology	0.11	0.14
2C Observation Unit	0.66	0.16
2D IMCU	0.77	0.27
3A Mother Baby Unit	0.11	0.12
3B Mother Baby Unit	0.08	0.12
3D Inpatient Unit - Pediatrics	0.61	0.37
4A Inpatient Unit - Gen Surg	0.11	0.12
4B Inpatient Unit - Ortho/Neuro	0.11	0.12
4C Inpatient Unit - Stroke	0.66	0.29
4D Inpatient Unit - Gen Med/ Obs	0.66	0.29
ICU-CCU	0.48	0.27
NICU	0.69	0.37
LDR	0.49	0.23

	Department Functional Index	Department Facility Experience
Clinical Operations		
Wound Care/Hyperbaric Clinic	0.53	0.46
Pulmonary Function Clinic	0.39	0.24
Outpatient Behavioral Health	0.20	0.36
1500-ICU	0.20	0.68
2100-Psych Nursing Unit	0.71	0.42
2200-Ortho Nursing Unit	0.50	0.45
2500- Nursing Unit	0.52	0.34
3000-L&D Unit	0.70	0.28
3100 Post Partum Unit	0.18	0.18
3200 Oncology Nursing Unit	0.66	0.32
4100-IMCU Nursing Unit	0.31	0.35
4200-M/S Nursing Unit	0.45	0.36
4300-ICU Neuro & M/S	0.66	0.68
5100-Cardiac M/S, Tele Unit	0.64	0.28
5300-Joint Replacement Cntr	0.36	0.08

Functional Index Score Key

< 25	good
25 - 49	fair
> 50	poor

Experience Index Score Key

< 20
20 - 29
> 30

Building Performance Dashboard Measured Results





The Situation At A Glance

- Several Large Campuses
- Third Party Facility O&M
- Multiple Legacy Systems
- Multiple Active Vendors
- Numerous Owned/Leased Buildings
- Limited visibility of performance across facilities and operating units

Adventist Healthcare

“Adventist HealthCare saved more than \$8M through a comprehensive approach to facilities maintenance, construction, and real estate management.”

-James G. Lee, Executive Vice President & CFO, Adventist Healthcare



Enabled performance improvement opportunities that resulted in OpEx savings of \$6.0M in 2 years



Optimized capital deployment strategies that are delivering savings expected to exceed \$1 million annually



Achieved approximately \$2 million in annual energy cost reductions



Recognized by the EPA as the largest purchaser of green energy of any Healthcare system



Established baselines and set benchmarks to achieve a 10K MT CO2 Reduction

Building Performance Dashboard

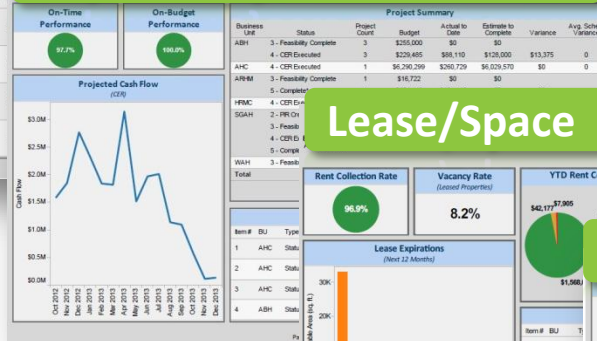
Financials Dashboard



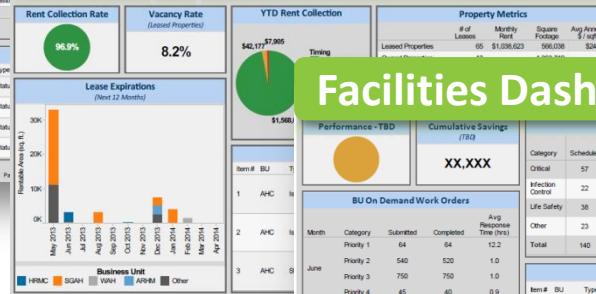
Resources Dashboard



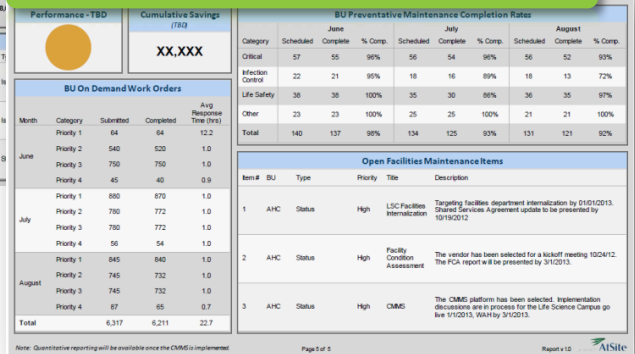
Capital Projects Dashboard



Lease/Space



Facilities Dashboard



Summary Dashboard

August 2013

Business Units	Financials: YTD Budget Variance	Resources: YTD Energy Savings kbtu	Real Estate: Rent Collection Rate	Real Estate: Vacancy Ratio	Capital Projects: On-Time Performance	Capital Projects: On-Budget Performance	Facilities Mgmt: Cost Per Sq Ft
ABH	6.7%	-2.8%	N/A	0%	100%	100%	\$3.66
ARHM	-1.0%	-2.5%	N/A	0%	100%	100%	\$6.34
HRMC	-10.4%	3.9%	100%	0%	100%	100%	\$4.59
SGAH	-0.9%	-0.8%	100%	17.0%	98%	100%	\$4.78
WAH	-2.0%	-0.9%	94%	20.0%	100%	100%	\$2.68
AHC	-1.7%	-0.4%	99%	11.2%	99%	100%	\$3.98

Building Performance Management Dashboard v2.0

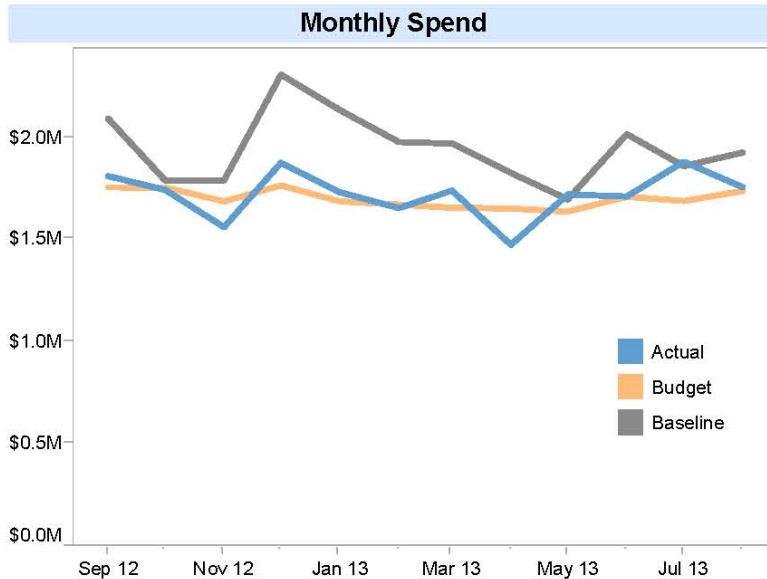
Financial Dashboard

Facility List*
AHC

*AHC results depend on user security.

August 2013

YTD Variance	YTD Financials			Monthly Financials					
				August					
			2013						
			Budget	Actual	Variance	Budget	Actual	Variance	
	Facilities Maintenance	Other Costs	\$3,761,453	\$4,036,656	-7%	\$450,425	\$448,132	1%	
		Total Labor Costs	\$2,941,607	\$2,817,740	4%	\$388,772	\$350,467	10%	
		Utilities	\$6,193,372	\$6,266,173	-1%	\$830,338	\$887,769	-7%	
		Waste	\$81,496	\$64,748	21%	\$10,187	\$16,787	-65%	
	Environmental Services	Waste	\$418,232	\$451,774	-8%	\$52,279	\$49,173	6%	
	Laundry	Waste	\$10,000	(\$1,298)	113%	\$1,250	\$0	100%	
	Grand Total		\$13,406,161	\$13,635,792	-2%	\$1,733,252	\$1,752,329	-1%	
Lifetime Savings \$6,603,358									



Key Financials Items

Business Unit	Type	Priority	Title	Description
AHC	Status	High	Negative Budget Variance	AHC Monthly actuals slightly over budget, resulting in -1.7% YTD savings, mainly due to higher than average Utility spend. However, Purchased Services continues to be the largest variable in budget performance.
		Medium	Electric supply rate increase	Forecast of electric supply rate increase related to transmission rate increase pass through shows a ~\$6.6k increase in electricity expenditures through the end of 2013 across all Business Units. This is significantly lower than first estimated.

Note: Large monthly variance may be due to timing of AHC invoice processing and payments

Building Performance Management Dashboard v2.0

Resource Dashboard

YTD Energy Savings

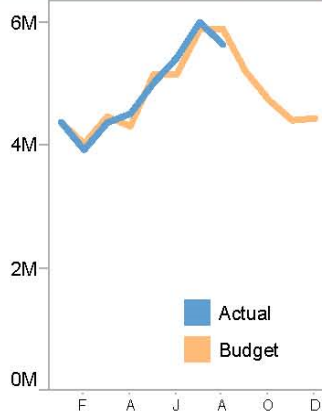
-0.4%

YTD CO2 Emission Reduction**

3,640

** Actual includes reduction for 15% green power purchase; does not include waste

Electric (kWh)



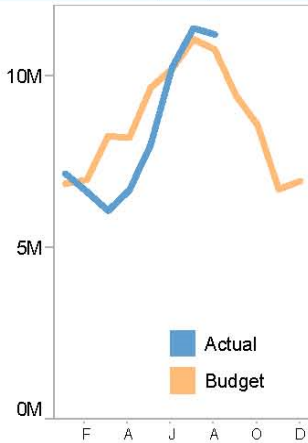
YTD Resources Usage

	2013			August		
	Budget	Actual	Variance	Budget	Actual	Variance
Electric (Kwh)	39,342,404	39,354,130	0.0%	5,908,668	5,655,436	4.3%
Gas (Therms)	1,515,597	1,526,939	-0.7%	146,438	143,419	2.1%
Water (gal)	72,171,865	67,567,189	6.4%	10,790,467	11,234,064	-4.1%

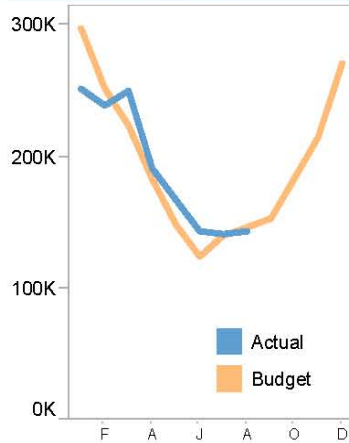
Key Resources Items

Business Unit	Type	Priority	Title	Description
AHC	Status	Medium	YTD Energy Variance	0.4% negative YTD Energy Variance. Working with each BU to implement operational ECMs identified for each BU.

Water (Gal)

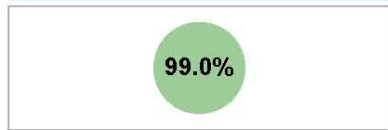


Gas (Therms)



Leased Property Dashboard

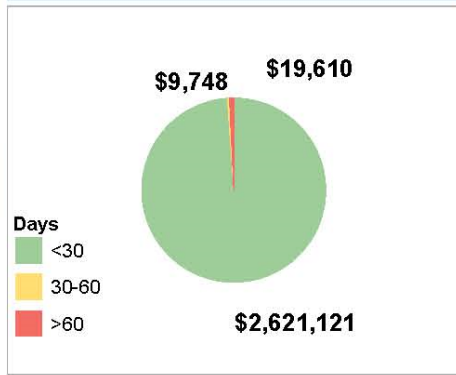
Rent Collection Rate



Vacancy Ratio



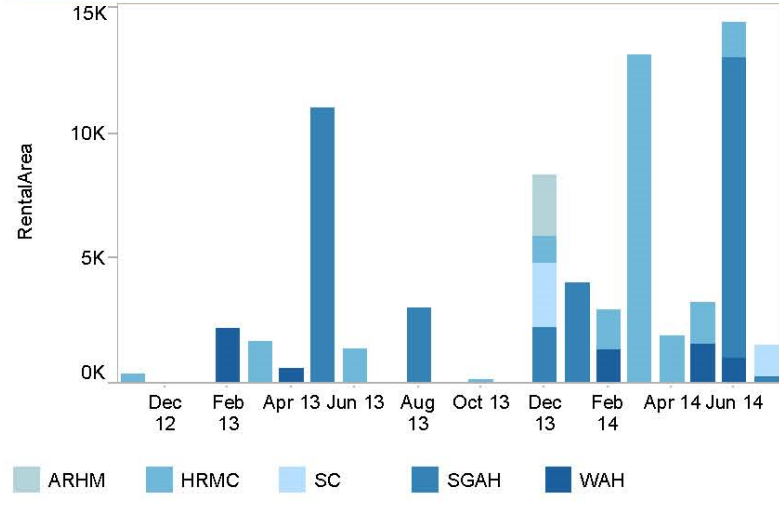
YTD Rent Collection



Property Metrics

New Types	# of Leases	Monthly Rent	Square Footage	Avg. \$/Sqft
Leased Properties	60	\$956,292	504,646	\$0
Owned Properties	12		1,361,890	\$0
AHC Portfolio	72	\$956,292	1,866,536	\$0
Owned-leased	10	\$48,753	19,795	\$34
Sub-leased	45	\$228,271	125,649	\$24
Leased to Others	55	\$277,024	145,444	\$26
Leased within AHC	3	\$63,889	32,366	\$31

Lease Expiration

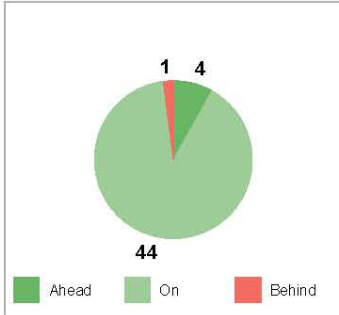


Key Real Estate Items

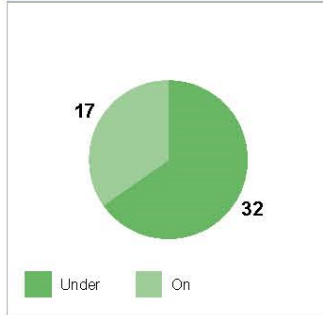
Business Unit	Type	Priority	Title	Description
AHC	Issue - Open	Medium	Rent Collection - 7610 Carroll Ave - Dr. Ferrer	Dr. Ferrer leases space at 7610 Carroll Ave in Takoma Park and is in arrears on rent payments. The issue has been referred to the AHC GC.
			Rent Collection - Germantown Pharmacy	Tenant moved out without notice and has payments in arrears. The issue has been referred to the AHC GC.
		Low	Change to Vacancy Calculation	A change to the vacancy calculation has been implemented.

Capital Project Dashboard

On-Time Performance



On-Budget Performance



Note: Performance evaluated for Status 4 & 5 Only

Project Summary

# Status	# Count	\$ Estimate	\$ Budget	\$ Actuals	\$ ETC	\$ Variance	Days Ahead
1 - Planning	11	3,681,338	70,000	39,040	15,000	30,960	0
2 - PIR Created	21	14,020,523	119,552	6,000	32,600	39,805	58
3 - Feasibility Comp	9	10,886,943	891,704	72,252	797,059	22,393	102
4 - CER Executed	23	0	18,319,065	7,394,932	10,605,808	318,325	16
5 - Substantially Comp	26	0	10,330,873	8,610,376	1,339,160	381,337	10
Grand Total	90	28,588,804	29,731,194	16,122,600	12,789,627	792,820	186

Note: Status 5 represents projects completed within the last 6 months; Status 0 & 6 excluded.

Projected Cash Flow



Key Capital Projects Items

Business Unit	Type	Priority	Title	Description
AHC	Status	High	Clarksburg Facility	AHC has leased space in Clarksburg which will be ready for interior buildout July 14. A coming soon sign is in process to be installed.
		Medium	Aqualino Cancer Center	Substantial completion obtained, punchlist work is proceeding. Opening set for 9/23
			Support Center Relocation	AHC Support Center submitted for LEED Gold. Awaiting Review comments.

Maintenance Dashboard

FM Cost Per Sq Ft		Preventative Maintenance Completion Rates									
		June			July			August			
		Sched.	Comp.	%Complete	Sched.	Comp.	%Complete	Sched.	Comp.	%Complete	
\$3.98		Critical	29	29	100%	153	59	39%	31	3	10%
		Infection Control	9	9	100%	0	0		1	0	0%
		Life Safety	315	308	98%	252	95	38%	509	14	3%
		Routine	514	514	100%	410	386	94%	407	74	18%
		Utility Mgt	5	5	100%	10	0	0%	3	0	0%

On Demand Work Orders					Key Facilities Management Items				
		Submit	Comp.	%Complete	Business Unit	Type	Priority	Title	Description
June	45 Day LS	282	281	100%	AHC	Issue - Open	High	% Completion Work Orders	The work order completion rate is lower than expected due to facility PTO time and the transition of the administrative assistant at the Life Science Campus. Work Orders are being completed and should be back in line with expectatons for the Sept Report.
	Patient	140	120	86%					
	Routine	763	681	89%					
	Urgent	22	17	77%					
July	45 Day LS	36	36	100%		Status	High	CMMS Software	We continue to review internal processes and creating custom reporting for LSC. WAH On-Demand work orders system in place and working on the preventative maintenance work orders.
	Patient	0	0						
	Routine	1,092	1,084	99%					
	Urgent	341	341	100%					
August	45 Day LS	93	4	4%				Hill-Rom Bed Repair	We are working with HillRom to improve the repair turn around on all beds for AHC. The goal is to reduce the annual
	Patient	0	0						
	Routine	1,271	720	57%					
	Urgent	361	272	75%					

Contact Us

- AtSite is a privately held company guiding clients and partners from its Washington, DC headquarters. Founded in 1993, AtSite provides innovation solutions that help organizations maximize the strategic value and performance of their real estate and facilities.
- We develop relationships that leverage our passion for solving real challenges and our desire to share expertise and insights. Our goal is to increase the economic, operational, and strategic value of our clients' buildings as true and collaborative partners aligned around the same mission.



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