Next Generation FM: Measuring Actual Utilization

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Living and Working in a Network of Space
Consider Running an Airline…

Operational Control

- $ per airplane…
- Maintenance costs…
- Fuel costs…
- Cleaning costs…
- Turnaround time…

Food costs…NOT!

_Airlines care about operational costs…_
Consider Running an Airline…

Strategic Management

Number of seats actually occupied
Average Percent capacity per route
Average use over time…

But airlines really care about Actual Utilization because an empty airplane is VERY expensive. Actual seat use, measured continuously…
Operational Control

$ per sq. ft…
Number of buildings…
Energy costs…
Maintenance costs…
Move management…

Knowing facility inventory information is necessary, but insufficient.
Strategic Management

Actual Workspace Duration Used vs. Total Workspace Duration Available
% Actual Used by building or total portfolio
% Actual Used by department

Strategic management requires actual, time-based utilization. An empty building is VERY expensive.
How much space do we have?
People complain that we need more space…
We can’t add new people…
We have too much space…
Conference rooms are never available, always booked…
We need to consolidate space…
Our rate of churn is skyrocketing and so is the cost…
People move themselves by calling IT to move their phone/data…
We need to figure out people moves to support business continuity plans

So while the facility manager is struggling with these issues…
How can we manage the workplace infrastructure to make people more productive?

How much real estate do we REALLY need?

Value of the stock this quarter.

How do we significantly improve EBITDA?

How can we measure the performance of our largest balance sheet item: real estate?

How can we expand into new geographies faster?

Senior management cares about profitability, return on assets, revenue growth, etc. How can FM play here?
Knowledge based workers use technology because they need mobility, and that creates office vacancy.
What’s Going on in the Workplace?

What is the average vacancy based on time of all commercial office space in U.S. and Europe between the hours of 8am to 5pm?

A – 10% to 20%
B – 20% to 40%
C – 50% to 70%

This may surprise you…but it shouldn’t
What’s Going on in the Workplace?

Source: Frank Duffy, DEGW
The New Office

Real Property is vacant 50% to 70% of the time because… the people are out working!
# What’s Going on in the Workplace?

## Workspace Usage Analysis

<table>
<thead>
<tr>
<th>Week</th>
<th>No. of Desks</th>
<th>No. of Reservations</th>
<th>No. of Check-ins</th>
<th>No. of No-shows</th>
<th>Unused Spaces</th>
<th>% of Space Used</th>
<th>% of Space Reserved</th>
<th>Unused Reserved Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>228</td>
<td>126</td>
<td>117</td>
<td>9</td>
<td>111</td>
<td>51%</td>
<td>55%</td>
<td>4%</td>
</tr>
<tr>
<td>Tuesday</td>
<td>228</td>
<td>124</td>
<td>104</td>
<td>20</td>
<td>124</td>
<td>46%</td>
<td>54%</td>
<td>9%</td>
</tr>
<tr>
<td>Wednesday</td>
<td>228</td>
<td>111</td>
<td>95</td>
<td>16</td>
<td>133</td>
<td>42%</td>
<td>49%</td>
<td>7%</td>
</tr>
<tr>
<td>Thursday</td>
<td>228</td>
<td>106</td>
<td>89</td>
<td>17</td>
<td>139</td>
<td>39%</td>
<td>46%</td>
<td>7%</td>
</tr>
<tr>
<td>Friday</td>
<td>228</td>
<td>117</td>
<td>99</td>
<td>18</td>
<td>129</td>
<td>43%</td>
<td>51%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Average unused spaces: 127.2

Cost per workspace: $10,000

Potential Annual Cost Avoidance: $1,272,000
### Example in New York City

#### Base People & Workspace Data

<table>
<thead>
<tr>
<th>Total Workspaces</th>
<th>334</th>
</tr>
</thead>
<tbody>
<tr>
<td># Assigned workspaces</td>
<td>108</td>
</tr>
<tr>
<td># Shared workspaces</td>
<td>228</td>
</tr>
<tr>
<td># People who share the 226 workspaces (250 home + 300 visitors)</td>
<td>550</td>
</tr>
</tbody>
</table>

#### Measurements

| For Shared Space: Worker to Desk ratio (550 workers for 228 workspaces) | 2.4 : 1 |
| Actual Shared Workspace Utilization (Of the 226 shared spaces, only 86 are in use at any given time) | 37% |
| Cost of Unused Facilities | $1,420,000 |

226 workspaces at 37% utilization leaves 142 vacant spaces on average. 142 x $10,000 per year = $1,420,000
Conference Rooms “booked” 100%... But 65% either vacant or used as individual workstations. 17 people in one week were turned away!
Even Dilbert knows the inefficiencies of real property use…
President of the United States
Executive Order 13327 of February 4, 2004
Federal Real Property Asset Management

“It is the policy of the United States to promote the efficient and economical use of America’s real property assets and to assure management accountability…”

Does 30 to 50% utilization constitute “efficient, economical, accountability”?
Traditional way of thinking about space.

1 worker = 1 workspace

Option 1: Workplaces “permanently” assigned without regard to worker mobility or time based use. Control Churn...
People need many workspaces!

Option 2: Fit the facilities to the way people work. Encourage mobility and workplace choice. Timeshare office space.
Shared space is assigned for a short time, and “permanent” space for a longer time...that keeps getting shorter.
What is the value to an organization of supporting mobility with a Network of Space?

A – Increased productivity of 5% to 15%
B – Reduced occupancy costs by 20 to 50%
C – Improved business continuity
D – All of the above

Hint: It’s more than real property savings.
Workers choose facilities, workspaces for each day’s tasks
Communications connected automatically
Ability to find colleagues
Telework/ Telecommuting

Increased Organizational Agility
More mobile workforce
Deploy workforce geographically more efficiently
Expand “bandwidth” of each facility to support more people
Attract and retain the best employees

Move work to people, not people to work… NIHITO!
(Nothing Important Happens In The Office)
Initial condition:
- 20,000 workspaces for 20,000 people
- 1:1 people to desk ratio

Implemented Network of Space:
- Reduce # of workspaces 20%
- 4,000 less workspaces needed

Calculate the savings:
- 4,000 workspaces x $10,000 per workspace = $4 million annually
- $40 million over 10 year lease

Take $40 million savings to the CFO…see what she says!
Examples

• TIGTA – I would tell you, but Joe would kill me…
• BearingPoint saves $50,000,000 per year
• IBM saves over $100,000,000 per year
• Sun Microsystems saves tens of millions
• Deloitte saves $132 million annually, in just 2 cities
• Other accounting firms save $40M - $60M per year
• Major hi-tech firm saves millions with just better conference room management
Able to answer key questions – and act immediately!

Where is my unused office space…NOW?
Can I absorb displaced people into it easily...NOW?”
How do people get their phone service when they move without notice?
Are people in the building ... today... NOW?
How can I find available rooms or equipment in an unfamiliar facility?

Real Property Resiliency
Reduce time to recover from a disaster
De-concentrate workforce

De-concentrate organizations, train for immediate mobility, achieve organizational resiliency.
How Do We Implement and Support The Next Generation Workplace?
CAFM systems focus on inventory, allocations, churn, maintenance and service requests...i.e. control. But we need more...

CAFM Software: Snapshot in Time

- An **Inventory** of workspaces
- An **Allocation** of workspaces
- Moves/Adds/Changes workflow
- Lease documentation
- **Number** of assets and costs
- **Charge-backs** based on Allocation
Workplace Utilization software’s adds the functions necessary to keep pace with today’s mobile, flexible workforce.

- Duration Used vs. Inventory of workspaces
- Continuous tracking vs. a snapshot in time
- Utilization vs. an Allocation
- Self Moves vs. Moves/Adds/Changes workflow
- Activity based Charge-backs vs Allocation based
- Accurate location data vs. out of date assignment
- Choosing desks when and where needed vs. one assigned desk
Measuring Actual Use

• Inventory data from CAFM
• People data from HR and other systems
• Scheduling data from booking systems

Presence data from:
• Security Systems
• Telephone Activation
• RFID Recognition
• Check in/Check out booking system data
• Motion detectors
• Bed checks

Gather data to verify presence.
Analyze the data to create actual use information, compare it to your strategic plan and make the decisions you need to drive value.

- Actual Workspace Duration Used / Total Workspace Duration Available
- Worker to workplace ratio (4:1)
- % Workplace Utilization by Workplace Type
- % Workplace Utilization by Geolocation
- % Workplace Utilization by Personnel Classification
### CAFM / Workplace Utilization Software Comparison

<table>
<thead>
<tr>
<th>CAFM</th>
<th>Workplace Utilization Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Snapshot in Time</td>
<td>Measurement Over Time</td>
</tr>
<tr>
<td>Inventory of Workspaces</td>
<td>Duration Workspaces are used</td>
</tr>
<tr>
<td>Snapshot in Time</td>
<td>Continuous Tracking</td>
</tr>
<tr>
<td>Allocation of Workspaces</td>
<td>Utilization of Workspaces</td>
</tr>
<tr>
<td>Moves/Adds/Changes Workflow</td>
<td>Automatically Manages Self-Moves</td>
</tr>
<tr>
<td>Lease renewal based on intended use</td>
<td>Lease renewal based on Actual Use</td>
</tr>
<tr>
<td>Number of Assets &amp; Costs</td>
<td>Performance of Assets</td>
</tr>
<tr>
<td>Allocation-base Charge-backs</td>
<td>Activity-based Charge-backs</td>
</tr>
<tr>
<td>Out of date people location data</td>
<td>Accurate, Continuous people location data</td>
</tr>
<tr>
<td>One Assigned Desk</td>
<td>Choosing a desk when and where needed</td>
</tr>
</tbody>
</table>

*Workplace Utilization software’s adds the functions necessary to answer the “C-Suite’s” strategic issues.*
The integration of CAFM + Workplace Utilization software gives you both operational control and strategic workplace management.
Many internal and external stakeholders are required to maintain the Workplace

Many People provide Workspace!

We can improve the way we communicate and work!
# Industry Problem

<table>
<thead>
<tr>
<th><strong>What We Face</strong></th>
<th><strong>What We Need</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>No-one speaks the “same language”</td>
<td>• Information flows freely because we know what we mean</td>
</tr>
<tr>
<td>Massive costs and time lost from redundant manual entry</td>
<td>• Our systems can talk to each other</td>
</tr>
<tr>
<td>Severe constraints to changing vendors and suppliers</td>
<td>• Do it once and everyone has data at the same time globally</td>
</tr>
<tr>
<td>Trying to move from a “cottage industry” to an internetworked industry</td>
<td>• Full integration of disparate sources of information</td>
</tr>
<tr>
<td>The market for technology is confused and risky…waiting for the leaders and standards</td>
<td>• Rapidly change vendors without changing processes, terms, definitions</td>
</tr>
<tr>
<td></td>
<td>• Our partners can more fully integrate with each other</td>
</tr>
<tr>
<td></td>
<td>• Take on supply chain characteristics seen in other industries</td>
</tr>
<tr>
<td></td>
<td>• Make the virtual corporation real – now rather than later</td>
</tr>
<tr>
<td></td>
<td>• Technology vendors can design to open standards</td>
</tr>
<tr>
<td></td>
<td>• Customers don’t have to stay stuck or make big bets – they can start moving and win with lots of choices</td>
</tr>
</tbody>
</table>
Value Drivers

• $15.8 Billion AEC/FM Industry Loss Due To The Lack of Interoperability
• $10.6 Billion Borne by Owners/Operators
• Probably more if not all if you figure the Owner pays the Arch/Eng/GC and Subs

Table 6-1. Costs of Inadequate Interoperability by Stakeholder Group, by Life-Cycle Phase (in $Millions)

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Planning, Engineering, and Design Phase</th>
<th>Construction Phase</th>
<th>Operations and Maintenance Phase</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architects and Engineers</td>
<td>1,007.2</td>
<td>147.0</td>
<td>15.7</td>
<td>1,169.8</td>
</tr>
<tr>
<td>General Contractors</td>
<td>485.9</td>
<td>1,265.3</td>
<td>50.4</td>
<td>1,801.6</td>
</tr>
<tr>
<td>Specialty Fabricators and Suppliers</td>
<td>442.4</td>
<td>1,762.2</td>
<td>—</td>
<td>2,204.6</td>
</tr>
<tr>
<td>Owners and Operators</td>
<td>722.8</td>
<td>898.0</td>
<td>9,027.2</td>
<td>10,648.0</td>
</tr>
<tr>
<td>Total</td>
<td>2,658.3</td>
<td>4,072.4</td>
<td>9,093.3</td>
<td>15,824.0</td>
</tr>
</tbody>
</table>

Source: RTI estimates.
It’s not so much about technology as it is about getting the industry supply chain stakeholders (YOU) to agree on definitions and context.