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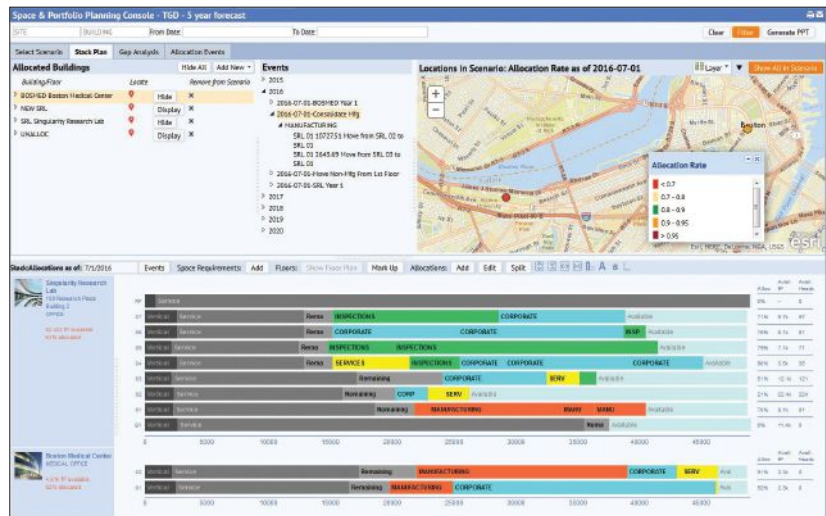
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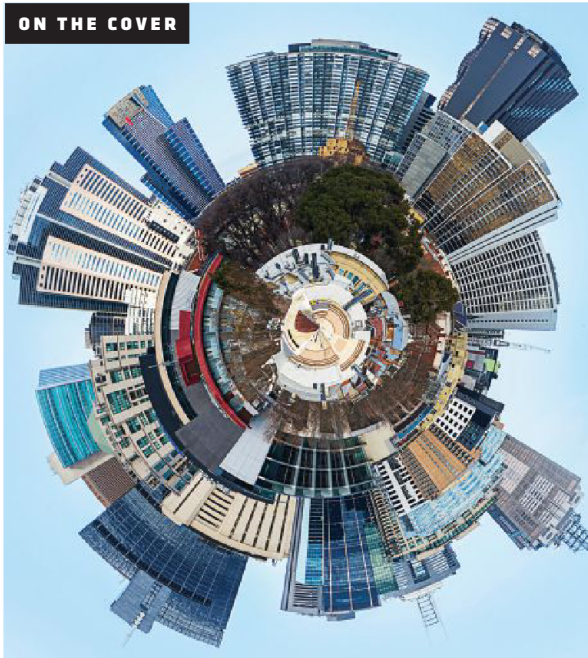
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BEHIND THE COVER

As data becomes more available, it continues to shape our lives and how we work. With such information, we can analyze, adapt and enhance every aspect — and angle — of our work flow and environment. This issue's cover features a modified view of downtown buildings to represent the full circle of data to come in 2016.



WITH THE GOAL OF MINIMIZING OUR CARBON FOOTPRINT, FMJ IS PRINTED BY AN FSC-CERTIFIED COMPANY.

PLEASE RECYCLE



ABOUT IFMA IFMA is the world's largest and most widely recognized international association for facility management professionals, supporting 24,000 members in 105 countries. The association's members, represented in 134 chapters and 17 councils worldwide, manage more than 37 billion square feet of property and annually purchase more than US\$100 billion in products and services. Formed in 1980, IFMA certifies professionals in facility management, conducts research, provides educational programs and produces World Workplace, the world's largest facility management conference and exposition. To join and follow IFMA's social media outlets online, visit the association's LinkedIn, Facebook, YouTube and Twitter pages. For more information, visit the IFMA press room or www.ifma.org.

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The online version of FMJ features extra resources like videos, podcasts, white papers and more to enhance your reading experience. Click on the **FMJ Extra** icons that appear in the digital magazine to link to additional sources of information to learn more about topics covered by articles in this issue.

- **DESIGN GUIDE:** "Sustainability of the Building Envelope" to accompany "Optimizing the Building Envelope" (p. 26)
- **BLOG POST:** "ISO 41000 | Integrated Facilities Management System" to accompany "Standardization: One of Today's Most Vital Global FM Trends" (p. 32)
- **WEBINAR:** "Distributed Work Revisited: Findings Revealed" to accompany "Distributed Work: The Next Generation" (p. 37)
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- **BLOG POST:** "5 Things We Learned at IFMA's World Workplace" to accompany "World Workplace in the Mile-High City" (p. 45)
- **PODCAST:** "Getting to Know IFMA's Members of the Month" to accompany "IFMA's November and December 2015 Members of the Month" (p. 52)
- **VIDEO:** "The New City Center in Jubail Industrial City" (2012) to accompany "40 Years of Operation and Maintenance in Jubail Industrial City" (p. 72)

IFMA members – don't stop reading at the back cover. The online magazine is only available to members and includes **FMJ Extended**, a special section at the end of each issue that contains additional articles not available in print. Navigate in the digital edition to the articles listed below to read contributions from IFMA's FM Consultants Council and Environmental Stewardship and Sustainability Strategic Advisory Group, and other content just for you.

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EDITOR'S COLUMN

ANDREA SANCHEZ
Editor-in-Chief
IFMA's FMJ magazine



Growth. It's what we all strive for, in one form or another, when we make those resolutions at the beginning of each year. Whether it's improving your health, expanding your skills or adjusting an attitude, there is a change that needs to take place in order for you to further develop.

As you enter the New Year, what opportunities are there for you to grow?

Development does not always have to refer to a monumental feat. It can be as simple as choosing an alternate route to work one morning to lessen the stress of a rush-hour commute. Life is about celebrating and learning from the milestones, no matter their size.

Do you want to move up in your company? Would you like to learn how to cook a new dish or take up a sport? How about reconnecting with an old friend?

DON'T WAIT FOR OPPORTUNITIES – MAKE THEM

The worst thing you can do is hold on to complacency due to fear of the unknown, or worse, fear of failure. Failure is living life thinking "what if" and not ever trying things out. Stop hiding from what you really want to say and do. Give growth a chance and satisfy the "what if" craving this year. Once a craving is satisfied, your mind is free to move on to the next thing, whether what you tried was good or not.

For me, that "what if" is developing others to have the courage to be themselves and follow their passions. Over the past year I began experimenting with this through social media outlets such as Twitter and Periscope. Today I am excited to say I will be incorporating this passion into my new role at IFMA as the vice president of communications and organizational change.

LIFE IS ABOUT CELEBRATING AND LEARNING FROM THE MILESTONES, NO MATTER THEIR SIZE.

WHEN ONE DOOR OPENS, ANOTHER CLOSES

After nine amazing years as editor-in-chief of FMJ magazine, I am stepping down to follow my new professional growth path within the association. From a whole new logo, a complete design and editorial makeover, a social media presence and additional online material, the magazine has made quite a transformation over the past few years.

As I reminisced about my very first column in 2007, I also realized how far I had come as a writer. Back then I was focused solely on the facts (typical journalist) and today, as I write my last column, I am focused on being human.

FMJ has won a place in my heart. I thank IFMA and all the special contributors, many of whom have become dear friends, for the journey and inspirational moments. I also would like to thank my talented FMJ team (refer to the staff listing on the right) for their countless hours in assuring what you receive is of the greatest quality.

I am honored and very proud to say that Erin Sevitz, FMJ's editorial manager since 2013 (and my exceptional right hand) will assume the role of editor beginning with the March/April 2016 issue. Erin is by far the best editor I have had the pleasure to work with. I look forward to seeing the direction she will grow the publication, and most importantly, herself.

Until next time,

Andrea

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HELLO IFMA MEMBERS AND FMS EVERYWHERE!

I hope you all had a great holiday season – a chance to celebrate with family and friends and recharge your batteries.

2015 was certainly an exciting and successful year for IFMA. Your board of directors, the outstanding IFMA staff, our volunteer leaders, active participants and all members contributed to a year of action and accomplishment.

IFMA's events, education and professional development products and services, as well as our standards-setting efforts, are world-class. These areas of focus will continue in 2016. In fact, our focus on member benefits will intensify this year.

STRENGTHENING THE GLOBAL FM NETWORK

Through all of these efforts IFMA is stronger than ever, has a positive trajectory and is making important inroads into emerging markets such as China, India, Africa and the Middle East. In fact, at its December meeting the board approved the charter of new Beijing Chapter, the fourth chapter to form in China, after Shanghai and Guangdong (and including Hong Kong).

One of IFMA's continuing challenges is allocating limited resources to fully support our core markets while encouraging growth in emerging markets. Annual budgeting is one of our most critical exercises. Achieving a balanced approach aimed at maximizing benefits for all members is always the target.

Another strategic challenge moving forward is effectively partnering with other FM associations in countries around the globe to advance the FM profession. IFMA has invested a substantial amount of its available resources to cooperate and collaborate with these professional groups. This work is vitally important to offset the challenges of a fragmented global FM community that negatively impact the international standing of our profession.

This challenge has been debated among association leaders for several years within forums such as Global FM and has led to partnerships, alliances and joint sponsoring of events. In the past, these efforts have had varying degrees of success. However, IFMA is committed to continuing to explore and strengthen opportunities of this kind that will advance the FM profession.

FM ON THE RISE WORLDWIDE

There are two key efforts now underway that focus on the global FM community. The first relates to IFMA's involvement with the International Organization for Standardization in developing FM-related standards. Now entering its second year, the development of ISO 41000 Facilities Management – Integrated Management System – Requirements will continue in 2016 with the standard expected to go to publication in 2018. In addition, ISO 18480-1 Facility Management – Part 1: Terms and Definitions and ISO 18480-2 Facilities Management – Part 2: Guidance on Strategic Sourcing and the Development of Agreements will be published in 2016.

The second key effort is IFMA's regularly scheduled Global Job Task Analysis. This effort will collect data from FMs around the globe to understand what new knowledge and skills are required to perform our jobs. This information will be used to update the core competencies upon which IFMA's professional development and education products and services are based. For more information about how you can engage in this effort, check the IFMA website at www.ifma.org/gjta.

The FM profession is ascending around globe. IFMA will be examining opportunities to improve continuity and consistency of the support FMs need to maintain and improve the built environment, no matter where they work.

2016 promises to be another exciting and challenging year. Stay tuned for more information about IFMA's world-class events and growing content available in the Knowledge Library.

Also, take some time to appreciate the excellent content in this issue of FMJ. The theme is managing the building portfolio. Articles revolve around FM for the distributed workforce, the facility envelope and managing exteriors. The feature article, which discusses 2016 industry predictions, is a very interesting read.

Thank you all for your continued participation and support.



TONY KEANE, CAE
President and Chief
Executive Officer

PRESIDENT'S COLUMN

WELCOME TO 2016!

Another year has come around, providing us with a new opportunity to make resolutions to improve our lives, our relationships and ourselves. IFMA had a great 2015, seeing two major multi-year projects come to fruition.

The Knowledge Library, released in October 2015, is a giant step forward to enhance the value of IFMA membership. In December, the new association management system (CRM/database software) went live, establishing a new, up-to-date platform that allows IFMA to enhance interaction with members, better support our components and improve our internal infrastructure. Both of these major achievements cap off a great 2015.

WHAT WILL 2016 BRING?

Since it is a new year we are all starting fresh and together will write the IFMA 2016 story. To make 2016 another great year, each of us needs to do our part in all of our IFMA activities. I offer the following resolutions for all of us to consider as we undertake our IFMA duties this year:

- Always do what is best for the organization.
- Respect each other's thoughts, opinions and efforts.
- Follow our IFMA core values (these can be found at www.ifma.org/about/strategic-plan/core-values if you need a refresher).
- Be open to change for the betterment of the worldwide FM community.
- Contribute to IFMA in a positive way.

I am sure that we could all come up with many more resolutions, but let's take a look at these five.

1 Always do what is best for the organization. In many situations, our first reaction is to frame what is "best" in the context of our own environment (chapter, community, council, staff, board, etc.). I encourage you to hit the pause button and think about what might be best for IFMA worldwide and not just what is best for your own environment.

2 Respect each other's thoughts, opinions and efforts. FM is an extremely broad discipline. Our members, leaders and staff all have different backgrounds and

have experienced IFMA in many different ways. This variety of experience leads to different approaches. We should not fight the differences – we need to embrace them, encourage them and most of all, respect the person delivering them.

3 Follow our IFMA core values. The IFMA core values provide an excellent framework for all of us to use in conducting our IFMA business. If you haven't read them recently I encourage you to do so.

4 Be open to change for the betterment of the worldwide FM community. IFMA has had a global focus since its second year of existence. The FM community is not made up of just one region; thus IFMA is not made up of just one region. Currently, 74 percent of our membership is based in the United States, but that is as of today. Our early leaders envisioned a world filled with IFMA members and a global FM community. The world is becoming a smaller place and IFMA needs to continue to enhance the worldwide community of FM.

5 Contribute to IFMA in a positive way. When we contribute our thoughts, time and/or money to any organization, we can choose to do so in a positive or negative fashion. Criticizing first and then offering your thoughts is not in the best interest of IFMA. Offering your thoughts, being open to different ideas and collaborating to enhance IFMA worldwide is much more effective. As they say, "check your ego at the door," and let's collaborate to make IFMA a dynamic global community through which the discipline of FM thrives and grows.

Together we get to write the IFMA story for 2016. Let's make it a great one with a fantastic ending!

Thank you to our Hampton Roads, Virginia Chapter for their wonderful hospitality and the great things that they are doing to promote FM in their region.

Have you invited a colleague to join the IFMA worldwide FM community this month? If not, please do so!

FLEXIBILITY, MOBILITY AND THE INTERNET OF THINGS PREDICTED TO DOMINATE WORKPLACES IN 2016

As businesses plan for workplace changes in 2016, five trends seem to be dominating the conversation, according to research conducted by software company Planon, a global leader in Integrated Workplace Management Systems (IWMS) and gold-level Corporate Sustaining Partner of IFMA.

According to Planon's research, the top five real estate and facility management trends expected to have far-reaching effects in 2016 include:

The Internet of Things will be applied.

Going well beyond consumer functionality, the Internet of Things will help companies improve their bottom lines. Affordable sensors are now available that can measure the occupancy of a workplace or meeting room minute-by-minute, providing big data for analysis with the right software. Employees will find workspaces via screens with availability on building floor plans. Additional functionality in apps can help users to check the availability of workspaces by scanning a QR code on a desk or swiping an RFID tag.

The need to create a mobile culture. One of the most significant drivers of change

is the rise of mobility. Work today is being done everywhere – at the office, at home and on the road. The average workplace occupancy rate is dropping and a large portion of the workforce has private commitments that require flexibility.

Organizations that recognize the need for mobility are better placed to attract the right talent. Businesses are striving to become creative, flexible environments where people thrive.

Embracing the alternative workplace.

Work today is more about the output than the space. Organizations are embracing new ways of working to foster more efficient collaboration, knowledge-sharing, flexibility, speed, innovation and productivity. More than 90 percent of respondents in Planon's research agreed that new workplace concepts will improve employee productivity.

BIM adoption increases. Building information modeling holds great promise for facility management and real estate. Applying BIM and BIM methodologies to manage and operate buildings over their life cycle can deliver tangible value and enable efficiencies for facility managers. They are not merely producing a model

of a building. They provide a platform for real-time collaboration, logistics and quality management.

Cloud delivery models continue to transform the workplace. Cloud services have become firmly established primarily in business-to-consumer markets with millions using sophisticated cloud services. Cloud provisioning not only simplifies the management of applications and their infrastructure; it also enables significant IT-related cost savings. Cloud adoption in the workplace management space is still in its early stage. As momentum builds, we will see more projects using cloud services in years to come.

Access to smart assets and facilities will remake offices, hospitals and universities in ways never seen before, creating better user experiences and improved efficiencies at the same time.

Today's facility managers and real estate managers have to plan for ongoing changes. Using an IWMS can help in bringing all relevant data on systems and spaces together, creating a next step toward professional space management and workplace innovation.

LEGRAND ACQUIRES QMOTION ADVANCED SHADING SYSTEMS

Legrand North America, a silver-level Corporate Sustaining Partner of IFMA announced in December 2015 that it has acquired QMotion, an award-winning leader in advanced shading systems. QMotion will become part of Legrand's North American Building Control Systems (BCS) business.

QMotion's window shading systems will integrate easily with the intelligent lighting control and automation solutions offered by Legrand BCS. This creates a more comprehensive portfolio of advanced solutions that provide energy efficiency

and lighting control for residential and light commercial applications. Homes to high-performance buildings will have shading solutions run by quiet, low-power consumption motors that allow manual and automated control of artificial and natural light.

The addition of QMotion's advanced shading solutions will strengthen Legrand's impact on the energy efficiency, productivity, safety, security and aesthetics of the places its customers live and work.



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BIM VALUE: FREE DECISION-SUPPORT TOOL FOR MAXIMIZING BIM BENEFITS



Building information modeling is a game-changing phenomenon gaining momentum across the construction world. This is because there is growing evidence of the significant benefits that can be achieved through its implementation. However, BIM is becoming equally vital as a tool for FM to improve building insight for retrofits and daily operations.

This evidence is, however, dispersed across a sea of industry and academic publications. This can make it difficult for individual organizations to realize what the potential value of BIM is for their particular case. Even when organizations have decided to implement BIM, there is little information consolidated on how to realize (what tools and processes to use) and how to monitor potential benefits across different project life-cycle phases.

Recent industry-led research – carried out by the Sustainable Built Environment National Research Centre (SBEnc), headquartered at Curtin University in Perth, Western Australia and supported by industry, government, research and industry organizations from across the supply chain in Australia and internationally – has moved to close this gap. The research was performed through SBEnc's Project 2.34 Driving Whole-of-life Efficiencies Through BIM and Procurement (<http://bit.ly/1YPVzZp>).

The project developed a comprehensive strategic methodology. SBEnc drew from international practice and literature as well as three exemplar case studies across Australia to develop a BIM Value Realization Framework and step-by-step guide. Part of

this methodology and the extensive research that supports it has been translated into an online interactive tool: BIM Value (<http://bimvaluetool.natspec.org>).

This provides the industry with a free, step-by-step guide to identify potential benefits, metrics and tools for implementing BIM. It provides an approach for industry practitioners seeking to implement BIM across the life-cycle of built environment assets and wanting to understand how BIM can deliver value to their projects and businesses. This tool will help managers identify benefits that are most important to them, how to achieve them and how to measure progress toward those goals.

BIM Value was developed in partnership with NATSPEC, a not-for-profit organization aiming to improve the construction quality and productivity of the built environment through leadership of industry information. NATSPEC has published the National BIM Guide and other BIM documents and aids BIM implementation. This partnership is likely to be extended to develop new modules of the tool to increase its value. One such module could, for example, form the basis for a world-first BIM Benefits Benchmarking System. This initiative also aims to understand how meta-data created from using the tool can be used to benefit industry.

The first module of the tool was launched in November 2015 and is available for free through the NATSPEC BIM Portal. For more information, visit www.natspec.com.au and click on the BIM logo.

JLL COMPLETES ACQUISITION OF TECHNOLOGY PIONEER CORRIGO

In December 2015, gold-level IFMA Corporate Sustaining Partner JLL (NYSE: JLL) completed its acquisition of Corrigo Incorporated, a pioneer in cloud-based facility management solutions. Corrigo's technology is a highly regarded platform that automates virtually the entire maintenance management process. The acquisition is expected to bolster JLL's ability to transform the real estate industry with innovative advancements that complement and expand its service offerings.

Corrigo's innovative platform and Work Order Network allow facility management and field service management

organizations of all sizes to assume more control over maintenance and repair spending while gaining a better understanding of vendor and technician performance. The platform has a strong network of 1 million users managing more than 10 million work orders per year across more than 180,000 sites.

Through its comprehensive suite of software and mobile apps, the platform automates virtually the entire maintenance management process by:

- Tracking work orders
- Maintaining a vendor database
- Verifying vendor insurance and certification

- Managing bids
- Tracking completed work
- Leveraging GPS to track service professionals' location
- Aligning actual invoices to forecast spending
- Integrating with accounting software to pay invoices
- Request to pay capability

Corrigo strengthens JLL's existing technology solutions, including the RED data and insights platform, which offers a full spectrum of tools to uncover areas for improved productivity with customizable dashboards and detailed analytical models.

WHAT'S NEW ON IFMA'S KNOWLEDGE LIBRARY?



Located within IFMA's Online Community, the new Knowledge Library is attracting growing interest as evidenced by the nearly 35,000 views logged since the platform's introduction at IFMA's World Workplace 2015 Conference and Expo.

Ranking highest in views and with nearly 1,000 downloads, IFMA's newest white paper, "Redefining the Executive View of Facility Management (FM)" by Richard Kadzis, shows high demand for content concerning the evolving view of executive facility management as a valued component of business strategy.

Please visit the Knowledge Library at community.ifma.org/knowledge_library to begin browsing content. Your experience and suggestions are essential to improvement as IFMA continues to enhance the Knowledge Library – share your feedback at www.ifma.org/know-base/knowledge-library/feedback.

\$300 Billion Annually

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THE YEAR OF THE 360-DEGREE VIEW OF THE BUILDING

BY JOHN T. ANDERSON

What was your New Year's resolution? For most people, the resolutions they commit themselves to involve eating healthier, getting a new job, picking up a new hobby or just spending more time with family and friends. All too often these resolutions end up falling through because they're easy to put off. But, there's one resolution that savvy facilities professionals can't afford to put off: establishing a data-driven 360-degree view of the building they manage.

What does it mean to establish a 360-degree view of the building? It means understanding both the intended and actual utilization of your building and using that knowledge to design for the future. Through a combination of software, hardware and sensor technology, FMs can analyze intended room and desk bookings versus actual occupancy levels of huddle areas, drop-in spaces, meeting rooms or phone booths. From there, FMs have a 360-degree view of their building's pulse, not only monitoring where people are congregating in real time but also anticipating where they will go next.

The potential for smart technologies to transform the way facilities professionals understand and manage their buildings is a topic that's been much hyped over for the last few years. And, this year, FM pros will find that smart technologies are now so widely spread and accessible that the data-driven 360-degree view of their buildings is a goal within reach. Furthermore, embracing it will have a tangible impact on both the facilities team and occupants' everyday experience in the space, to say nothing of the bottom line.

The incoming flood of workspace data

Until relatively recently — not just for facilities, but for virtually all industries — data collection was a slow and steady process. The tools for gathering data were often tedious to use and in general had a significant time delay and lack of quality. By the time the analysis was complete, any insights that could be derived were already out of date.

Now, we have the opposite problem. The rise of connected devices and their integration into workplaces have already completely redefined the data landscape. Consider Gartner's prediction that, by the end of 2016, the Internet of Things will span more than 6.4 billion devices worldwide.¹ That number is expected to skyrocket to more than 20 billion connected devices across the globe in the following four years. With so many smart devices flooding the workspace, companies now need to be able to distinguish which data collection mechanisms are the most efficient at gathering only the data that provides useful insights.

FM professionals have more data than ever, accessed faster than ever, to draw on for extrapolating new conclusions and deploying new solutions. FMs can use tools that aggregate data from HR systems, badge security

BY INTEGRATING SMART SENSOR TECHNOLOGY INTO COMMON OFFICE TOOLS, FM PROFESSIONALS CAN SEAMLESSLY GAUGE HOW EMPLOYEES ARE UTILIZING AVAILABLE SPACES.

systems and other kinds of smart sensors to fully understand the pulse of their office.

This information can, in turn, empower facilities professionals with a 360-degree view of the building.

But while the power of data may be there, this raises the question: how can facilities professionals unlock it?

Drawing on big data for a smarter building

The 360-degree view of the building enables facility managers and real estate executives alike to constantly optimize how space in their office building is used, based on real-time or near-real-time data that tracks workspace efficiency. Rather than maintaining disparate snapshots of part of a building's life, the 360-degree view makes a full profile accessible in one place.

By integrating smart sensor technology into common, day-to-day office tools, FM professionals can seamlessly gauge how employees are utilizing available spaces — whether meeting rooms are going unused or constantly double booked; whether sitting desks continue to reign supreme or standing desks have rendered them obsolete; and whether common meeting spaces are attracting clusters of employees to work together and spark productivity or if they spend most of their time unoccupied. Best of all, this can all be done completely under the radar, without disrupting the employees in question in the process.

All of this insight is incredibly valuable to FM professionals, who can use that data to adjust their building's office plans accordingly. Real-time, 360-degree views of any given building allow facility managers to make workspaces not only more accommodating for current occupants, but attract new ones as well.

If there are spaces in a building that are being underutilized, you might consider renting them out to other companies, similar to how an airline might sell seats — with real implication for cost-saving. Now, thanks to smart building technology, all of the data analysis can be automated and done in real time, allowing FM professionals to respond faster than ever when it comes to designing a more intuitive and efficient facility.

Going green with smart buildings

Establishing a smart, 360-degree view of the building

goes beyond just maximizing workspace use and efficiency. Smart sensor technologies also facilitate a significant push in building sustainability, empowering businesses to reduce their carbon footprint while benefiting from cost savings.

Between the U.S. and China's pact to cap their countries' carbon emissions in 2014 and the recent talks in Paris about curbing climate change, never before have we seen such a worldwide and concerted push for greener and more sustainable living. In order to achieve these larger goals, facility managers can do their part to achieve more sustainable offices. Sensor technology makes this easier than ever to track and accomplish.

Facility managers can use their integrated dashboards to not only gauge space usage, but determine usage of utilities like light, water and heat as well.

Odds are you've already seen iterations of this kind of technology around the office already: motion sensors that turn a meeting room's lights on and off depending on whether or not someone is in the room; smart thermostats that automatically raise or lower the temperature of the office based on the weather and eventually learn to determine a building's most comfortable base temperature; and motion-activated faucets that only run water if there are hands underneath, ensuring you never run the risk of leaving the faucet on and wasting water again.

Smart building dashboards streamline all of these processes, coordinating utilities monitoring into a single easy interface and giving FM professionals a real-time, 360-degree view of how efficiently a building is consuming these resources. With that kind of data on hand, facility managers can then implement new measures to better regulate how the building taps into these resources, ultimately resulting in a more cost- and energy-efficient office building.

Not only does this serve a larger mission of fighting worldwide climate change, it also saves on the building's bottom line too, ensuring a decrease in utility spending.

Looking ahead to a smart building future

If anyone is still skeptical about the imminent rise of the 360-degree view of the building, just look around: all of the conditions are already in place. Many FM professionals already use a variety of tools to manage and understand different aspects of their facilities.

But a centralized workspace management toolkit

unifies these features into a single, consolidated dashboard that makes tracking, collecting and processing these data streams more intuitive than ever.

Through graphical representations of space utilization and heat maps, FM professionals can more quickly identify where employees' preferences lie and where improvements can be made. This can range from streamlining meeting room scheduling to avoid double bookings (or eliminating spaces that are never booked), designating common workspaces for greater productivity, sub-leasing unused spaces to new tenants that could better utilize them and remapping office layouts to better accommodate current tenants.

Best of all, these improvements can be made without conspicuously disrupting employees' day-to-day routines and yield serious cost savings in the process.

Adapting the 360-degree view for you

The New Year's resolution that should absolutely be on FMs' minds is designing a 360-degree view of the building. Understand how the current workplace plan is functioning by planning, defining, enabling and measuring the actual utilization of the current space. Then, maintain a constant feedback loop to determine the intended future use of the space.

This resolution yields benefits all around: for the building managers, for facility occupants and, on the efficiency front, for the greater fight to create a more sustainable footprint. A better managed office, more productive employees, optimized workspaces and energy-efficient utilities usage — a 360-degree view isn't just how office buildings should look in 2016, it's the baseline for how all offices should run. **FMJ**

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John T. Anderson serves as the chief revenue officer of Condeco Software where he is responsible for all facets of revenue generation and field sales operations for the Americas.

As a visionary executive with 30 years of success building teams to accelerate growth and meet aggressive revenue and profit targets, Anderson has played a pivotal role in the transformation of software technology organizations into market leaders in the workplace management space. At Condeco, Anderson applies his business development and leadership skills toward helping clients realize the greatest possible value from Condeco solutions. Learn more at www.condecsoftware.com.



IFMA Foundation Celebrates Successes in Making FM a Career of Choice at World Workplace 2015



Pictured: Scholarship recipients at the foundation celebration at World Workplace 2015.



Pictured: John Carrillo, CFM, IFMA Fellow; 2015-2016 IFMA Foundation Chair Mary Jane Olhasso; John Ritter; Keri Roid; James Camille; Carlos Rivera; Steve Lockwood, CFM, IFMA Fellow; Tony Keane, CAE.

Global Workforce Initiative

With its Global Workforce Initiative (GWI), the IFMA Foundation acts as a connector between business, government, high schools, colleges, universities, economic development and IFMA chapters and councils. By making facility management a career of choice for high school and community college students, the foundation aims to grow the future FM workforce and fill the sizeable gap in FM jobs coming available as the baby boomer generation retires.

GWI Facts and Performance Metrics

- 50% – Percentage of FM workforce that will be retiring over the next five to 10 years
- 8% – Percentage of IFMA members who are 35 or younger
- 1,000 – Number of high school students introduced to the FM profession in first year of GWI pilot program
- 50 – Number of high schools at which FMs have given presentations introducing FM as a career of choice
- 30+ – Number of schools with Accredited Degree Programs in facility management
- 100% – Job placement percentage for students graduating from an ADP
- US\$55,000 – Average starting salary for FMs graduating from IFMA Foundation Accredited Degree Programs (ADPs)
- US\$140,000+ – Amount of FM scholarships given out by the IFMA Foundation in 2015
- 43 – Number of scholarships awarded by the IFMA Foundation in 2015*

Foundation trustee award winners

Six foundation trustee awards were presented at World Workplace 2015 to those who believed strongly enough in the Global Workforce Initiative to make it happen.

Local Initiative Award – Florida A&M University graduate Royal King and student Soraya Oriol Royal invited parents, teachers, students, business owners and government representatives to learn about FM as a career of choice, then helped facilitate these community conversations. Steve Lockwood accepted on their behalf.

Corporate Support Award – A & A Maintenance. With overall contributions exceeding US\$65,000, A & A has been a key contributor and a premier sponsor of the foundation celebration events and annual golf tournament for the past five years. Carlos Rivera accepted the award.

Large Chapter Award – New York City Chapter of IFMA. In addition to a US\$40,000 donation over the last two years, this chapter is reaching out to local high schools and working with the city's school district to develop an educational program focused on making FM a career of choice. James Camille accepted the award.

Small Chapter Award – Sacramento Valley Chapter of IFMA. Hosting a number of fundraising events, this chapter contributed US\$9,000 and established the Kit Tuveson Memorial Fund. Keri Roid accepted the award.

Council Award – Utilities Council of IFMA. For 25 years, the council has funded student scholarships, raising money through the Doug Underwood Memorial Golf Tournament. In recognition of their 25th anniversary, they awarded US\$25,000 in scholarships in 2015. John Ritter accepted the award.

Volunteer Commitment Award – Mary Jane Olhasso. Olhasso is a global innovator in workforce development and has been instrumental in helping the foundation understand how to design and develop a pilot for the Global Workforce Initiative.



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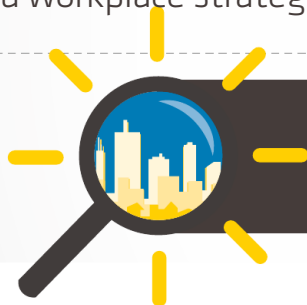
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AN INTEGRATED APPROACH TO
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BY CHRIS SWARTOUT

There is a paradigm shift in how companies view the workplaces within their facility portfolios. The workplace, now more than ever, is considered a strategic component of a company's competitive advantage in attracting and retaining top human capital talent globally, as well as re-attracting former employees. Companies aim to create a workplace and culture to support finding (and keeping) the right talent, which impacts the bottom line.

According to Gallup, the combined effect of creating the right mix of workplace, culture, selection of talent and focus on employee strengths can boost revenue per employee by 59 percent.¹ In a trillion-dollar-a-year design and construction industry, and since the workplace is one of a company's single largest assets which touches multiple key stakeholders throughout the organization, the question becomes: How can all the competing interests involved in the process of creating the workplace be brought together to arrive at the most optimal solution?

A collaborative integrated services approach led by the design and delivery teams is more successful than the conventional method of silos, or the "waterfall approach," to arrive at a desired outcome of a complex problem.

The field of design is facing its own paradigm shift as well — parametric thinking has recently gained the attention of many educators, designers and researchers. This is the influence of engaging in a thinking process that links, relates and outputs calculated actions to generate solutions to problems rather than simply seeking them. In his book *Massive Change*, Bruce Mau speaks of making the invisible visible and how our insatiable embrace of the image knows no bounds.²

Parametric thinking in the workplace design context is a pedagogic approach that combines design logic and generative solution delivery through reliance on a multidisciplinary team's knowledge expertise at the outset of the project. This leads to increased productivity, achieving the desired outcome of a workplace that balances

all the interests of design, schedule, cost, aesthetics and functionality, while not pre-determining a solution.

This approach enhances design output and reduces abortive work. The objective is for budgets to be used on creating a great workplace while not wasting money on errors. Data shows that using this approach decreases the industry average of 8-10 percent of a project budget being used on errors, or change orders, to 0-2.5 percent, creating a more successful outcome for all. It's always better to get to the end of a project and not embark on the dreaded, misnamed "value engineering" process, which in actuality, should be renamed the "value destroying" process.

Every workplace project requires its own tailored approach. At first glance, there may seem little to differentiate between a financial company's workplace from any other corporate office. But by peeling back the thin veneer of similarities, the entire magnitude of design, engineering, planning and technology in the financial space is revealed to be quite different than any other organizational space.

Case study: CLS Bank

Even by the typically rigorous demands of the financial industry, CLS Bank International is deemed a systemically important financial market utility as designated by the Financial Stability Oversight Council. Founded in 2002 by an international consortium of banking institutions, CLS provides 61 member institutions with electronic foreign exchange settlement services in 17 currencies. In fact, on a typical day the firm clears approximately 90 percent of the world's foreign



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exchange transactions, with a total value of between US\$4-6 trillion.

When the bank was looking to move to a new U.S. headquarters in New York and expand to a business continuity site in New Jersey, it embarked on a complex set of objectives. As a fundamental mechanism in the Foreign Exchange Market, CLS needed a space that could continuously function 365 days a year, 7 days a week, 24 hours a day.

Business continuity sites like this require the ability to offer additional workspace and resources to all surrounding area employees during an emergency situation. The project team for the CLS site worked to integrate design, engineering, planning, IT and construction into a holistic “integrated project services” process that would streamline development from conception through completion.

Design follows function

The overall design concept and objective was about “bringing ideas to work.” The workplace and its functionality needed to be designed to make new ideas, collaboration and productivity come together naturally.

What increasingly characterizes the offices of today is how they are designed to make flashes of inspiration almost routine. These workplaces are “architecture of ideas” — open, flowing and non-hierarchical, with technologies for collaboration and spaces for socializing seamlessly woven in. In these work settings, rather than being chained to a desk, people can circulate, casually encounter colleagues, exchange questions and ideas, build bonds with other team members and ultimately work more effectively and productively.

As an outcome of the CLS project, most staff members work in daylight-infused open-plan areas with versatile bench-style workstations, with only vestigial partitions separating inward-facing rows for some acoustical sound control. Enclosed spaces, such as executive offices, are located intermittently along the edges of the floorplan; their transparent fronts allowing natural light to flow through to the interior of the space.

Formal meeting rooms are clustered around the reception zone for easy visitor and guest access, while additional areas for ad-hoc conversations were designed into the office’s café, which overlooks the regional forest behind the building, to allow for a connection between the outdoor and interior space.

Concurrently, the design teams collaborated closely with CLS team’s key stakeholders in both New York and London to evolve the design language from past to present of “how

they work.” The starting point was a conversation with CLS about its need to move away from the previous cubicle-style workspaces to a more open, flowing environment that would encourage collaboration and improve flexibility for a more effective workplace for employees, visiting guests and regulators.

Creating furniture solutions

An increasing trend of “how we work now” is not only supported by the new workplace architecture, but also supported and expressed by the sustainable, comfortable, ergonomic and flexible furniture solutions that inhabit the space, as well as how they support different types and settings of work taking place.

The design and consultant teams collaborated seamlessly from concept to initial furniture selection. They assisted CLS with furniture layout plans and renderings, through to the final installation. The team didn’t simply review aesthetics or price, but also took operational and functional needs into account to ensure personalized office solutions.

For example, in CLS’s New Jersey office, furniture was sourced to create collaborative, individual and conference spaces that enhance the company’s working environment. Various tables are outfitted with outlets and USB ports for connectivity and social interaction in the space, including some installed in the corridor at a standing height to allow for impromptu meetings.

Selected stools and seating options are strategically placed to add pops of color. Task chairs and tables with power boxes are available in the conference rooms to provide optimal comfort and flexible connectivity throughout meetings.

Technology integrations

CLS required services from pre-lease, through design and engineering, to the construction phase of its new business continuity site. The team was tasked with designing a visually appealing space that also accommodated various redundant infrastructure including power, cooling, backup generation, dual points of entry for fiber and a network operations center.

The team utilized three-dimensional modeling with all key stakeholders, along with laser scanning, analysis of existing infrastructure and mobile virtual thermal rapid energy audit technology to facilitate the success of the project.

An accurate laser scan of the facility was performed prior to any construction and after demolition. This provided a true understanding of where existing walls, columns, core and other services were located and confirmed as-built drawings. The team combined the schematic design models and the results of the laser scan to perform a slab deflection analysis



to understand floor leveling issues, as well as low points of existing infrastructure. Doing this early on in the design process allowed for accelerated schedules and lower costs for end users.

Three-dimensional modeling technology was also utilized to encourage collaborative communication between the design, construction and subcontractor teams. It allowed for real-time feedback early in the design and budgeting process to avoid abortive work later in the process.

Mobile virtual thermal rapid energy audit technology allowed the design and construction teams to accurately diagnose and retroactively upgrade portions of an '80s-era building envelope. This helped avoid heat and cold loss, as well as increase the operational efficiency of the building systems for the facility managers in line with best practices for sustainability.

To create the state-of-the-art network operations center, the team used an integrated collaboration model of decision making supported by three-dimensional and virtual reality communication tools. The resulting space supports traditional workflow and can also adapt to next-generation applications. The virtual reality immersive experience allowed the design team and end users to review design intent and options at different scales and angles, leading to a better understanding of the final solution required.

Translating the physical into the digital and back again is a complex process. The team was careful to select appropriate software tools at the right time to achieve answers to questions that arose. Design is a process that requires thinking, developing and iterating; it is made up of people, rather than a product that is a result of software development.

Collaborative integration

Four dominant trends for work and the workplace with major implications are:

- The continued distribution of workplaces. Centralized offices will evolve to provide a greater variety of work settings to support collaboration and diversity of needs.
- The challenge of keeping workers engaged and connected to encourage socialization and culture. Designers, facility professionals and human resources need to combine conscious workplace strategies with social technologies and work policies.



- One of the most monumental tasks an organization can take on is the difficulty and resistance of changing the workplace, which involves not just the physical environment or technology — it includes changing the people. Giving employees a voice in the planning process is critical for success in any transformational change exercise.
- Creating functional workplace practices to allow for casual communication with distributed work teams combined with emergence of other alternative workplaces.

Work styles, settings and places do not stay the same and need to be flexible and evolve over time. Having the ability to “future-proof” design so flexibility is built in from day one can only be achieved by using a collaborative integrated services approach. This must be combined with a parametric thinking methodology at the outset, led by agile, trusted design and delivery teams.

This is fast becoming the best practice worldwide to uncover the right solution and create an innovative workplace, as well as save time and arrive on budget. **FMJ**

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He is a recognized thought leader for use of advanced technologies and integration methodologies for the AEC industry and has been featured in multiple publications in both the United States and Asia.

Swartout was a 2014 IFMA New York City Chapter Award of Excellence nominee for workplace innovation. He was also a former member of Autodesk's Advisory Consumer Council on Product Development for new and existing software solutions and currently serves as board advisor for two emerging technology companies in the computer visioning and machine learning field.

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Sustainability
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OPTIMIZING THE BUILDING ENVELOPE

BY HARRY YEATMAN

Constructing a new facility based simply on how many square feet the operation needs? Those days are long gone. Today, successful facility development and management involves deftly understanding the importance of the building envelope, energy efficiency and local energy codes. It's a complex equation many businesses view as important as well as confusing.

Energy management is now no longer a "nice-to-have" but rather a "must-have" to be competitive in the marketplace. Consider that 91 percent of companies invest in energy management programs and nine out of 10 businesses indicate they have energy management goals in place.¹ Given that more than a third of those companies cite competitive advantage as a primary driver for their energy management programs, it's surprising how many clients try to save money on the up-front costs of a building.¹

The case against up-front cost savings

Often, construction trades win business by providing what seems to be the lowest cost during the bid stage. In many instances, decision makers have finite budgets that drive the selection of these lowest-cost proposals.

What decision makers might not realize, however, is that savings up front can easily come back to bite the budget down the road. In fact, a facility's construction budget accounts for only 10 percent of its total lifetime costs. Operation accounts for the other 90 percent.² In these cases, the up-front savings on materials end up burdening owners throughout the life of the building. Lower-quality products create energy inefficiencies followed by maintenance and complete replacement sooner than higher-quality products.

It's easy to see that saving money on just 10 percent of costs is a misguided approach.

Optimizing the building envelope

Once companies understand the importance of building performance over the life of ownership, the next step is understanding what building decisions make the biggest impact on energy performance. That discussion starts with the building envelope.

So what is the building envelope?

The building envelope includes all of the exterior components of a building, such as walls, roofing, foundations, windows and doors. It includes all components that make up the shell or skin of the building. Any living space equipped with heat or air conditioning would be included and impact the rest of the building, specifically regarding climate, ventilation and energy consumption within the structure.

The building envelope covers four basic functions. These include: adding structural support, controlling moisture and humidity, regulating temperature and controlling air pressure changes. By serving these different functions, the envelope



42 percent of the energy consumed by nonresidential buildings in the U.S. is lost through the building envelope.

also affects ventilation and energy use within the building. Of note, space heating, cooling and ventilation account for the largest portion of end-use energy consumption in commercial buildings.³

Specifically, 42 percent of the energy consumed by nonresidential buildings in the United States is lost through the building envelope, according to the U.S. Department of Energy. This demonstrates the need to focus on the building envelope when developing an energy management strategy. The challenge is to build an envelope that is airtight and well-insulated so the energy that comes into the building stays within the envelope, and any inclement weather outside has little impact on the comfort inside.

The building envelope significantly impacts a company's energy use and maintenance requirements. It should be a top concern when looking to reduce total cost of ownership and future operating expenditures. Making the right material decisions for the building envelope is vital to energy management strategy.

The International Energy Agency's Technology Roadmap for Energy-efficient

Building Envelopes states that, "The quality and energy efficiency of building envelopes are the most important factors that affect the energy consumed by heating and cooling equipment."⁴

Addressing energy management in the planning stage

The building envelope is a great place to start an energy management strategy. What other factors affect the opportunity for envelope optimization? Building owners and facility managers should consider many factors when making sustainable decisions:

- **Product lifetimes:** Building material product lifetimes are an important aspect to building envelope decisions. Many product material life expectancies are determined through research and testing based on regular recommended maintenance and conditions of normal wear and tear, and not extreme weather conditions, neglect, overuse or abuse. They should be considered guidelines, not guarantees or warranties. That said, it is important to consider the level

of product testing that various materials undergo, as well as the anticipated weather conditions in the building location.

- **Maintenance requirements:** Infrastructure sustainability has a major impact on future maintenance budget requirements. In fact, a Metal Construction Association study finds that by simply opting for a Galvalume-coated metal standing-seam roof system, businesses can save more than 90 percent on maintenance because this choice offers an average 60-year lifespan. Other options with shorter lifespans will require multiple reroofs in that same 60-year time period.
- **Financial incentives for choosing energy-efficient building designs:** Financial incentives can help energy-efficiency projects overcome cost barriers. These include grants and rebates, tax incentives, government risk mitigation guarantees, revolving loan funds, tax-lien financing and policies that enable energy performance contracting. Check with the local municipality to verify whether your building decisions can earn rebates or incentives.
- **Local energy code requirements:** Buildings account for approximately 41 percent of all energy consumption and 72 percent of electricity use in the United States, according to the U.S. Department of Energy. Energy codes and standards set minimum efficiency requirements for new and renovated buildings, ensuring reductions in energy use and emissions over the life of a building. Efficient building design presents an opportunity for building owners to reduce environmental impact and achieve energy expense savings.
- **Adaptable design:** Design your building for change and growth.

In some cases, the intended purpose of a facility changes over time. When materials, context, occupants and technology change, buildings can be designed in a way that flexes with them. Create an architecture that stands the test of time, considering how it will weather, change and grow.

- **Retrofit:** For facility managers looking to improve the performance of existing buildings, a retrofit is a great option. Federal, state and local standards have led to an upsurge in energy efficiency retrofits for existing structures. Before investing in major capital improvements to heating and cooling systems, however, consider making simple, less-costly upgrades to the building enclosure. A sound exterior envelope acts as a thermal shield, reducing demand on HVAC equipment, improving indoor comfort and extending the lifespan of building components.

Energy modeling

To ensure your building envelope decisions prove beneficial, incorporate energy modeling into your process. An estimated 91 percent of companies invest in energy management programs, with an average investment of 12 percent of the total capital budget, regardless of company size.¹

Energy modeling is essential for defining which parts of a building envelope are responsible for maximum energy consumption. It is important to involve this process at an early stage because the energy performance of a building is only as strong as its weakest link. Energy analysis and simulations help you understand the building performance and make informed decisions before the building design progresses to the construction phase.

For example, if the building envelope allows heat loss, address the problem through early design optimization.

Resolving the issue later in the build process, or once the building is constructed, becomes more expensive and time-intensive.

Long-term focus

Today, 61 percent of companies reported a high degree of effort and resources allocated to energy management programs, and more than one-third of those companies cite competitive advantage as a primary driver for their energy management programs.¹ Focusing on the total cost of operating your building is a smart way to approach your construction budget. Smart building envelope decisions will ensure the initial expenditure will pay off in the long run. **FMJ**

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Since that time, he has held positions of area manager in the southwest region, national insulation manager and southeast regional sales manager in Laurinburg, North Carolina, USA. He obtained his Bachelor of Science in building science from Auburn University in 1983.



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"I recommend the FMP program to everyone who considers themselves a facility professional. The FMP credential helps professionals better understand and apply the core elements of the various FM disciplines, challenges their decision-making skills and sets the stage for the CFM credential. I feel stronger in my knowledge base knowing I passed the rigorous FMP online self-study program."

- Brian Rush, CFM, FMP

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ISO 41000 | Integrated
Facilities Management
System

STANDARDIZATION:

*One of today's
most vital global
FM trends*

BY JAMES P. WHITTAKER

DEVELOPMENT OF ISO 41000 FM MANAGEMENT SYSTEMS STANDARD

If communities, like humans, had DNA, standards would form the genes and chromosomes of society. Standards are woven into the fabric of all we do and have been around from the beginnings of recorded history. As John Quincy Adams remarked to the United States Congress in 1821, “standards are among the necessities of life to every individual of human society.”

Standards are also the building blocks from which everything rises in the built environment. They help shape our buildings and infrastructure, ensure our safety, guide our progress and improve the quality of our daily lives. Standards take many forms. In fact, the term “standard” has many distinct meanings.

As a noun, the term “standard” can refer to everything from a baseline from which we are judged to moral principles, levels of excellence

or even a flag. Standards can represent values, units, models, measures or an upright pole used as a support. Standards can also refer to plants, petals of a flower or even an enduring piece of music.

In terms of adjectives, we have moral standards; high, low, gold and double standards; standards of care, living, learning, measure; and standards of deviation and error. There are technical standards; guidance standards; requirements standards; core standards; monetary, modern and open standards and many more.

For our purposes, a standard is a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose.¹

Standards truly are the DNA of society. But why are they so important to the facility management profession?

Why are integrated FM standards important?

FM experts from around the world are currently investing a lot of time to develop ISO integrated FM standards for a number of reasons, from idealistic to operational.

Ideally, the goal is to help advance the FM profession globally. Many countries are struggling to gain recognition of FM as an official profession or professional discipline by their national governments. The U.S. Department of Labor Bureau of Labor Statistics still does not have a North American Industry Classification System Standard Industrial Code for FM. Thus, there is no official way of collecting census data and statistics for our profession, or even promoting it to young adults seeking rewarding careers. Recently, efforts in the UK were successful in achieving official recognition of FM as a professional discipline, in part due to having European standards for FM.²

Operationally, integrated FM standards will provide real guidance and tools to help FMs streamline processes and enhance performance of organizations entrusted with managing the building portfolio. Standards enable the development and implementation of processes aligned with strategies that eventually become ingrained and create efficiencies.

Facility management has a direct impact on the efficiency and productivity of organizations and associated individuals. FM also positively impacts the safety, security, health and well-being of much of the world's population. The FM industry and related services impact all aspects of human life, including productivity, work, and recreational, social and non-work related living.

The challenge is that FM does not mean the same thing globally, nationally or even within different organizations. The requirements and capabilities of FM organizations have evolved differently in different parts of the world, as have the quality of service they provide. The expectations of clients have equally evolved from local to national, and are now becoming more consistent globally. Global FM service providers and international corporations are increasingly seeking more consistent delivery of services through the application and use of enhanced and innovative FM techniques.

The development of the market for FM services, however, is hampered by the absence of common global standards. Owners are seeking benchmarks against which FM services and systems can be assessed and measured. Thus, the need for standards is currently in demand worldwide.

ISO technical and management systems standards

The International Organization for Standardization (ISO) is an independent, non-governmental organization and developer of international voluntary consensus standards. In general, voluntary consensus standards may be classified as technical (or guidance) standards or requirements (management systems) standards.

ISO technical standards are established norms that present specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose. A management system creates a framework of policies,³ processes and procedures that can be used to ensure that an organization⁴ can fulfill all tasks required to achieve its objectives. Systems standards are valuable to organizations that wish to seek certification by an accredited third party, or make a self-determination and self-declaration of alignment and conformity.

While there are more than 19,500 ISO standards, there are fewer than two dozen management systems standards published by ISO.

ISO management systems standards related to FM

Management systems have a positive impact on an organization's performance and bottom line. When implemented, applied and certified, management systems improve profitability, quality, service, client loyalty, brand reputation and more. Some of the ISO management systems standards most relevant to FM include:

- **ISO 9001:2015** Quality management systems – Requirements
- **ISO 14001:2015** Environmental management systems – Requirements with guidance for use
- **ISO 22301:2012** Societal security – Business continuity management systems – Requirements
- **ISO 26000:2010** Guidance on social responsibility

- **ISO 50001:2011** Energy management systems
– Requirements with guidance for use
- **ISO 55001:2014** Asset management –
Management systems – Requirements

It is clear how each of these standards relates to the role and function of FM. In particular, ISO 55001 asset management has recently gained the interest of and traction with leading global FM service providers.

Historically, asset management has been defined as a systematic process of maintaining, upgrading and operating physical assets cost effectively by combining engineering principles with sound business practices and economic theory, and provides tools to achieve a more organized, logical approach to decision making.⁵

ISO 55001 defines asset management as the “coordinated activity of an organization to realize value from assets.” The new asset management standard establishes a framework for FM organizations to translate strategic objectives into asset-related decisions, plans and activities using a risk-based approach.

What are the benefits of ISO standards?

There are critics who believe that standards do little more than add complexity and cost to operations and stifle innovation. While there is potential danger in increasing costs, the long-term benefits to FM organizations are substantial.

ISO standards ensure that products and services are safe, reliable and of good quality. For businesses, they are strategic tools that reduce costs by minimizing waste and errors and increasing productivity. They help companies to access new markets, level the playing field for developing countries and facilitate free and fair global trade.

One of the most broadly recognized and adopted ISO standards is ISO 9001 quality management systems. ISO 9001 specifies requirements for a quality management system when an organization needs to demonstrate its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements. It also aims to improve customer satisfaction of products and services.

The benefits of ISO 9001 have been well documented and have proven benefits across various aspects of organizations:⁶

- **Management** – certified companies outperformed the market by 100 percent or more
- **Finance** – 55 percent achieved cost savings
- **Operations** – 75 percent boosted their performance
- **Services** – 75 percent improved their customer service and loyalty
- **Sales and marketing** – 71 percent acquired new customers and retained existing clients

ISO 41000 FM Management Systems standard

The FM profession has a direct impact on the productivity of every individual who works in and around buildings and infrastructure. FM also plays a role in the security and quality of life of people around the world. In order to do so effectively, the establishment of international standards will enable the discipline to evolve in a coherent and coordinated manner. The objective of ISO TC 267 is to make a valid contribution to this process at a strategic level that ISO member countries will adopt.

The purpose of the FM management systems standard is to provide the specific requirements for individual organizations to establish and manage an integrated standard for the practice of facility management. The goal is “for an organization to be able to demonstrate that it has a robust process through which to design, manage and improve its integrated facility management system.” The bottom line is to enhance performance.

The value of an integrated systems standard for FM includes:⁷

- Improving workforce productivity, safety, health and well-being
- Improving communication of requirements and methodologies among and between public- and private-sector organizations
- Improving competition and thus improving cost benefits to demand organizations
- Improving service consistency and hence reducing risk for buyers
- Opening markets to new FM service providers
- Providing a common platform for small businesses and those from developing economies

Scope of ISO 41000

When published, ISO 41000 will be the first international management systems standard for FM, and will also support voluntary certification when justified by an organization's business plan.

The scope of ISO 41000 is applicable to organizations of all types and sizes that wish to design, maintain and improve an FM management systems standard appropriate to their needs, ensuring conformity with a stated FM policy and that interested parties' requirements are met. ISO 41000 will specify requirements to plan, establish, implement, operate, monitor, review, maintain and provide a documented integrated FM system within the context of managing an organization's operational activities and risks.

The requirements specified in ISO 41000 will be non-sector-specific and are intended to be applicable to all organizations, regardless of type, size, nature or geographical location. The standard can be applied to both insourced and outsourced service provision of facility management.

The FM management systems standard follows a standard ISO format: 10 clauses with the latter six structured in a plan-do-check-act model. The FM systems approach starts with an understanding of the context of the organization (i.e., alignment with mission, vision and strategic objectives) and leadership commitment. It continues with the development of sound FM policies and strategic FM plans and procedures; securing the necessary resources for implementation; operational aspects; performance measurement; and continuous improvement. One of the most valuable elements of the FM management systems standard will be guidance on integration of the various elements of the broad scope of FM.

What's next?

The ISO FM standards development falls under the auspices of a technical committee (ISO TC/267), which is chaired by Stan Mitchell of the British Standards Institute. The TC includes more than 50 FM experts hailing from more than 30 countries across almost every continent.

TC/267 is currently nearing completion of two technical guidance standards: ISO 18480-1 FM – Part 1: Terms and definitions and ISO 18480-2 FM – Part 2: Guidance on strategic sourcing and the development of agreements. The intent is to have final approval and preparation of the two guidance standards for publication in early 2016.

The first ISO FM guidance standards are based on the first two of seven CEN standards (EN1521-1 through EN15221-7). The ISO 41000 FM Management Systems standard is just now beginning development by a newly formed work group (WG3). Scheduled publication of ISO 41000 is targeted for February 2018.

If you are interested in getting involved in the development of ISO FM standards, or for more information, contact Laverne Deckert at ifmstandards@ifma.org. Help us form the DNA of the FM profession of the future. **FMJ**

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Currently, he is past chair of IFMA, chair of the ANSI US/TAG for ISO TC/267 FM Standards (ISO 18480-1 and 2), convener of WG3 for ISO 41000 FM Management Systems Standards and serves on the board of directors for the National Research Council of the National Academies of Sciences Board on Infrastructure and the Constructed Environment.

Whittaker sits on the industry advisory board of Brigham Young University's Facility and Property Management degree program and is an instructor in the facility management program at George Mason University. He has also served on the APPA Educational Facilities Professionals board of directors and on numerous IFMA committees.

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June 22-24, 2016

Atlanta, Georgia



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BY ISILAY CIVAN AND LEIGH STRINGER

The International Facility Management Association (IFMA)'s Research Report #37, *Distributed Work Revisited*, reveals how organizations are using new workplace strategies to improve the productivity and success of their people.

This recent follow-up to its 2009 *Distributed Work* report builds on a growing amount of IFMA workplace research, this time focused on the use of flexible on- and off-site strategies to accommodate a continually changing workforce.

The report, which was co-sponsored by HOK and Allsteel, also explores the operations and change management activities required to support these strategies.

The key findings of this research are based on survey results from respondents of 538 IFMA member organizations, primarily across North America, as well as interviews with real estate and facilities leaders with eight leading organizations currently implementing distributed work strategies.

FMJ EXTRA



CLICK TO VIEW

Distributed Work
Revisited: Findings
Revealed

Impact of distributed work

DISTRIBUTED WORK IS STILL NEW AND IS BEING ADOPTED BY ORGANIZATIONS ACROSS SECTORS AND OF VARYING SIZES.

The size of the organizations that reported in the survey that they are adopting distributed work strategies ranged widely, from those that occupy less than 50,000 square feet to more than one million square feet.

Of the survey participants, only 18 percent have had a distributed work program in place for more than 10 years and only 37 percent for over five years.

Most respondents are still in early stages of rolling out new ways of working.

UNASSIGNED SPACE IS USED BY A MAJORITY OF ORGANIZATIONS, BUT ONLY FOR A PORTION OF THEIR POPULATIONS.

The survey found that most companies adopting unassigned space strategies are using that space to house either non-full-time employees or only a small portion of full-time staff. Of respondents who allocate unassigned space, 32 percent still put all of their full-time staff in dedicated spaces and use unassigned seats as a flexibility strategy for accommodating business partners, contractors, interns and visitors.

When companies do accommodate their staff in unassigned workspaces, 75 percent adopt this type of accommodation for less than 30 percent of their employees. Only 17 percent of respondents accommodate more than half of their staff in unassigned space.

DISTRIBUTED WORK STRATEGIES ARE SUPPORTING A “GROWTH WITHOUT GROWTH” MODEL.

Comparing 2009 data with the 2015 survey results, a much higher percentage of organizations have increased the number of staff sitting in unassigned spaces. Yet respondents are more often seeing decreases than increases in the amount of space required to support unassigned staff.

In distributed work environments, particularly those with a high number of unassigned workers, the amount of space needed per person typically decreases. As a result, sharing ratios increase, which means more people are using the same amount of real estate.

This strategy is often referred to as “growth without growth.”

NEW TECHNOLOGIES TO SUPPORT DISTRIBUTED WORK ARE FOCUSED ON INFRASTRUCTURE AND BUILDING OPERATIONS MORE THAN INDIVIDUAL PROVISIONING.

The survey showed that the most commonly provided tools to support distributed work include teleconferencing, document management systems, and Web and video conferencing, closely followed by document sharing, universal messaging (instant messaging) and reservation software.

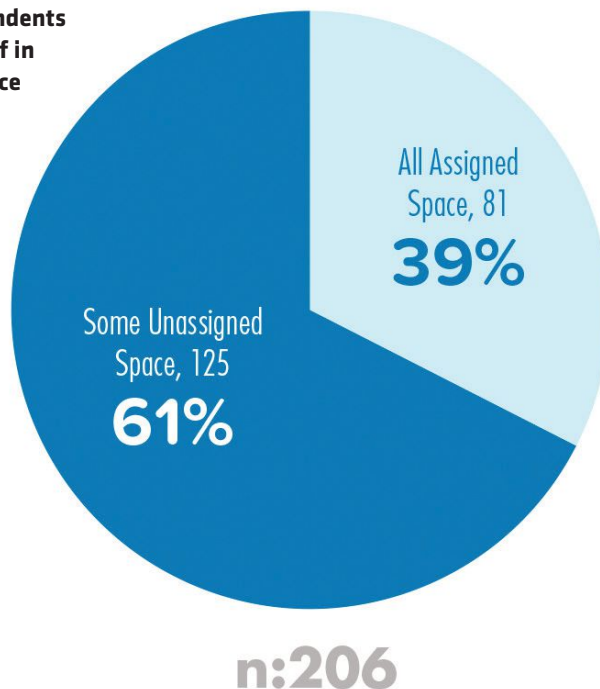
The significant advances in technology that are enabling on-site distributed work include more secure cloud storage and sophisticated space measurement tools such as Rifiniti or wearables. Third-party reservation tools like LiquidSpace and Convene are making it easier to schedule off-site distributed work.

OFF-SITE DISTRIBUTED WORK STRATEGIES ARE TYPICALLY HOUSING A SMALL PERCENTAGE OF THE EMPLOYEE POPULATION.

When survey respondents were asked about the percentage of their employees that occupy satellite offices or co-working spaces, or are telecommuters, the largest percentage indicated was for telecommuters working in organizations with more than 3,000 employees.

At less than 2 percent, the overall number of people assigned to sit off-site represents a fraction of the total number of employees.

Percentage of respondents accommodating staff in unassigned workspace



Drivers and costs

THOUGH IMPORTANT, COST REDUCTIONS ARE NOT THE PRIMARY DRIVERS BEHIND ADOPTING DISTRIBUTED WORK.

Facilitating work/life balance, enabling flexibility, aligning with organizational goals, leveraging technological advances and delivering perceived benefit to workers are the most popular reasons to adopt on-and off-premise distributed work strategies.

Cutting costs and reducing real estate are important drivers, but these drivers were chosen no more or less than many of the organizational or employee-related goals.

This observation was made clear both in survey results and in conversations with case study participants.

THE COSTS OF ON-SITE STRATEGIES ARE PERCEIVED TO BE DROPPING, WITH MAJOR EXPENSES OFTEN BEING FURNITURE AND TECHNOLOGY.

As in 2009, the two most commonly cited costs for on-site distributed work strategies in 2015 are technology and furniture. The next most-cited cost was parking, a new option added to the 2015 survey.

Many companies have found that, as their space becomes more densely populated, they need more parking spaces based on code requirements or increased demand.

Overall costs, utilities, regulatory compliance, rent/lease/property costs, and personnel salaries and benefits were chosen less than 20 percent of the time, and selected less in 2015 than they were in 2009.

THE COSTS OF OFF-SITE STRATEGIES ARE PERCEIVED TO BE HIGHER TODAY, PERHAPS BECAUSE ORGANIZATIONS HAVE MORE EXPERIENCE AND A REALISTIC UNDERSTANDING OF THESE PROGRAMS.

From 2009 to 2015, there are significant variances between the perceived cost impacts of off-premise distributed work programs. These variances could be attributed to today's organizations having more experience with these programs or to the fact that changes in the real estate market have affected costs.

For example, respondents cited technological equipment/supplies and furnishing costs much more often in 2015, while the cost impact of utilities was more of a concern in 2009. In 2015, every cost item listed, with the exception of utilities, was indicated to have an increased cost implication compared with 2009 findings.

MORE ORGANIZATIONS ARE PROVIDING INCENTIVES TO EMPLOYEES ADOPTING DISTRIBUTED WORK, ESPECIALLY IN THE FIRST YEAR OF IMPLEMENTATION.

In 2015, 33 percent of respondents reported that they needed to provide some incentive — typically technology — to employees when adopting a distributed work policy.

This is more than the 18 percent of respondents who offered incentives in 2009.

Organizations that have more experience with distributed work are more likely to provide incentives.

Cost impacts of on-premise distributed work programs



Importance of engagement

PEOPLE REPRESENT THE BIGGEST BARRIER TO DISTRIBUTED WORK.

The biggest change barriers to distributed work are people-related. Survey respondents were allowed to select multiple barriers to distributed work within their organizations. Those most commonly selected relate to “cultural resistance” and opposition from mid-level management, executives or employees — regardless of the industry and especially in the early days of implementing distributed work.

Security and technology constraints were also named as concerns, although they seem to be less important over time. Overall, more survey respondents believe there is a moderate or strong appeal across all generations for on- and off-site distributed work strategies.

THE NUMBER OF ORGANIZATIONS MEASURING THE RESULTS OF THEIR DISTRIBUTED WORK PROGRAM IS INCREASING.

The survey results indicate that the three most common ways of evaluating on-premise options are through observations, employee surveys and employee interviews.

Less than one-third of the organizations actually engage their workforces in testing and implementation of distributed work settings. Yet this figure is up from only 19 percent in 2009.

Conducting research and due diligence helps organizations understand their needs and provides opportunities for change management and employee engagement.

CHANGE MANAGEMENT TAKES PLACE IN LESS THAN HALF OF DISTRIBUTED WORK PROGRAMS.

Only 45 percent of respondents are using change management in the rollout of their distributed work strategies.

Of this group, a little more than half are using exclusively internal resources to communicate and engage with employees during the process; slightly less than half are using a combination of internal and external resources.

Only 7 percent of those using change management are relying exclusively on external resources for this service.

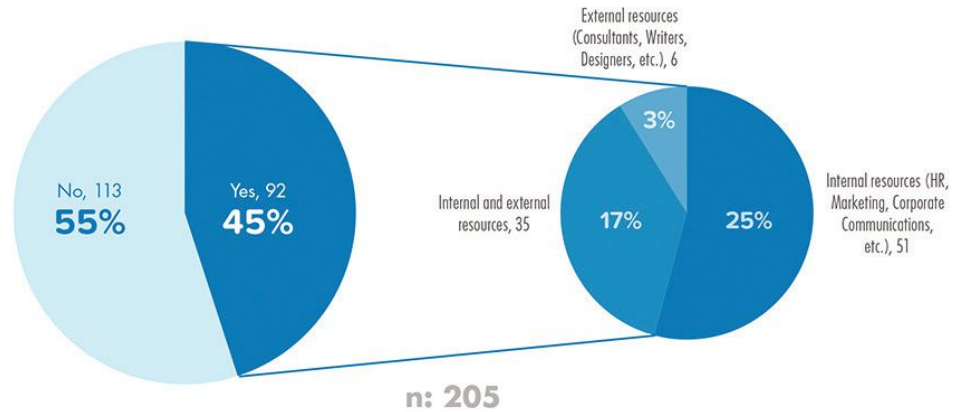
TRAINING IS A CRITICAL PART OF A DISTRIBUTED WORK PROGRAM ROLLOUT, PARTICULARLY IN THE BEGINNING.

Survey respondents were allowed to select multiple answers for additional training that they are providing while rolling out distributed work programs.

The three most commonly selected training options were new technology/tools, etiquette protocols and tip sheets.

Business process change and etiquette protocols were an especially popular choice for organizations with less than two years of experience with distributed work programs.

Was change management put into place as part of the rollout of a distributed work strategy?



Operational considerations

DISTRIBUTED WORK IS AN “ECOSYSTEM” INVOLVING MORE THAN SPACE.

This study highlighted several ways that distributed work involves more than a space solution. It also requires a careful consideration of technology, operations, policies, building management solutions and a new way of thinking about the workplace delivery. According to the survey, the biggest operational considerations for distributed work are putting in a reservation system and making ergonomic adjustments that enable multiple users to use the same space. Organizations with more than 3,000 people typically chose additional cleaning and concierge services as operational concerns.

MAINTAINING AN EFFECTIVE WORKPLACE PROGRAM IS LIKE “PAINTING A BRIDGE.”

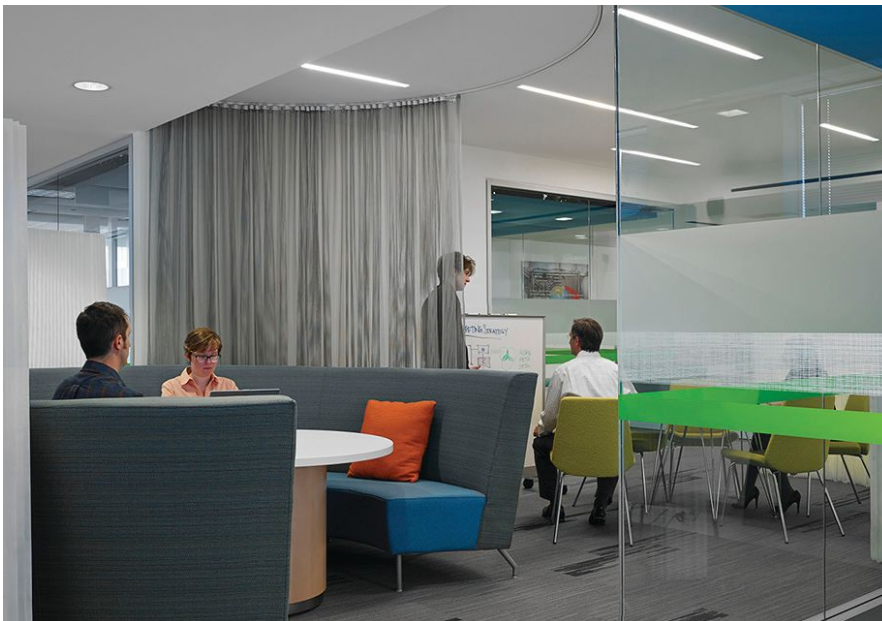
One real estate leader that we interviewed described launching and expanding a distributed work program as an ongoing process, like “painting a bridge.” As soon as an organization finishes a program, it often needs to start a new one. Several real estate and facility management leaders emphasized the importance of a strong internal workplace team — one that stays on top of trends and new ways of thinking about work. They also stated that it is critical to budget for ongoing support of workplaces that are using distributed work practices. This allows these work spaces to be tuned up and used efficiently and effectively over time.

Building on experience

Distributed work strategies are not a “one size fits all” solution. To succeed, they require careful orchestration of facility management, real estate, human resources, IT, communications, change management, business leaders and other moving parts.

The good news is that many pioneering organizations have paved the way for the next generation of workplaces. The organizations interviewed for IFMA’s Distributed Work Revisited report, including Rockwell Collins, the City of Calgary, Credit Suisse, the U.S. General Services Administration, eBay, GSK, Accenture and Microsoft, provided many examples of best practices and described lessons learned. Survey respondents from 538 IFMA member organizations provided details about the challenges and opportunities involved with implementing new ways of working.

Rolling out a new workplace strategy is an iterative, always changing process. To quote Matt Corkery, principal program manager for facilities services at Rockwell Collins: “Any updates we do in our facilities now use our new workplace strategy. However, we continue to apply lessons learned as we go from each installation we do around the world. And while our design strategy and standards remain the same, the leadership team for each area determines how the strategy is applied to their area to best accommodate the type of work they do.” **FMI**



ACCENTURE

The authors helped develop and analyze the survey, collect the case studies and write Distributed Work Revisited: Research Report #37.



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Leigh Stringer is a workplace specialist for EYP Architecture & Engineering in Washington, D.C., USA, and author of the forthcoming book, *The Healthy Workplace: How to Improve the Well-Being of Your Employees – and Boost Your Company’s Bottom Line*. For more tips on how to be healthy at work, like the book’s Facebook page at www.facebook.com/TheHealthyWorkplaceBook, subscribe to leighstringer.com or reach out to Leigh at lstringer@eyppae.com.



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Scott Eck, CFM
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Donna Boyce, FMP
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Surrey, BC, Canada

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IFMA's World Workplace

The Facility Conference & Expo

Oct. 7-9, 2015 | Denver, Colorado

WORLD WORKPLACE IN THE MILE-HIGH CITY

BY ERIN SEVITZ



FMJ EXTRA



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IFMA's World
Workplace 2015
Highlights



CLICK TO VIEW

5 Things We Learned
at IFMA's World
Workplace

Boots, booths, building professionals and even a blue bear — the return of IFMA's World Workplace Conference and Expo to Denver, Colorado, USA, for the first time since 1993 offered something for everyone.

Held Oct. 7-9, the 2015 event brought the global FM community together in the Mile-High City for a week of learning and comradery. More than 4,600 attendees mingled, networked and truly embodied the conference theme, "collaborate to innovate." This year, which also marked the 35th anniversary of IFMA, saw nearly 1,000 first-time participants attend the association's flagship conference.

At the event, IFMA launched its new Knowledge Library, a comprehensive online repository of expert-vetted FM content. It also released Distributed Work

Revisited: Research Report #37 and a white paper on the executive view of FM.

In conjunction with World Workplace, IFMA offered in-depth, instructor-led credential courses at its Fall Symposium beginning on Oct. 3. FMs participated in knowledge and skill building through Facility Management Professional™, Sustainability Facility Professional® and Certified Facility Manager® Exam Prep courses at the Hyatt Regency Denver at Colorado Convention Center.

On Tuesday, Oct. 6, early arrivals took advantage of deeper-dive workshops. This year's offerings included a high-octane event with IFMA's Workplace Evolutionaries, titled "Bandimere Speedway: Workplace as a Fuel for Innovation," as well as the high heels and hard hats workshop on women in FM.



Denver facility tours

This year's behind-the-scenes looks at local building landmarks were in such high demand that additional tours were added to accommodate the more than 300 participants. Guided by in-house facility management professionals, these exclusive excursions offered insight into the operations of some of the city's most efficient properties.

The spaces explored included IKEA Centennial, the second-largest IKEA store in North America and the first in the United States to incorporate a geothermal heating/cooling system; the recently renovated Colorado Convention Center; the National Renewable Energy Laboratory; the Ralph L. Carr Colorado Judicial Center; the Colorado State Capitol; and Sports Authority Field at Mile High, the home of the Denver Broncos National Football League team.



First-time attendee orientation

The always-popular first-time attendee event packed the room again this year. This orientation helps those new to IFMA and/or World Workplace learn what to expect and meet their peers.

The interactive session, led by IFMA members and staff, gave attendees an inside look on navigating and customizing the event to meet their personal and professional goals.

FMJ-hosted panel on knowledge sharing in FM

For the third time at World Workplace, FMJ hosted a panel of FM thought leaders. This year's discussion focused on how "traditional" FMs have gained and expanded their professional knowledge, and how this will shift as a clear path to the industry becomes increasingly established.

Moderator and award-winning FMJ author Bill Conley, CFM, SFP, FMP, LEED AP, IFMA Fellow, engaged panelists of diverse backgrounds in a dialogue involving their unique FM stories, including how each of them first learned about the industry and the ways in which practitioners can best grow and share the FM body of knowledge. Panelists included FMs Mary Day Gauer, CFM, IFMA Fellow with the UNM Planning, Design & Construction Health Sciences Center and Merrilu Alfaro, CFM with the Los Angeles County Metropolitan Transportation Authority; industry partner Koen Matthijs with MCS Solutions; and IFMA Foundation 2015 International Student of the Year Jun Rong Jeffrey Neo.

The panel began with a special surprise tribute to Conley for his role as the most prolific contributor in FMJ history, with more than 50 articles authored since 1995.



Opening keynote

The official conference kick-off marked a World Workplace first: a visit from the future. An FM scientist (also known as Jennifer Corbett-Shramo) came back in time to tell IFMA President and CEO Tony Keane and attendees about the major gains ahead of the FM industry in the coming years. As theorized by many today, she confirmed that FM will become widely recognized across the globe as a career of choice.

Following this future-themed tone, opening keynote speaker Josh Linkner prepared the audience to charge into the rest of the week, and their careers, with gusto. Linkner, a technological entrepreneur, investor, best-selling author and weekly contributor to Inc. magazine, Forbes and the Detroit Free Press, spoke on what he refers to as harnessing innovation. His message of innovative success stories, such



as start-up company Dollar Shave Club's unconventional approach to competing with industry giant Gillette, resonated with the FM audience.

FM innovations on the expo floor

After his keynote delivery, Linkner, along with a drum line and Denver Broncos cheerleaders, led attendees upstairs to the networking hub of the conference: the sold-out expo floor.

There, FMs were inspired by forward-focused product and service solutions from nearly 300 industry thought leaders. Exhibiting companies represented a range of business sectors including alternative energy, architecture, building maintenance, disaster recovery, education, food services, furniture, health care, real estate, security and technology.



The IFMA Central area on the show floor offered a space for attendees to rest, recharge and learn about the association. This year, IFMA Central expanded to include an FMJ area, as well as live demonstrations of IFMA's newly launched Knowledge Library. As in past years, the Council Pavilion provided insight into how IFMA's 17 councils support the varied industries within which FMs practice.

Solutions Arenas, located around the perimeter of the expo floor, offered exhibitor-led product demonstrations and information sessions. Sponsored by IBM, FM:Systems and Archibus, the Solutions Arenas held sessions on safety, data-driven workspace strategies, SaaS, IWMS, BIM and more.

In addition to the highly anticipated daily prize drawings, a new event debuted at the 2015 expo. The first ever Twitter photo scavenger hunt encouraged attendees to get social with participating exhibitors. However, what made this year's expo uniquely Denver was the local chapter's incredible Lego city display.

Ringin' in the conference with Western flair

Known as one of the world's last great honky-tonks and named one of America's Top 10 Coolest Nightclubs by Men's Health Magazine, the Grizzly Rose lived up to its name as the setting for the IFMA party of the year. Attendees dusted off their boots and accepted the challenge to embrace the Wild West for the World Workplace Welcome Reception at Denver's legendary country and Western nightclub.

The venue served up line dancing, games, mechanical bull riding and a barbecue buffet complete with freshly pulled smoked pork. Sponsor Caterpillar helped ensure that all were appropriately attired by providing cowboy hats, and the Denver contingent came decked out in light-up T-shirts displaying their chapter logo. The evening was completed with entertainment by award-winning country band Sawyer Brown.



Education and networking

What sets World Workplace apart from other FM professional development events is the consistently high quality of the education sessions. The 2015 conference offered a broad variety of learning topics critical to the success of facility managers, both today and moving forward. Thought leaders in FM and related industries presented on big data, outsourcing, corporate social responsibility, budgeting, emergency preparedness and much more. Sessions accommodated all levels of experience, from FM newcomers to seasoned practitioners.

In addition, evening receptions for credential holders, students/young professionals, Canadian FMs and other specialized groups enabled attendees to continue collaboration beyond the session context.

Awards of Excellence luncheon and evening gala

Held on Friday, Oct. 9, the Awards of Excellence celebrations gave formal peer recognition to outstanding achievements in the FM field. Among the honorees were the 2015 class of IFMA Fellows, as well as IFMA components and individuals.

Receiving fellowship, the highest honor awarded to the most dedicated and accomplished IFMA members, were Howard K. “Buck” Fisher, CFM; Marc S. Liciardello, CFM, MBA, CM; and IFMA Foundation Director of Accreditation



and Academic Affairs Steve Lockwood, CFM. IFMA Chair Mike Feldman also presented discretionary Chair’s Citation accolades to two longstanding members, Eric T. Dillinger and Bill Conley, for their inspired leadership and significant contributions to the association.

The awards luncheon began with entertainment by Song Division, a self-described “experiential music agency” which led IFMA members Lynn Baez, Mark Sekula and Larry Morgan in a lively game of on-stage musical trivia.

Attendees of the evening gala arrived dressed to impress and followed the awards presentations with some serious dance

moves. The Awards of Excellence Banquet was made possible by the sponsorship of ISS Facility Services, Inc.

IFMA Foundation events at World Workplace

Not to be outdone, the IFMA Foundation also made productive use of the World Workplace week. The 25th Annual Doug Underwood Memorial Golf Tournament, presented by the Utilities Council of IFMA, the foundation and C&W Services, contributed toward donations of more than US\$145,000 for 43 students at World Workplace. The scholarships were presented at the Academic Awards Ceremony, sponsored by Aramark and the San Fernando Valley Chapter of IFMA. The foundation also held its legendary celebration at the Ellie Caulkins Opera



2015 IFMA AWARDS OF EXCELLENCE WINNERS

- **Distinguished Author Award:
Article or Research Paper**
Bill Conley, CFM, FMP, SFP, LEED AP, IFMA Fellow
- **Associate Member Award**
Wayne Whitzell, LEED AO, BEP
- **Emerging Professional Award**
Nick Heibein
- **Distinguished Author Award:
Book or Instructional Material**
Judie Cooper, CFM
- **Distinguished Author Award:
Web Based/Social Media**
Michael Habeeb
- **Chapter Award in Government Affairs**
Saint Louis Chapter
- **Large Chapter Award for
Professional Development**
Atlanta Chapter
- **Large Chapter Award for Web Communications**
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- **Small Chapter Award for Web Communications**
Delaware Chapter
- **Council Award for Programs &
Professional Development**
FM Consultants Council
- **Educator Award**
John Garcia
- **George Graves Award for Facility
Management Achievement**
Gaetano D'Alturi, CFM
- **Sheila Sheridan Award for Sustainable
Facility Operations and Maintenance**
Bloomberg Sustainability Team
- **Distinguished Member**
Stephen Jagun, CFM, FNIVS, FRICS
Teena Shouse, CFM, IFMA Fellow
- **Large Chapter of the Year Award**
Toronto Chapter
- **Student Chapter of the Year Award**
Brigham Young University Student Chapter
- **Council of the Year Award**
FM Consultants Council

House, launched a new online FM Academic Registry (<http://fmacademicregistry.org>), ran a silent auction, announced winners of the ePoster Competition and presented six foundation trustee awards (more on page 18 of this issue).

The FM story is ours to share

Ready to head to “America’s Finest City,” where the weather rarely falls short of perfect? IFMA and our 12 California chapters are pleased to invite you to the Golden State for World Workplace 2016 in San Diego. Located at the San Diego Convention Center directly on San Diego Bay, the premier FM event of the year will be held Oct. 5-7, 2016.

Have you seen the World Workplace 2016 website yet? Your headquarters for information on the event, worldworkplace.ifma.org contains the call for presentations (open until March

25), housing reservation links (book early to secure your preferred hotel), the expo floor plan (half of the available space is already reserved), the schedule of events and more. Check back frequently, as more details will be added on facility tours, keynote speakers and session outlines as October and #IFMAWW16 approach. **FMJ**



Erin Sevitz is editorial manager for IFMA and leads the copy editing, art direction and production of FMJ. She also helps guide IFMA’s voice and messaging and develop the association’s social media strategy.

She is a University of Florida graduate with bachelor’s degrees in English and French and tweets on leadership, branding and the workspace @ESevitz.



LOOKING FOR MORE PICTURES?

Official photos from World Workplace Denver can be viewed online at www.flickr.com/photos/ifma.

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CONGRATULATIONS TO IFMA'S NOVEMBER AND DECEMBER MEMBERS OF THE MONTH

As members of the world's premier association with a network of more than 24,000 facility management professionals, IFMA recognizes how hard you work in your careers and in advancing the FM profession. It is through members such as you that the association has had a positive influence and made a difference in increasing the awareness of facility management.

In 2015 IFMA committed to further recognizing your accomplishments within the industry by developing a Member of the Month program. Members selected for this honor will gain additional recognition from their peers and IFMA.

Please join us in congratulating **Graham Tier** (November 2015) and **Kevin Wallace** (December 2015). Refer to the Member of the Month podcasts linked in the online version of this issue of FMJ to hear directly from them.

FMJ EXTRA



CLICK TO LISTEN

Getting to Know
IFMA's Members
of the Month

IFMA NEEDS YOUR HELP!

Nominate a member who has made a difference in the FM industry at www.ifma.org/membership/member-of-the-month or contact Senior Manager of Membership Lauren Krueger at lauren.krueger@ifma.org for information on the nominating process.

GRAHAM TIER, CFM, FMP *NOVEMBER 2015 MEMBER OF THE MONTH*



Graham Tier works at The Hong Kong Jockey Club, a non-profit charitable organization in Hong Kong which has a total annual revenue of more than HK\$190 billion. His responsibilities include managing all matters relating to facility management, including operations and maintenance of racing

and non-racing facilities. The club is comprised of approximately 9 million square feet of residential, commercial and recreational facilities, making it one of the largest property holding in Asia.

Tier has worked for many leading international companies such as British American Tobacco, Johnson & Johnson, McPherson's and Amcor and shares a network with many blue chip organizations internationally.

He became president of the IFMA Hong Kong Chapter in 2009 and has been a staunch supporter of the local chapter, acting as a custodian of industry best practices and forging links with key organizations. Tier has been instrumental in the promotion of FM credentials and was the driving force behind Hong Kong's CFM executive dinner, which is now a key event in the chapter's calendar. In addition, he started the chapter's new member night and established the student membership segment in 2008.

His long service to the association has included speaking at seminars and conferences around Asia, promoting IFMA and sharing his insight and experience on wide-ranging FM topics. In addition, he presented on enhancing employee satisfaction in the workplace at IFMA's World Workplace 2015 Conference and Expo in Denver, Colorado, USA.

Tier studied at various institutions in Australia gaining qualifications in mechanical engineering, operations management and construction management. He holds FMP and CFM credentials and is a former CFM trainer for IFMA. He is also a senior professional member of RICS.

KEVIN L. WALLACE, AIA *DECEMBER 2015 MEMBER OF THE MONTH*



Kevin L. Wallace, AIA, is director of architecture and business development with CES Architecture Group, a studio within Childress Engineering Services, Inc., in Richardson, Texas, USA.

He is a licensed architect who concentrates on providing design services to the commercial and retail markets throughout the United States, as well as building envelope consulting in the central United States. Wallace operated his own architectural studio for 19 years prior to joining CES, where he has combined the leadership of account and project teams with strong business operations.

He has always been passionate about architecture and loves to learn about the inspiration revolving around how people work, live and play in buildings. The desire to see buildings and cities succeed is what motivates him.

A member of the Dallas/Fort Worth Chapter of IFMA since 2013, Wallace immediately became involved in planning for the chapter's tradeshow, the FMexpo. He assumed chairmanship of the expo in 2014 and will continue as chair through 2016. For the past few years the expo has taken place in August and has about 60 vendor booths with complementary seminars for attendees. The event has grown every year of his involvement, both in number and mix of exhibitors and number of show attendees, which he credits to the hard work of dedicated show committee members.

Wallace enjoys his membership in IFMA and feels it is a great environment in which he has grown his professional and personal relationships. He looks forward to monthly chapter events to catch up with old friends and make new and rewarding connections.

CITY LIFE

an FM PERSPECTIVE on promoting sustainable cities

BY BILL CONLEY



A city sits on a hill. Overlooking suburban homes, roads and highways, it is a city unique unto itself. No other city is quite like it. In the distance are other cities; just as different in their own way.

However, no matter how special a city is, it has consistent similarities with all the other confluences of the built environment. It needs infrastructure, it needs water and it needs power. A lot of power. Cities are like facilities; only bigger. They are inorganic complexities of concrete and steel, infused with organic entities — people.

The buildings are the bones of the city. Roadways and railways serve as the blood vessels, while the infrastructure fulfills microcirculation functions. Energy provides the sustenance, invigorating the system. The challenge is to avoid over-consuming. Obesity is a disease. Cities need to run as lean and as efficiently as a finely tuned facility. Through controlled deployment of energy, the circumspect use of water and the proper elimination of waste, a city can be healthy and wealthy.

A city is the epitome of the built environment, while a facility is a microcosm of a city. Who's to say, then, that what works in a facility won't work in a city? The parallels are obvious. Facility professionals can serve as fitness trainers, helping keep the entity fit and on a good diet through advice and recommendations to city and community leaders.

IFMA's Advocacy Day and Public Policy Forum

Success of the IFMA Advocacy Day program over the last six to seven years has highlighted the impact and influence that facility managers can have on elected officials. The results that have come about due to the efforts of IFMA members visiting the U.S. capitol prove the positive effects that constituents can provide, as well as creating awareness that FM's are a resource when it comes to training and energy efficiency methods.

This applies to how the federal government is run, as well as to legislation that will help the country better manage its resources and be more sustainable. Locally, the new C-suite that needs such input is the city council. Facility managers cannot hesitate to approach local leaders, as such interactions work.

Climate/sustainability action plan

When dealing with a city, there are two areas upon which to focus: the city operations themselves and the community which these serve. Both of these targets can benefit from a comprehensive climate or sustainability action plan.

The basic skeleton of a climate action plan outlines land use and transportation — two elements which are inextricably entwined. The more spread out a city is, the more travel is required for people to partake in city life; to work or play.

Traffic is of major concern, especially due to emissions. But addressing urban density is only a part of a sustainability plan. It is a good start, but measuring and managing resources is also necessary to truly make a difference in greenhouse gas emissions and the cost savings that result from energy efficiency.

Part of a climate action plan is the development of a greenhouse gas inventory. This is a critical first step toward measuring and managing climate change impact. Such an inventory is a compilation of emission sources and the associated emissions quantified using standardized methods.

Most greenhouse gases are generated by building heating and cooling, fleet vehicles, electricity use and employee travel — areas which touch, or are touched by, facility professionals. In this analysis, it is important to consider community-scale measures, municipal operations measures and a summary of existing emissions reduction measures. This entails measuring and evaluating the environmental, economic and public health benefits of climate change and clean energy initiatives.

Once the inventory has been established, then measures and policies need to be created to address:

- Transportation and land use
- Energy efficiency
- Renewable energy
- Solid waste management
- Green building
- Combining measures to achieve additional reductions
- Summary of proposed emissions reduction measures

Focus can then turn to identifying and documenting cost-effective policies and initiatives that address climate change, including those that promote renewable energy, energy efficiency and related clean technologies.

IFMA and its members can offer tools, guidance and support for assessing the options and benefits of actions to reduce greenhouse gas emissions. IFMA chapters can combine to foster peer exchange opportunities for state and local officials to share information on best practices and lessons learned about innovative policies and programs. For

It is incumbent upon facility managers to “walk the walk” when it comes to sustainable programs.

further support, the U.S. Environmental Protection Agency (EPA) provides a Center for Corporate Climate Leadership. This is a resource center that can help municipalities identify and achieve cost-effective emissions reductions.

Inside the city

In any facility, change comes about more easily when employees can follow a positive lead. Thus, it is incumbent upon facility managers to “walk the walk” when it comes to sustainable programs, ensuring that the FM department leads by example.

The same can be said for a city. Municipal offices can start the process by implementing solutions in-house. They can save energy and reduce greenhouse gas emissions by setting equipment to power down when not in use, use lighting controls to turn off lights and encourage the use of ENERGY STAR qualified products. Office products that have earned the ENERGY STAR label feature special energy-efficient designs, which enable them to use less energy while performing regular tasks. Computers, copiers and printers, in addition to more than 60 other product categories, including lighting, heating and cooling equipment, and commercial appliances, all are part of the ENERGY STAR program.

Other areas in which cities can improve their performance include gradually eliminating heat islands or using high-albedo materials for hardscapes and rooftops. They can minimize irrigation through intelligent choices of plant palettes for city landscapes. They can replace streetlights and traffic signals with LED lamps. They can implement city-wide recycling programs. City fleets can run on propane or biogas, or include electric vehicles. Many waste management companies already harvest biogas from landfills to run their vehicles. These companies are usually contracted through the city, providing a natural base on which to build a working partnership.

Emissions created by electricity generated from fossil fuels can be one of the most significant environmental impacts associated with city operations. Electricity that is generated from renewable energy sources such as wind, sun, geothermal and biomass are categorized as green power. If it is not feasible to install or take advantage of renewable energy sources, then purchasing green power is an effective

way for any organization, public or private, to reduce its carbon footprint and environmental impact.

Cities can promote public transportation, carpooling, biking or telecommuting to save energy and reduce greenhouse gas emissions related to employee transportation. Commuter benefits can be offered to the public to reduce traffic congestion, improve employee recruitment and retention and minimize the environmental impacts associated with drive-alone commuting.

One movement that is spreading throughout both city and state governments is legislation mandating ENERGY STAR benchmarking. These laws are being enacted due to the understanding that buildings must be managed better and to do that, their energy use must be measured and monitored.

Buildings that earn EPA’s ENERGY STAR label provide safe, healthy and productive environments that use about 35 percent less energy than average buildings. Their efficient use of energy also reduces the total facility operational cost. Again, working on the premise that someone must lead, facility managers should be creating their own portfolio manager — IFMA already has the ENERGY STAR Challenge in place — and encourage municipal leaders to understand the importance of this simple act.

The community

As such initiatives and programs spread out from the city to the community, one of the crucial components for success is education and communication. Although people of all ages can benefit from learning about what they can do to implement climate control, informing citizens about the vital, positive aspects of climate control will win support and participation.

Within communities, people have varying views when it comes to climate change. Bridging differences is important for achieving sustainable goals. Many communities have found ways to work across ideological differences and focus on common values and goals. Just as FMs need to gain consensus and cooperation at the facility level in implementing any type of change (especially sustainability), the same precepts arise when dealing with a community made up of disparate positions and viewpoints.

It is important to discover what drives people's interests and opinions, and address their priorities. Drawing on people from different ideological groups to form stakeholder groups or advisory boards is a critical step, as is developing outreach programs that cross party lines.

Initial skeptics can become the most powerful advocates. City leaders need to listen and learn from credible, diverse views that will improve project credibility and provide momentum. Any program or project needs to serve a varied constituency. Receiving support and advocates from a variety of backgrounds will facilitate the process.

Working models

In the United States there are already 10 cities working on the City Energy Project. Boston, Massachusetts; Philadelphia, Pennsylvania; Chicago, Illinois; Atlanta, Georgia; Orlando, Florida; Houston, Texas; Kansas City, Missouri; Denver, Colorado; Salt Lake City, Utah and Los Angeles, California, are all focused on developing city initiatives to minimize energy consumption and greenhouse gas emissions. In many of these areas, the local IFMA chapter has been engaged to assist in these efforts.

On the global front, the Clean Energy Ministerial (CEM) is a forum that has been created to encourage and facilitate the transition to a global clean-energy economy. Members share best practices and promote policies and programs aimed at reducing emissions, improving energy security, providing energy access and sustaining economic growth. The CEM is focused on three global climate and energy policy goals: to improve energy efficiency worldwide, enhance clean energy supply and expand clean energy access.

Members of the CEM are Australia, Brazil, Canada, China, Denmark, the European Commission, Finland, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Norway, Russia, Saudi Arabia, South Africa, Spain, Sweden, the United Arab Emirates, the United Kingdom and the United States.

Organized in conjunction with the CEM is the Global Sustainable Cities Network (GSCN). This group functions as a knowledge-sharing and networking consortium for representatives of CEM countries that have introduced policymaking and procurement responsibilities in city management.

Municipalities have been recognized as major contributors to the world's economic output, energy consumption and carbon emissions; they are prime targets for clean energy deployment. Energy efficiency has always been a viable option for cities. Those opportunities have become more achievable due to the falling cost of renewable energy, creating an increasing potential for cities to produce energy.

Through the GSCN, participating governments are collaborating on innovative and creative sustainable city initiatives. The dual focus of the GSCN at this time revolves around waste-to-energy and demand-side management efforts. It has released highlights of successes and national experiences and has sponsored workshops to evaluate policy and technology options for enhancing market growth and cross-investment in these two areas.

Some examples of successful initiatives implemented in concert with the CEM and the GSCN can be seen in areas like the Finnish region of Lahti, where 90 percent of waste produced is recycled or used in energy production. In Denmark's city of Sonderborg, a program named ProjectZero has already resulted in a 16 percent reduction in carbon emissions, helping the city make progress toward its goal of zero emissions by 2029. In the United Arab Emirates, the Estidama/Pearl rating system, which enhances the energy performance of new buildings, is now required for new construction in Abu Dhabi. And in Sweden's city of Linköping, all municipal buses are powered by biogas produced from wastewater treatment plants and landfill waste.

Lean and green

Cities are living entities; each has its own culture, identity and idiosyncrasies. Yet they all suffer from the same excesses. Clean energy deployment and energy efficiency are part of a diet for cities. These trends are not a fad, but an ongoing regimen to better control consumption of resources.

There are various elements that are important in the maintenance of the structure through a process of evaluation, consideration and improvement. Facility managers pride themselves on performing these activities and can serve as problem solvers and resources to city staffs. **FMJ**



Bill Conley, CFM, SFP, FMP, LEED AP, IFMA Fellow, is facility manager at Yamaha Motor Corp. in Cypress, California, USA. Prior to that, he served as owner and chief sustainability officer of CFM2, a facility management and sustainability consulting company. Conley has more than 40 years of experience in the facility management profession and has been a proponent of sustainable operations for more than 20 years.

Conley has served on the IFMA board of directors, is a recipient of IFMA's distinguished member of the year award and has received the association's distinguished author award three times. He has been a regular contributor to FMJ for more than 20 years and has authored more than 50 FMJ articles.



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IFMA'S KNOWLEDGE STRATEGY UPDATE

BILL CONLEY
Member,
Knowledge Strategy Task Force



INFORMATION LEADS TO KNOWLEDGE; KNOWLEDGE LEADS TO CAPABILITY; APPLICATION LEADS TO WISDOM

AS FACILITY PROFESSIONALS FULLY UNDERSTAND, there is more than enough information out there – enough to drown us if we're not careful. IFMA is well aware of this fact, so the Knowledge Strategy Task Force has taken a major step in remedying this situation by creating the Knowledge Library.

Located on IFMA's Online Community at community.ifma.org/knowledge_library/, the Knowledge Library has been designed to provide the right information in the right place to expedite the assimilation of facts and allow FMs to perform more efficiently.

The premise is simple: the task force assembled the collective historical documents written over time by and for facility professionals and organized them for ease of access and relevancy. IFMA's new Knowledge Library contains a wealth of digital content that has been reviewed by FM professionals to help supplement your learning and growth. You can find everything from articles, benchmarking documents and case studies to how-to guides, research reports and more.

The more you learn, the more you need to learn

As most people have discovered, the more you learn, the more you find you need to learn. In the Knowledge Library, this can be true in a very good way.

For example, looking for best practices in sustainability may lead you to topics on energy, where the acronym GHG catches your attention, which brings you to carbon emissions, cap and trade, carbon footprint, Scope III reporting; to transportation and land use, to alternative workplaces. This, in turn may lead you to IEQ, then green cleaning, then water conservation, leading to the nexus of water and energy, bringing you back to energy. And that's just within one of the competencies; there are 10 more that will equally captivate you.

All of this information, all of these resources and all of these tips that you can apply to your workplace are now available in one location: the Knowledge Library.

Finding your way around

Navigation within the library is easy. Documents are organized by type (white paper, article, presentation, etc.) and by competency or by 12 different industries. To assist your foray into the site, there is a support function which provides tips to help ease you through the process. Cross-pollination is abundant. The links and crossovers in facility management are extremely prevalent and this is reflected well in the library.

The library is a living entity, changing and improving over time. One of the functions on the site is dedicated to news and updates which highlights posts made by the Knowledge Library administrators regarding newly added content, new features and functionality. One of the areas that this will point you to is the recently added list. Here you will find the content most recently published by the Knowledge Library team. This material can be sorted by name, the date it was written, how many others have already downloaded the item and any reviews or comments attributed to it. The site provides you with all of the information about all of the information in which you are interested.

The Knowledge Library is still within its developmental stage. Even now, though, it is a robust, informative and comprehensive composite of the best information regarding facility management. Members are strongly encouraged to check it out and grow with it. Be careful, though. It's a fascinating journey, and it could become more addictive than any online game. **FMJ**

CHECK OUT IFMA'S NEW KNOWLEDGE LIBRARY AT COMMUNITY.IFMA.ORG/KNOWLEDGE_LIBRARY

CLEANING NEEDS



FOR THE 21ST

BY ROBERT KRAVITZ

The world of business in North America and around the world is changing, and it's doing so very quickly. Facility managers need to be aware of the fact that these changes are being reflected in the ways buildings are used, designed, operated and maintained.

Very simply, occupants think differently about the workplace, which is causing nothing less than a design and building use revolution. The old design of "one staffer/one office space" has become passé and this is causing many facility managers and building owners to play catch-up; updating, renovating and changing their properties to address the changing needs of today's facility occupants.

For instance, were workers in the 1990s looking for office space that had a touch-down area? Today, many office designs include a touch-down area — a small designated space that offers power, Internet connections and possibly a phone, which workers or visitors can use for a few minutes or up to a few hours.

And were occupants 10 and 20 years ago looking for office space that included "caves and commons?" A cave is similar to a touch-down area but more private, often larger, and more permanent — essentially a small private workstation. However, a "common" is entirely different and is one of the biggest changes in workspace design in years. A common is an open area, often very large, in which scores of people (such as executives, clerical people, middle management, etc.) work intermingled.

There are many more changes to note, such as occupant requests for areas or office spaces to be retrofitted as "war rooms," "huddle spaces" and even "hotels." With all of these modifications, something that may be overlooked is that these

CENTURY

changes also impact the ways facilities are cleaned and maintained. Because of this, a request for proposal (RFP) that was adequate for the cleaning contractor selection process a decade or more ago is most likely outdated when it comes to addressing the cleaning needs of occupants of 21st-century office spaces.

Need for an evolving RFP

Years ago, when a management company took over the operations of a new office building, one of its first tasks was to put together an RFP for cleaning the building. This is no easy task, even for the most experienced facility manager, and often requires the help a building operations consultant to put it together.

Once it is completed, what usually happens, according to Ron Segura, whose company helps major organizations streamline their cleaning and building operations, is that the “RFP is filed away and pulled out every couple of years when the decision is made (or when facility managers are required) to take bids for a new custodial contractor.”

According to Segura, about the only update to the RFP may be to change its date. But cleaning has changed, and so have building workspaces and occupant needs. For instance, one of the most common requests found in older RFPs is that “floors be stripped and re-waxed every four [or possibly six] months.”

Today, we no longer use the terms “waxed” or “re-waxed,” according to Segura. “The terms we use today are [floor] ‘finish’ and ‘re-finish.’ And few managers today want their floors to be refinished every four to six months. It’s simply too costly, too disruptive, [potentially] too environmentally unhealthy, and

due to new hard-surface floor coverings and decors, simply may not be needed.”

With something like this listed in an RFP, what is probably the biggest negative implication is what we just mentioned: costs. To refinish floors as frequently as listed in the RFP can increase the contractor’s estimates significantly. This means that this old RFP, which may have been prepared initially to help reduce expenses, is actually causing facility managers to pay far higher costs for custodial work than is necessary.

Segura mentions this one example because it is so common. But specifically addressing the needs of the new workspace and the different ways occupants use office space, one of the biggest changes that must be incorporated into an up-to-date RFP is the “commons” area.

More and more companies want large open spaces for their staff. This is impacting the cleaning time and needs of the facility because large open spaces typically require the following:

- Tables must be cleaned and disinfected nightly due to so many more people using each area.
- Along with this, telephones, keyboards, calculators and other items may be used by many people, all requiring more careful cleaning and sanitation.
- Private office spaces tend to be neat and tidy, most of the time; with common-area workspaces the cleaning professional may never know what to expect.

WORKING SPACE USAGE TYPES IN THE MODERN OFFICE

Touch-down area

Small designated space that offers power, an Internet connection and sometimes a phone. For use by workers or visitors for a few minutes or up to a few hours.

Cave

Small private workstation. Similar to a touch-down area but more private, often larger, and more permanent.

Common

Open area, often very large, in which scores of people at all levels of the business work intermingled.

War room

Typically refers to a private room or space set up for teams to address specific projects. Includes tables, flat screens connected to computers or other data sources, chalk or white boards, etc.

Huddle space

Usually informal, relatively small areas where two to five people can meet together privately.

Hoteling

This practice offers a space similar to a touch-down area (but larger) that is designed to be used for one or more days by a specific staffer or visitor.

AN RFP THAT WAS ADEQUATE FOR THE CLEANING CONTRACTOR SELECTION PROCESS A DECADE OR MORE AGO IS MOST LIKELY OUTDATED.

- Floors will need more regular vacuuming and/or cleaning. In a private office, floors may only need to be cleaned or vacuumed a couple of times per week; in a large open workspace, nightly service will likely be needed.

Another change in the way workspaces are used today affects when the facilities can be cleaned. Asking cleaning workers to begin their tasks “after work hours” is no longer possible because there often are no set work hours. When people are in a facility when it is being cleaned, this can slow down the cleaning professional. This can impact how much time it will take — and how much it will cost — to clean a facility and should be an issue addressed in the RFP.

The GPO and the cleaning contractor

Just as occupants’ needs and the ways they use office space have changed, along with how these facilities must be cleaned and maintained, so have the ways some cleaning contractors purchase supplies and receive much of their training and education. The big change, which can benefit today’s facility managers, is the development of group purchasing organizations (GPOs) for the professional cleaning industry.

A GPO is not a buying group. It is not a group of independent cleaning contractors that have banded together to purchase cleaning supplies and equipment in exchange for discounts. Instead — according to Terry Sambrowski, executive director of a GPO for larger cleaning contractors — a group purchasing organization allows contractors to develop close ties with manufacturers of cleaning equipment to the benefit of their cleaning customers.

“[Like a buying group] they do enjoy special pricing — which may also be reflected in reduced cleaning costs for building owners — but this relationship and input from contractors allows manufacturers to design cleaning tools and equipment that specifically address the changing cleaning needs of today’s changing workspace.”

Along with this, Sambrowski adds, there are other benefits of GPOs that can prove helpful for facility managers working with GPO-member cleaning contractors. These include the following:

- **First in line:** Some manufacturers introduce new equipment first to GPO members before the equipment is brought to market. Along with allowing them to beta test the machines, they have access to the most state-of-the-art equipment long before it is available to other cleaning contractors.
- **Training:** With the new equipment, manufacturers are very concerned that custodial workers are trained how to use these new machines. This training often includes a review of “best practices” in professional cleaning as well as an introduction to new cleaning procedures that improve worker productivity, helping to reduce costs which once again can be reflected in custodial charges.
- **Competitive edge:** Some GPOs have regularly scheduled meetings during which members discuss their own challenges along with addressing the needs of the evolving workspace.

“What often happens is one contractor has already encountered such problems and discusses how she has handled the situation,” explains Sambrowski. “This means the cleaning contractor will know how to handle an unexpected or unusual issue, as they’ve already been taught by another GPO member how to do so.”

Facility managers who must re-work their RFPs so that they include the cleaning of such spaces as touch-down areas, caves and commons, should know they are not alone. Many managers are in the same boat. Turning to consultants to help address today’s cleaning needs as well as selecting contractors that are members of GPOs can help make these transitions smoother and even cost effective. “Fortunately,” says Segura, “along with potentially resulting in cost savings, facilities often are cleaner and healthier as well.” **FMJ**



Robert Kravitz has authored many articles on the professional cleaning, building, building management, hospitality and health care industries. He may be reached via his website, AlturaSolutions Communications, at www.alturasolutions.com.

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THE BUSINESS IMPACT OF PESTS

BY RANDOLPH CARTER

You've no doubt heard the old adage "you only get one chance to make a first impression." It's absolutely true, especially in business. Imagine the damage pests such as bed bugs, rodents and cockroaches can do to the reputation of your business. In terms of physical facility assets, the impact can be just as severe.



A recent report, commissioned by the Centre for Economics and Business Research (Cebr) found that U.S. businesses incurred an increase of US\$6.8 billion in their operating costs in 2014 as a direct result of pest infestations in their facilities. They also experienced US\$13.2 billion in lost revenue. Moreover, a staggering 90 percent of all businesses surveyed suffered at least one pest infestation in the past five years. On average, these businesses experienced one infestation every 20 months.

Damage from pest infestations extends well beyond immediate financial loss

The negative effect of pest infestations on the operating costs and revenues of a business is clearly significant and should not be ignored. However, the impact of pests extends well beyond financial repercussions. Survey respondents stated key concerns included loss of reputation (65 percent) and risk of compensation claims and fines (66 percent).

Businesses that are public-facing generally suffer greater damage to reputation from pest problems as a result of customer complaints. After all, businesses today no longer only have to worry about customer dissatisfaction on the business premises if something is not to their liking.

They now have to also think about the repercussions of negative feedback, comments or reviews online or on social media. In just a few clicks, potential customers can easily be deterred from visiting the premises by reading negative comments or reviews posted online long after the eradication of the pest infestation.

Additionally, there is another ramification of pest infestation that is far less talked about and not as well understood. We already know the last thing a client or customer wants to see is a cockroach crawling along the wall, or mice scampering across the floor. But while the effects of infestation on paying customers could largely be seen as a



INFESTATION ALSO OFTEN HAS ADVERSE EFFECTS ON EMPLOYEES.

given, infestation also often has adverse effects on employees — leading to lost productivity and revenue even after the problem has been eliminated.

In fact, 42 percent of U.S. businesses suffered a loss of at least one working day as a result of pest infestation. More than a quarter of businesses (26 percent) suffered a loss of at least five working days — a full working week. In many cases, the negative impact includes a drop in staff morale; 36 percent of respondents reported suffering a detrimental impact on morale when a pest infestation occurred.

In more serious cases, pests that carry diseases, such as cockroaches, rats or mice, may expose staff to harmful bacteria and the risk of infection. In fact, the full impact a pest infestation can have on productivity is often disproportionate to what is perceived and understood by key decision makers and facility managers.

The potential for ongoing disruption is real

One of the things most overlooked when it comes to pest control is that in the event of an infestation, it will not

necessarily be a case of “business as usual.” While a sudden infestation of mice may seem to an onlooker like a relatively straightforward problem to eradicate, the reality is the work could take weeks and cause staff a lot of distress.

In a recent example, a New York City asset management company office had to be fumigated due to the presence of bedbugs. This infestation forced staff to work remotely, disrupted the working day and ultimately adversely affected productivity, not to mention staff morale. Moreover, once a business has had one infestation, it’s highly likely it will suffer another within a few years.

The Cebr research reveals that the majority of disruptions to the working day tend to last for at least as long as the period of infestation itself. In other words, after the pests have been physically removed from the premises, businesses still continue to face adverse impacts on productivity.

Every industry is at risk for pest damage

The risk of infestation is real no matter whether your business is in cold or warmer climates, natural surroundings

or urban environments. Pests do not discriminate and as such, any industry — including hospitality and tourism, food processing, distribution and retail as well as professional services — can be affected.

Mice and other rodents, as well as cockroaches, bedbugs and stored product insects such as moths and beetles, are consistently recognized as being common pests in the developed world. They are extraordinarily well-suited to taking advantage of the favorable conditions that humans create, including warm, damp kitchens; packed food product and raw ingredient storage areas; and waste areas.

Humans have unwittingly helped the spread of pest infestations. Modern buildings, with their internal ducts, voids, false floors and ceilings, provide a perfect setting for pests.

For example, mice indulge their natural curiosity and share our living and working spaces as they forage for food, gaining entry to buildings via so called “mouse motorways,” including the underground and pipe tunnels we have built beneath our feet. They are also often “delivered” on pallets of foodstuffs from a manufacturer to a customer. Once inside, mice can squeeze through dime-sized openings and require a relatively small amount of food to survive — only 0.1 ounce per day.

While pests can create problems for any business, the sector in which a business operates may determine the extent of potential damage from pest activity. For example, consider businesses where food is a core focus, whether in retailing, manufacturing or distributing food or beverages. For these businesses, proactive pest control must be a high priority, subject to food safety and hygiene legislation and typically regulated by national government and auditing bodies linked to the industry.

Businesses that handle food may be forced to shut down in the event of a pest infestation due to the threat to public health and food safety. Even

if the relevant authorities allow the restaurant to reopen after the pests have been eradicated, the damage to their reputation may be harder to deal with than the shutdown itself. No matter how popular the restaurant, forced closure is a serious setback.

Benefit of proactive pest management

Clearly, for many businesses it is not enough to simply call in the experts once an infestation is on the doorstep. Discreet and continuous pest prevention in the background that will not disrupt staff and will not get in the way of the working day is a safer, cleaner and more efficient solution.

This is especially important for food manufacturers. In Belgium, for example, a chocolate manufacturer had fly catchers installed to pre-emptively keep flying pests at bay, as well as other preventative measures against mice, moths and rats. To date, the business has not had issues with any kind of pest, and the preventive measures are continuing to work. An infestation for food manufacturers such as this one could severely disrupt business should pests get into the production area, leading many companies to choose to be safe rather than sorry.

Proactive recommendations

In light of the Cebr study’s findings, businesses should put plans in place to suppress the risk of pest infestation. Taking the following four steps are important components of a proactive approach to pest management for any commercial environment:

- **Exclusion** – Minimize opportunities for entry by blocking gaps, proofing doors, windows and open areas, in order to halt entry into critical business areas.
- **Restriction** – Implement pest knowledge and training for staff in order to limit access to food and areas attractive to pests within businesses.

- **Destruction** – Include innovative, effective solutions to eradicate existing infestations effectively and efficiently by professionally trained pest control technicians.
- **Monitoring** – Ensure regular checks for early warning signs of pest activity to enable a quick reaction to signs of activity, so that the impact on the business is kept to a minimum and halted as soon as possible.

Regardless of whether instituting pest control measures is a legal necessity or a response to an actual infestation, it is important that all pest control solutions are tailored to particular environments and individual businesses.

The key to combating pest infestations is understanding pest behavior and proactively administering pest management measures. Different pests display specific behaviors and preferences that help them thrive in their environment of choice. Therefore, it is essential to consider these attributes when designing and implementing measures to prevent or eradicate an infestation.

Businesses with prevention measures in place are already the least likely to be infested or disrupted financially by pests. It therefore stands to reason that businesses that adopt a proactive pest control approach are likely to experience greater productivity than companies that do not plan ahead. **FMJ**



Randolph Carter is vice president of marketing for Rentokil North America, one of the world’s largest pest management companies. J.C. Ehrlich Pest Control

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The New City Center
in Jubail Industrial
City (2012)



40 YEARS

of operation and maintenance in JUBAIL INDUSTRIAL CITY

BY SULTAN ALKHURAISSI

The Royal Commission for Jubail (RCJ) is the governmental authority in the Kingdom of Saudi Arabia responsible for the master planning and development of infrastructure, utilities and facilities in Jubail Industrial City (JIC), the largest industrial city in the Middle East.

The city is home to less than 1 percent of the Kingdom of Saudi Arabia's population, but supports the petrochemical processing facilities in the region and provides approximately 8 percent of the kingdom's national gross domestic product. Failure to provide proper maintenance and managing of its assets and facilities would have detrimental effects, not only for its infrastructure and facilities, but for the national economy.

What makes JIC unique has been its ability, over the last 40 years, to maintain and preserve all assets and the building portfolio in good condition, serving the purpose for which it was constructed. This ability has been achieved through effective planning, engineering, project management, and operations and maintenance (O&M) from day one of the JIC project in 1975.

Maintaining JIC's built environment has contributed to the overall experience of the more than 200,000 residents, preserved public assets and supported overall investments. This has been achieved through the operation and maintenance practices of the city, and the performance management regime implemented within the facility portfolio.

Jubail Industrial City O&M practices

To explain the role of the O&M sector within the RCJ, and to understand the complexity and challenges of the city's operation and facility maintenance within the city over the last 40 years, RCJ uses a dedicated O&M system. This maintains all infrastructure, assets and facilities through five core departments: roads, buildings, sanitation, irrigation and landscaping, and general utilities.

All O&M services are delivered through 26 service contractors comprised of more than 5,000 employees. Each department has a set of processes, procedures and improvement plans. The O&M practice over the last 40 years can be categorized into two main themes: management and framework.

MANAGEMENT

The existing organizational structure within the RCJ separates the responsibility of planning and capital program delivery — engineering, construction and capital projects — from the O&M activities. This enables the O&M organizations to focus on the long-term management of physical assets, resources and coordinated services to improve performance, optimize costs and manage life cycles.

O&M FRAMEWORK

The framework of O&M has evolved over time as the city has grown, but it is enabled by the pillars of leadership and strategy.



O&M strategy is part of the city's development and master plan, aligned and integrated with capital projects and planning to meet the demand and growth within the city. The separation of capital project management from the O&M strategy is a critical enabler of developing and optimizing O&M activities. Planning includes long-, mid- and short-term schemes based on city development requirements and asset conditions.

Governance and structures

RCJ's strategy and objectives are translated through O&M into work plans. Roles, responsibilities and authority are clearly defined by the organization's structure and integration between each function. RCJ utilizes 154 Jubail Management Procedures (JMP) that support achieving business goals and investment in conjunction with other sectors in RCJ.

The asset management operating model is one of the JMPs. It includes policies, procedures, standard work instructions and a performance management regime. These policies and procedures are supported by:

- Work instructions that ensure best practices
- An operational performance management framework that enables key metrics to be visible, allowing for proactive performance management
- A problem resolution system that enables root cause identification
- Process confirmation to ensure that change is sustained

Operational management

Work plans are executed through option identification regarding operation and maintenance strategies. Option identification covers infrastructure and built environments as well as the hard and soft services that reflect RCJ's strategy.

Option identification and approaches are based on the city's requirements and asset condition and are aligned with master planning and capital projects. They can include one of the following:

- Maintenance, repair and replacement carried out through service contracts

- Rehabilitation and replacement carried out through rehabilitation contracts
- Condition-based assessments for assets and infrastructure
- An audit of existing procedures and performance assessments

Preventive maintenance is the cornerstone for all departments within O&M. The 80/20 rule serves as guidance: 80 percent of resources and activities planning are allocated for preventive maintenance and 20 percent for corrective maintenance.

Supplier and contract management

All the O&M services are delivered through contracts. Currently, more than 26 O&M contractors handle roads, buildings, irrigation, landscaping and sanitation delivery services and asset management. Contracts are either output-based (performance) or input-based, depending on the scope, analysis and facility requirements.

All O&M contracts are based on the following plans, which require compliance with RCJ standards for the entire asset portfolio:

- Health, safety and environment management plans
- Quality management plans
- Preventive and corrective maintenance plans
- Emergency response plans
- Training and knowledge transfer plans

Performance management

Performance management, one of the critical factors in RCJ's vision for asset management, has been recently developed: "To deliver a world-class asset management service and be known as the center of excellence in our asset classes, in the Kingdom of Saudi Arabia and within the top five in the GCC."

To this end, RCJ recognized the importance of improving the existing practices of performance management, given the wide range of infrastructure and facilities and number of contracts within the city. RCJ manages the real-time performance of the service and ensures the availability of performance data at regular review meetings. This provides the power to identify when and what intervention is required and to implement improvements promptly to correct any further or sustained deterioration.

The purpose of performance management is to track actual performance against targets and identify opportunities for improvement. The key objectives of performance management are to ensure that:

- Targets are planned and expectations are set at all levels of the organization;



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- Performance of work is measured, monitored and reviewed on a regular basis;
- Areas of and reasons for high performance are identified and reinforced; and
- Reasons for poor performance are identified (by applying problem-solving and root-cause analysis) correctly in order to drive continual improvement.

A brand-new integrated performance management regime has been implemented for buildings and facilities as part of RCJ's asset management transformation strategy. Key principles applied in the development of this new performance management regime include:

- Effective performance of an organization depends on the contributions of activities at all levels — from top management policy development through to the operational front line.
- Performance measures should focus on outcomes that meet the strategic business objectives and contract objectives (rather than input-based measures or measures that do not correspond to an objective).
- Performance measures should be devolved and cascaded down to the relevant team level to promote ownership of improvement on the front line.
- A balanced set of measures should be used to measure overall contract performance (e.g., using a mix of short- and long-term measures and selecting measures that link cause and effect).
- Measures should include assessing both effectiveness (doing the right things) and efficiency (doing things right).
- Individuals' performance objectives should be aligned with the achievement of overall outcomes.

Part of performance management is the selection of KPIs that aim to:

- Align with the O&M strategic objectives
- Represent the minimum number required to form a balanced view of performance
- Represent an executive dashboard for top management in tracking departmental progress against strategy

Looking ahead

O&M is an ongoing process involving many aspects of an organization's operations, and it is not something that occurs at a fixed time on an annual cycle. It is an investment in managing the life of the facility in order to achieve the organization's business goals.

RCJ recognized the importance of O&M from the beginning and adopted an O&M strategy as part of the city's development and master planning. As a rule of thumb, every dollar spent on planning for O&M activity will save three dollars of unplanned breakdowns and repairs in the future.

RCJ is moving forward to improve and develop an O&M strategy that emphasizes:

- **Customer focus:** All activity must be focused on the end users; if they don't need or demand it, we should not be doing it. Conversely, if we are not meeting or exceeding our customers' requirements, then we need to take action.
- **Lean and optimized:** Eliminate waste in resources, process and procedures, and optimize performance by implementing total productive maintenance across all O&M contracts and activities. In addition, spread the culture of lean, measure spending and target losses.
- **Operational performance management:** Manage the real-time performance of the service. Provide performance data at regular meetings to identify when and what intervention is required. Identify actions to correct any further or sustained deterioration and implement them promptly.
- **Problem solving:** Ensure that problem-solving systems are in place so that when problems are identified, there are structured processes in place to isolate and eliminate the root cause(s). Then, standardize the actions to prevent recurrence of the problem.
- **Continual improvement:** Foster a culture that encourages continual improvement; for example, implement structured problem-solving techniques, lean and total productive maintenance approaches. **FM**



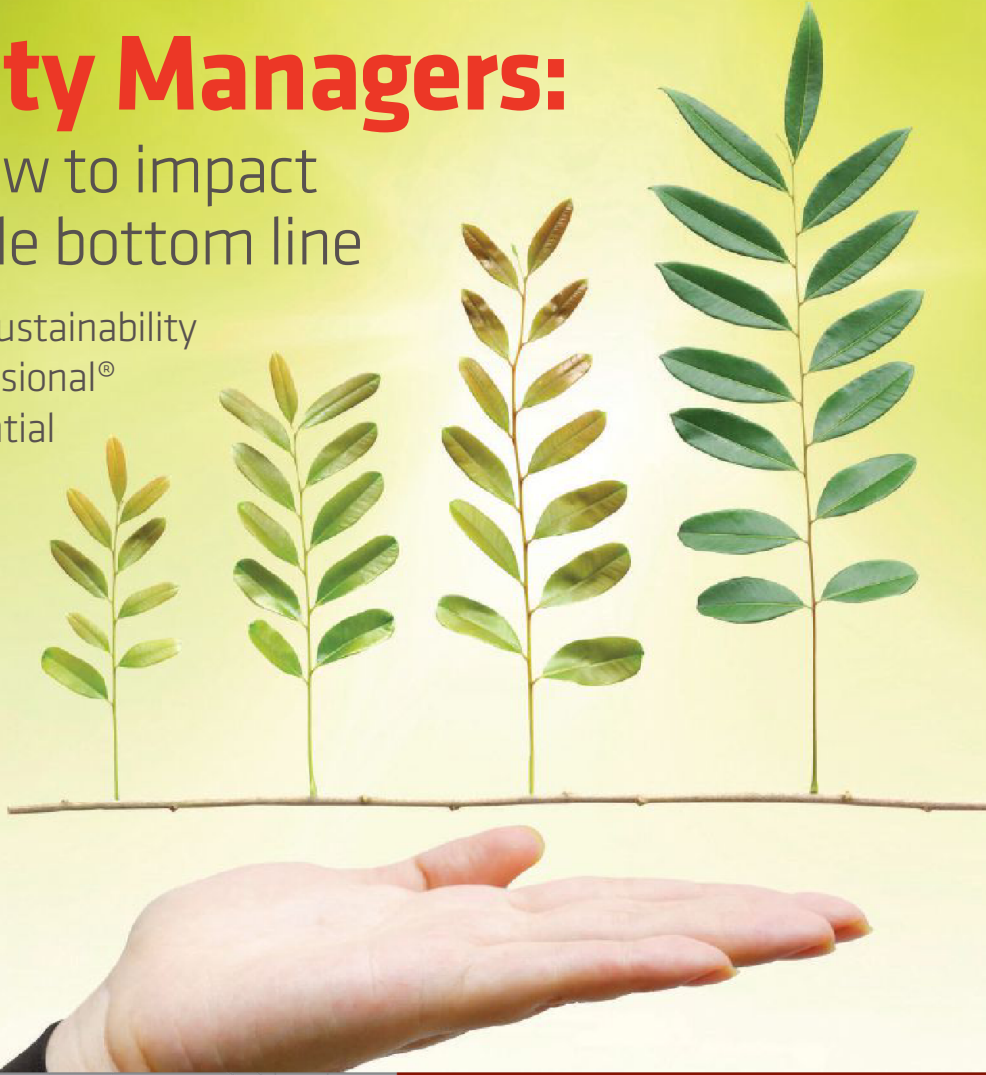
Sultan Alkhuraisi is the general manager for operations and maintenance in the Royal Commission for Jubail. He holds a master's degree in building engineering and has spent more than 14 years in operations and maintenance, with project management, plant maintenance management and value-engineering certifications.

His experience encompasses operations and maintenance, asset and facility management, contract management, project management, and computerized maintenance management systems. Currently, he leads the operation and maintenance sector, delivering O&M services across the two cities of Jubail and Ras Alkhair.

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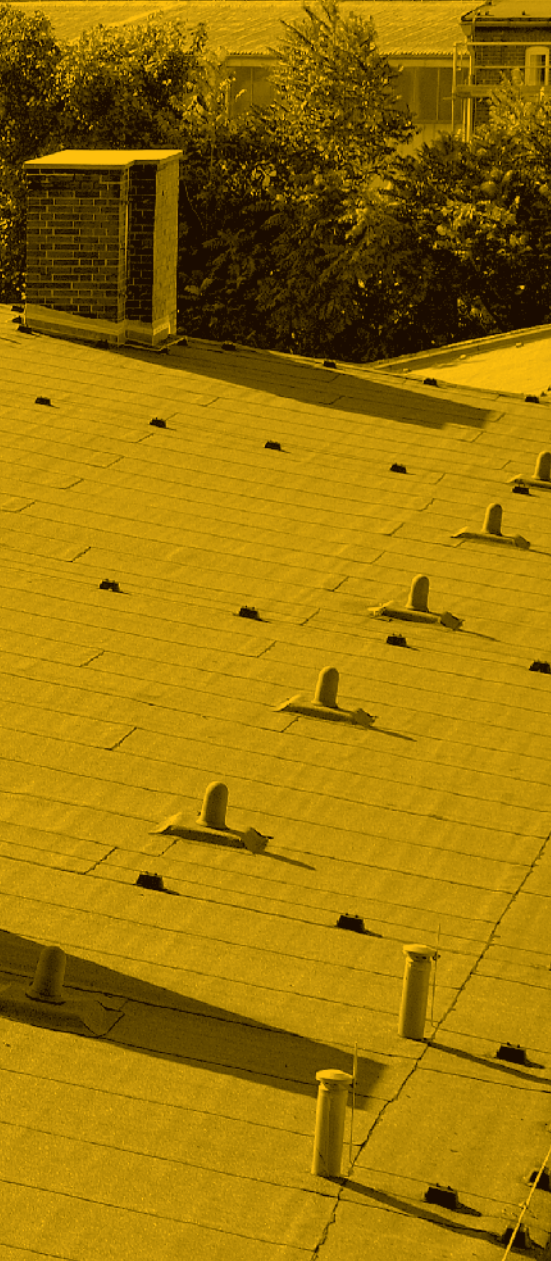
THAT'S NOT COVERED?!

UNDERSTANDING THE NUANCES OF A COMMERCIAL ROOFING WARRANTY

BY
ANTHONY
VROSS

Buyers of roofing systems too often get caught up in the numbers. They can become enticed by 20- or even 30-year warranties on products not designed to last that long.

The late, respected roof consultant Carl Cash authored one of the most credible and widely referenced studies on roof life and life cycle costs the industry's ever seen. Of the 14 types of low-slope membranes he studied, only prefabricated sheet metal and two types of built-up roofs experienced an average life beyond 20 years. Many other systems simply will not last that long. So, what exactly are manufacturers warranting?



the design, materials and maintenance plan support it lasting that long. A 20-year warranty alone should not provide you with that level of security.

Monetary amount matters

When there's a covered event, warranties may contain a monetary limit that caps the amount of coverage, which could be up to the cost of the original roof installation price, or less. Beyond that, sometimes this amount is prorated based on how far into the warranty term the claim occurs.

For instance, a claim on a roof that's 19 years old and is under a 20-year warranty could likely be limited to a figure that's a fraction of the cost of the installation of the roof. Be sure you know how much you'll have available for the fix, as your "buying power" could be further compromised by the increased cost of labor and materials from the time you purchased the roof.

Understand what you're getting and how much you're allowed for repairs, and know what questions to ask when you're reviewing the coverage and terms.

What initiates a warranty claim?

Unfortunately, many building owners and facility managers don't discover the deficiencies in their warranty until an event occurs that triggers a claim. At that point, it is often too late, because typically a warranty claim cannot come about unless there is a roof leak — specifically, a roof leak that causes damage.

A roof can be relatively new and completely saturated, for instance, but if the ceiling below it is keeping the building dry and is not leaking, then there is no damage; therefore there is no claim. Insulation can be wet, but without an accompanying roof leak there is no claim. Weather events can create havoc on a roof, but if the ceiling underneath remains dry, again there is no claim. Think of warranties in similar terms to lawsuits: without damages, there is no lawsuit.

When there is a leak, however, the remedy is simply to fix it. This is what

most warranties cover — in the case of a covered event, that is. And, even if an event is covered, the leak is only required to be repaired to the extent outlined by the warranty terms. Your expectation should not be anything beyond a repair. You are not entitled to a new roof, nor anything beyond simply repairing the leak.

So how do you determine what constitutes a "covered event?" Not all warranties are created equal, so it's essential to understand what your warranty covers. To varying degrees based on the individual terms, a warranty may cover labor and material to fix a material defect, but may not cover workmanship issues beyond two years.

Because the typical model is for these services to come from different entities, you'll want to pay particular attention to the specifics of the coverage and who is responsible for each.

A word on exclusions

As you dig into and evaluate a warranty's terms, you will usually find that the more loopholes it contains, the weaker it is. The weaker the coverage, the longer the duration is likely to be. The risk is weighted by the coverage.

Become familiar with the details of your warranty, as most of them are riddled with exclusions. The most common ones are:

- Even the smallest leak can result in compromised air and **consequential damage** to internal walls, ceilings and floors; furnishings, fixtures and equipment; as well as inventory and goods.

Further, leaks can open the door to slip-and-fall incidents involving employees or customers, and the associated risk of expensive workers' compensation claims or liability lawsuits. Roofing issues are commonly referenced as leading sources of litigation in construction and architecture, and as leading sources of building maintenance costs. The bottom line is that most

Warranties can provide a false sense of security. They evolved over time essentially for manufacturers to have something in writing to limit their liability. Even building owners felt assured knowing that having something in writing was better than having no protection at all. Warranties quickly grew in popularity and became a marketing tool.

Today, some warranties get buyers to focus on their duration as opposed to what they specifically cover. But it is critically important to know what your roofing warranty covers and the extent to which it is covered.

If you want a 20-year roof, the bottom line is that you need to make sure that

A WARRANTY IS NOT A SUBSTITUTE FOR MAINTENANCE PRACTICES.

warranty coverage is limited to fixing roof leaks, not the series of problems that result from water damage inside the building.

- **Natural and man-made disasters** outside of the control of the roofing materials manufacturer and beyond the design tolerances of the materials used, such as windstorms, hurricanes, lightning, hail or other unusual weather occurrences, are frequently listed as exclusions. Damage due to falling objects fits in this category as well. The design of the roof and the materials used in its construction should factor in the climate and surrounding environment that are likely to become issues.
- **Ponding water** or other conditions caused by improper drainage when the roof is not maintained per the care and maintenance requirements spelled out in the warranty is another common loophole. This is typically defined as water that sits on a roof for 48 hours under otherwise dry conditions. Poorly functioning drainage systems can affect structural safety, accelerate a roof system's deterioration and lead to a roof collapse.
- **Structural movement** of the building can have a dramatic effect on how the roofing system performs, and if this is the source of the warranty claim it won't be covered.
- **Environmental hazards** such as mold growth or rooftop grease overflow in restaurant buildings can cause premature deterioration of roofing systems and are uncovered on most warranties.

- Most warranties allow you to mitigate an emergency leak, even if it's not the same material or manufacturer, just to stop damage in a timely manner. It used to be a common fear of building owners that repairing an emergency leak before filing a claim would void the warranty. **Unauthorized repairs**, however, are typically spelled out as an exclusion in most warranties. Understand who is authorized to repair your roof per your warranty terms, and how long they have to repair it.
- **Change in usage** of the facility often makes the exclusion list. For example, this could include a case in which a non-air-conditioned space requiring no insulation is later turned into an air-conditioned space with a need for insulation, or a warehouse building that is converted to an industrial freezer for which the roof was not originally designed and manufactured.
- **Changes in building ownership** are typically excluded as some warranties are non-transferable. Many building owners plan to hold a property for well under a 20- or 30-year warranty's coverage length, so know where your roof warranty terms stand in relation to the purchase and sale of the facilities.
- **Wind speeds** beyond 55 miles per hour per the Beaufort scale are typically excluded, and more geographic areas than you might think experience wind speeds of this magnitude. Consider whether your region necessitates mindfulness of heavy winds when designing a roof system.

- There's a **notification process** to every warranty, and it's important to know what that is. If you don't properly notify the manufacturer in writing of a leak and warranty claim within a certain time limit written within the terms — commonly around 48 hours — the claim will be rejected.

Is a roofing warranty even necessary?

A warranty is there for when something unexpected or catastrophic happens; not for day-to-day roof leaks or as a substitute for maintenance practices. It is not for someone looking for zero costs. It's there so you have some kind of protection when a sheet just splits or when there's a defect in the material. There are roof systems no longer on the market due to bad defects, and you should have a warranty to protect yourself against those types of situations.

More importantly, if you're going to pay for a warranty, focus more on the coverage than the duration. Focus on the roof system and what its true life expectancy is versus the term of the warranty. Maintain the roof, not the warranty. The care and maintenance requirements within a warranty contract are pretty much the preventive maintenance steps you should be taking anyway.

Remember, you're not buying a warranty. You're buying a roof. **FMJ**



Anthony Vross is a co-owner of Simon Roofing, a U.S.-wide roofing contractor and manufacturer that was recently named among the

largest roofing contractors in the United States. Contact him at +1-800-523-7714 or visit www.simonroofing.com.

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APPS EXPEDITE FACILITY ISSUE REPORTING, RESPONSE

Two new mobile portals leverage a common platform to expedite issue reporting and response in facilities.

CrowdComfort's Human Sensing Network™ technology allows building occupants and facility managers to use their smartphones to report real-time geo-positioned reports of and responses to environmental issues. This provides a way to capture critical information and communicate it to decision makers and event participants by transforming occupants into physical sensors, who respond to the stimuli related to an emergency – natural or man-made – ranging from disaster to something as simple as a burst pipe.

The CrowdComfort User app improves the quality of occupant reports by providing an easy and intuitive way to flag building issues and share information with peers. This app improves upon the responsiveness of previous features, allowing users to:

- Report on and follow issues.
- Agree to and comment on existing issues.
- Submit photos of problem situations.
- Provide geo-positioned, time-stamped delivery reports.
- Receive notification of a reported issue's resolution.
- Receive reports of nearby issues according to their affiliation.

The Manager CrowdComfort app gives facility leaders their own mobile app to monitor and delegate solutions. With Manager CrowdComfort, facility leaders have enhanced mobility to connect the information from occupant reports to real-time building issues faster than ever.

CrowdComfort applications are available on the App Store and on Google Play. For more information about CrowdComfort, visit www.crowdcomfort.com or Twitter: [@CrowdComfort](https://twitter.com/CrowdComfort).



CROSS-FUNCTIONAL PROTECTIVE GLOVE WITH HIGHEST-IN-CLASS WEARABILITY RATING

In many industries, impact protection, cut protection and worker comfort must all be considered when choosing protective gloves, since some applications or job sites present multiple hazards. Safety Today's new Brass Knuckle® SmartShell™ BKCR4499 gloves are a best-in-class solution, providing high levels of cross-functional protection and a glove construction that utilizes the company's Fit, Form and Function™ standard.

The BKCR4499 begins with a machine-knit, ultra-high-molecular-weight polyethylene shell that offers ANSI cut level 4 protection, which has a strength-to-weight ratio that's eight to 15 times higher than steel. The glove's layered construction is designed to conform to the natural contours of the hand and includes flex points in the fingers, wrist and palm, helping to ensure maximum comfort and increase compliance.

Thermoplastic rubber padding is sonically welded to the back of the glove and offers protection

from contusions, smash injuries, punctures and object strikes, with pinch protection extending to each fingertip. The sandy finish of the black nitrile palm coating offers excellent wet grip and slip resistance along with abrasion resistance.

For long-lasting durability, the BKCR4499 is double-stitched in high-wear areas such as the fingertips, index finger and palm. Its excellent flexibility and top-rated ergonomic design make this glove one of the most wearable in its class. The bright lime green shell color meets the requirements of American National Standard (ANSI/ISEA 107-2010) for High-Visibility Safety Apparel and Headwear Devices.

The BKCR4499 is recommended for assembly, agriculture, construction, forestry and logging, heavy equipment, machine operation, manufacturing, oil and gas and other petro-based refining, mining, rigging, and other heavy-duty work environments.

Get additional details at www.safetytoday.com.

LED LUMINAIRE OFFERS VERSATILE, ENERGY-SAVING AND AFFORDABLE SOLUTION FOR AREA, SITE AND ROADWAY APPLICATIONS

Power management company Eaton has introduced its Lumark Prevail LED Luminaire, a versatile, energy-saving and affordable lighting solution for area, site and roadway applications. Featuring a patent-pending architectural design, the Prevail luminaire combines easy installation features with multiple controls options, resulting in significant installation, energy and maintenance savings for both retrofit and new applications.

In addition to the integrated sensor control system, the luminaire is available with an optional LumaWatt outdoor wireless control and monitoring system, which manages the lighting levels according to pedestrian and traffic safety needs. The system allows for metering power consumption and wireless communication and employs four control strategies to automate luminaire behavior including scheduled on/off, scheduled dimming, occupancy detection

and daylight harvesting. The product is also offered with an optional National Electrical Manufacturers Association three-pin or seven-pin photocontrol receptacle, enabling wireless dimming when used with a compatible photocontrol.

Prevail's patent-pending, standard versatile arm mount makes retrofit and new installations easy. The standard arm, which features a built-in wiring compartment for simple installation, can also uniquely accommodate a wide range of existing fixture drilling patterns and can be installed on both square and round poles. The fixture is also available with a wall and mast arm for building and roadway applications.

The luminaire is offered in four optical distributions that deliver controlled, uniform illumination and maximum light levels, directing the light exactly where it's needed. A low-profile, modern

architectural design allows one housing to accommodate multiple lumen packages ranging from 6,100 to 15,100 nominal lumens to replace typical high-intensity discharge products from 150 watts to up to 400 watts.

With lumen maintenance greater than 92 percent at 60,000 hours, the rugged, die-cast fixture housing is 3G vibration and IP66 rated, which provides years of operation with minimal service requirements for area lighting applications including parking lots, walkways, roadways and building areas in commercial and industrial applications.

To find out more about Eaton's lighting solutions, visit www.eaton.com/lighting.



COMPACTOR MINIMIZES SPACE NEEDED FOR WASTE MATERIALS

Trash compaction keeps debris out of sight, minimizes access by rodents and scavengers, results in fewer hauls and reduces associated costs. The new CP-3101-HD Industrial Compactor is ideal for handling packaging materials, dry wastes and process scraps in warehouses and large retail outlets, as well as for light to medium industrial/institutional uses.



The waste compactor boasts a single-cylinder design and dozens of customizable features – including multi-cycle timer, automatic safety retract and freestanding power unit, which come standard. In addition, the product features structural steel supports (versus formed steel), superior breaker bar rigidity, thrust beam design and ram guide systems.

Customizable to meet unique customer needs, the CP-3101-HD has dozens of optional features such as rear-load hopper with interlocked gate, side-load security chute, through-wall ratchet

binder assemblies, photo eye start system and keyed pinning/boost override system.

Summary of CP-3101-HD features:

- Single cylinder design
- 59 by 58-inch clear top opening
- Handles packaging materials, dry wastes and process scraps
- 100 cubic yards per hour volume displacement
- 76,960 pounds maximum force

For more information, visit bestcompactors.com, email info@sp-industries.com or call **+1-269-793-3232**.

CHEMICAL-RESISTANT CANOPY HOODS

Canopy fume hoods are designed to collect and exhaust corrosive vapors, heat, steam and odors when mounted over areas with water baths, hot plates or portable equipment.

HEMCO canopies are available in wall, island and corner models and can be ordered in stainless steel or fiberglass. Manufactured of molded one-piece composite resin, fiberglass canopy hoods are lightweight and can be wall-mounted or suspended from the ceiling over island locations. The canopy fume hood's smooth surfaces provide superior chemical, corrosion and heat resistance. Optional side panels prevent cross drafts and further improve airflow while providing a way to contain chemical spills.



Visit HEMCO at www.hemcocorp.com or call +1-800-779-4362 for more information.

SUPPORTING FLEXIBLE STORAGE IN CHANGING WORKSPACE ENVIRONMENTS

A new family of three minimalist-design, contemporary auxiliary side table/storage carts has been introduced for use in office environments.


HOLD Workspace and Collaborative Carts are ideal for temporary storage and personal items especially in the changing personal workspace of desk and benching systems, or as an alternative to a mobile caddy beneath a desk; as well as in training centers and conference rooms. They also provide a functional and aesthetic solution for retail boutiques, health care and hospitality settings.

HOLD comprises a rectangular, open-box frame with one or two fixed shelves, depending on model, and a methacrylate top. The carts are available in three sizes, with or without casters. HOLD's simple, elegant design fits discreetly in any space, and is compatible with a broad assortment of design plans and color palettes. The carts are manufactured from painted steel and offered in Textured Black, Forge Grey, Grey Beige, Mustard and Textured White.

Visit Magnuson Group at www.magnusongroup.com to learn more.



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ISSUE	MARCH/APRIL	MAY/JUNE	JULY/AUG.	SEPT./OCT.	NOV./DEC.	JAN./FEB.
ARTICLE DEADLINES	<i>Deadline has passed</i>	Feb. 26, 2016	April 29, 2016	June 24, 2016	Aug. 26, 2016	Oct. 28, 2016
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THEMES	Tech Trends <ul style="list-style-type: none"> Innovations in FM technology Change management for new tech implementations Tech impact on productivity/efficiency 	Back to Basics <ul style="list-style-type: none"> Operations and maintenance Budgeting Proactive asset management Safety/security 	Sustainability <ul style="list-style-type: none"> Energy efficiency and fiscal responsibility Reuse/upcycling Meeting mandated sustainability targets 	Leadership <ul style="list-style-type: none"> FM and the leadership journey Ongoing education/professional development FM pioneers and future leaders Fostering public awareness of FM 	Strategic Planning <ul style="list-style-type: none"> Planning and project management Benchmarking/data analysis Risk mitigation 	Workspace as a Tool <ul style="list-style-type: none"> Flexible workspaces and support tools Leveraging design to foster productivity Addressing space reduction

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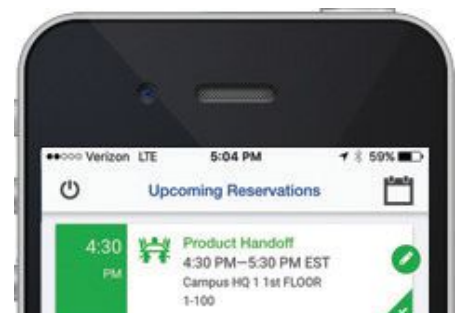
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SUSTAINABLE PROCUREMENT FOR FM

BY JOHANNA KERTESZ



This article is part of a regular series in FMJ Extended contributed by IFMA's Environmental Stewardship and Sustainability Strategic Advisory Group.

Facility management professionals have been strong supporters of sustainability for years. With job responsibilities centered on the built environment, efforts related to green building materials and energy efficiency have been a focus for facility managers around the world.

In the U.S., the Leadership in Energy and Environmental Design (LEED) standard for green buildings has driven sustainability initiatives since the early 2000s. These efforts have led to many environmental improvements as well as cost savings related to reductions in energy use. Facility management professionals have wholeheartedly accepted sustainability into their long list of job responsibilities and the environment has benefited as a result.

Why focus on procurement?

With so many other duties to be managed on a daily basis, why should a facility manager add procurement to his or her list of responsibilities? In short, because the power of procurement is significant.

Purchasers — ranging from the head of a single household to the head of purchasing for a Fortune 500 company — send messages to the marketplace with every dollar spent. Collectively, institutional purchasers spend an estimated US\$10 trillion dollars on goods and services each year.¹

When institutional purchasers — a group that includes governments, businesses, educational institutions and non-profits — ask for something, the market must respond. Therefore, institutional purchasers have great leverage for making positive changes.

A 2009 report from the U.S. Environmental Protection Agency estimated that approximately 29 percent of U.S. greenhouse gas emissions can be attributed to the provision of goods.² This finding suggests that those interested in sustainability should place an emphasis on procurement and the entire life cycle of a product — from the mining and extraction of materials, to the manufacture and distribution of the product, and finally to the end-of-life management.

By considering the entire life cycle of a product before making a purchase, we can minimize impacts, reduce costs and conserve resources more effectively since many impacts occur early in a product's life cycle. Using a life-cycle approach also allows us to reduce or even eliminate costly end-of-life management processes.

Until recently, purchasers have focused primarily on environmental concerns. However, as Sam Hummel notes in *A New Era for Green Procurement*,³ “Environmental factors are no longer the only points of emphasis for the responsible purchasing movement... ‘sustainable procurement’ requires taking into account the economic and social impacts of products as well as environmental impacts throughout their life cycle.”

By balancing the environmental, social and economic dimensions of procurement, a purchaser can address the unique needs of the organization in an efficient and effective manner.

What can facility managers do?

Facility managers wear many hats on a daily basis and are likely involved in the procurement of a variety of goods and services. While that means there's probably barely time for a lunch break, it also means that, when it comes to engaging in sustainable procurement, the opportunities for facility management professionals are endless.

Before considering the specific product and service opportunities in the facility management arena, it's important to note the value of a thoughtfully planned sustainable purchasing program. The best way to make meaningful, long-term impacts is to develop a sustainable purchasing program for your department or entire organization. While this task may seem daunting at first, the benefits of institutionalizing your program will be reaped for years to come.

Once you've developed your program and established your priorities, consider the following examples for putting your program to work.



Custodial

Custodial products and services are a great place to start for facilities that are new to sustainable purchasing. “Green cleaning” has become rather mainstream and there are many third-party standards accepted by the industry, making it very cost effective. In fact, facilities implementing green cleaning programs may realize cost savings through inventory reduction and minimizing the amount of hazardous waste generated.

- **Issues:** Traditional cleaning products often contain toxic chemicals that are harmful to people and the environment. Basic cleaning services may use less effective tools leading to excess product application and increased worker exposure to harmful chemicals. After-hours cleaning increases facility energy use.
- **Possible solutions:** Adopt a green cleaning policy that requires the use of third-party certified green cleaning products (e.g., Green Seal or EcoLogo). Develop a green cleaning program that incorporates the use of green cleaning equipment and practices. Consider transitioning to “daylight cleaning” to reduce energy use during non-business hours.

CUSTODIAL CASE STUDY

While implementing a green cleaning program, Rutgers University reduced its annual cleaning chemical costs more than 20 percent by simplifying the number of chemicals in use and by metering portions so there was less waste. Because workers were no longer being exposed to harsh chemicals, the institution reaped further savings in lower workers' compensation insurance premiums.

*“The custodial staff liked the new products so much they wanted to take them home, so we set up a program for them to purchase them at a discount,” recalls Kevin Lyons, director of the Supply Chain Management program at Rutgers Business School and author of *Buying for the Future: Contract Management and the Environmental Challenge*.*

SUSTAINABLE PURCHASING DEFINED

Sustainable purchasing is a holistic way of considering the impacts of procurement, including the environmental, social and economic dimensions.

What's included in those dimensions?

- » **ENVIRONMENTAL DIMENSION:**
The importance of maintaining the natural systems on which life (and our markets) depends, now and in the future.
EXAMPLES: greenhouse gas emissions, human health impacts
- » **SOCIAL DIMENSION:**
The importance of maintaining the social systems on which society (and our markets) depends, now and in the future.
EXAMPLES: child labor, fair wages
- » **ECONOMIC DIMENSION:**
The importance of maintaining the economic systems on which financial systems (our markets) depend, now and in the future. Economic sustainability is measured at the system (as opposed to the firm, enterprise or organizational) level.
EXAMPLE: monopolistic behavior

Source: Sustainable Purchasing Leadership Council, Principles for Leadership in Sustainable Purchasing Version 1.0 (www.sustainablepurchasing.org/public/splc_principles_for_leadership_in_sustainable_purchasing_v1_0.pdf).



Lighting

Facility managers are experts in the lighting needs of their facilities. Since lighting represents a large portion of the building's energy use, this is an area of great potential for implementing sustainable purchasing.

From switching to LEDs to installing motion sensors, there are many procurement strategies for reducing the impacts of lighting. Benefits center on cost savings across the life cycle of the products — by switching to more efficient lamps, energy use decreases, as does staff time for bulb replacements since the more efficient bulbs last longer. In addition, a facility can reduce the amount of hazardous waste generated by reducing the number of mercury-containing lamps used.

- **Issues:** Less efficient bulbs increase facility costs by increasing the number of bulbs used each year, increasing energy costs and the staff time needed to change the bulbs. In addition, mercury-containing lamps are considered hazardous waste and are more expensive to manage than non-mercury-containing lamps. Inefficient use of lighting throughout the building (e.g., lamps turned on in empty rooms) leads to unnecessary energy use.
- **Possible solutions:** Consider a switch to more energy-efficient lamps. This may require a change in the fixture/housing as well, but the cost savings you'll achieve will more than cover the initial expense. Install motion sensors in rooms that are not occupied continuously throughout the work day. When conducting renovations or new construction, consider incorporating daylight as much as possible.

LIGHTING CASE STUDY

As part of Best Buy's commitment to reduce its carbon footprint, the retailer installed new lighting in 840 stores. The stores transitioned from high-wattage, high-bay metal halide fixtures to more efficient, lower-wattage fluorescent fixtures. It reduced lighting energy usage by nearly half — the equivalent of removing more than 12,000 households from the grid. And it's saving the company money on its monthly utility bills, more than what was originally forecast.

The lighting retrofit was a simple change that was scaled across the chain, and which created significant results. Not only did the project have a substantial impact on exceeding the company's 20 percent carbon reduction goal, but the new lights created a brighter store environment that's better for employees and customers. Best Buy recently set a new goal to reduce carbon emissions 45 percent by 2020 through additional operational reductions and renewable sourcing.

WHAT ARE THE BENEFITS?

The benefits of sustainable purchasing are numerous and vary by the product or service category. Your sustainable purchasing program can be tailored to achieve certain benefits. The table below provides examples of the types of benefits that can result from sustainable purchasing.

ENVIRONMENTAL

Reduced greenhouse gas emissions

Reduced impacts on human health

Reduced water consumption

Reduced waste

SOCIAL

Employee engagement

Fair trade

Human rights

Improved occupational health and safety

ECONOMIC

Open competition

Transparency of information

Use of diverse suppliers

Use of local suppliers

Source: Sustainable Purchasing Leadership Council, Guidance for Leadership in Sustainable Purchasing Version 1.0 (www.sustainablepurchasing.org/guidance).

Green building materials

As mentioned earlier, LEED has driven a great deal of sustainable purchasing over the last several years. Facility managers make decisions on many building material purchases — including but not limited to carpet and flooring, furniture, paint and hand dryers. By choosing the more sustainable options within these categories, facility managers have the ability to improve indoor air quality within the facility and reduce the environmental impacts related to the production of the product.

- **Issues:** People spend a good portion of their time indoors and traditional products emit chemicals that negatively impact the indoor air environment. Facilities require the use and purchase of many material goods. Many of the products used in facilities use energy.
- **Possible solutions:** Procure low-emitting materials. Seek out durable goods and recycled content products. When selecting products that consume energy, choose energy-efficient options.

Ensure success: Develop a sustainable purchasing program

The Sustainable Purchasing Leadership Council (SPLC) has great resources to guide you through the process of getting your program started — from creating a vision to securing program and resource commitments to establishing program priorities. By taking the time to institutionalize your program and create a program plan, you ensure that your efforts will be both efficient and effective. Visit www.sustainablepurchasing.org for more information on helpful program resources and to learn more about becoming part of an engaging sustainable purchasing community.

If the facility management team drives the sustainable purchasing program, the priorities of the program can be

GREEN BUILDING MATERIALS CASE STUDY

After a steady stream of issues and complaints about the mess paper towels were leaving in the restrooms, the City of Portland's Facilities Services installed high-speed energy-efficiency (HSEE) hand dryers in the restrooms of the Portland Building, a 15-story municipal office building that houses many of the city's municipal bureaus and departments.

When it was built in the 1980s, the Portland Building's restrooms were equipped with conventional electric hand dryers. However, because of the length of time it took for a user's hands to dry under the electric hand dryers, most occupants opted to use paper towels instead. After looking at how much the building was spending on paper towels every year, the city made the decision to install the HSEE hand dryers as a way to reduce mess, cost and the amount of waste going to landfills.

HSEE hand dryers use high-speed motors to produce high-velocity airflow, which uses up to 80 percent less energy and offers a more rapid dry time of 8-10 seconds in comparison to the typical 30-45 seconds for conventional models. The HSEE hand dryers were US\$1,200-1,400 per unit — about three to four times more expensive than the conventional electric hand dryers previously installed. However, due to the HSEE dryers, the city experienced a reduction in both custodial supply and waste disposal costs. While the city expected to see a slight increase in energy consumption costs, Facilities Services felt it would be offset by the decrease in paper towel costs.

To read more about this project, visit www.portlandoregon.gov/brfs/article/479368.

tailored to complement the priorities of the facility. For example, a facility manager may be charged with reducing the overall energy footprint of a facility — in this case, the program could focus on energy-saving goods and services. Protecting and improving the indoor air environment for employees is another common facility-based goal, so this type of program could place emphasis on low-emitting products.

Sustainable purchasing is a powerful tool to help you reach your facility goals, use your budget and time efficiently, and be a leader in sustainable facility management. **FMJ**

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Johanna Kertesz has coordinated the State of Minnesota's sustainable purchasing program at the Minnesota Pollution Control Agency for eight years. The

state's program focuses on developing less impactful state contracts for goods and services. Learn more about the program at www.pca.state.mn.us/epp.

The State of Minnesota became a Founding Member of the Sustainable Purchasing Leadership Council (SPLC) in 2013. Kertesz currently serves as the chair of the SPLC's Technical Advisory Committee.

WHY THE COP21 PARIS CLIMATE PACT IS A BIG DEAL FOR FACILITY MANAGERS

BY ERIC TEICHOLZ

The 195-country pact to combat climate change, signed in December 2015 near Paris, France, has dramatic implications for facility managers.

Buildings account for over 39 percent of CO₂ emissions in the U.S. — more CO₂ than any other country in the world except China. U.S. buildings also consume over 70 percent of the electricity, which in turn is the most significant contributor to CO₂ emissions. Buildings are on track to produce 5 thousand million million (that's 15 zeros) British thermal units (BTUs) of energy within the next 10 years. At present most of these BTUs will be produced by fossil fuels.

Key points of Paris accord

The overall goal of the accord is to limit global warming to a maximum of 2 degrees Celsius (3.6 degrees Fahrenheit) above temperatures as they were at the beginning of the Industrial Revolution. If we fail to reach this goal the Earth's climate will become dangerously unstable.

We have already reached almost the halfway mark on the path to that red line. Working to reverse civilization's current trajectory, 186 countries at COP21 identified emission reduction targets for the first five-year cycle starting in 2020.

The initial targets, though not low enough to meet the 2 degree limit, will be lowered every five years until 2050 at which point human-made emissions will be at a level that oceans and forests can absorb.

Unlike in previous global climate discussions, COP21 participants agreed on transparency rules mandating that countries meet their specified targets. Finally, regarding the economics of emission reduction, affluent nations agreed to help poor countries finance their emission-reduction initiatives.

Why the Paris agreement will work

In a webinar about COP21, John Holdren, director of the U.S. Office of Science and Technology Policy, Executive Office of the President, gave several reasons why he thought the agreement will succeed in meeting its long-term goal:

- COP21 is a bottom-up approach in which each country develops its own emission targets;
- There was an initial commitment of strong support from both the U.S. and China, the two biggest emitters in the world;
- With recent events such as China's Red Alert, it is becoming more difficult to deny the human contribution to climate change or the necessity for adaptation, resilience and mitigation.

Additionally, energy and climate-related technology is getting cheaper and better. Solar prices in the U.S. have dropped by more than 80 percent in the past six years. In this same timeframe, the cost of energy derived from wind is down 60 percent and LED costs have declined by more than 90 percent. It will become easier to lower our emission targets as clean (non-fossil) energy begins to cost

less than energy derived from fossil fuels.

The private sector will play an increasingly important role in imposing actions that reduce global emissions. Many of the largest international corporations have made firm commitments to green buildings toward the reduction of emissions. Corporate employees, clients and the public will increasingly demand independence from fossil fuels.

Facility managers: carpe diem

Facility managers are in a position to play a central role in the reduction of carbon emissions. Major U.S. cities are already issuing specific emission targets which will figure importantly in the management of buildings. One example of this trend: within two weeks of COP21, the city of San Diego passed legally binding legislation to be using zero fossil fuels by 2050. Such action makes sense from a financial as well as an environmental perspective.

IFMA members need the tools and the education to understand, justify and plan for climate change and to be leaders in climate mitigation and adaptation. Only then can we play a major role in supporting the goals of the Paris climate accord and make the world environmentally viable for the next generation. **FMJ**



Eric Teicholz, IFMA Fellow, is the chair of IFMA's Strategic Advisory Group for Environmental Stewardship, Utilities and Sustainability.

**FROM
THE
GROUNDS,
UP**

**SELLING THE
VALUE OF
FACILITIES**

BY JOHN RIMER

There has been much deserved emphasis on getting facility management to the C-suite, which is necessary for our industry to realize success. However, all efforts expended on earning our way to the executive level can be quickly dashed if facility staff and contractors are not on board with the initiative.

Thus, it is imperative that we not only sell the value of facilities up the food chain and across the organization, but that we ensure that staff and contractors buy into this vision and help with the execution thereof.

This necessity becomes painfully obvious and potentially problematic when you consider that a facility manager is only one person. Most facility managers have a handful to a dozen building engineers reporting to them, with typically twice as many custodial and grounds personnel under their leadership — each of whom interact daily with the customer.

These interactions can quickly undermine your efforts; or they can significantly multiply them, if equipped and managed appropriately.

Changing the mindset

This leads us to the painful reality that facility personnel are not typically respected for their contributions. For

example, when an item turns up missing in the office, who is the first to be blamed? Typically, the custodial team. This mindset must be changed at all levels. Why? Because often they are not valued; their jobs are viewed as menial and of little importance.

That is a misconception. These people, just like other facility staff, show up each day and work hard doing things that most would not want to do or couldn't fathom.

Some might argue that custodial, grounds and even building engineers have earned the negative reputation of their own accord. However, the counter to this is the proverbial chicken-and-egg argument: Is the negative perception caused by those who occupy that position or the value assigned to such positions?

Consider the high turnover that is typical of custodial staff. Ever stop to wonder why? Is it because custodial services is

a low-skilled, low-paying, dead-end job? Or is it because the employees fulfilling such duties do not feel respected or valued? What if we helped them to see the impact and fruits of their labor? Might they gain a sense of self-respect and purpose that would motivate them to work harder and to stick around longer? Could they not, in turn, help sell the value of their services and the facility department to the customers?

Many of you might think that this is impossible or that it sounds too utopian. But if we are going to continue the growth of our industry and earn a seat at the executive table, then we need to build and deliver that value from the "grounds" up. So where do we start?

Taking the first step

The first step is for facility staff at all levels to recognize the value and impact their efforts have on the triple bottom line. This impact, however, is not just the bottom line from a cost perspective;

TO CONTINUE THE GROWTH OF OUR INDUSTRY AND EARN A SEAT AT THE EXECUTIVE TABLE, WE NEED TO BUILD AND DELIVER VALUE FROM THE “GROUNDS” UP.

rather, it includes the larger implications of worker productivity, revenue generation and branding.

The maintenance, cleanliness and aesthetics of grounds and interior spaces have a direct effect on customer and employee perception, productivity and safety. Additionally, indoor environmental quality, such as lighting, temperature and noise, can impact workers' stress, health and productivity.

Such effects can be and have been quantified. For example, studies have shown that for every one degree Fahrenheit outside the “comfort zone,” worker productivity drops by two percent. Another study found that occupant productivity increased by nine percent after dirty HVAC air filters were changed. Changing air filters is one of the simplest maintenance tasks we can perform and yet it can have a significant effect. Other studies have shown similar correlations for noise, lighting, etc., which all have a tangible impact on the triple bottom line.

This recognized value should be embedded into the fabric of the facility management team, which requires leadership. The facility manager or director should espouse this value proposition and respect the role and contribution of each team member.

Championing the FM team

Once facility staff and contractors understand the impact of their actions, they must learn to be their own advocates, selling themselves and the overall facility department. To do so

successfully requires adequate training and equipping.

With respect to training, a “soft skills” class can go a long way toward helping facility staff make the most of every customer interaction. Additionally, coaching and enabling staff to handle difficult customers and negative situations is often where the FM team can really shine.

Each team member should have an “elevator speech,” a roughly 10-second, carefully crafted explanation of what his or her team does that provides value to the organization. Take, for example, the role of custodians. If asked what they do, they could state that their team works hard to provide “a safe and clean working environment that keeps employees happy, healthy and productive, delivering value to the bottom line,” rather than saying that they empty trash cans, clean bathrooms, wash windows, etc.

They do not perform these tasks simply to do them — there is a purpose. With an elevator speech, team members can take advantage of any opportunity, no matter how brief, to succinctly communicate their value proposition.

Once you have your staff on board with helping to sell the value of facility services, you should evaluate ways to maximize all other touchpoints and incorporate this into a marketing plan.

For example, perhaps building occupants visit the facility intranet website to submit service requests and to see what's

on the menu in the cafeteria. This could provide a valuable opportunity for you to share the department's progress in achieving relevant goals, highlighting team accomplishments (e.g., earning certifications/credentials) and possibly shining the spotlight on a different team member each week, including his or her training, skill sets, etc. These methods can be invaluable in selling and promoting the value of the FM team.

In short, facility managers and staff must be deliberate and diligent with the continual selling of the value their department provides to the triple bottom line. It's up to each of us to make the most of every opportunity. **FMJ**

RESOURCES

- The Effects of Indoor Air Quality on Performance and Productivity. Indoor Air 2004.
- Windows and Offices: A Study of Office Worker Performance the Indoor Environment. California Energy Commission.



John Rimer, CFM is president of FM360 Consulting and has 18 years' facility management experience in a variety of capacities and industries. He uses his breadth of knowledge and diverse expertise to provide a comprehensive perspective to his clients and students.

Rimer is very active in the facility management community and an avid proponent of education. As such, he is an IFMA Qualified Instructor and an approved Building Operator Certification instructor.



IFMA CREDENTIALS ASSIST U.S. DEPARTMENT OF VETERANS AFFAIRS WITH FBPTA COMPLIANCE

BY JOHN M. WAGNON

Five and a half years ago, U.S. Senators Thomas Carper of Delaware, Barbara Boxer of California and Susan Collins of Maine proposed legislation known as the U.S. Federal Buildings Personnel Training Act (FBPTA).

The law requires all personnel providing building operations and maintenance services in U.S. federal facilities to demonstrate competency in their performance areas. The law's premise is that when trained and certified facility managers properly maintain buildings, the facility portfolio will perform better at a lower cost, protect occupant health and safety, increase productivity and ultimately provide a return on investment to American taxpayers. President Barack Obama signed the bill into law on Dec. 14, 2010.

Since then, the U.S. General Service Administration (GSA) has worked with facilities representatives from various government agencies, IFMA

and other industry associations to identify 12 competency areas, 43 core competencies and 232 performances necessary for federal personnel performing building operations and maintenance, energy management, safety and design functions. The GSA has also identified industry-recognized courses and credentials that encompass those competencies and performances — such as IFMA's Facility Management Professional™ (FMP®), Sustainability Facility Professional® (SFP®) and Certified Facility Manager® (CFM®).

Department of Veterans Affairs Facility Management School

To comply with the FBPTA, the U.S. Department of Veterans Affairs (VA) established the Facility Management School (FMS), which is part of the VA Acquisition Academy located in Frederick, Maryland, USA. FMS offers resident and online courses, dedicated workshops, training and certification in a range of FM-related disciplines.

In September of 2014, FMS and IFMA entered into a strategic partnership that gives VA FMs access to IFMA's credential programs, which fulfill many of the obligations set by the FBPTA. The VA operates more than 1,800 facilities, including outpatient sites, hospitals, cemeteries, benefits administration offices and Vet Centers,¹ and employs more than 360,000² people to take care of an estimated 22 million veterans.³

Dr. Paul Krasley, vice-chancellor of FMS, states, "FMS is in place to provide the skills necessary to be compliant with the FBPTA. The vision of the FBPTA is to develop and maintain the knowledge and skills of FM-related professionals in order to reduce the collective energy use and operational costs of government facilities, and to provide safer, longer-lasting facilities for the U.S. government. My goals for FMS is to make it the very best provider of FM and capital project delivery training, education and certification."

Krasley, who is a U.S. Army Veteran, has a vast government background including

"IFMA IS THE LEADER IN FM TRAINING AND CERTIFICATION."

— DR. PAUL KRASLEY, FMS VICE-CHANCELLOR

eight years in the military, 25 years as a government contractor and seven years as a government employee who understands the importance of reliable facility management. He believes that all government agencies should comply with the FBPTA to ensure savings for taxpayers.

Not only does Krasley believe in the importance of FM education; he also believes that IFMA's credentials are the best choice for FM personnel. He states, "IFMA is the leader in the FM field. The value is with the credential itself and the discipline and study it takes to earn it, and as well as the continued effort to maintain the credential."

Achieving a credential

Katie Willis, a 20-year employee of the VA North Texas Health Care System engineering service in Dallas, Texas, USA, recently completed her FMP credential. Upon hearing of the VA partnership with IFMA, she remembers feeling "thrilled...as I [had] wanted this credential for a long time." Once enrolled, she adhered to FMS' requirement of completing all coursework within 90 days. This innovative approach ensures that all FMS candidates are serious about FM and the investment placed within them.

Willis truly enjoyed the experience and recommends the course to others, stating, "The learning experience was good. I learned more about subjects I have general familiarity with — the pre-made flash cards are a life saver!"

Even after completing the credential, she still finds herself looking back over the material. For example, she recently realized that her team was not

managing the expectations of facility occupants as taught in the FMP course. At that time, she says, "I pulled up the IFMA Leadership and Strategy book on my laptop and reviewed the Resolving Conflicts portion."

From her experience with FMS, she will always remember a great group of people who care about her success in her education and career, especially their "enthusiasm" and "warmth." Willis also believes that the FMP is "...an effective way to educate all the facility management employees on important information. With this information, employees from different aspects of facility management can come up with creative ideas for implementation. This could save the VA time and money."

FMS continues to reach out to the more than 30,000 VA employees in FM-related disciplines, not only to comply with the FBPTA, but also to ensure that they have the tools and credentials necessary to operate effectively. According to Krasley, "IFMA is the leader in FM training and certification. IFMA is committed to being the best representative of FM, so along with its focus on today, it is committed to continual process and FM improvement." **FMJ**

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3. Department of Veterans Affairs FY 2014-2020 Strategic Plan, page 20. www.va.gov/op3/docs/strategicplanning/va2014-2020strategicplan.pdf



John M. Wagoner is IFMA's global account manager responsible for working with government and corporate clients on professional development planning and

implementation. He is a service-connected veteran and is based in IFMA's Service Center of Excellence in Houston, Texas, USA.

ASK THE EXPERTS

BY IFMA'S FACILITY MANAGEMENT CONSULTANTS COUNCIL



In each issue of FMJ, IFMA's Facility Management Consultants Council shares some commonly asked FM-related questions accompanied by advice from top FM consultants. The questions and answers presented in this section align with IFMA's core competencies following the themes outlined for the given edition of the magazine.

While the following answers are intended to be helpful, these responses should not be deemed complete and are limited in context by the space allocated. Please contact the individual consultants directly for further explanation of the opinions expressed.

The theme of this edition of FMJ is **"Managing the Building Portfolio."**

The Facility Management Consultants Council (FMCC) represents more than 300 FM consultants from various countries around the globe. Its mission states, "The FMCC is the resource and voice for facility management consultants worldwide to leverage our collective expertise to benefit IFMA members, and the facility management profession."

Questions regarding the Ask the Experts section of FMJ can be directed to Mark Sekula, IFMA Fellow, CFM, FMP, LEED AP, president of Facility Futures, Inc., at msekula1@wi.rr.com.

Visit FMCC online at fmcc.ifma.org or join the conversation on the council's LinkedIn group at <http://linkd.in/1gAa8ae>.

QUESTION

Your new FM client manages 5,000,000 square feet (464,512 square meters) in the U.S., Europe and Middle East. The portfolio ranges from small leased space in multi-tenant buildings to larger owned single-occupant buildings. What would you advise your client are the three most important things to focus on in terms of managing her real estate portfolio?

ANSWER: Analyze the client’s real estate portfolio in relation to the core. What is their core business and who are their clients? This is necessary to know in order to determine what the primary FM focus should be.

Be sure that you have all the appropriate information about the real estate you will have to facilitate. In Central European countries this is really a problem — there tends to be accounting information available but not technical and process information.

Add value by helping the client optimize facility management services by not only focusing on the “hard” services (operations and maintenance) but also on “soft” services. In this way you can clearly demonstrate that increasing the efficiency and effectiveness of the real estate portfolio can increase profitability.

ANSWERED BY:
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Strup is active as an FM consultant and specializes in the process of tendering FM providers for large Czech companies to perform relocation projects and facility management audits. He is the founder and primary teacher of FM in the Czech Republic. He organizes and executes numerous education seminars, conferences and workshops to support FM growth in the Czech Republic and Eastern Europe.

He is the founder of the Czech IFMA Chapter and was vice chair of EuroFM. He also runs two businesses: FM Institute, s.r.o. (education and research) and Hein Consulting, s.r.o. – Czech Branch (FM consulting).

ANSWER: **Asset management — list of all assets and conditions:** You first have to assure all the assets that are listed are still in place. One of the big issues is keeping track of what a client has in their portfolio. You also need the make, model, serial, age and condition of all assets so you can track and prepare for your future capital replacement expenses.

Operating budget review and adjustment: You should check all contracts to make sure the service is still needed or if you can cancel any unnecessary services. You should also review any leases and try to make any adjustments to benefit the client.

Preventive maintenance review and adjustment: Check to make sure all preventive maintenance contracts are in place and review frequency to assure the best possible outcome to maintain the assets.

ANSWERED BY:
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Bryan is facility manager of TD Bank Group. He has worked with Brookfield Global Integrated Solutions for close to three years, taking care of roughly 80 retail sites. Prior to that, he worked for Direct Energy running the service department in charge of dispatch, quoting, scheduling, coordinating projects and managing major customers.

ANSWER: She should have a small (one- to three-person) central FM team that is well trained on FM and on central management. This central team should manage and educate the local teams, and establish the clients’ standards and expectations.

She should examine the local laws, standards and FM regulations. This will allow for the development of a standard system with the flexibility to adapt to regional differences on a uniform basis.

She should use CAFM software to centrally operate and oversee the local FM activities.

ANSWERED BY:
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Marton is director of FM at the Hungarian Academy of Science. He is an independent FM expert and developer of CAFM software who provides consultancy and training for its installation. He is co-founder of the FM education program at Budapest Technical University. As a consultant he has worked on a variety of projects, such as FM standards development and advising clients on the financial aspects of facility management.

ANSWER: Understand your assets thoroughly, including location details, equipment and systems deployed, and procedures followed. Develop a full assets register if one has not already been created.

Interact with your clients regularly. Understand their pain areas thoroughly.

Make sure you have very proactive team members who pick up and address issues on the go.

ANSWERED BY:
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Joshi is a senior real estate and facility management professional with more than 35 years’ experience in strategically managing high-value and complex real estate portfolios and projects in diverse organizations and cross-cultural environments. He has worked for Halliburton Worldwide Limited, the largest oil and gas service provider in the world, and the Emirates National Oil Company Limited (a company of the government of Dubai).

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