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**The Future of
Facility Management
in a Real Estate Perspective**

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“The best way to predict the future is to invent it.”

Immanuel Kant
Prussian Philosopher
1724 - 1804



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Sustainability

- ▶ Sustainability plays a part in an organization’s branding and increasingly a part of its overall mission.
- ▶ Sustainability continues to influence the design, construction and operation of facilities worldwide.



IFMA Forecast Report 2010: Exploring the Current Trends and Future Outlook

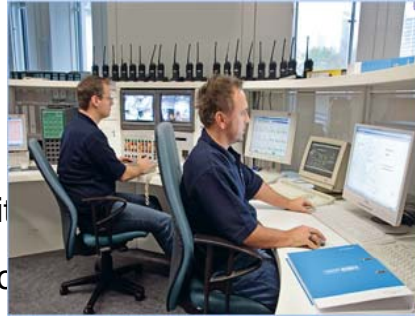


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High Performance Building System & Technology

- ▶ Increasingly complex building systems and controls offer both opportunity and challenge for the profession.
- ▶ Facility professionals can leverage new technologies to conduct short and long term management of facilities, but it also needs to ensure adequate training is in place to educate facility managers on new systems.



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Aging Building Stock

- ▶ Facilities and mechanical systems reach and exceed their expected operating lives significant issues of “repair or replace” must be addressed.
- ▶ The global economic recession compounds the problem of deferred maintenance by causing much greater competition for capital investment once it does return.



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Data Management

- ▶ The increasing quantity and complexity of data available to facility management through new reporting protocols poses challenges to facility managers to convert raw data into usable and meaningful information.



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Recruiting Tomorrow's Talent

- ▶ The effort to attract top talent into facility management continues to seek ways to improve its success rate.
- ▶ Elevating the profession and updating its image will help to attract the best and brightest professionals.



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Evolving Skill Set and Business Acumen

- ▶ The evolving skill set for facility management includes not only technical knowledge, but also an increased focus on business acumen.
- ▶ Facility professionals need to think strategically and to communicate the position of facility management in the language of the C-suite.



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Changing Workplace

- ▶ The changing workplace stems from an increased focus on complexity, innovation, speed, flexibility, corporate branding and sustainability.
- ▶ The work space itself contributes to the organization's image as the preferred place to work, and the "employer of choice".



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We'll probably also see smaller CRE organizations as a whole, composed of strategically thinking people who act as the link between business needs and the service provider market.

Mike Napier, Chief Executive for Real Estate, Shell International

Corporate Real Estate and Facility Management must reinvent themselves from a perception of “business support,” to a reality of “business critical.”

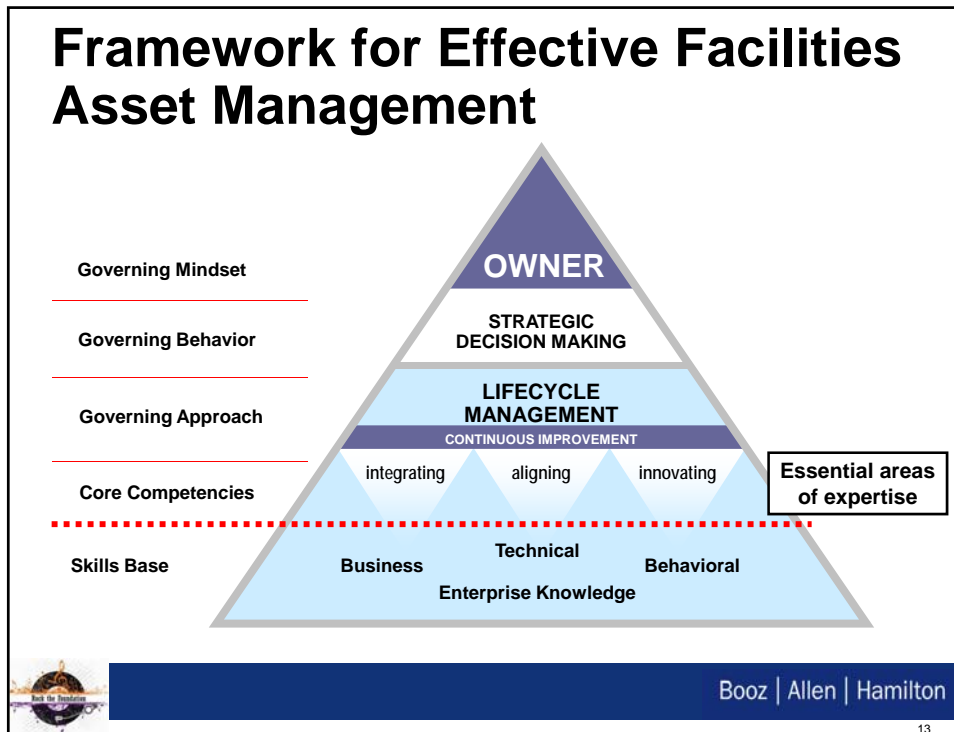
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Asset Management defined as ...

- ▶ Systematic and coordinated activities and practices through which an organization optimally and sustainably manages its assets and asset systems, their associated performance, risks and expenditures over their life cycle for the purpose of achieving its organizational strategic plan.
- ▶ (BSI PAS 55-1:2008)



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Strategic alignment of asset portfolio

- ▶ Do you understand the importance of assets relative to one another empowers leadership to make critical budgetary and programmatic decisions?
- ▶ Are you leveraging the use of assets as an enabler to achieve organization strategic goals?
- ▶ Do you have a 'pulse check' to baseline organizational strengths and weaknesses?

Asset Priority Index

Y-axis: HIGH (top), LOW (bottom)

X-axis: GOOD (left), POOR (right)

HIGH INVESTMENT PRIORITY ASSETS

LOW INVESTMENT PRIORITY ASSETS

CANDIDATES FOR DISPOSAL

Current Maturity Level

Y-axis: Mission Dependence (increasing upwards)

X-axis: Increasing Program Maturity (increasing rightwards)

Level 1: "I know what I have"

Inventory, policy, & organization

Level 2: "I know where I must improve"

Systems and processes

Level 3: "I know how to best spend my budget"

Performance metrics & condition assessments

Level 4: "I can justify a budget increase"

Performance improvements & short-term planning

Level 5: Mission validation & long-term planning

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Taking an Asset Inventory

- ▶ What is the current state of my assets?
- ▶ What do I own?
- ▶ Where is it?
- ▶ What condition is it in?
- ▶ What is its remaining useful life?
- ▶ What is the economic value

USAF

MAJCOM

Installation

Legend: Admin, Educational, Housing, Industrial, Medical, Recreational, Storage

Obj	Est Cost	Current Planned Admin	Admin \$/Sq Ft	Admin \$/Sq Ft (2010/2011)	Delta Cost	CBM Change	CBM Annual Cost	Project Req'd	Req'd FY	Annual Cost	Annual Cost per person	% Annual Cost of
41	61,346		1,174,194.13	0.76	18,235.52		200,842.5	201,804.52	2011	1,182,849	2,130	
42	1,178		177,594.88	0.57	2,496.76		2,008.00	48,290.76	2009	1,489.03	1,740	
43	7,743		99	0.05	2,472.00		10,100.00	1,028,972.00	2011	1,028,972	1,028,972	100.00
44	17,375		184,372.89	0.81	4,555.92		581,745.52	184,962.52	2011	183,985.58	22,843	
45	4,000		47,241.63	1.48	3,553.96		350.00	11,053.96	2011	11,053.96	11,053.96	100.00
46	26,301		182,278.16	3.52	42,288.84		180,000.00	228,462.52	2011	228,462.52	228,462.52	100.00
47	1,484,407		38,492,385.34	0.27	488,252.83		621,842,208	3,388,794.83	2011	8,479,377	1,442	
48	22,442		187,744.78	0.34	12,028.84		1,000,000.00	69,000.00	2011	69,000.00	69,000.00	100.00
49	12,429		170,982.76	0.20	2,428.94		3,000,000.00	42,428.94	2011	42,428.94	42,428.94	100.00
50	181,875		2,538,982.42	0.82	89,178.84		18,801,848	854,511.28	2011	1,571,901	8,446	
51	12,428		170,982.76	0.20	2,428.94		3,000,000.00	42,428.94	2011	42,428.94	42,428.94	100.00
52	32,728		355,987.84	0.76	15,246.68		1,004,228	70,000.48	2011	70,000.48	70,000.48	100.00
53	22,846		344,993.42	1.49	24,746.17		1,047,847	146,270.17	2011	146,270.17	146,270.17	100.00
54	22,846		344,993.42	1.49	24,746.17		1,047,847	146,270.17	2011	146,270.17	146,270.17	100.00
55	17,407		187,424.76	1.17	9,127.23		1,049,948	45,123.43	2011	45,123.43	45,123.43	100.00
56	28,449		460,159.34	1.61	26,794.88		11,295,487	284,816.88	2011	284,816.88	284,816.88	100.00
57	21,465		449,148.78	0.34	34,008.42		1,000,000.00	176,000.42	2011	176,000.42	176,000.42	100.00
58	17,423		191,891.22	0.86	4,889.71		111,740	12,428.71	2011	12,428.71	12,428.71	100.00
59	40,100		1,238,943.91	0.86	38,050.92		12,230,000	481,850.92	2011	1,482,331	9,732	
60	483,892		979	1.27	778,594.42		284,424,424	114,423,194.42	2011	114,423,194.42	114,423,194.42	100.00
			Total	4,401,404,614	0.74	1,811,996.76		816,478,892	20,547,268.76		7.38	

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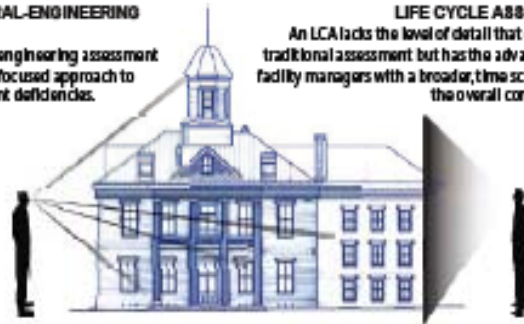
Assessing asset and inventory condition



- ▶ Condition assessments can be conducted in a variety of ways
- ▶ Physical inspections vary in scope, and parametric approaches can provide more rapid feedback at a sufficient level of detail for planning purposes

ARCHITECTURAL-ENGINEERING ASSESSMENT
An architectural-engineering assessment takes a narrowly focused approach to identifying current deficiencies.

LIFE CYCLE ASSESSMENT (LCA)
An LCA lacks the level of detail that one might find in a traditional assessment but has the advantage of providing facility managers with a broader, time scaled perspective of the overall condition of the asset.



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Calculating replacement value



- ▶ Automated approaches can be used to set consistent valuation baselines
- ▶ Useful for unique asset types or when original estimates not readily available

Asset Code	Description	Asset Number
1130	Roof	5000
1100	Roofing/Asph	5010
1700	Roofing/Scup	5020
1800	Roofing/Turret	5700
2100	Tire	5800
2200	Tire/Broken	6100
2300	Tire/Normal	6200
3100	Maintained Landscapes	6300
3800	Roofing	6400
4100	Rubbish	6500
4300	Roofing	7100
5100	Water System	7200
5200	Water/Visitor System	7300
5300	Water/Air Control/Chlor	7400
5400	Electrical System	7900
5500	Bulk System	
5600	Stone System	
5700	System (i.e. Lab)	
5700	Cast System	
5800	Cast/Stone/Concrete System	
6100	Dam/Access/Chg	
6200	Construction Waterway	
6300	Marina/Waterfront System	
6400	System System	
6500	Outdoor System	
7100	Outdoor Sculpture/Monument/Waterfall	
7200	Stump	
7300	Fertilization	
7400	Swamp/Wetland Site	
7900	Land/Scapes	



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Calculating the Total Cost of Facility Ownership (TCFO)

Strategic alignment of asset portfolio → Asset inventory and condition assessments → Asset valuation → Capital planning and budgeting → Implementation and execution → Performance assessment and improvement

TCFO Calculator Screenshots

Legend	
Required user input	
Optional user input	


Project Information		Building Surfaces		Building Equipment	
Location of Asset by P&ID	G01	Building	Exterior walls	Equipment	Type
Building Type	Administration Building	Exterior	Exterior doors		
Year Built	2008	Halfway	Exterior windows		
Building Size (S.F.)	40000	Kitchen	Roof		
Design and construction cost	\$60,000		Interior walls		
Inflation factor	2.00%	Multi-Purpose Room	Ceiling		
Expected Life (in yrs)	50	Office	Interior walls		
			Ceiling		
			Floor		
			Interior walls		
			Ceiling		
			Floor		
			Interior walls		
			Ceiling		
			Floor		
			Interior walls		
			Ceiling		
			Floor		

Present Value (PV) 50 Years						
Total TCFO	Build	RM	PM	OPS	CR	UM
\$2,070,786.19	\$60,000.00	\$200,792.25	\$32,875.57	\$1,665,141.00	\$49,596.89	\$62,380.48

Calculation includes location factor

O&M Portfolio Cost by Work Type						
Total (S.F.)	40000					
		Floor				
		Interior walls				
		Ceiling				
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Integrating information Into comprehensive plans



▶ Comprehensive asset management plans tie together the detailed analyses into a comprehensive, mission oriented plan for directing the execution of maintenance work


Strategic alignment of asset portfolio
Asset inventory and condition assessments
Asset valuation
Capital planning and budgeting
Implementation and execution
Performance assessment and improvement

Current Forecasts

Current Funding

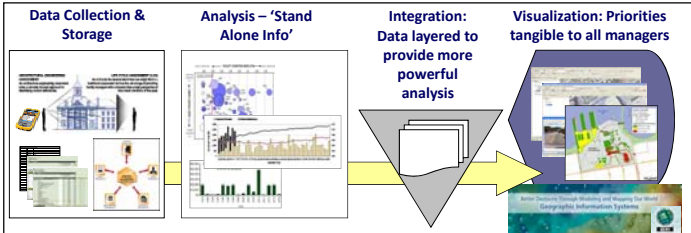
Current Requirements


Managing the Gap



▶ GIS-based integrated planning represents a needed next step for balancing priorities

Data Collection & Storage
Analysis – ‘Stand Alone Info’
Integration: Data layered to provide more powerful analysis
Visualization: Priorities tangible to all managers




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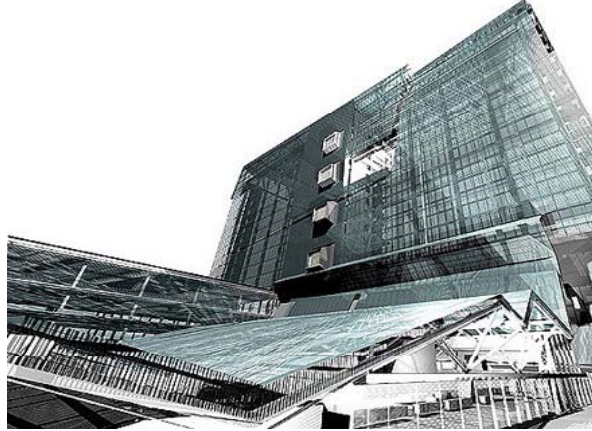
Recommended Theme for the Future

- ▶ Adopt the mindset of an owner
- ▶ Integrate facilities-related decisions into strategic planning
- ▶ Use life cycle management approach
- ▶ Measure performance
- ▶ Persistent Feedback
- ▶ Continuous Improvement


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Questions / Discussion



Thank You



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Building the Future of FM for 20 Years



- ▶ “To expand our knowledge of the **Built Environment** in a changing world through scholarships, education and research”



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