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FMJ FMJ (ISSN 1059-3667) is published six times a year (January/ February, March/April, May/June, July/August, September/October, November/December) by the International Facility Management Association, 800 Gessner Road, Suite 900. Houston, Texas 77024-4257 USA. Periodicals postage paid at Houston, Texas and at additional mailing offices. One electronic copy of each issue is supplied to IFMA members. Printed conies are available to members at an additional US\$48 per year. Nonmembers can purchase a subscription for US\$84 per year. To receive a subscription, mail a check to FMJ, attn: Subscriptions; 800 Gessner Road, Ste. 900; Houston, Texas 77024-4257 USA or visit www.ifma.org/fmj/subscribe. For advertising rates call +1-281-974-5674 or email diana.maldonado@ifma. org. FMJ is printed in the United States. FMJ reserves the right to edit any articles received or solicited for publication. This right includes the discretion to select titles, artwork and layout. Opinions expressed in articles are those of the authors, not necessarily those of FMI staff. @ 2019 International Facility Management Association

POSTMASTER Send address changes to: FMJ, 800 Gessner Road, Suite 900, Houston, Texas 77024-

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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.

#### 075 Article

"Design Your Way to Change"
http://fmj.ifma.org/
publication/?i=249717&ver=html5&p=26

#### 079 Article

"Escape Velocity"
Dean Stansbury

#### 081 Resource

"Humanizing the Workplace: Using Design Principles to Inspire Workplace Thinking"

http://community.ifma.org/knowledge\_ library/m/free\_fm\_content/1057700 IFMA's KNOWLEDGE LIBRARY

#### **FMJ Extended**

Check out the online issue of FMJ for a special section that follows the end of the print magazine and includes additional articles not available in the print edition. Read the extra articles listed below for contributions from councils and communities, and other supplementary content.

#### 070 Ask the Experts

Contributed by IFMA's Facility Management Consultants Council

#### 074 Components in Focus

**082** Vendor Profiles

#### IN CASE YOU MISSED IT ...

The May/June 2019 issue of FMJ focused on Managing Modern Risks. Our most-read article was "Preserving Ancient Artifacts" by Dr. Himanshu Khurana. Find out how museums are using advanced technologies to protect their assets as well as staff and guests by going to http://bit.ly/2wLxqJn.



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#### Editor's Note Bobby Vasquez

In May, I had the good fortune to join IFMA as editor of FMJ Magazine. I'll be honest. I entered the world of FM with no prior knowledge of facility management.

I was blissfully unaware of the built environment's moving parts, and I gave no second thought to how each step in my daily routine is made possible by the strategies, decisions and hands-on work of a facility management professional.

I knew if I tapped a button, the elevator arrived. If I held up my access card, the office door unlocked. When I walked into the office, I expected the lights to be on. If I complained about a defective power outlet, somehow the outlet regained power. While I appreciated the comfort, cleanliness, usability, safety and aesthetics of my surroundings, it never occurred to me that someone was in charge of making it happen.

The moment I walked into IFMA's Service Center of Excellence in Houston, Texas, USA, my perception changed. I began to see the connections — my access card is part of our security strategy; the power outlet wasn't fixed "somehow," but by someone. The office aesthetics are part of a grand design scheme, planned carefully to support productivity, encourage interaction and stimulate creativity. I soon realized that my workplace is more than a place to work. It's the heartbeat of a structure, and the FM keeps the ticker pumping so the people and the business thrive inside its walls.

Producing FMJ's Design Issue gave me even more insight into the scope of your knowledge and skills, and the direct impact you have on the employee experience, the long-term resilience of the business and organizational effectiveness. In this edition, you'll read about what the world's best workplaces are doing to provide optimal environments for living, working, learning and playing.

IFMA is in the midst of some tremendous changes and growth. We're searching for a new CEO. John Carrillo is stepping up as chairman of the global board, following Graham Tier's successful tenure. Like me, several new staff members are not only grasping, but fully appreciating and passionately supporting the fine work that you do. This is an exciting time to be an IFMA member, active in the association through advocacy, continuing education, community discussion and knowledge sharing.

In my role as FMJ editor, I'm honored to continue presenting information, stories, best practices and industry developments that are changing the way we work, live, communicate and collaborate.

I invite you to engage with FMJ. This is your magazine. Let's all succeed together.

Cheers!

Interested in writing for FMJ?

Email **bobby.vasquez@ifma.org** article ideas to be considered for future issues of FMJ.

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## From the **Chair**

JOHN CARRILLO CFM, IFMA FELLOW

> Chair, Board of Directors

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I'm proud to say we enter the new fiscal year in a strong financial and organizational position, and I will strive to keep IFMA's momentum moving forward. With a new year comes new goals. One of our key goals this year is to enhance our value proposition and offerings to our FM internal and external stakeholders. We will strengthen our performance by reenergizing the Balance Scorecard Program. Key performance metrics will be developed for all IFMA components and staff.

On the CEO front, the search committee is busy interviewing candidates. We are looking to announce our new CEO by end of the first quarter of the fiscal year. As we continue to evolve and grow, a membership committee task force is examining all aspects of membership to identify opportunities to increase membership and reduce attrition rates.

We're also preparing for the future in other ways. The Information Age of Technology is driven by software and computing advancements in the digital world. FMs need to prepare and continue to enhance their knowledge and skills in the world of IoT.

SMART systems and applications in the public and private sectors will provide huge productivity dividends and cost savings to the bottom line. The increasing trend of a mobile workforce will drive the need to reduce office space, along with the transformation and conversion of existing and new workplace requirements for collaborative and technology upgrades.

IoT Technology Platforms will enhance benefits in everything that we do in the 11 core competencies of the FM world. We need to find a way to connect and provide our stakeholders with the knowledge of the IoT platform collaboration process such as end-user requirements, software application, connectivity solutions, availability of IOT sensors and end-user platform/programs and more.

We will be hearing more from our Built Environment Technology Association (BETA) on how to enter the race of SMART technologies.

From a global perspective, World Workplace® in Amsterdam was a huge success and we continue to build a strong relationship with EuroFM. The excitement continues to build toward World Workplace in Phoenix, Arizona, USA. IFMA's World Workplace is the biggest and best FM event in our industry and this year will be no different. I hope all our members take advantage of the opportunity to network and hear some great speakers and see the steps in FM technologies and processes. See you in Phoenix!

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Thank you for attending IFMA's Facility Fusion 2019 Conference and Expo in Atlanta, Georgia, USA

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#### **Industry News**

# IFMA INTRODUCES 2019-2020 EXECUTIVE COMMITTEE

In accordance with IFMA's Bylaws, a ballot containing the names of candidates submitted by the nominating committee for the executive committee of IFMA's global board of directors for the fiscal year (July 1, 2019 through June 30, 2020) was presented to the membership.

The nominating committee chose strong leaders to help shape the future of both the association and the FM industry, and our members have confirmed the nominating committee's candidates as presented and validated by the ballot.

Please welcome IFMA's 2019–2020 Executive Committee to office, effective July 1, 2019:



Chair **John Carrillo**, CFM, IFMA Fellow



First Vice Chair **Peter Ankerstjerne**, MBA,
COP, IFMA Fellow, FRICS



Second Vice Chair **Laurie A. Gilmer**, P.E., CFM, SFP, LEED AP, CxA

#### IFMA 2019-2020 Nominating Committee:

Bill O'Neill, CFM – Immediate Past Chair (Committee Chair) Michael D. Feldman, FMP, CM – Past Chair John McGee, IFMA Fellow – Past Chair Thomas L. Mitchell, Jr., CFM,

IFMA Fellow - Past Chair

# IFMA seeks the right fit for new president/CEO

In April 2019, IFMA announced it was accepting applications for the position of president/chief executive officer (CEO) of the association. To ensure a secure, compliant and sustainable hiring process, IFMA's H.R. firm Insperity has been managing the application process.

The announcement was made to all IFMA members, including IFMA Fellows, past association chairs, component leaders, alliance/strategic partners, Corporate Sustaining Partners, and members of IFMA's global, regional advisory, Foundation and FM Research and Benchmarking Institute boards.

As this is an important decision and an exciting opportunity for the association and the profession, IFMA's CEO Search Committee has gone to great lengths to ensure that the process of hiring a new president/CEO is thoughtful and thorough. Comprised of the board's Executive Committee and two IFMA Fellows, the committee is focused is on finding the right fit for IFMA based on professional experience, leadership abilities and individual qualities.

An experienced and forward-thinking executive will have the opportunity to lead the association to the next level of engagement and influence, and to serve as the voice and champion of the FM industry. Working collaboratively with the board of directors to position the association for strategic growth, the new president/CEO will model and drive an exceptional organizational culture, inspiring vision, purpose and creativity for all staff, association leaders and members.

IFMA's CEO Search Committee includes: Bill O'Neill, CFM, Committee Chair and Global Board Past Chair; Graham Tier, CFM, FMP, MRICS, Global Board Chair; John Carrillo, CFM, IFMA Fellow, Global Board First Vice Chair; Peter Ankerstjerne, MBA, COP, FRICS, IFMA Fellow, Global Board Second Vice Chair; Jon Martens, CFM, FMP, SFP, IFMA Fellow; and Kathy Roper, CFM, MCR, LEED AP, IFMA Fellow.



# Digital badge launches for FM ADP degree graduates

As a longtime supporter of the Facility Management Accredited Degree Program (ADP), the IFMA Foundation recently announced the launch of the Facility Management Graduate (FMG) digital badge. This will give graduates of FM ADPs in good standing special recognition for their completion of a post-secondary program in facility management.

IFMA and the IFMA Foundation have partnered with digital badging company Credly to provide this service through their platform Acclaim. Digital FMG badges are available free of charge to FM ADP graduates. Degree holders can apply for their badge through IFMA's online Credentials Application/Maintenance Program (CAMP) using a special form. Download instructions at foundation.ifma.org/academics.

#### UPCOMING EVENTS



### IFMA's Advocacy Day and Public Policy Forum

Sept. 17-18, 2019
Washington, D.C., USA
ifma.org/events/fm-events/advocacy-day



#### World Workplace 2019 Conference & Expo

Oct. 16-18 Phoenix, Arizona, USA worldworkplace.ifma.org



#### IFMA's Facility Fusion Conference and Expo

April 14-16, 2020 San Francisco, California, USA facilityfusion.ifma.org

# IFMA WELCOMES NEW BARBADOS CHAPTER

In June, IFMA's global board of directors approved a petition to form a new chapter in Barbados, one of the larger islands in the eastern Caribbean region in terms of population and economic activity. With the addition of the Barbados Chapter, IFMA continues to grow its professional community and raise the profile of facility management globally.

"The launch of the IFMA Barbados Chapter speaks to the great value and interest that the facility management professionals in the region have for the advancement of the profession and the built environment," said Aykean Matthews, MBA, FMP, CFM, Facilities Operations Director, The International School Port of Spain, Trinidad and a member of IFMA's Americas Advisory Board. "IFMA will open doors to a world of opportunities, possibilities and potential for the improvement of the standards and practices of facility management in Barbados and the region, particularly through education."

The Royal Institution of Chartered Surveyors (RICS) is already prominent on the island, presenting the new chapter with an opportunity to leverage the partnership between IFMA and RICS. With support from Chapter Steering Committee president Ian Rogers, who is a member of the RICS Caribbean board, IFMA's Barbados Chapter will reach out to the large number of property-related professionals on the island to increase awareness of facility management and grow its membership.

#### Top facility management trends to watch for this year

Silver-level IFMA Corporate Sustaining Partner Sodexo recently released the top facility management trends for 2019, all of which are aimed at improving living experiences.

**Technology:** With the ability to communicate in real time with experts and share instant live video, augmented reality glasses are taking FM to a new level; and chatbot programs offer an alternative to live customer support by continually learning from the questions asked by users.

Read more of Sodexo's study on 2019 trends by going to http://bit.ly/2WFGIGe **Engaging Millennials and Gen Z in trade careers:** Retiring older workers and fewer young adults choosing blue-collar jobs have left a significant shortage of skilled talent in facility management.

#### Using data to create smarter buildings:

From integrated facility services and building analytics to remotely monitoring commonly installed critical assets, new technologies are helping FM teams view client needs holistically; predict how equipment is maintained, repaired or replaced; collect data on benchmark performance, output and energy savings; and resolve issues and system failures remotely, saving time and money.

Green buildings: The "living building" is becoming an affordable reality. Buildings will soon make their own energy through various types of renewable energy. Waste-free buildings produce their own electricity and create minimal waste; and WELL Buildings are one of the hottest FM trends, utilizing low VOC paints, non-toxic furnishings and carpet, whole-building air and water filtration systems, natural light and ergonomically designed spaces.

# Have relevant FM industry news to share?

Submit your news to be considered for inclusion in the Industry News section of the next issue of FMJ. Send us an email

at communications@ifma.org

**Industry News** 

#### **Industry News**

# STUDY: MULTICLOUD DEPLOYMENT IS HERE TO STAY

An April 2019 study commissioned by enterprise-class cloud company Virtustream, "Multicloud Strategies Drive Mission-Critical Benefits," found that 97 percent of respondents are employing multicloud strategies for mission-critical applications, and nearly two-thirds are using multiple vendors for mission-critical workloads.

Based on a global survey of more than 700 cloud technology decision makers at businesses with more than 500 employees, the study shows multicloud deployments are here to stay. Budgets for staffing, training and investments in multicloud strategies are on the rise, and organizations are adding new expertise and skills around maintenance, implementation and cost optimization. Almost 90 percent of organizations predict they'll maintain or increase their investment and staffing for multicloud deployments over the next two years.

The top-ranked use cases for multicloud strategies center on customer and financial data and sales applications. Nearly 75 percent of organizations say they are using two to three cloud providers for business-critical applications.

Surveyed IT leaders believe multicloud strategies yield broad benefits, from increased performance and agility to improved efficiency and costs. Performance and cost savings ranked as the top success metrics organizations use for evaluating these strategies. The third most cited benefit of multicloud is the ability to quickly and efficiently respond to changes and challenges within the business.

Multicloud deployments are complex, and nearly all surveyed organizations experienced issues with deploying and using multiple cloud environments. Although 61 percent feel their multicloud strategy is well aligned to their business objectives, security and management challenges are still reflected as the top issues with use, migration and deployment. In response, organizations are looking to add staff with specific multicloud experience and to work with cloud vendors with expertise and managed service offerings.

# Four ways China is fighting air pollution...and winning

A new study by international industrial research company The Freedonia Group finds that the Chinese market for internal combustion engine, air and fluid filters will approach US\$18 billion in 2022, and remain the largest in the world. Among the factors driving market growth are efforts by regulators to curb the nation's notorious air-pollution problem — as China neared its 2020 air-quality targets ahead of schedule, the government introduced stricter goals. Here are four ways China is shedding its reputation as the smog capital of the world:

- » Imposing more demanding vehicle and factory emissions standards. While less restrictive than those in the U.S. or the EU, Chinese emissions limits have decreased in recent years, creating need for higher-performing filters and significantly improving air quality.
- » Shuttering tens of thousands of factories and cracking down on both lax and excessive enforcement by local authorities via a national inspection system. An unintended result of a one-size-fits-all approach to environmental standards in China has been an effective blanket-ban of heavy industry, but now local governments are allowed to set their own targets.
- » Investing in green energy and advanced filtration technologies. China leads the world in renewable energy investment, and as concerns about pollution continue to grow in China, consumers will increase their use of air and fluid filtration products.
- » Forming partnerships to address key goals. Ongoing collaboration between China's Ministry of Ecology and Environment and the U.S. Environmental Protection Agency has yielded stronger methods for assessing and mitigating pollution levels.

#### Flexible workplaces among reasons knowledge workers leave cities

According to a new study commissioned by Citrix Systems Inc., 70 percent of knowledge workers living in urban locales say they would move to outlying areas if they could perform their jobs at the same level. As the battle for talent heats up around the world, companies need to rethink the traditional workplace and enable flex/remote work.

Of the 5,000 U.S. knowledge workers surveyed, a majority see cities as a key catalyst for their careers due to the large number of employers operating within them, the availability of more highly skilled job opportunities and higher salaries. But the price of these opportunities is becoming too high to pay. More than half of those polled cited the costs of city living as "crippling."

HSBC's annual Beyond the Bricks survey revealed that one in five people who moved out of the city this year did so to escape the impact of pollution on their well-being. This comes after the World Health Organization's (WHO) latest air-quality data report revealed that only 20 percent of the global urban population live in cities that meet WHO air-quality guidelines.

Technology has also played an important role in people's ability to move outside city centers. The rise of flexible working has greatly impacted the decision to move. Overall, the number of people who moved out of U.S. cities last year increased by 7 percent. The only other country that had this much movement was France at 10 percent.



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# Influencing change to develop a better experience by Laverne Deckert and Casey Martin

ISO/TC267 is developing a new standard ISO 41015/ AWI — Facility Management Influencing behaviors for improved facility outcomes and user experience.

The purpose of this new standard is to demonstrate how the function of facility management can support the demand organization by aligning occupant behaviors. It is important to first understand the performance objectives of the demand organization, and then the context of the FM organization in supporting those objectives. While not all behaviors can be influenced by the FM team, there are ways facility managers can control or influence the built environment.

#### FIRST THINGS FIRST:

When a facility manager determines a behavioral change is necessary, the first step is to understand if the desired changes fall within the circle of control, or the circle of influence of the FM organization.

To understand the circle of control for the FM organization, first determine the core objectives of the demand organization and what decisions are directly within the authority of the FM organization to impact or achieve these objectives. Also, consider the limitations or challenges of the FM organization in achieving it. This will help determine the boundaries of control for the FM organization. Next, consider the culture, and the relationship of the FM organization with top management and other stakeholders. This will form the circle of influence. As the FM organization matures from simply completing technical activity and tasks to becoming a strategic advisor to the demand organization's top management, the circle of influence and/ or control grows.

Anything beyond what can be influenced or controlled within the culture and context will be outside of the circle of influence and fall under the circle of concern. Although it may be a concern, it is not necessarily within the ability of the FM organization to affect change, so it can be monitored until circumstances change enough to move it under the influence or control circles.



Once the circles of control and influence are understood, the FM organization can consider its strategy to affect change.

#### THE PATH OF LEAST RESISTANCE:

It is human nature to resist change. Where it is possible, the FM organization should consider affecting change through automation. It is likely these processes are in place already to meet other energy- or cost-saving goals such as:

- Sensor or timer controls for lighting
- · Door badging to control access
- Motion sensor plumbing fixtures
- Building automation systems with remote monitoring and control features

Technology provides a means to automate processes and achieved desired behavior without requiring action from the occupant. This is the path of least resis-

tance and the decision to implement these automations are likely within the direct control of the FM organization.

#### **SNEAK ATTACK:**

While this may sound nefarious, there is no diabolical intent behind looking for ways to influence the behaviors of building occupants through social and subconscious queues. Robert Cialdini, a social science researcher and author of "Influence: The Psychology of Persuasion," explains how people imitate the behaviors we see around us — we take our cues about acceptable behaviors from what others around us are doing. So it follows that people will be louder in noisy environments, litter where strewn trash is already present and deface facilities that are already in disarray.

Facility managers who control their environments also influence the behavior of the occupants in those environments. Once again, there is no need for direct engagement with the occupant to achieve the desired behavior, but instead, the FM organization should be mindful of how the occupants interact with their surroundings and how subtle changes to the environment might influence changes in behavior.

#### TAKING THE BULL BY THE HORNS:

Adjusting occupant behavior to support corporate goals and objectives often requires FM participation to be successful. To support these goals, there will be times when the facility manager must directly ask for the change necessary to achieve the desired outcome. Regulatory or voluntary certifications may require workplace behavior changes to be compliant. Core business initiatives such as sustainability goals (waste reduction, recycling programs, reduced hard copy storage, etc.), corporate social responsibility or wellness goals may require facility managers to direct occupant change as well.

Asking for the necessary change will likely

#### **On Standards**

require the biggest effort and most amount of time to achieve results. Facility managers have to be prepared for resistance. Change is uncomfortable and may cause some to feel threatened or harassed. It is necessary to understand how to motivate others to change, communicate the benefits, develop champions for change and above all, be persistent in achieving the desired behavior.

Facility managers can manage change initiatives through formal routes such as:

- Direct communication directives
- Policy and procedure development
- · Change management initiatives

#### INFLUENCING CHANGE IN PRACTICE:

Let's look at industry examples to demonstrate how these methods can be applied to support the demand organization's mission.

In **HOSPITALS**, the overarching objective is typically centered around improving the patient experience. While FMs may not always have direct interaction with patients, their function creates many opportunities to impact the patience experience.

**AUTOMATION:** Controlled door access negates the need for posting signs that note who is authorized to enter a space. Motion sensors can automatically shut off lights or control temperatures in unoccupied rooms. Window shades can automatically adjust to accommodate sun intensity.

**INFLUENCE:** The facility environment — appearance, noise and odors - can contribute to lowering patient, visitor and staff anxiety. Following Cialdini's research on social behavior, people will feel more comfortable being loud in a noisy environment with squeaky wheels and loud mechanical noise. Facility managers can intentionally soften the background noise of specific areas or during specific time periods. Initiatives that reduce squeaky wheels, ventilation whistles and misaligned escalators can all have direct benefits for improving the patient experience. The behaviors of hospital occupants can in turn be influenced towards more subdued tones, supporting the mission of an improved patient experience during their stay.

For **PARK AND RECREATION SITES**, the core objective may be to connect visitors with the outdoors.

**AUTOMATION:** Automated technology may include off-trail sensors, audio tours or other technology solutions that shape how visitors use the recreation space.

**INFLUENCE:** As Cialdini concludes from his multiple studies on human behavior, people will do what they feel is expected of them. The mindful placement of trash and recycle bins can influence visitors to dispose of unwanted items in a controlled manner that supports the overall mission. If trash is consistently disposed of in receptacles, then people will continue to follow the standard set by others depositing trash in the appropriate place.

**DIRECTED CHANGE:** Policies that mandate cell-free zones or pet-restricted areas may be a way to mandate behavior that supports the mission to allow visitors to connect better with nature.

AIRPORTS strive to improve the passenger experience wherever possible. Bathrooms are one of the most memorable spaces that influence the perception of the passenger experience at airports. Messy facilities, odors and long lines can leave a poor perception of an otherwise fully functional facility. An impactful way for the FM team to support the organizational mission of the airport is to look at how they can make the restroom a better experience for passengers.

**AUTOMATION:** Automated technology may be used to alert staff when paper supplies run low or water is detected on floors.

**INFLUENCE:** Clean begets clean as an indirect influence. Maintaining a clean environment in restrooms will set the behavioral expectation and prompt passengers to maintain a cleaner environment while also improving their own experience.

DIRECTED CHANGE: Sights, sounds and smells all contribute to our overall experience of places. Granted, not all passengers will observe the cues and perform the expected behavior, but without the expectation being set, the chances are far less. It is within the purview of the facility manager to set the expectation and behavioral standards through service levels, conditions and monitoring. Facility managers should

communicate frequencies for levels of service for restroom cleaning cycles.

#### **ALL IN A DAY'S WORK:**

The "broken windows theory," first introduced by social scientist Wilson and Kelling in 1982, notes that one broken window signals approval for more broken windows; graffiti leads to more graffiti; and litter leads to more litter. Occupants begin to pick up their cues for how to interact with their environment from what they are surrounded with, and facility management are integral to establishing the expected standards of behavior.

Regardless of the method used to influence behavior, benchmarking, monitoring, measuring and continuous improvement should be an integral part of the program. Celebrating achieved behavior milestones can maintain momentum and enthusiasm for the building occupants and the FM organization while communicating the benefits of the changes.



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New technologies are disrupting traditional ways of working and standard concepts of workplace design and facility management. These so-called "disruptive technologies" for real estate and facility management functions offer opportunities to fundamentally change the workplace paradigm in three primary categories: real estate transactions, property ownership and tenant/workplace occupancy.

While each category provides distinct benefits that facilitate better interaction and more efficient management, tenant/workplace occupancy is the ultimate market driver because tenant users create demand for real estate product in the marketplace. A better understanding for the implications of these disruptive technologies can help building owners construct more cost-effective buildings and help facility managers improve efficiency and service levels for a wide range of facility management functions.



More than 200 collaboration and huddle spaces support PTC's activity-based workspace, and quiet work areas and small "phone booths" were strategically placed in the open office neighborhoods. The themed "Hives" on every floor were imagined as unique and energizing spaces for people to mingle.

BY MARC MARGULIES AND JOHN CIVELLO

#### The shifting workplace - and workstyle

According to a survey by Herman Miller, 40 percent of workstations are occupied less than half of the time, and private offices are on average occupied only 25 percent of the time. Corporate real estate executives and facility managers are coming to realize what an enormous waste of resources this represents — one that feels increasingly jarring as we move toward a more shared economy. Many companies are shifting their workplace from fully assigned seating to free address space allocation for activity-based work.

For workers who are not devoted to one focused task all day long, the free address concept allows them to choose where they want to sit based on their daily or hourly task, who they need to collaborate with or what other adjacencies are important to their productivity. Remote working has also become ubiquitous as many companies develop remote working policies to help attract and retain talent. The trend toward open-plan offices, collaborative work and remote work is thus driving the use of disruptive technologies to maximize workplace utilization, increase productivity and communicate with staff to improve employee satisfaction.

Managing such a dynamic office environment — one that must be highly flexible and responsive — is only possible via a software support platform that is both simple to use and portable, and those technology systems now exist. The world of

IoT (Internet of Things) has enabled an increasingly robust interaction between the interior environment and its occupants. Sensors installed in office spaces, light fixtures, workstations, HVAC equipment, hardware and audiovisual equipment facilitate the ability to gather data on activity, light levels, vacancy, temperature, security and media interface. With the data comes the ability to understand patterns and using that data to improve facility and productivity outcomes.

#### Disruptive technologies do it all... except the work

Myriad disruptive technologies can provide facility managers with aggregated data across the office to analyze trends, optimize building performance and reduce operational costs. Some systems known as "people analytics programs" gather data by tracking how and where workers engage each other, highlighting patterns of interaction and providing information to plan for the most effective strategic adjacencies. Some options include:

According to National Grid, 35 to 45
percent of an office building's energy
cost is due to lighting; the potential to
save energy and money by turning off
unnecessary lights is enormous. New
lighting control technology is moving
beyond just code-mandated occupancy sensors in offices in favor of control
systems that dynamically modify the

- light fixtures in open-office areas too. These more refined applications allow users to adjust LED light levels in their work areas to individual preferences.
- User comfort is always a priority for building managers. One person's hot is another person's cold. New energy management technologies now allow for more efficient heating and cooling, and customized area controls are becoming more common. CrowdComfort, for example, addresses user comfort and organizational communication by allowing individuals to use their smartphones to communicate with building management directly, facilitating micro-adjustment of systems to user preference, as well as smooth dialogue with building engineers.
- Security is of global concern, for reasons related to life and physical property and safety, as well as protection of intellectual property. Building reception desk greeters have become security guards, and front doors have become entry gates. At the tenant level, smartphones can now be readily programmed with owner identification. Mobile access control has the advantage of simplified and centralized credential management, and offers the benefit of full data gathering and analysis. Knowing who and when users enter and leave a building facilitates a better

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understanding of how much space is really needed. An increasingly mobile workforce does not operate according to a traditional 9-5 schedule; thus, the amount and location of required space must be more deeply scrutinized.

- AV systems have become the mainstay of collaboration. Few meetings in the knowledge economy are conducted without technology support, and screen sharing has become universal. Confirmation that the right AV is available for the meeting size and purpose is one of the functions of companies like TEEM (recently purchased by WeWork), a software that not only schedules rooms and equipment, but simplifies the sharing and display of information.
- Finally, there are applications that interface with services and vendors inside and outside the office building itself. Corporate cafeterias now support the ability to order food via an app, either for individuals or catered groups,

in advance of the rush-hour pickup. Many new dining facilities offer state-of-the-art software capabilities for viewing and ordering customized selections from any of the variety of their culinary options. Other services ready to ride this technology wave may include dry cleaning, health and wellness services, day care scheduling and access to other amenities.

#### Case study:

#### PTC's new global headquarters

PTC, a global provider of technology that transforms how companies design, manufacture, operate and service things in a smart connected world, recently relocated its global headquarters from suburban Needham, Massachusetts, USA, to a new 17-story, 400,000 square-foot office tower in Boston's Seaport District. PTC's vision for future growth drove a business transformation for its new 250,000 square-foot, technology-rich headquarters and a dramatic shift to a new way of working with

an activity-based, open-office and free address concept for the workspace. PTC's three project goals for its new headquarters were to: elevate the PTC brand and profile of the company; deliver space that attracts and inspires talent and taps the potential of its urban setting; and create a world-class technology experience for customers.

While PTC management was embracing the new changes to come, it recognized that moving to the Seaport District represented a major shift for the company's workplace and workstyle, most notably:

- Suburban location to urban hub;
- Three-story horizontal campus to nine-story vertical workplace;
- Private offices and workstations to an open office plan;
- Assigned seating to 100 percent free address.

PTC's previous office planning model was dated, cramped and did not allow for cross-pollination of departments. Of the 1,000 employees in headquarters, 40 percent worked in private offices and 60 percent in workstations that limited interaction. Conference rooms were mismatched to size and function. Based on facility data, the office had just 65 percent utilization on any given day and 40 percent attendance ratio on average, necessitating the rollout of a remote work policy. In sum, PTC's former space was sub-optimal for how it needed to work.

To address these challenges and improve work flow, PTC collaborated with architecture firm Margulies Perruzzi (MP) and the Boston office of project management firm Cresa to devise a workplace strategy that embraced an open, activity-based workplace design with an abundance of technology. The free address model facilitates accidental collisions among employees and creates opportunities for interaction across departments. PTC's transformational new headquarters reduced from 321,000 square feet to 200,000 square feet overall and 321 square feet to 196 square feet per person.

#### **EARLY BENCHMARKS**

PTC is employing disruptive technologies to evaluate and manage the effectiveness of their new workplace strategy. Even in the first few weeks of occupancy, the benefits are being realized. For example, PTC's new headquarters uses a 100 percent free address workspace model, a big change from the assigned seating in their previous Needham, Massachusetts, office. In addition, just 750 seats were provided for the 1,000 employees, with ancillary seating in collaboration areas to accommodate peak attendance.

Shortly after moving in, one group indicated that they were running out of space. The facility management team was able to leverage the data collected from Steelcase's Workplace Advisor reports to determine that the group's portion of the floor had consistent vacancies. The issue was with employees not following policy regarding claiming workspace overnight or during meetings.

Similarly, another group reported a lack of meeting spaces on their floor. In this case, facility management determined that employees were reserving rooms and never using them. While the rooms were automatically released after a few minutes of not being occupied, the facility management team was able to take the extra step of addressing these specific individuals, requesting they omit unnecessary meetings from their scheduling systems to make them available in advance to others.

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#### **Evaluating disruptive technologies with** MIT Center for Real Estate

As with any new facility where a new workplace paradigm presents a major shift for its occupants, PTC's goal was to implement facility management and employee productivity technologies that would facilitate input from their 1,000 employees in the 250,000 square-foot workspace, ensuring the new facility works properly as designed, gathering facility data in order to maximize space utilization and identifying employee concerns to respond in a timely

As part of the design of a new physical work environment, PTC recognized the opportunity to meld its role as an innovator in software for product design, IoT, and Augmented and Virtual Reality (AR/VR) to make its headquarters a global model for excellence in the use of disruptive workplace technology. The task? Evaluating the most appropriate workplace and facility/real estate management technology in an industry known for lightning-speed evolution.

To assist PTC and MP with evaluating the most appropriate technology options, the MIT Center for Real Estate (MIT/ CRE) was engaged as a research collaborator in the use of disruptive technologies. With a strong background in understanding disruptive technologies, MIT/CRE was well-positioned to help facilitate a conversation about the goals, opportunities, challenges and processes for a variety of potential technological directions.

The day-long workshop led by MIT/ CRE's Innovation Lab helped the team define the technology landscape and curate the building technology stack. Discussions included how to work differently, engage the community, provide smart green spaces, use technology to improve commuter and visitor experiences, and integrate technology solutions into PTC's platforms. After a collaborative team process, MIT/CRE provided recommendations and a roadmap for researching and evaluating disruptive technologies to incorporate into PTC's state-ofthe-art headquarters.

The selected technologies measure space utilization and heavy-use patterns in real-time, and provide PTC's facility managers with aggregated data across the office to analyze trends and adjust space allocations, optimize building performance and reduce operational costs. These technologies included:

- CrowdComfort crowdsources occupant and building information to improve efficiency and service levels for a variety of functions, from climate control, lighting and acoustics issues to maintenance, audiovisual needs and space utilization. The CrowdComfort mobile application delivers an employee-driven data set, including geo-location and photo evidence, that facility managers can analyze to make informed maintenance decisions, saving time and money.
- Steelcase's Room Wizard and Workplace Advisor help to maximize productivity, collaboration and space utilization. With sensors installed in all workstations and conference rooms, facility managers will be able to identify areas of heavy utilization and communicate with users how to change meeting schedules to avoid congestion or modify facilities to meet the need. The software can be accessed by users remotely via their mobile devices to book collaboration space, and facility managers can measure heavy-use patterns in real-time, anticipating pressure on the space before it becomes critical.

#### Real-time results

Perhaps the most interesting lesson from the adoption of these dramatically impactful technologies is that new management practices and skills are necessary to interpret and respond to the plethora of data. For example, anecdotal reaction soon after move-in was that there were not enough desks available to meet demand. Sensor data, however, showed only 65 percent occupancy. Upon visual inspection, it became clear that users were leaving their personal possessions (laptops, coats, shoes, etc.) at workstations even if they were in meetings elsewhere. When the policy on using and vacating workstations was clarified, the problem went away.

The feedback through CrowdComfort has been voluminous. Just the newfound ability to easily comment has encouraged thousands of comments about the interior environment. This has allowed PTC to categorize issues and bundle them for efficient response, and brought to their attention to seemingly small issues that can be easily addressed to increase staff satisfaction. It is clear that these new tools have radically changed how PTC operates

its workplace. PTC's facility management team itself has noted that it cannot imagine trying to manage a workplace this dynamic without these tools.

As companies seek to offer highly personalized employee interactivity within the work environment, it is essential that facility managers research and evaluate the most appropriate workplace management technologies for their facilities.



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What goes around, comes around. For those people with a philosophical bent, or are fatalistic, this could mean karma, kismet or fate. They might believe people get what they deserve in the end, whether it be good or bad. It is a concept known as predeterminism.

verything isn't always written in the stars. In facility management there are multiple opportunities to initiate cycles to accommodate give and take. In waste management, applying the three R's — reduce, reuse, recycle — creates a recursive loop for materials, bypassing landfills and ocean clutter. Trash avoidance policies, rethinking the use of materials or minimizing the amount of materials brought into a facility can help mitigate the amount of waste generated and contributes to a circular economy. In a circular economy, we develop a way to use materials in a secondary capacity. This takes materials past their first, intended use and extends their value in a new cycle while diverting them from the refuse pile.

#### **CIRCULARITY**

Circularity is front-of-mind for many people. Consumers increasingly choose businesses that are reducing the impact of their products on the planet. Companies are responding by taking a close look at the end of use and product life cycle of their services and optimizing resource use. It is an aggressive undertaking because circularity is not just about diverting waste at the end of a product's life. It is also about focusing on more sustainable design at the beginning of product life, such as incorpo-

rating recycled content or using modular design principles.

The traditional linear economy has a make, use, dispose model of production. In a circular system, resource input and waste are minimized through efforts of redesign. Practices that entail preventive maintenance, repair, reuse or refurbishing of materials and, finally, recycling, all lead to less burden on the environment. A circular economy does not mean a drop in the quality of life for consumers. It can be achieved without loss of revenue or extra costs for manufacturers.

Circular business models can be as profitable as linear models. Looking beyond the current take-make-waste extractive industrial model, a circular economy aims to redefine growth by focusing on positive, society-wide benefits. It entails gradually decoupling economic activity from the consumption of finite resources. Supported by the transition to renewable energy sources, the circular model builds economic, natural and social capital. It is based on the principles that waste and pollution can be designed out of products, while keeping those products and materials in use, and it works on regenerating natural systems.

The notion of circularity has deep historical and philosophical origins. The idea of feedback, of cycles in real-world

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...rethinking the very basics of activities throughout a product life cycle, from design and construction through consumption and disposal, should become a preferred business practice.

systems, is ancient and has echoes in various schools of philosophy. With current advances, digital technology has the power to support the transition to a circular economy through virtualization, analysis, transparency and intelligence driven by data and experience.

There is a world of opportunity to rethink and redesign the way materials are used. Through a change in perspective, the supply chain can be redesigned. Products can be made to be reused while using renewable energy to power the system. With creativity and innovation, a restorative economy can be built and sustained in a circular economy.

Transitioning to a circular economy is more than adjustments aimed at reducing the negative impacts of the linear economy. It represents a systemic shift that builds long-term resilience, generates business opportunities, and provides environmental and societal cycles. Consumption happens in biological cycles, where food and biologically based materials are designed to feed back into the system through processes like composting and anaerobic digestion. These cycles regenerate living systems, which provide renewable resources for the economy. Technical cycles recover and restore products, components and materials through strategies like reuse, repair, remanufacture or (in the last resort) recycling.

#### **WASTE NOT. WANT NOT**

There is a realization emerging in the global consciousness that waste is a wholly human construct. Much like the issues that are experienced with greenhouse gas emissions, mankind is solely to blame.

Closed-loop, waste-free resource management is captured in the precepts in biomimicry and the zero-waste initiative.

In nature, there is no waste. Every molecule goes through multiple configurations. Every organism or particle provides an environmental service during and after its life. When a plant dies, a community of organisms breaks down all the chemical compounds into other compounds and individual molecules, which are then used in other organisms. Everything is used, and there is no excess. This concept can be emulated by humans to evolve into a society where there is no waste.

Biomimicry is the imitation of the systems, elements and models of nature to serve as examples to help solve complex human problems. It is the science of implementing nature-inspired activities to create a better balance with the environment — to live in harmony with the natural world and cease producing negative global impacts. It is an approach to innovation that seeks sustainable solutions to human challenges by emulating nature's time-tested patterns and strategies. When looking at sustainability, the only real model that has worked over time is nature. It has had 3.8 billion years of research and development on which to rely.

In addition to being environmentally friendly, there are other incentives to warrant using biometric products and processes. Applying biomimicry provides the opportunity to do more with less, enabling more production and profit with less work and cost.

Zero waste is a goal that strives to encourage lifestyle change and new practices to aspire the replication of sustainable natural cycles. All discarded materials can be designed to become resources for secondary use. Zero waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them. Implementing zero waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health.

With the cost of waste disposal rising every year along with the green aspirations of customers, businesses large and small are looking to reduce the amount of waste they generate. In fact, achieving zero

waste, or at least a component of it — zero landfill — has become a popular objective for businesses of all sizes and types. In the final analysis, achieving zero waste is a goal that encompasses much more than diverting trash to the recycling bin. However, diversion is still a perfect place from which to launch an initiative.

In either instance, whether it be biomimicry or zero waste, rethinking the very basics of activities throughout a product life cycle, from design and construction through consumption and disposal, should become a preferred business practice. Thought processes must migrate toward the question of which actions do more good, rather than simply thinking about what is less bad for the environment.

#### CHALLENGES OF RECYCLING

Separating trash to be recycled has become ingrained in current society. In the United States, more than 34 percent of refuse is recycled, a gain of more than 400 percent since 1960. However, that percentage has not changed in almost two decades, and the U.S. has fallen far below other developed countries. There are other challenges on the horizon. Lower oil prices drive down profits in the recycling industry, as it becomes cheaper to create fresh plastic than it is to process, clean and recycle materials.

A crash in the recyclables global market is forcing communities to make hard choices about whether they can afford to keep recycling or should simply send all those bottles, cans and plastic containers to the landfill. Most are maintaining recycling programs but taking a financial hit as regional processors have raised rates to offset losses. Mountains of paper have piled up at sorting centers.

Cities and towns that once made money on recyclables are instead paying high fees to processing plants to take them: some are paying up to US\$122 per ton for recycling, whereas last year they were paid US\$16 per ton for the materials. The pro-

cess is becoming financially unsound. Some financially strapped recycling processors have shut down entirely, leaving municipalities with no choice but to dump or incinerate their recyclables. There's no market. One owner of a plant that handles recyclables from about 30 communities at its sorting facility states they are paying to get rid of recyclables. He reports that 75 percent of what goes through the plant is worth from nothing to negative numbers now.

Despite the problems, recycling is here to stay. In addition to the environmental advantages and public support, many state laws mandate it. However, it must be done better, and as a last resort, after all other avenues of reuse and reconsideration have been exhausted.

Companies that produce goods are now accountable for the full life cycle of their products. The volume of waste they produce is substantial and costs have increased in parallel, particularly for waste hauling and disposal. Companies need ways to manage their product destruction in an economical and responsible manner. Achieving circularity is a critical goal for those companies that want to move from product-focused sustainability to a more comprehensive sustainable strategy.

#### REGENERATION

Another facet of repurposing or reusing materials is called regenerative design. This is a process-oriented systems, theory-based approach to minimizing waste and can be described as the biomimicry of ecosystems. Its goal is to provide the ability for all human systems to function as a closed viable ecological and economics system for all industries.

The term regenerative describes processes that restore, renew or revitalize their own sources of energy and materials. It creates sustainable systems that integrate the needs of society with the integrity of nature. It is an arrangement that produces absolute efficiency used for sustainable development. The concept behind regeneration is one in which all waste products of one group can be used in the same or in different systems with zero loss of input and output. It becomes self-sustaining.

Rather than taking a managerial approach to nature, regeneration promotes a partnered relationship between humans and natural systems — building social and natural capital rather than diminishing them. It offers a positive framing of environmental issues that both inspire and create thinking points that could lead to transformative practices. The concept has undergone serious scrutiny when judged against issues such as the social and environmental equities that are key to sustainability and it has proven to be a viable tool.

#### THE CIRCLE GAME

The circular economy initiative uses several sustainability procedures to validate certain attributes of processes and products today, including standards that validate recycled content, recyclability, bio-based content and waste minimization leading to zero waste to landfill.

The initial focus of program measurement should be on investigating characteristics or activities that evince the reinvention of materials throughout the supply chain instead of the disposal of products in a landfill.

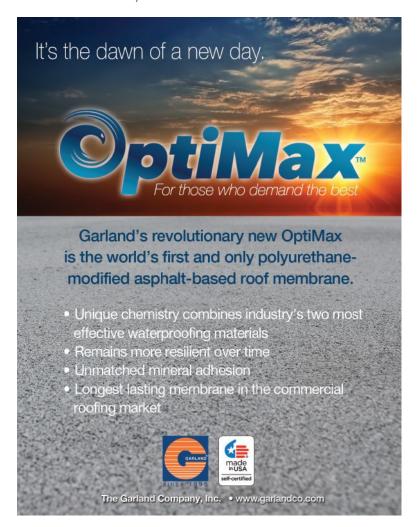
Plans are made and then life happens, sometimes spoiling intent or forcing a shift in focus. However, plans can be made and then life helps, fueling thought and innovation based on examples provided by nature. The annual shift in seasons points to one of the many cycles in nature. How the flora and fauna react and adjust to such change teaches adaptability and sustainability. Winter signifies finality, yet spring delivers rebirth. The end of some things leads to the genesis of others. Failures in nature are fossils, and life goes on.

Adopting circularity as a common practice based on the natural cycle of things, for both materials use and conservation, should be part of future thinking. After all, a line ends somewhere — a circle just keeps going around.



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Employers are increasingly embracing on-site fitness as part of a larger focus on workplace wellness and a culture of health. In turn, fitness centers are getting the attention of facility managers and corporate real estate directors who typically oversee these centers.

eventy-two percent of companies surveyed by the National Business Group on Health and Fidelity Investments said on-site fitness classes would be offered by year-end 2018 — compared with 66 percent the previous year — and another 8 percent are considering offering such classes this year.¹

There are two primary drivers behind the uptick in on-site fitness services:

One, employers are keenly aware that they need to offer amenities to recruit and retain talent in today's highly competitive labor market. Corporate fitness facilities help employees achieve better work-life balance — one of their top priorities. Recent graduates are accustomed to easy access to state-of-the-art facilities at their universities and expect the same experience at work.

Two, there is a link between exercise and lower blood pressure, healthier hearts, cognitive benefits and increased productivity. One study found employees who exercised in their companies' gyms during the work day managed their time more effectively, were more productive and had smoother interactions with colleagues.<sup>2</sup> Researchers have also found individuals who exercise enjoy better mental health than those who do not.<sup>3</sup>

Developers, looking to attract potential tenants with cutting-edge facilities in their local markets, also view fitness centers as a valuable sales tool. Having on-site amenities gives developers a competitive advantage when marketing their property and enables them to lease spaces at a higher rate per square foot.

#### Flexing the space

A common misperception is only very large companies have the space and budget for a fitness center. However, many mid-sized and smaller companies also provide their employees with on-site fitness services.

The size of fitness centers varies greatly by company size, eligible population and geography. While the average space is roughly 6,000-8,000 square feet, some

large companies' sites exceed 20,000 square feet.

Much smaller areas can also be leveraged. For example, a tech firm transformed a 400 square-foot conference room into a group fitness studio by installing storage racks and a few pieces of small equipment. It then brought in an instructor to lead yoga and fitness boot camp classes for its employees.

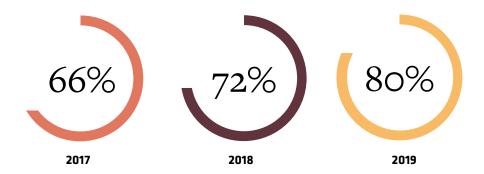
Designing and developing a customized fitness center to meet the needs of an employee population is essential to supporting both the employee experience and employer investment. Prior to the design phase, a needs analysis, feasibility study, employee input (what type of facility and programming do employees want) and a determination of whether the employer will subsidize use of the facility should be performed. These elements lay the groundwork for the design and development phase, which includes equipment layout, audio visual, technology, HVAC, flooring and other crucial aspects of a well-designed fitness center.

To create an attractive and highly functional facility, close collaboration among the design and project teams throughout this phase is critical. This is especially true for companies that envision the fitness center as part of a more holistic approach to promoting employee wellness, rather than simply a stand-alone, one-off space.

A key design component is space allo-

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#### COMPANIES OFFERING ON-SITE FITNESS CLASSES



cation — both where to locate the fitness center within the building, and how to allocate space within the center. Wherever possible a well-lit, easily accessible area with welcoming, highly visible signage is preferable.

Fitness centers create a liveliness and buzz that make them a social environment. But the pulsing music that pumps up the energy in a cycling class may be unwelcome in adjacent office space. Acoustical and sound-reducing measures can help alleviate the sound transfer.

In newly constructed buildings, fitness activity simulations can identify ways to mitigate sound and vibration transfer, such as designing for a spring lift isolated slab system for a fitness center on an elevated floor.

In both new and existing buildings, installing layered rubber flooring can help. Other solutions — if noise or vibration is still an issue — include choosing low-impact equipment to minimize vibrations, providing platforms in free-weight areas to absorb weight impact, and controlling or capping audio levels.

#### Setting the bar

Filling every square inch of the fitness center with exercise equipment should be avoided. There should be space for functional movement, mobility work and layout flexibility. Fitness center consultants, working with the design team and employer, can help determine how many square feet to allocate within the overall space to equipment, studios, locker rooms, storage and amenities such as towels. Well-programmed locker rooms with the appropriate shower, storage and vanity space help maximize efficiency and employee experience during peak times. Flooring should be appropriate for the area it is support-

ing. Rubber flooring is essential in a freeweight area (to provide impact resistance from weight drops and shock absorption) but would not be appropriate in a yoga studio.

To charge or not to charge for using the center is a key question. Employers do not want to see 5,000 square feet going unused. Thus, their inclination might be to fully subsidize in order to incentivize participation. But that is not always the case.

Common fee models include fully subsidized (employees pay nothing), subsidized (employees pay a nominal fee) and partially subsidized (employees pay higher amounts). Interestingly, the highest level of engagement is typically with the subsidized model. When fitness center membership is free, the enrollment rate is typically high, but utilization is low because employees do not have the proverbial skin in the game. On the other hand, charging a nominal fee (US\$15 per month, for instance) often results in fewer signups — but higher utilization — than the fully subsidized model because employees feel they have bought something of value.

Peak use of fitness centers is typically early morning before the work day begins, lunch time and after work. However, during non-peak times, they may be vacant for long stretches of the day. One firm creatively filled that void. It noticed that except for the three daily group fitness classes it held in its 1,500 square-foot studio, the space was normally empty. So, together with its consultant, the company created an aesthetically pleasing experience where, surrounded by dim lights, electric candles, soft music and yoga mats, employees were able to enjoy some quiet time when classes were not being held.

Using an on-demand streaming group fitness service is another way to minimize

underutilization, particularly at facilities operating around the clock but providing group fitness classes only during prime times. Employees walk up to a kiosk in the center, select a yoga, stretching, aerobic or other type of class and then follow along with the virtual trainer on the television screen.

#### Let's get physical

A common mistake is dedicating space to specific functions that are programmed only a few hours daily. If a mid-sized or small company has a dedicated cycling studio that only hosts three classes per week, it becomes largely unoccupied real estate that could be used for other purposes.

A solution: create a multipurpose studio with a flexible layout utilizing the four walls, ceiling and storage area to maximize open floor space. A multipurpose room with storage space enables the room to be converted for different class types — spin bikes can be rolled out for the cycling classes, then returned to storage for set up of a high-intensity or suspension training class.

Providing a clean, safe, functional and engaging space in a cost-effective way requires a significant time commitment and attention to detail. Some facility managers take on operational responsibility, assuming the task cannot be difficult. But sooner or later, they find themselves mired down in details such as overseeing the towel service, hiring group fitness instructors, maintaining clean showers, fixing broken treadmills, repairing a leak in the ceiling and wiping down the equipment. Of course, managing staff to handle those tasks is itself, another responsibility.

One of the most significant capital investments involved with developing a fitness center is the exercise equipment.

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#### Checklist for success

- Create a survey to understand what potential tenants are looking for in a fitness center, where employees currently work out and what equipment they desire
- Find the right location in your building for the fitness center
- Determine the right type and number of classes to offer

As with deciding who should operate the facility, choosing the appropriate staffing model to run programs and classes is another key decision. Having credentialed, well-trained professionals who are personable and highly energetic to staff the center and run the classes can make a big impact on employee engagement.

Fitness centers can help employees achieve their health-related goals. Other complementary services can also help them down that path. For example, an ergonomist, wellness coach or registered dietician nutritionist can ensure that the progress being made in the fitness center is not being undone when the employee returns to his or her desk or heads to the cafeteria or home. Ergonomists can help employees address their musculoskeletal issues in a more holistic way by suggesting that an employee participate in corrective exercise programming offered at the company's fitness center.

Being physically active can help employees enjoy better health, feel less stress and be more productive. Boutique, single-tenant corporate and multitenant property fitness centers enable employees to attain their fitness goals. Modern fitness centers are an attractive amenity for commercial real estate developers and, if properly designed, staffed and operated, enable facility managers to help contribute to employees' well-being, while freeing them up to spend more time on their core business.

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**Ravita Persaud-McGuigan** is vice president, design and development, Optum On-Site Services.

Equipment can easily cost hundreds of thousands of dollars; for large spaces — more than 25,000 square feet — the expense may exceed US\$1 million. Consultants with industry knowledge of equipment performance and warranties may be better able to help maximize the lifespan of the investment and leverage preferred pricing terms than equipment dealers can.

the goal of increasing employee

enrollment, Optum redesigned the

space on the floor above, bought

new equipment, implemented new

center, modernized the locker rooms,

expanded to an adjacent underutilized

programming tailored to the employees

and brought in highly trained staffers.

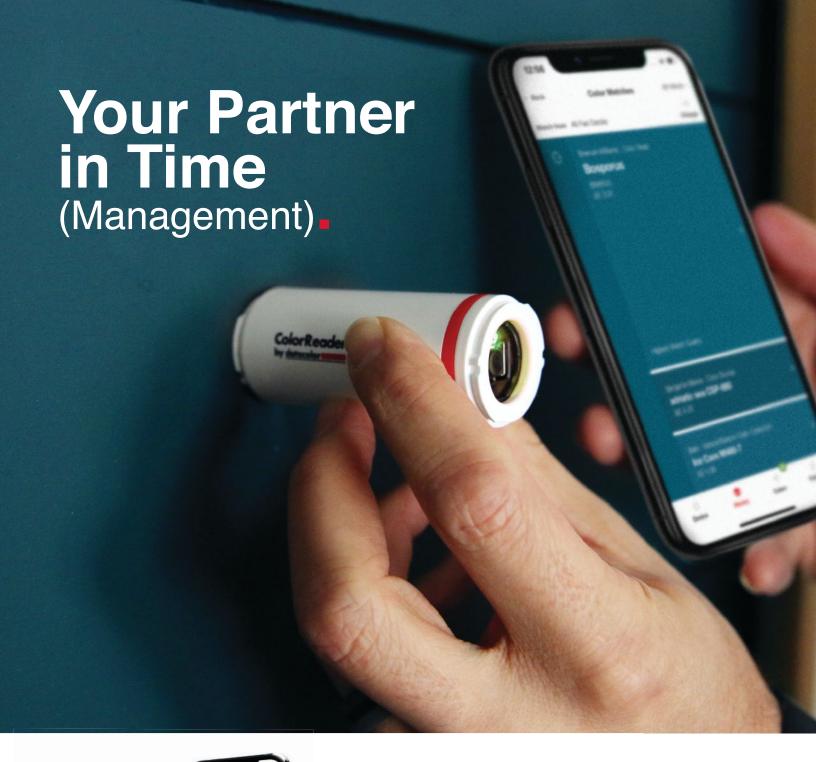
The results a year later: new members

increased by 23 percent, active

members increased by 70 percent.

A common maxim in the fitness industry is: if you build it, they will not necessarily come. Developing, designing and building a fitness center will not be worth the time and expense without robust employee participation. That is why it is important to have a wide array of classes and programs tailored to employees' interests, regardless of their fitness level. These may include small group training, group fitness and other classes ranging from spin and abdominals to Pilates. Fitness assessments, personal training, and even walking and running clubs may also be part of the program.

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We are living in a time in which exponential change is driven by advances in technology, automation, the emergence of the sharing economy and the fall of siloed space, all of which is having profound impact on the spaces and places that we create. Regardless of the abundance of innovation, many of us are still working in spaces where technology is frustrating at best.

ith all of this access to technology 24/7, the inability to disconnect in a seemingly ever-connected world is causing dramatic increases in stress levels among workers today. The World Health Organization (WHO) projects techno-stress — the stress of constantly being on and overwhelmed by technology — will be one of the biggest health issues in the coming decade. Although we are more connected than ever, loneliness and poor social connections are on the rise. For many people, work is not working.

### Facing the challenge

As the world welcomes new tech advances, we are seeing new opportunities to embrace new ways of work emerging.

The ability to merge the digital and physical worlds creates an opportunity to enhance the user experience. By creating an immersive and interactive realm that seamlessly interweaves the physical and virtual worlds, people have more options at hand and more ready access to information. The objects that reside in the real-world are "augmented" by computer-generated perceptual information and are often multiple sensory modalities, including not only visuals, but also smell and sounds.

The real value of the IoT is not tracking users, but leveraging sensors to create better user-experiences, hence creating the IoE, Internet of Experiences, and enabling WorkHOW. Be it identifying a space that meets your preferred lighting, temperature or noise levels or adjusting the space to your specific settings — people can determine when, where and how they want to work. We need to be aware that data collected from a singular point is thin at best

and can led to false conclusions. Thick data, on the other hand, is the compilation of data taken from multiple viewpoints, queried by human understanding with logic applied and addresses the whys.

### Times are a-changing

The emergence of the gig, or freelance, workforce has opened nontraditional hiring options. Forty-four percent of the workforce is temporary help, staffing agency help, part-timers, contractors, freelancers and gig workers. However, by 2025 more than 50 percent of the global workforce will be gig workers. This provides opportunities for companies to rethink their hiring practices and create pools of just-intime workers to supplement a core group, thus ensuring companies do not have too many or too few employees.

Recent reports have outlined the threat

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of climate change and noted that a government-led mass mobilization effort can potentially transform society quickly enough to avoid global catastrophe. The proposed Green New Deal initiative would entail greening the energy grid; encouraging a shift to electric vehicles and mass transit; the densification of existing cities and building new ones from scratch while retrofitting the existing building stock. The impacts on corporate real estate and the design and construction industries would be profound.

### Establishing a disconnect

Given the challenges and opportunities at hand, there are some key steps we can take and concepts we can embrace to ensure we are optimizing work environments, improving efficiencies and effectiveness, and creating great experiences.

The inability to disconnect is causing a dramatic increase in stress levels among workers today, with 70 percent reporting they feel overwhelmed daily. We need to design spaces that help people function at higher levels and feel refreshed so they are truly effective.

**CONSIDER** creating quiet zones, tech-free days or blocking emails from passing through your servers during certain off-hours. Also consider creating zones within the workspace where people can work "alone together" or designated spaces for more solo concentrative work, be it individual work points on the perimeter and away from team areas or focus rooms.

As we shift away from focusing on incremental productivity, where it is about producing things faster, better and cheaper, a new model is emerging. Divergent creativity leverages different expertise and points of view to co-create and drive to more game-changing innovation that break through boundaries. The sage on the stage empowered by PowerPoint is replaced with the democratization of meeting where everyone can contribute, leading to inclusive ideation and speed to innovation.

**CONSIDER** creating scrum areas for ideation and work project spaces, or dojos, for extended





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## PREDICTIONS / RECOMMENDATIONS:

- » As robotics do more production, measuring that will not matter as much. Companies will live and die by their ability to innovate and adapt.
- » Everyone is crazy for data, constantly wanting more. But the data we have is not convincing people of much. We need to trust common sense and our intuition and get better, thicker data.
- » We need to proceed with caution. Once new technology is out of the bottle, we cannot put it back in. Facial recognition, robotics, etc. – there is a dark side to it all.
- » Sensors that monitor and track us are not popular. When we can leverage the information gathered to empower us, people will get on board.
- » Yes, robots and Al will replace some jobs. But new ones will be created. Are your people prepared to shift into those newly created positions?
- » Yes, user experience is important, but user expectations should be the focus.
- » A lot of change is coming in the next decade and will impact the environments we are building now. We need to design to be future-ready. You cannot futureproof. Developing plausible scenarios and remaining agile is key.
- » We need to incorporate aspects of higher-education to enable life-long learning and reskilling of the workforce; design for divergent co-creation; and leverage community sharing of amenities going forward.

assignments that have both digital and analog information sharing opportunities.

### A sense of belonging

Much focus has been on the younger generation, but the worker is aging, so space today needs to be designed to be inclusive for all generations, genders, personality traits and ethnicities. Space today needs to reflect the diverse makeup of organizations as we are becoming a majority of minorities. We are also living in a time of increased numbers and awareness about neurodiverse individuals who may be ADHD, on the autistic spectrum, dyslexic or have early signs of Parkinson's disease. These individuals can be high energy, risk-takers, good in a crisis and bold problem solvers, but most work environments today are not designed to support them.

**CONSIDER** designing spaces that are an ecosystem of work settings that can help accommodate and be inclusive for all.

People today are becoming untethered to their desk and can work anytime, anywhere. So we need space that supports that freedom of movement and is designed to operate without direct human control. Smart-tech can help create a truly intelligent, autonomous workplace designed to support users.

**CONSIDER** utilizing technology to aid in making the environment adjust to us, instead of us having to adjust to it. Biometrics, smart fobs and sensors can help identify our preferences and provide preset solutions that adjust to us and provide access to data and information when and where we need it.

Exceptional amenities will continue to be a differentiator and create destination locations. Providing a wide variety of gathering spaces and food and beverage options is important for building community and meeting people's physical and social needs. High-quality coffee is a valued perk.

**CONSIDER** going beyond owned and controlled amenities and leverage the power of the sharing economy. Access to amenities replaces the need for each and all to have separate dedicated amenities. Savvy companies are leveraging the amenities within the facilities and neigh-

boring buildings not only to reduce cost, but to create a more vibrant, connected community with more options for their workforce.

### Be flexible

People want options and choices when it comes to how they work. Sitting stagnantly is not only bad for our health and well-being, it is bad for productivity. When people have no options, they can be stuck sitting next to somebody they may not mesh well with, which can adversely impact their engagement and overall performance.

**CONSIDER** designing spaces that encourage movement and give people a variety of options. Activity-based environments allow people to choose the right setting for the task at hand. The environment also enables them to find the right community of co-workers so they feel more supported and connected. When people bond, they open up and become more trusting. That is when real innovation happens.

Today's workplace features a generation who is not just working to feed their families, they are working because they want to make a difference. They want their companies to have a clear mission and they want to believe in that mission. People want and need to feel connected to the purpose of the business. It is vital for employees to get excited and motivated about the company's work.

**CONSIDER** designing spaces to connect people to the core of what the company does and why they do it. Spaces that are designed to infuse transparency and openness help employees tap into that sense of purpose and meaning while fueling their desire to perform. Space should be the physical embodiment of a company's mission, values and culture.

### **High EQ**

Machines may excel at computational capabilities and be the "Science of the Job," but humans excel at the "Art of the Job." Soft skills — our ability to connect, empathize, motivate and inspire, and our EQ/emotional intelligence — how we relate to others, apply insight and judgment is what separates us from machines. Leadership skills and the ability to apply emotion and ethics in social context has a renewed importance today.

**CONSIDER** designing space that embraces the concept of "high-tech equals high-touch." Simply put, most of us feel overwhelmed by technology today, so designing spaces that are "high-touch" and bring organic, natural elements into the interior environment while making things more transparent, genuine and real is a welcome check to "high-tech."

We need to move away from people working in isolation. When employees are interconnected and can see the work each is doing, their role takes on more significance and purpose. They feel more excited and connected to the business.

**CONSIDER** spaces that break down silos and provide areas for meaningful exchanges. Wider passageways, social areas, interconnecting stairs and atriums, and common amenities—not only within the building, but among

the neighboring facilities as well — can create an enhanced sense of connection and provide opportunities for discovery, collaboration and community.

### Empowering people through design

What is truly driving the need for change? The desire to better enable people to live and work in optimum conditions. Hence, we are seeing the parallel rise of the machine age and the rise of the human factor. These two streams are already converging in the workplace and changing not only the tools we use, but when, where and how we work as well. The ability to combine space and technology solutions to democratize space and enable divergent creativity is at hand. To truly be inclusive we need to design spaces that accommodate and empower a diverse workforce, not one

single group, generation or worker type. Workspaces must integrate smart-tech solutions that enable people to thrive and be successful. We are no longer in the business of designing work spaces, but creating holistic workplace experiences that have a tremendous impact on people's well-being — not just their physical, but social, emotional and financial well-being. Change affords us an opportunity to recalibrate and create destination work environments where people can thrive and, as a result, organizations can prosper.

Photography by Alise O'Brien



Kay Sargent, ASID, IIDA, CID, LEED\* AP, MCR.w, WELL AP is a senior principal and director of

WorkPlace at HOK.



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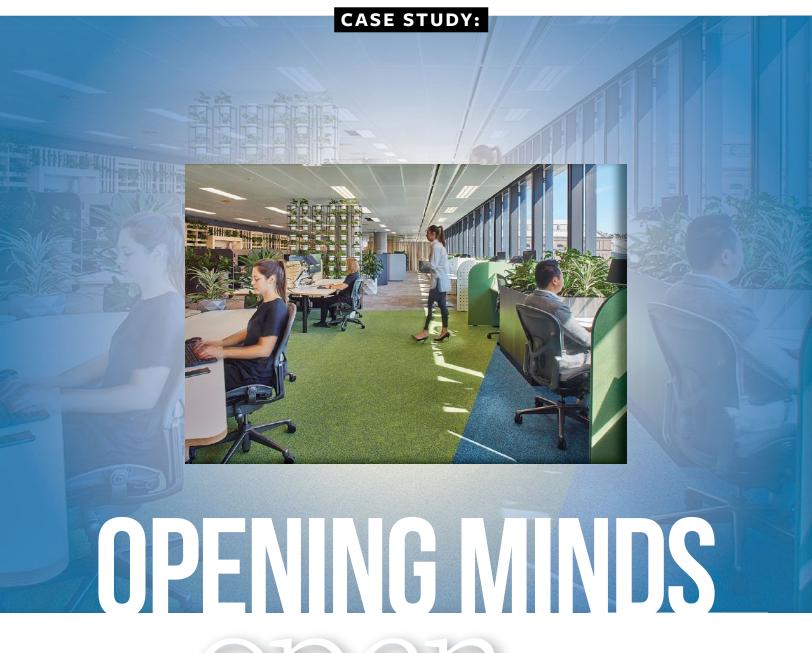




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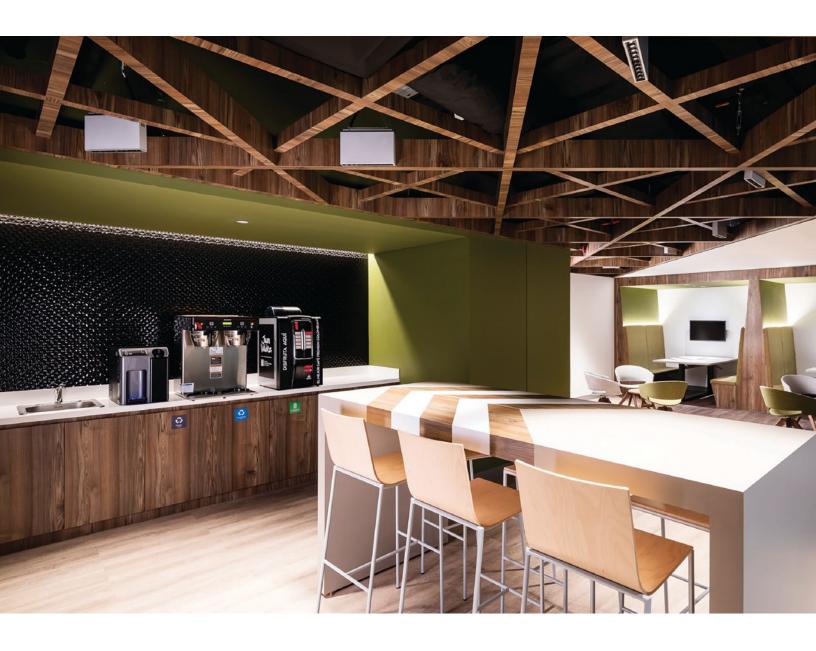
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## to OPEN SPACE Concepts

BY JO SUTHERLAND



### The state of play

Excellent employee experience doesn't happen accidentally. It is the result of an approach that puts the employee and their role in the organization at the center of leadership's attention. The results of a recent online survey by Leesman are arming business leaders with the data they need to understand what is and what is not working from an employee perspective. The survey looks at what employees are doing, and how well each of the activities they undertake as part of their roles are supported by the physical, virtual and social infrastructures on offer. The benchmark also considers the impact that the design of a space has on an employee's overall experience, from their perception of their productivity to the sense of community.

Having surveyed more than half a million employees across 3,442 workplaces (17 percent of which are spread across the U.S.), in 90 countries, only 52.8 percent of employees agree their workplace is a place they are proud to bring visitors to; 58.9 percent said their work environment contributes to a sense of community; 59 percent agree their workspace creates an enjoyable environment to work in; and when asked if the workplace enables them to work productively, 60.3 percent checked the "yes" box. If these figures are reversed, approximately 40 percent - two-fifths of the workforce — cannot agree with these statements.

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A shocking number of workplaces are, quite simply, not fit for purpose. But an elite group of employers buck this trend, delivering environments that brilliantly support the employee experience. The organizations behind these workspaces challenge the often-recycled idea that "work is a thing you do, not a place you go." The organizations that have made it to the top of the workplace charts have done so by creating a series of work destinations where employees do want to go.

In the United States, three of these buildings belong to architecture and design firm Perkins+Will. TripAdvisor's Boston office also made it onto the winner's list, proving that it's not just organizations within the built environment that recognize the impact that design decisions have on the employee experience.

High-performance workplaces can be curated regardless of industry segment or geographic location. The research shows outstanding employee experiences are being delivered in both large and small spaces, with high- and low-density occupation.

So, what sets these spaces apart? How exactly does the best beat the rest?

First, these organizations understand their employees - what they do, what they need, what they want - and by adopting evidence-based decision-making, they have created spaces that provide responsive, participatory work experiences that respect and support employees in the role they are employed to do. Offering employees the choice to work in a way that suits the dynamics of their role and personality is also a key ingredient of success. These companies consistently deliver a variety of work settings to support both individual and collaborative activities, the ratio of which depends on the organization in question. For example, a team of web developers writing code do not need as much, if any, collaboration with their colleagues as marketers planning an international campaign do.

### Does size matter?

There are also clues as to how the corporate real estate envelope — square footage, occupant density, desk-sharing ratios,

environmental certification and the like
— can impact the overall employee experience

At the risk of bursting some industry bubbles, the data suggests that there is no such thing as an ideal amount of office space. Top workplaces vary considerably in both size and density, ranging from just 900 square meters (9,687.5 square feet) net internal area (NIA) to 35,000 square meters (376,736.8 square feet) NIA, and from 28.6 square meters (307.85 square feet) per person to 5.1 square meters (54.9 square feet) respectively. There are companies, including Leesman+ winners in Asia, for example, that offer less than 8 square meters (86.1 square feet) per person. Perhaps unsurprising considering the continent includes nine of the 10 most densely populated cities on Earth.

Employees in these spaces are happy, regardless of the fact they do not have as much space as other top workplaces in other locales. The U.S. firms on the winner's list contribute the most space to the elite collective's footprint, averaging 18.4 square meters (198 square feet) per person. This suggests employee expectations — and therefore the relative satisfaction levels — vary depending on the geographic position and cultural norms/preferences in question. What leads to a good experience in the U.K. may not be the same in Oman, and vice versa.

There seems to be an assumption that bigger is better. More space is thought to improve people's physical and mental well-being, and it is even said to encourage exciting business benefits like collaboration between disparate teams. On the other hand, productivity killers are often pinned on larger offices, often of the openplan ilk. In the press, such spaces have been blamed for everything from distracting noise levels to triggering toxic cultures because of the physical distance between teams.

The truth sits somewhere in the middle and what matters is how the space is configured. The data points to different types of workspace as a possible powerful counteragent to the perceived ills of free address, for example. Respondents' satisfaction with variety is almost 30 percentage points higher in the flexible workplaces

compared with the traditional spaces. An employee's satisfaction with their work-place might not necessarily dip if they lose a dedicated desk, but in its place would have to be the choice to do individual focused work elsewhere like a pod or a quiet zone. It is all about balance.

All this means is that facility and real estate managers tasked with reducing office space can rest a little easier — size and density alone do not make or break the employee workplace experience. But reducing space for space's sake will only deliver diminishing returns, says Leesman CEO Tim Oldman. Any organization on a journey to improve its employee workplace experience must do more than cut costs, he stressed. It should also develop a far better understanding of its employees' expectations, their needs and the impact from new real estate.

### An open mind

While the 2018 Leesman+ workplaces represent a range of sizes, they have one thing in common. Openness.

In her article, "The Open-plan Witch Hunt," Dr. Peggie Rothe states such spaces are demonized in the mainstream press with increasing frequency. "It seems that journalists trapped in poorly designed open-plan offices act as what economist Edward Glaeser called entrepreneurs of error," she writes. "As they have been known to feed the public with headlines like 'Does Open-plan Get the Worst Out of Workers?" 'Open-plan Offices Suck,' '10 Rules for Surviving Your Open-plan Office' and my favorite, 'Open-plan Offices Were Devised by Satan in the Deepest Caverns of Hell."

The most common charges are that open designs distract people, frustrate those who value privacy and increase levels of stress at work. And yet the research paints a very different picture. Of last year's 28 Leesman+ workplaces, only 2 percent feature private offices. This speaks to the growing popularity of open-plan design for many of the world's biggest corporates, but it also demonstrates that the ire directed at open-plan offices is misguided.

There is a caveat. Leesman's research

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suggests that the greater variety often associated within these open-plan spaces may come at the expense of personalization. In the hunt for each year's best-inclass workplaces, the survey covers over 90 areas. The Leesman+ spaces excel in every single area except two: there is practically no difference between all Leesman+ workplaces and the global database on the satisfaction levels concerning ability to personalize a workstation and personal storage. In fact, these features have seen a decrease in satisfaction, dropping 13.5 percentage points compared to the 2015 results, almost certainly as a consequence of the increase of flexible and unassigned workplace solutions.

In order to better manage a wider variety of workplace designs, are organizations denying their employees the opportunity to personalize space? And if so, at what cost?

### Push, probe, challenge

Employees working for Leesman+ employers consistently record exceptional satisfaction scores with the workplace and its ability to promote a positive corporate image, culture and sense of community. What's more, employees in these spaces are more likely to agree that their workplace enables them to work productively, either as part of a team or individually. This leaves little doubt that these workplaces are key assets in organizational performance, corporate resilience and competitive advantage.

An extract from Leesman's "The World's Best Workplaces 2018" report reads: "The organizations that achieve Leesman+ certification are not afraid of understanding how they are performing and knowing where they could do better. They see value in a depth of understanding and continuous improvement. They welcome change rather than loathe it."

Push, probe, challenge. This reflects what the world's best workplaces are doing when it comes to providing the best possible environments for their people. Success is not about the amount of space that is on offer; it's about delivering tailored solutions that are built on a deep understanding of what employees do in their roles.

Organizations that adopt user-centric, evidence-based decision-making to inform the design and management of workplace services and infrastructures have more

chance of making the greatest difference to an employee's working day. The companies that place their employees front and center will have more to show for their efforts than a trophy.





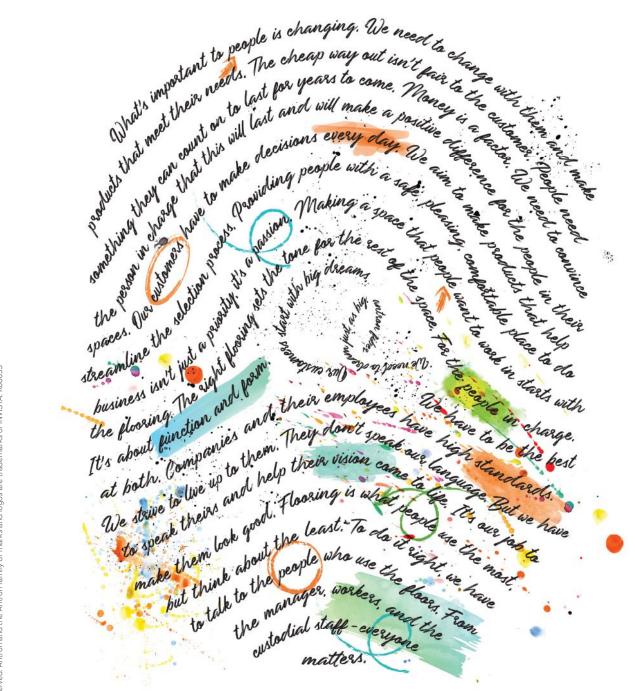
Jo Sutherland has worked in FM and workplace management for four years. In that time she has had her work published in business and trade titles. She has contributed opinion pieces to and produced white papers for the likes of RICS and IFMA's Knowledge Library. She has also secured speaking slots at key FM events in the UK.

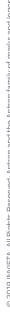
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**WEBSITE** www.cambridgesound.com | www.biamp.com

## **FMJ** What research or product innovations is your company working on that will help facility managers be more successful in their roles?

focused on developing and delivering the most innovative, industry-leading products and solutions. The acquisition of Cambridge Sound Management by Biamp means major advantages for facility managers. The combination of our leadership positions, technology innovations and sales-force expertise will help facility managers in all industries get the help they need from a single, multi-faceted company. One of many examples is the new, seamless integration of Cambridge Sound Management's industry-leading sound masking solutions with Biamp's advanced Vocia paging and emergency notification system. Now, sound masking and ultra-reliable paging capabilities can be accomplished in partnership with one vendor with unparalleled building-infrastructure expertise.

### FMJ What has been the most positive feedback you've received from clients?

**CSM** Customer: Autodesk Inc.

**Solutions:** Cambridge Sound Management Qt® 600 sound masking system

"[The employees] were being distracted by conversations 60 feet away. When the system's on, speech becomes unintelligible at a distance of about 20 feet," said Charles Rechtsteiner, Autodesk's Regional Facilities Manager.

Facilities Coordinator, Steve Boulas, appreciates the system's set-it-and-forget-it ease of use. "The software is easy to use and allows me to modify any zone without needing to leave my office." Mr. Boulas adds, "But I really don't have to make adjustments, the system just works."

In all, the addition of the QtPro system has led to a better aesthetic design, while ensuring a distraction-free environment with privacy for each employee. "When the system is off, it's noticeable; you can hear people talking and other office noises. It's much more pleasant when the system is on," said Mr. Boulas.



COMPANY NAME VARIDESK
EXPERTISE Furniture Solutions
CSP LEVEL Silver
CSP SINCE 2016

WEBSITE www.VARIDESK.com

**FMJ** What research or product innovations is your company currently working on that will help facility managers be more successful in their roles?

At VARIDESK, we use our headquarters as an innovation lab for both new products and our space design theories, as we feel that together they contribute significantly to employees' productivity levels.

We've found that especially in an open workspace environment, employees need both their "me & we" spaces — that means both spaces to focus, and spaces to collaborate freely. Consider large conference rooms with standing stables for big meetings, smaller enclosed areas for one-on-one work, rolling white boards so any space can become a place to brainstorm, focus pods for individual projects, phonebooths for private calls, and even Zen rooms for when you really need to unwind. We encourage the use of moveable walls and partitions to create some of these varied spaces, which allows teams to adjust their space as they grow or as their needs change.

## FMJ What's on the horizon in your field/industry, and how is your company meeting those challenges and opportunities?

When it comes to helping our clients build spaces that stand the test of time, flexibility is the new key to success. Facility managers face significant struggles as they work to anticipate the needs of the future. That's why VARIDESK is helping clients account for the many ways their organization could change in just a few years.

Are they going through a massive growth spurt, or adding a new team? Will they be adding senior executives that require additional private offices? Or, will they bring on more junior employees that want more collaborative space? Could they benefit from special war rooms or breakout spaces for high-priority projects? Or, is management facing a lay-off situation?

It's time to reconsider static cubes and desks, and trade them in for height-adjustable workstations and moveable walls, overhead lights that plug right into the ceiling, standing conference room tables, and furniture that can be assembled with only hand-tightening bolts. It's a new, simpler way to create a workspace.



PARTNERSHIP FEATURING

COMPANY NAME Kimberly-Clark Professional EXPERTISE Restroom Supplies and Solutions CSP LEVEL Gold CSP SINCE 2016 WEBSITE www.KCProfessional.com

## FMJ What research or product innovations is your company currently working on that will help facility managers be more successful in their roles?

k-cp Kimberly-Clark Professional and GOJO Industries have collaborated across their technology platforms to bring you an industry-changing, innovative partnership that will transform the way restrooms are managed. Through this collaboration, the Onvation™ Smart Restroom

Management System now features the most trusted and customer-preferred Scott® and PURELL® products.

This strategic partnership inte-

This strategic partnership integrates two best-in-class brands with leading smart sensing technology to provide a single interface for proactively monitoring restroom conditions to reduce customer complaints and increase tenant satisfaction.

Gain total visibility into your restroom management operation and easily identify restroom activity by product consumption, traffic, average response time or premature refill waste. The Onvation™ System dashboard provides a complete picture of year-to-date savings, including dollars saved from prevented service requests and waste reduction, as well as custom insights that help guide best practice.

In addition, our Scott® Pro™ Restroom Solutions are specifically designed to deliver unparalleled performance for maximum efficiency and advanced dispensing. Our newest offering, the Scott® Pro™ Electronic Hard Roll Towel System offers game-changing Direct Drive Dispensing technology to deliver a quieter, more reliable and more power efficient operation — for unparalleled performance on all fronts.

**FMJ** What's on the horizon in your field/industry, and how is your company meeting those challenges and opportunities?

**K-CP** Today's buildings are remarkably sophisticated. For facility managers, the Internet of Things can provide efficiency gains — from more effectively managing energy consumption to proactively monitoring restroom conditions.

A smart restroom management system delivers relevant, actionable analytics and insights. The system can allow the reallocation of resources to enhance staff productivity. It even helps with making informed decisions about budgeting, planning and scheduling so you are proactive rather than reactive.

When people take a break, the most popular destination is the restroom, according to a recent study. The typical office worker visits the restroom three-to-four times a day,

which translates into more than 1.1 million annual opportunities in a typical-sized facility to impress or disappoint.

A study found:

- 73 percent of tenants say a bad restroom equals poor management
- 60 percent say an unhygienic restroom lowers their opinion of a facility

A smart restroom management system can help you impress. By providing real-time data and alerts on everything from dispenser malfunctions to restroom traffic, you eliminate problems before they become complaints — enhancing tenant satisfaction and giving you peace of mind.

Learn how our Onvation  $^{\text{TM}}$  Restroom Management System can reduce 75 percent of tenant complaints related to the restroom — guaranteed. Visit www.KCProfessional.com/Onvation.

**FMJ** Share how your brands/offerings make a unique impact in the marketplace.

**K-CP** Trends show consumers prefer brands they know, and familiar branded solutions can help increase the perception of cleanliness and improve restroom users' satisfaction.

In buildings that use Kimberly-Clark Professional branded restroom solutions like Scott® and Kleenex®, tenant satisfaction with restroom appearance and with restroom cleaning scored higher than the Kingsley Index across seven major U.S. cities.

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IFMA's Corporate Sustaining Partners (CSPs) are dedicated to the goals and work of the association, supporting every resource IFMA offers. These best-in-class organizations make a substantial investment in the facility management community with no guarantee of a tangible return. As advisers, topic experts and change leaders, they are committed to the success of the professionals they support.







### Credible



**Authors** 



**BODY** of **FM** 



Advisors



Presenters

With the generous support of our CSPs, we have the

that you've come to expect from your association.

means to deliver the quality, cutting-edge information



Researchers



Experts

A company bearing the CSP logo has made an investment in the continued advancement of the FM profession - they have made an investment in you.

**PLATINUM** 











**SILVER** 





















































### **ACOUSTICAL/SOUND MASKING**

Cambridge Sound Management | www.cambridgesound.com Number Community 
Lencore Sound Masking & Acoustics | www.lencore.com
LogiSon Acoustic Network | www.logison.com

### **BUILDING AUTOMATION**

Electromechanical Maintenance Services & Facilities Management (EMS W.L.L.) | www.emsqatar.com

### **BUILDING MAINTENANCE/REPAIR/RESTORATION**

Otis Elevator | www.otis.com

### CARPET/FLOORING/TEXTILES

MasterCorp | www.mastercorp.com milliCare Floor & Textile Care | www.millicare.com

### **CEILINGS/CEILING CARE**

Armstrong World Industries | www.armstrong.com

### **DISASTER RECOVERY/EMERGENCY RESPONSE**

BELFOR USA Group Inc. | www.belforusa.com

### **ELECTRICAL/WIRE MANAGEMENT**

Connectrac | www.connectrac.com FreeAxez LLC | www.freeaxez.com

### **ENERGY SOLUTIONS/MANAGEMENT**

Energi Pros | www.energipros.com

### FLOORING INSTALLATION/MAINTENANCE

Corporate Care | www.corporatecare.com Norbor Flooring | www.forbo.com
Tarkett | www.tarkettna.com

### FM CONSULTANTS/SERVICES/PROVIDERS

ABM | www.abm.com

AECOM | www.aecom.com

Al-Hajry Overseas Co. LTD. | www.alhajry-overseas.com.sa

Al Shirawi Facilities Management | www.alshirawifm.com

ARAMARK | www.aramarkfacilities.com

Canadian Base Operators | www.canadianbaseoperators.com

C&W Services | www.cwservices.com

EMCO Qatar | www.emcoqatar.com

EMCOR Facilities Services | www.emcorfacilities.com

Facility Management Services dooel | www.fms.mk

FEA | FEApc.com

FBG Service Corp. | www.fbgservices.com

ISS Facility Services | www.us.issworld.com

Jacobs | www.jacobs.com

New PIG Corporation | www.newpig.com

Sodexo | www.sodexousa.com

### **FM SOFTWARE**

ARCHIBUS Inc. | www.archibus.com FM:Systems Inc. | www.fmsystems.com

IBM | www.ibm.com/us-en/

iOFFICE | www.iofficecorp.com **№** 

Planon | www.planonsoftware.com

SpaceIQ | www.spaceiq.com

Trimble | www.trimble.com

### **FURNITURE**

 $\mathsf{CORT} \,|\, \mathsf{www.cort.com}$ 

Davies Office Inc. | www.daviesoffice.com Kimball Office | www.kimballoffice.com The LifeDesk | thelifedesk.com Sunline Office, LLC | www.arnoldsofficefurniture.com VARIDESK | www.varidesk.com Versteel | www.versteel.com

### INTEGRATED FACILITIES MANAGEMENT

AECOM | www.aecom.com United Facilities Management | www.ufm.com.kw

### **HVAC/WATER HEATING**

Rheem Manufacturing | www.rheem.com

### JANITORIAL SERVICES/CLEANING PRODUCTS

Excel Dryer | www.exceldryer.com REDLEE/SCS Inc. | www.redleescs.com ServiceMaster Clean | www.servicemasterclean.com

### LANDSCAPE/MAINTENANCE/PLANTS/ SERVICES/SUPPLIES

Ambius | www.ifma.ambius.com

### PEST CONTROL

Rentokil Steritech | www.rentokil-steritech.com

### RESTROOM PRODUCTS

Kimberly-Clark Professional\* | www.IFMAandChess.com

### ROOFING

Astec Re-Ply Roofing Systems | www.whyreplace.com J Reynolds & Co. | www.jreynolds.com

### **SECURITY**

HID Global | www.hidglobal.com Kastle Systems | www.security.kastle.com Securitas Security Services USA | www.securitasinc.com

### **TECHNOLOGY SOFTWARE TOOLS**

ARC Technology Solutions | www.e-arc.com OpenSensors | www.opensensors.com SCLogic | www.SCLogic.com Spacewell | www.spacewell.com

### **TELECOMMUNICATION**

Comcast Business | www.business.comcast.com

### **WATER & FIRE RESTORATION**

COIT Cleaning & Restoration Services | www.coit.com

# ATTRACTIVE SAMENIES



# SETTING TRENDS across the facilities spectrum

Buildings and facilities across the United States are increasingly showing signs of redevelopment and updates to better fit tomorrow's challenges. Approaching five to six years of solid recovery from the Great Recession, property owners, developers and facility managers are starting to react to the idea that the winds of good fortune could shift at any moment.

BY KELLY DARBY

JPMorgan Chase & Co. released a report this year that stated growth is slowing across commercial real estate asset classes. "Rents and valuations have been rising for years, but that's not likely to continue indefinitely. The U.S. economy has had a good run, and eventually, there will be a correction — for which owners and investors should plan," writes Alfred R. Brooks, managing director of Chase Commercial Real Estate. Industrial and office vacancy predictions both trend downwards as far ahead as 2020, which means companies are investing money now in the best of design and amenities to attract and retain their quality talent and tenants.

### Multi-family Residential

The sector that arguably began the "War of Amenities" is multi-family residential. Many of these types of developments cannot compete on location, so amenities are the next best option. The days of only installing a lonesome bocce ball court seem long gone at this point, as many of today's amenities are based on flexibility and smart technology. Kristin Vinesett with Cortland Partners explains, "Several of our newest units are tech-driven with Internet of Things (IoT) services such as Nest thermostats, Amazon Alexa and access control through mobile devices. Even something seemingly simple like a USB electrical outlet is noted and appreciated by our clients." Vinesett points out fitness centers in these environments are shifting toward those with built-in programming like Zumba or yoga, along with equipment fitted with "on-demand programming screens" from which a user simply chooses and joins a class from an online cloud-based service. "Cortland has an exercise program, Elevate, which is guided programming for each community," she explains.

Trash valet and dog parks are timeless amenities but require attention to details such as timing, access to running water, a leashing pen and ample seating. Amenities that are not as popular are business centers, large tennis courts, and leasing screens or walls that give local suggestions on where to eat or things to do. These screens are underutilized in some markets, often suburban areas, which make them not worth the investment.

Another amenity with cross-sector implications is provision of electric car charging stations. "These have mixed reviews," admits Vinesett. "A lot of properties see people use them, but we have push back based on location. If a resident with an electric car lives in one building, yet the station is in front of another building, they may not end up using it. The key is placement and walking distance, rather than just supplying a property with the amenity."

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### INDUSTRIAL



Industrial has come a long way in a few short years. The trend in this group is that buildings are shifting away from growing wider, and instead growing taller as the so-called "last-mile" of supply

chains grows in importance to

logistics and shipping companies. The last mile tends to reside in more urban areas. where there's a need to stack higher to avoid greater land costs.

The Japanese model of a multi-story warehouse with trucks spiraling up and down around the outside of the building is finding its way into the United States. Within the last year, Prologis opened a similar me-changing facility in Tacoma, Washington. Paired with technology that shows current available space in the storage section of the warehouse, companies can avoid traditional issues of stockpile problems. The potential impact of driverless trucks, forklifts and delivery vehicles to this sector is mind-boggling.

Industrial is also shifting away from its low-cost minimalist roots in favor of interior finishes that look like what is found in coworking or creative office spaces, which has trended toward more residential or hospitality styles in the past few years. As more workers be-

come aware of the fact that they spend more than 8 hours per day at work, the need grows to feel comfortable and content in the workspace. This fosters the desire for soft seating, lounge spaces and higher quality experiences in the workspace of industrial.

### OFFICE

Medical centers as an amenity, like what can be found in retail pharmacy locations, are making a comeback in the office space. Qualified providers are onhand to assist building employees. Instead of someone leaving work because they have a sore throat, a medical professional can diagnose seasonal allergies are the cause, provide over-the-counter medication and send the employee back

Technology and flexibility are also key in this market, which is making use of fitness centers with the same on-demand programming available in the multi-family market. "These Peloton-like services are really becoming great ways to provide fun group fitness classes without the hassle of employing area coaches or trainers," says Tracey Hatcher with KDC Real Estate Development. Wi-Fi is a standard in all office buildings — and it must reach to the peripheries of the property lines because outdoor seating areas are becoming popular with workers. Amphitheatre seating or tiered



Paired with technology that shows current available space in the storage section of the warehouse, companies can avoid traditional issues of stockpile problems.

Offices have to embrace, and even offer support for, these services in order to attract the best quality talent. The advancement of driverless cars will only increase this need.

giant steps are elements used both inside and outside office spaces. These arrangements offer unique opportunities for company announcements, picnics and decompression/relaxation time when paired with availability of food and beverage.

Other interior prevalent and functional amenities include hubs and collaboration spaces such as town hall areas with access to food and beverage located near work surfaces. These break and café spaces must offer the ability to charge devices wirelessly in order to facilitate heads-down or earbuds-in work. Coffee bars and seltzer drinks are becoming popular offerings for workers — even with some built in near the reception area or simply functioning as the reception area itself.





### BUILDING WATER SYSTEMS: THE SUSTAINABILITY & PUBLIC HEALTH NEXUS

September 11-13, 2019 Westin Bonaventure Hotel & Suites Los Angeles, CA

The second annual *Legionella* Conference is a unique event that focuses on emerging issues related to building water systems and brings together professionals across various industries to collaborate and solve them.

### **IMPORTANT TOPICS INCLUDE:**

- Creating and monitoring a successful water management program
- Advancing water reuse opportunities
- Water conservation goals and public health

### WHO SHOULD ATTEND?

- Facility professionals
- Public health officials
- Sustainability directors
- And more

**LEARN MORE AND REGISTER TODAY!**legionellaconference.org





No matter how many in- and out-of-of-fice amenities are offered, parking remains an issue for many employees. As cities discourage car usage within their metro areas, building owners are finding parking less important to provide, while tenants are reacting to the lack of availability of parking. Mobile device-based services are filling these gaps, which have given rise to Uber drop-off stations and the proliferation of e-scooters like Lime, Lyft and Bird. Jillian Japka with The Allen Morris Company explains, "Offices have

to embrace, and even offer support for, these services in order to attract the best quality talent. The advancement of driverless cars will only increase this need."

"Location next to public transportation is also key in many areas. We will not see needed relief in traffic congestion until people take advantage of critical adjacencies of office space and public transport hubs," says Hatcher. Some companies are hiring transportation concierge services to educate employees of the different transport

options available in their area.

As FMs look to the future of parking needs, one solution can lie literally right under their nose. "One of the parking levels located just below the offices is designed to be easily converted into a future workplace if the need for those parking spaces disappears. The ceiling heights are the same as the offices above, and the systems are designed to be easily added there," explains William Hotch, senior project architect at Warner Summers Architecture and Designs.

### **SUMMARY**

Looking across amenities in these three sectors, several key points begin to emerge.

- Future-proofing amenities and design means planning ahead. One important trend across
  all sectors is the fact that cars are becoming discouraged in metro areas. With the rise of
  driverless cars/trucks and the proliferation of e-scooters and other transportation options,
  the need for parking decks may lessen in urban areas.
- Available technology must respond to building amenities and vice versa, whether it is standard Wi-Fi, space logistics, efficient medical treatment or on-demand fitness classes.
- Flexibility is key to future-proofing. Spaces cannot perform only one function they must perform multiple functions with ease. Modern solutions include forward thinking such as turning a break area into a staff training room, flipping a parking level into part of the office building or turning new open warehouse space into storage for the latest shipment.

Retaining quality will mean reading these trends and outlooks for the future and responding in kind to them.

Kelly Darby's background in architecture gives a unique perspective to the work she does as Marketing and Business Development Manager for Warner Summers, a commercial

architecture and interior design firm. She lectures on graphic design and the built environment having given presentations in Lund, Sweden, and The Art Institute of Atlanta. Darby is a graduate of the Georgia Institute of Technology, earning both a bachelor's of science degree and a master's degree in architecture. Darby is involved with CREW Atlanta as Communications Committee Co-chair, the American Institute of Architect's (AIA) Equity in Architecture Committee, and has served on the Young Professional's Board of the Museum of Design Atlanta (MODA).



# READY TO BATTER

LAUNCHING AT WORLD WORKPLACE

## CASIND ROYALE

TUESDAY 10.15 HANGAR ONE PHOENIX, AZ



MAY THE BEST BOND, JAMES BOND TRIUMPH ON THE RUNWAY



FOR MORE INFORMATION GO TO

HTTP://FOUNDATION.IFMA.ORG/FOUNDATION-EVENTS



# I STATE OF FM EDUCATION COMPETITION COMES TO THE WORLD OF FM EDUCATION

BY MICHAEL SCHLEY, IFMA FELLOW AND DEBORAH ROWLAND

### People love competition. We revel in the drama of victory or defeat and enjoy recognizing excellence.

ast October, the IFMA Foundation launched IgniteFM!, an exciting event that allows students in facility management degree programs worldwide to compete and demonstrate their expertise.

### Wait, you say there are degrees in FM?

Yes, indeed! There are colleges and universities around the world offering two- and four-year and graduate degrees in facility management, and these programs are growing. For about 25 years, the IFMA Foundation has been promoting and supporting college education in FM. The foundation created the Accredited Degree Program to ensure that these programs educate students in the broad range of knowledge that the facility manager of tomorrow will need. The foundation's scholarship program assists FM students financially and helps introduce students to the IFMA family including future colleagues, mentors and employers. The IFMA Foundation's Global Workforce Initiative, GWI, is expanding FM education to community colleges and high schools.

### **Inspired by hackathons**

The inspiration for IgniteFM! came from hackathon events that have become popular in computer programming. At hackathons, competing teams of programmers work together to create a fully functioning application in a very short amount of time.

The inaugural IgniteFM! competition was held at World Workplace 2018 in Charlotte,

North Carolina, USA. In our FM version, the competition organizers added an additional challenge: Students were assigned to teams with students from other schools whom they had never met. Their first task was to get to know each other and determine how they were going to work together.

The competition organizers wrote a problem statement that entailed a hypothetical company dealing with preparation, response and follow-up to a major hurricane. Although Charlotte was spared during the 2018 hurricane season, this is a real-life situation all too often in the southeast United States during the August-October peak hurricane season.

Student teams were given three hours to solve the problem. By the end of the threehour period, teams had to submit their presentations to the organizers in Microsoft PowerPoint files. (For students attending World Workplace and other IFMA events, there is tremendous value in the educational and social events, and the organizers did not want student teams being tempted to work all night perfecting their presentations.)

Student teams presented their solutions to the judging panel the next day. Each team had 10 minutes to explain their solution to the problem in a way that was clear, concise and interesting. Teams were judged on critical thinking, the quality of their verbal and visual presentations, and on their knowledge of IFMA's 11 core competencies. Although it wasn't a requirement, each team organized their presentations so that every team member delivered part of their respective presentations.





### And the winner is...

At the Charlotte competition, the winning group was a team comprised of students from Hanze University in the Netherlands, Hong Kong Polytechnic University, Georgia Tech, Texas A&M University and Temple University in Philadelphia. The international representation was indicative of the diversity of the competing students. The team earned a US\$2,000 prize, which was presented on the main stage at the closing luncheon of World Workplace. This high-profile recognition was an effective way of connecting IFMA membership with today's bright FM students.

### The future of IgniteFM!

The inaugural IgniteFM! event was a tremendous success. Subsequent competitions were held in Amsterdam, Netherlands, at World Workplace Europe [refer to sidebar] and Facility Fusion in Atlanta, Georgia, USA. Plans are underway for a competition at World Workplace 2019 in Phoenix, Arizona, USA.

Although the basic structure of the IgniteFM! competition is set, the competition organizers will continue to experiment with different types of problems and different formats to keep the event fresh and interesting.

So far this year, IgniteFM! succeeded in capturing the imagination of both students and working professionals. It raised the awareness of FM education among IFMA members, and provided a way for FM students to create valuable connections and friendships with their peers at other universities. Finally, and most importantly, it introduced today's FM community to the facility managers of tomorrow.

### **IGNITEFM! STUDENT COMPETITION**

An additional IgniteFM! competition with 12 students from across Europe took place during the World Workplace Europe conference in Amsterdam in March 2019.

The assignment: Answer the question, "What will facility management look like in the smart city of the future?" through a combination of research, interviews, FM knowledge and creativity.

As part of the assignment students needed to:

- Interview a minimum of five participants at the conference to get input for their mission;
- Prove that they used information from a minimum of three sessions that were held during the conference.

The students presented their results digitally to the judging panel. They were also given the opportunity to share a summary of their findings at the end keynote of the conference, which was a great opportunity for them.

The findings from the students were quite varied:

### TEAM A

Team A explored what the FM of the future will be doing in tomorrow's smart city with a focus on technology, including:

- Smart mobility intelligent transportation system (ITS)
- Big data use
- Smart water management
- · Clean energy grid
- · Control of emissions
- · Smart health care and emergency response

They concluded that smart cities would need to focus on:

- Smart e-governance;
- with smart buildings with smart connectivity;
- · that are health stimulating; and
- provide living compliance.

062 WWW.IFMA.ORG/FMJ



### **WORLD WORKPLACE EUROPE**

### **TEAM B**

This team looked at the driving factors of technology, people and sustainability.

- They asked what if:
- People are not open to innovation?
- We cannot make all cities smart?
- Virtual reality replaces office workplaces?
- Earth becomes inhabitable?
- We achieve zero emission?
- AI takes over?

We just don't know.

### TEAM C

Team C wanted to keep it human and explored the why, the how and what's in it for us. They explored the Integrated Experience Management concept – connecting private and work life in a sustainable way, using front-end technology while keeping a human touch

Choosing the winning team was extremely difficult. At one point, the judges were at an impasse. However, we felt that team C was worthy of the prize as they connected the human experience to the smart city of the future. Team C was awarded the prize of €250 each (4 members per team), which was sponsored by Planon and Sodexo.

It was a great experience for all to see what the future of FM looks like through the lens of a student – someone who will help to develop the design and management of our future cities/buildings.

**Michael Schley** is an IFMA Fellow, past chair of the IFMA Foundation, and founder and chairman of FM:Systems. He leads the organizing committee for the IgniteFM! student competition.

**Deborah Rowland** is an IFMA Foundation Trustee and director of public sector affairs for Sodexo. She leads IgniteFM! Europe student competitions.

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## Innovative Products & Services



## Spacewell's new IoT-enabled service app innovates office cleaning

Building technology and consulting firm Spacewell recently released a new service app, which is a mobile touchpoint of its Cobundu smart building platform. Work Assistant for cleaning supports service providers in delivering activity-based services based on live IoT-data. Work orders can be created through sensor triggers, user feedback, help desk tickets and service scheduling.

The app is intuitive, providing clear instructions on floor plans to cleaning or service teams; but what makes it truly unique is the combination of floor plans with live occupancy data, sensor triggers and real-time data analytics provided by the Cobundu smart building platform. Due to the app's IoT connection, services are delivered in a more dynamic way, based on actual space occupancy and activity data from user devices. Built with and field-tested by cleaners and service providers, the app enables users to:

- » See which tasks to perform and where, automatically sorted by priority
- » Work in a standardized and qualitative way
- » Complete and skip tasks, providing a skip reason
- » Easily track time spent on a task or in a room
- » Report ad-hoc issues for the FM team to resolve
- » Onboard new cleaners and technicians more quickly

Spacewell's Work Assistant for cleaning app realizes its full potential when smart building technology measures which parts of the building are in frequent use and which are less important for end-user satisfaction. Cleaning operatives can then target their efforts where it matters most.

DOWNLOAD Work Assistant on Google Play; request a free demo at go.spacewell.com/demo-request-EN

### A new way to laminate: Press "run" and walk away

After four years in development, the first affordable, fully automated laminator is redefining limits in the lamination category. The Foton™ 30 from ACCO Brands' GBC® is both time-efficient and cost-effective, resulting in a superior quality output for a fraction of the cost of an industrial machine.

The Foton 30 is proven to free up 98 percent of time spent laminating compared to manual pouch loading and feeding. No need to wait for the machine to warm up. The fully automated system will do all the feeding, laminating and trimming for standard size papers. Drop up to 30 documents in the tray, press run and save more than 30 minutes of highly valued user time previously spent loading, feeding or repositioning. Foton 30's internal sensors auto-detect film thickness and provide perfect cuts with no waste or manual trimming. Even cartridge loading is as simple as dropping the cartridge into the machine — no film threading is required.



"I finished my first job with the Foton 30 in one day, when it would normally take me three days with other lamination machines. It's an amazing machine that's small in size, fast and accurate."

- Randi Downs, Corporate Administrative Assistant, Century Tile.

Each Foton 30 comes with a two-year or 5,000-cycle warranty, plus an additional 60-day risk-free trial in the U.S. market. In the U.S., the Foton 30 is currently available at GBC.com, Amazon and through select office dealers. Through September of this year, Foton 30 will be rolled out globally in Japan, Canada, Singapore, Australia and Europe.

VISIT gbc.com/foton

### **EXTECH introduces SKYSHADE** 2500 glass canopy system

Blending form and function, the new SKYSHADE 2500° Series glass canopy system from Exterior Technologies Inc. (EXTECH) allows people to enjoy outdoor views, while sheltering them from rain and snow. The canopies can be incorporated into freestanding structures, pavilions, walkways and other covered entrances for commercial, industrial and transportation applications.

The self-supporting, aluminum-framed canopy system incorporates continuous mullions that rigidly secure the glass. It is tested to meet ASTM E-330 deflection of less than L/240 at 60 psf, and the system has passed industry-standard testing for flame spread and smoke



generation, and air and water infiltration. Effectively managing water, the canopy features a proprietary, internal guttering system tested per ASTM D-331 to 15 psf. The aluminum framing system uses recycled aluminum as standard, and after its useful life as part of a canopy, the metal is 100 percent recyclable.

Optional glass coatings and custom silk-screen patterns help to diffuse the direct top-lighting and control unwanted solar heat gain. If future updates are desired or repairs needed, the glass panels are individually replaceable.

VISIT extechinc.com/skyshade-2500-glass-canopy



### Heads Up Lock system solves one of life's annoying inconveniences

We've all been there – either awkwardly knocking on the outside of a restroom door or nervously answering "just a minute" from inside. California-based Heads Up Lock Co. produces a variety of

LED signs that let employees and customers know when a single-stall restroom is in use. The red-and-green lights can be seen from a distance, reducing unnecessary trips, time wasted standing in line and embarrassing exchanges.

The lock/light system uses a wireless transmitter on the door lock coupled with a receiver mounted on the wall. The kit can be easily installed by a qualified handyman. It is ADA-certified and made in the USA. A new model that shows whether a room is "open" or "in use" is ideal for hospitals.

Heads Up Lock Co. founder Bruce Roberts developed the lock/light system when he was confined to a wheelchair. "Starting a business helped with my recovery. By helping others, I helped myself," said Roberts.

VISIT headsuplock.com

## Future-proof LED fixture makes it easier, more economical to instrument facilities for IIoT applications beyond lighting

Digital Lumens, a market leader in intelligent LED lighting and IIoT applications, recently expanded its portfolio with the new RLE intelligent LED fixture featuring socketed intelligence and an upgradeable smart sensor.

All Digital Lumens intelligent LED fixtures feature embedded smart sensors that enable customization and automation of advanced lighting controls to deliver up to 90 percent in lighting-related energy savings. The new RLE intelligent LED fixture is equipped with Bluetooth technology for indoor positioning applications. It reimagines the Ind ustrial IoT through a unique, socketed and upgradeable sensor design that allows users to capture the benefits of intelligent LED lighting while ensuring compatibility with Digital Lumens' growing suite of SiteWorx IIoT applications for the lifetime of the fixture.

Among Digital Lumens' IIoT applications is SiteWorx Sense, which extends the energy and lighting control benefits of

Digital Lumens' intelligent LEDs and SiteWorx IIoT platform to the automated collection and centralization of critical environmental, utility and production/process data. With the recently released SiteWorx Sense Alarms feature, users now can configure and trigger email or SMS notifications to proactively identify potentially unsafe environments, utility misuse or signs of equipment failure.



VISIT digitallumens.com

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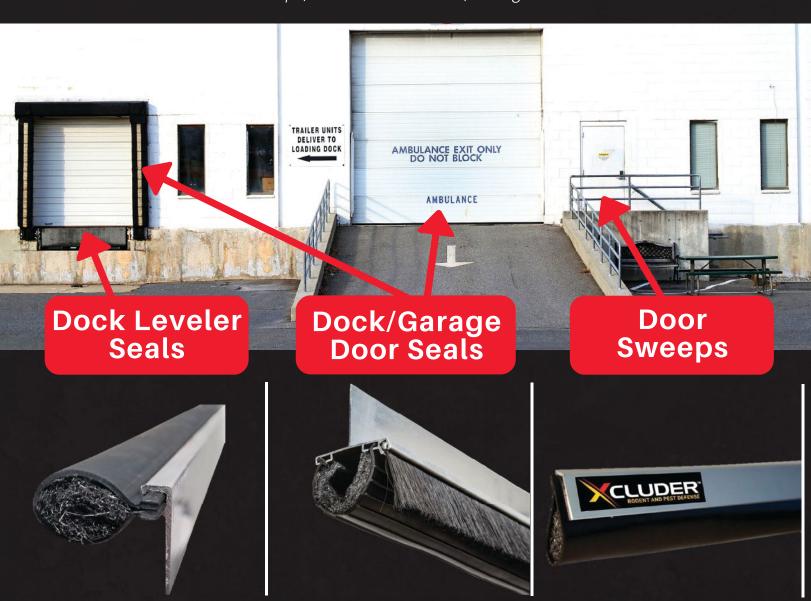
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### Extended

# Exclusive online section featuring expanded FM coverage.

### **070** Ask the Experts

Contributed by IFMA's Facility Management
Consultants Council

### 074 Components in Focus

### 075 Article

"Design Your Way to Change"
http://fmj.ifma.org/publication/?i=249717&ver=html5&p=26

### 079 Article

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Dean Stansbury

### **081** Resource

"Humanizing the Workplace:
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### **082** Vendor Profiles

### MANAGING MODERN RISKS

## Ask the Experts

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 "**Design**."

### CONTRIBUTED BY



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.

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### Questions regarding the Ask the Experts section?

### Mark Sekula

IFMA Fellow, CFM, FMP, LEED AP President of Facility Futures, Inc. msekula1@wi.rr.com

Mahmoud is the facility manager at the corporate headquarters of the Dubai Financial Centre (DFC) located in Dubai, UAE. The headquarters building houses 1,500 employees.

The CFO of DFC has noticed that on any given day, 40 percent or more of the assigned workstations in the building are unoccupied.

He has directed Mahmoud to develop a plan to better utilize the space and reduce the number of unoccupied workstations.

Mahmoud knows that there are multiple solutions to this challenge but is unclear about how to begin the discovery process. He has engaged you to help him develop a plan of attack. What advice would you give to him?

My first step would be to discuss with Mahmoud (a) who are the employees and what are their roles contributing to the company, (b) how much time do they spend outside their offices, and do their roles require them to have a desk, and (c) do they lose face if they don't have a one. Many business transactions occur on a 1:1 basis, face-to-face in Dubai, when people go to other offices and meet. (An empty one for a time doesn't mean an unoccupied one.) Simply put, how do employees feel about sharing workstations on peak days of worker occupancy? The answer varies substantially depending on country origin, education, job performance and the like.

My second move is to avoid a rushed conclusion that 40 percent of the employees are not "working." Careful consideration should be made of the social facet of work. The Arab culture encourages connections and much business occurs in social settings (perhaps outside the office and in restaurants, coffee houses, etc). Additionally, there is a strong cultural hierarchy in Dubai, not only among native citizens, but also among the large expatriate community (80 percent of the workforce is from India, Pakistan, the Philippines, other Arab states, the United States and United Kingdom). How moves or changes are handled can have significant family repercussions in the hierarchy of citizens from various countries.

If a plan is to be developed, Mahmoud shouldn't blind-side the employees, but rather discuss and socialize the ideas with them before implementation. Those conversations also would quickly reveal who your strong opponents would be, whom you need to win over and where the resistance would come, that leads to adjustments to the plan as needed.

My third piece of advice is to assess solutions, such as how common Western ones are working in this culture. For example, in the West "hoteling" has long been used in consulting companies whereby an employee "checks into" an office space for the day with a locker for personal belongings. (There are apps to book the desks and lockers.) Survey other local companies to see if they have used hoteling, its reception, and any impediments to its success. Certainly, some employees, especially the lower expat levels, might be in roles that don't need desks all the time and the culture would not be adversely affected if that employee used hoteling when in the office. Another option is the open floor plan. Again, survey how other companies have handled it, but be careful to avoid having local employees lose face by having offices taken away.

JULY/AUGUST 2019 EXTENDED // 071

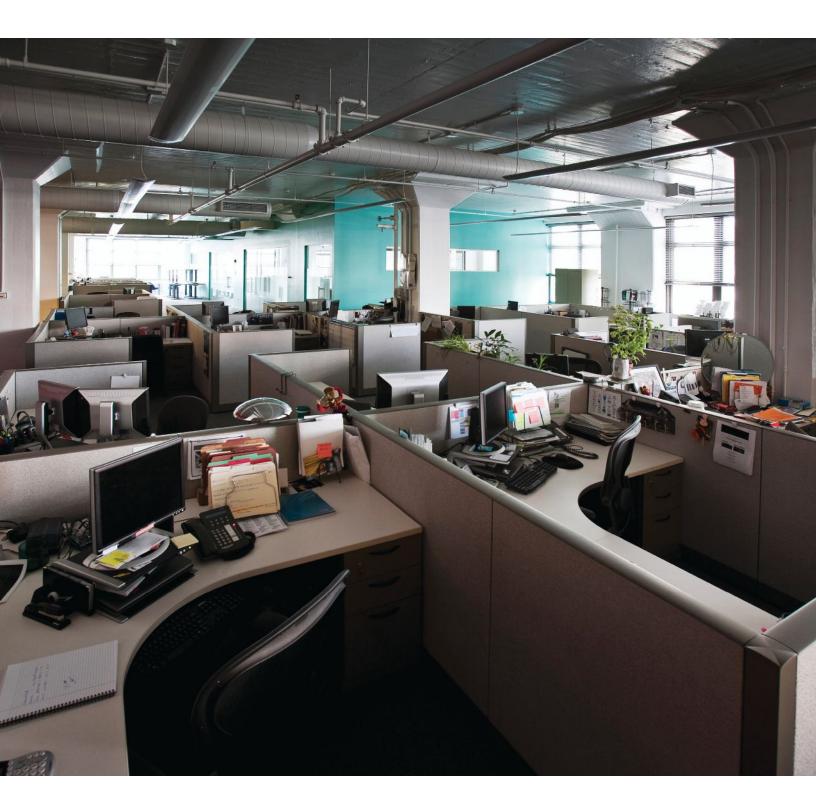
My final comment is what does the CFO want to do with all that "extra space"? Dubai does a tremendous amount of international business, so conference rooms are a must for technological communication (video conferencing for example) as well as any extensive meetings among employees. There are several good ROTs to add useful space to office areas and improve the overall productivity. Assess the needs from all angles before finalizing a plan for executives.

### Dr. Doug Aldrich, CFM, IFMA Fellow

With five decades of industry experience and FM consulting, Doug is a strategic leader, laboratory expert and globality advocate. He was IFMA Chair, co-founded the R&D Council, served on advisory boards, communicates in word/print, and helps non-profits.

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072 // EXTENDED

A

The nature of work has changed. Rapid advancements in information and telecommunications technology have fueled a fundamental shift in how, when and where

knowledge work is conducted. Today's knowledge-based workforce has the ability to connect with the people, information, and tools that they need from just about anywhere and at any time. This could be the primary reason for the low utilization levels observed with your assigned workstations and could also be the case for other workplace settings as well.

The way we need to manage workspace is also changing. Conventional work environments were built to support a standard set of work patterns and preferences and workspace programing was cumbersome and expensive. Today's workforce requires a greater variety of workplace settings that support different work patterns and employee work preferences. One size no longer fits all. These new work environments must support the diverse work practices that individuals and teams perform to successfully meet their business objectives. Ideally, employees should be provided choices in matching different work settings with the changing tasks they need to perform. Design and configuration of these new workplace settings should be data-driven and organization specific to optimize the appropriate mix of choices.

The data collected in the discovery process should report both utilization of space and employee work behavior. The process begins with an assessment of employee utilization of all types of workspaces within the building. This is easily done using readily available software tools to gather, analyze and report employees' use of their space and is necessary to validate or disprove any perceptions individuals have made from casual observation. The second assessment focuses on employee work behavior. Information about work behavior provides a different perspective into how employees use space during a normal workday. It's not just about being present, but how employees interact within their work environment. Information about employee work behavior provides a different set of statistics documenting how and where work is performed, with whom and what tools are used in the course of doing work. It can relate experiences, tell a story about how work is conducted, even suggest a level of organizational or cultural readiness to adapt to a new type of work environment. It can provide context for the more objective utilization data that has been collected and adds richness to the analysis. Think of it as the color commentary to a work place event. It assists in making more informed work environment decisions.

These two assessments (space utilization and employee work behavior) are the initial steps in initiating the discovery process. They provide the detailed program requirements including headcount to seat ratios (current and future state), types of employee interactions (formal and informal), how they collaborate, the degree of employee mobility (internal and remote) and their use of work tools (software and hardware). This is the critical programming information needed for data-driven decision making your architect will require in developing a new work environment specification and the prototype test fits for the new workplace settings specifically suited to optimize your employees' productivity.

### Glenn Dirks, Workplace Consultant

Glenn has worked for over 38 years in Corporate Resource functions mostly in the Silicon Valley. During this time, he became nationally recognized for implementing innovative, organizational management techniques within his work groups in areas of sustainability, leveraged outsourcing, change management and implementation of collaborative work programs. In his 22-year tenure with Sun Microsystems, Glenn managed U.S. facilities operations, developed Sun's Environment, Health & Safety function and lead HR organizational work practice efforts in developing and implementing Sun's shared work environment program. Glenn has spent the past 18 years as a consultant assisting Fortune 500 companies adapt to the changing dynamics of the workplace. He holds both bachelor's and master's degrees from the University of Wisconsin.

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business

First, I've learned after many years managing facilities, that the most expensive space in a workplace is the unoccupied, unused space. We focus on this in our

With today's high level of communication technology, once you can access your workplace from anywhere, an in-office physical presence is no longer needed. Connectivity is the key. Today, the "home office" does not mean necessarily the office at home, but anywhere outside the office where you can be productive.

Second, this changes the routine of the employees, and it must be presented so that all the options are available. The supervisory group and the employees must have a clear understanding and trust of the working hours expectations.

Third, the office's empty space must be free of personal belongings so that other people can comfortably function at work. Establish an efficient system so that everybody can connect and work smoothly without any trouble or interruption. Sharing schedules is a good way to know if co-workers are in or out of the work area.

Finally, when everything is running efficiently, what do you do with the new free space? Do you offer it back to the building owner/operator? Do you rent to a third-party? Make sure there is a way to offer it back so that you are not paying to use unoccupied space.

### Gesse' C. Camargo, Interface FM Consulting

Gesse' is an FMCC member, IFMA member, ABRAFAC (Brazilian FM Association) board member, and has 25 years of experience on executive seats for national and multinational companies on FM. Gesse' is also a speaker and president of the CONGRESSOS INFRA, the largest Brazilian FM event in the last 15 years.

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# **Components in Focus**

## DAN Banks



For 30 years, Dan has worked in FM. The Troy, Ohio, USA resident said he got into

facilities management through a natural and gradual progression from his facilities planner and architectural education background. Today, Dan serves as facilities project manager for his corporate location.

**FUN FACT:** I was previous owner of a local tavern for 10 years.

## ADAM HOOKS



Wanting to share ideas with like minds, Adam found his way into facilities management. He is the assistant director of

engineering in the hospitality industry. Adam resides in Dallas, Texas, USA.

**FUN FACT:** I enjoy hockey and am a drone enthusiast.

# WANT TO SHARE YOUR MEMBER OR COMPONENT NEWS?

Reach out and share your chapter news with other members and FMJ readers. Send details and photos (if available) to bobby. vasquez@ifma.org with the subject line:
Components in Focus.

We look forward to featuring your chapter in an upcoming issue!

# ADAM OSKVAREK



Adam knew exactly what he wasn't look for when he began his professional

career. "I didn't want a true desk job when I started my career and facilities management gives me the opportunity to excel in multiple areas, both in the office and out in the field," he said. Now with 13 years of industry experience, he said he really enjoys the broad exposure and diverse challenges that come with facility management. Now residing in Prosper, Texas. USA, Adam is the workplace manager for a corporate call center. Connect with Adam on Linkedin at www.linkedin.com/in/adam-oskvarek.

**FUN FACT:** I recently built a ninja warrior course in my house for my daughter to use, complete with monkey bars and a rock-climbing wall.

# CARLOS PLAZA



Having spent more than 26 years between maintenance and facilities, Carlos knows

the challenges presented at many levels of facilities management. During that time, the Plantation, Florida, USA resident went back and forth between maintenance and facilities, sometimes doing both. Today, he holds the title of facility engineer for a medical device manufacturing company.

**FUN FACT:** I'm crazy about energy and utility savings since 1998. I am a Certified Energy Manager since 2012 (with AEE) and a Certified Water Efficiency Professional since 2017. Also, I'm one of the oldest dads in the company, but happy and grateful. Enjoying every day.



Multiple IFMA Components, RICS and five other associations members gathered at the AECOM facility at One California Plaza in downtown Los Angeles this summer for a Joint Association Meetup.

The IFMA groups were joined by members of the Business Development Guild, Asian American Architects & Engineers Association, CoreNet Global, Society for Marketing Professional Services. Organizers and attendees felt the event was a success and are looking forward to more cross-association opportunities.

Image provided by Ted Ritter, IFMA IT Community Global Chair.

074 // EXTENDED WWW.IFMA.ORG/FMJ

# design way your way your



### BY ALBERT DE PLAZAOLA

Imagine you are outside a large conference room. As the meeting adjourns, participants file out and you can hear them saying to each other:

"Why are we doing this?"

"Why doesn't senior leadership have to do this?"

"This will never work."

"It will never happen. If it does, I'll leave."

"Our team is different — this doesn't apply to us."

"Once this effort fails, we'll just go back to doing it the old way."

This mobile advertising firm converted nearly 50 percent of its workspace into collaborative/client-facing space.



If you've ever been part of a large organizational shift or change management effort, you have undoubtedly been privy to these sorts of comments, and may have even muttered them yourself. Anger, denial and fear are all healthy responses to change. After all, these emotions stem from evolutionary and biologically endowed instincts that have helped us survive when resources were scarce and change really was a bad thing.

Our reactions to change are natural. You can't blame people for the way they feel. The real problem lies in organizations', and specifically leadership's, inability to empathize

and connect with employees. Often leaders don't understand how their employees feel about change, or worse yet, why they feel that way.

Running into this sort of challenge is common when implementing a new workplace strategy, which happens to be one of the most significant and visible expressions of change an organization can undertake. Leadership may think that employees will simply be happy to get a brand new workspace. Yet when employees are told they are moving to a new or progressive workplace environment, they often remain defensive, defiant and see it as a change for the worse. Interestingly, most

organizations are good at explaining why they are making a strategic shift in the workplace. Where they stumble is in addressing the emotional response to the suggested change, and in providing a change program that includes tools that can support the employee journey to a new future.

Lack of empathy in organizations is, fundamentally, a design problem. Narcissism, politics, siloed thinking and self-interest can all prevent real conversations about change, even in the most collaborative environments. The key to a successful change program is to provide employees with the tools and resources to adapt and

### STAKEHOLDER ANALYSIS GAME BOARD

STAKEHOLDER GRUIIP

WHERE ARE THEY TODAY?

### **SENIOR MANAGERS**

- Unclear as to how this will support their teams
- Fear of losing benefits (offices) - May have change fatigue/be
- change weary

### **SALES AND** MARKETING TEAM

**ENGINEERS** 

- Positive anticipation
- Seen by some as an effort to follow new workplace trends

- Unclear as to the "why" of the change

- Fear the change will be disruptive

Seen by some as an effort to only

to everyday operations

- WHAT DO WE WANT THEM TO FEEL?
- This project will help teams and employees be more nroductive
- Will be a net positive for their teams
- A win for clients
- Positive anticipation
- Proud of being part of company innovation efforts

- Excited, enthusiastic, "ready

- Proud of being part of the

to move yesterday!'

Seen as innovators

- **HOW DO WE WANT THEM TO** BEHAVE IN THE FUTURE?
- Adopt and demonstrate work practices that employees should mimic
- Reward employees who adopt new ways of working/thinking
- Increased connection to
- Stronger unity between new
- external customers
- and legacy teams

- Increased collaboration across

Better sense of community

internal customers

across remote teams

- Specific outreach plan to clients to ensure they are informed about the change

WHAT TOOLS (PRODUCTS)

DO THEY NEED?

virtual teams

- Training: How to manage

collaborative workplace

- Training: How to manage in a

- New tools for remote working
- New workplace guidelines
- Training: How to work in an
- open environment New guidelines around unassigned seating and breakout areas
- New collaborative tools for distributed teams

FIGURE 1 Stakeholder analysis game board populated by a software company that was consolidating legacy firms under one address.

thrive in a new situation or environment. To do this, it's important to consider and understand the emotional and cognitive needs of the user. In other words, you have to think like a product designer.

### Where to begin

Change management consultants have frameworks which include a 12-step process for successful transformational change. The key to choosing a process is considering a change program that takes a user-centric approach which puts people at the center of the process. If we want employees to adopt new behaviors in a new work environment, an output of the change management process must be tools and resources that enable employees to do so.

Think of it in these terms: if you want employees to transition to a new work environment, consider them as end users or consumers. You want these users to shift their attitude about their new work environment, and adopt new attitudes and work practices. To do this, you must create tools to help with the transition. These tools are change products.

To develop successful change products, it's important to take a product design approach.

### Know your audience

Knowing what users need and having empathy for the user experience is the bedrock of any successful product. This is particularly important when designing change products that will help employees transition to a new workplace environment. Intuition serves a purpose, but don't rely on what you think you know about

your employees and how they feel about something as personal as their workspace.

# **Identify and segment your**

One way to understand user needs is to create a "Stakeholder Analysis Game Board" (see Figure 1). This is a simple template that identifies:

- Who is affected by the change?
- What are their current perceptions of and feelings about the change?
- How do we want employees to feel?
- What is the ideal future state for these employees (i.e., what is a win for them)?
- What skills or resources do they currently lack to get them to the future state?
- What tools, resources and initiatives (i.e., products) can we provide to help them win in the new environment?

The insights captured in this exercise will guide the development of the change products. This exercise will also help define a go-to-market plan for how these products should be disseminated in order to resonate with employees.

Remember, the goal of the change product is to facilitate the user journey into the future.

### **Examples of change products**

Once you've identified your user groups and what kind of resources each group needs to support its change journey to the future state, it's time to develop the products to get them there.

The following list describes just a few example change products that organizations have developed as part of their change efforts. It is important to understand, however, that these examples represent just one component of a comprehensive change strategy.

### Change products for managers

Training modules on:

- Managing virtual teams
- Creating a sense of community with distributed teams
- Evaluating performance of remote workers
- Leading a project in an open environment
- A change network: Match managers with other managers and team leads in the organization who have undergone similar change.

Note: Engage and invest early with managers and team leads. They usually have the least to gain and the most to lose by advocating or supporting a workplace shift.

### Change products for employees

Game or etiquette rules addressing:

- New space types such as focus rooms and breakout areas
- Noise and manners
- Privacy and confidentiality
- Meetings and conference calls
- Health and safety

Approach these game rules like any product. How am I going to package them so people will use them? How can I market them so that they are fun?

JULY/AUGUST 2019 EXTENDED // 077 Be creative about how you engage with users about new workplace rules. Road shows and lunch and learns are helpful, but think about using videos or podcasts to create clever but relevant content. Use social media to connect with users in multiple ways. People want to be engaged and even provoked. If you want employees to ignore the new game rules, package them as corporate protocols.

**Etiquette pilots:** Try practicing the new game rules in your current work environment before you move in to your new workplace (only if appropriate). Take note of what works and what might need to be further refined before move in. Think of these as prototypes that should be iterated.

**User profile stories:** Past experiences of other teams or groups that have undergone similar change have strong impact. Create videos of employees sharing their own experiences and how they transitioned. These should be honest, fair, humorous or even irreverent. Just don't spin.

**Workplace gallery:** Create a gallery space with renderings of the new environment, including user stories and other project resources.

**Brand it:** Create a logo or graphic mark that gives all change materials a unique look and feel. Remember, these are products we want employees to consume, so package them well and make them cool to use.

One critical thing to remember when developing these kinds of products is to iterate throughout the process. Capture user feedback and recalibrate accordingly. The key is to adjust to the needs and attitudes of the users as they shift.

### Use your employee change group

Call them what you'd like. Ambassadors. Change champions. Change advocates. The League of Justice. The Magnificent Seven. The key to gathering this group is to identify and nominate employees who have credibility among fellow colleagues. Their role or official title is not the most

important criterion. Choose employees who have social, cultural and political capital with their teams.

Why is this team important? These are the individuals who will populate the "Stakeholder Analysis Game Board" and ultimately help develop the types of products mentioned above. They are also the ones who will create a goto-market strategy to disseminate the change products. Think of them as product endorsers; they will confer credibility and authenticity to the suite of change products.

# Be strategic in how you use your change consultant

If you are undergoing a significant workplace change, chances are you will hire a consultant. Use your consultant to advise leadership, lead strategy sessions, manage the employee change team and prepare for outreach activities such as town halls and brown bag sessions. However, the change consultant is a subject matter expert and should operate (most of the time) behind the scenes. Don't lean on the consultant to sell the change directly to employees — it will look and sound like an infomercial.

### Ditch the hyperbole

Terms such as "burning platform" (we must change or else!) and grand promises of transformation can sound dramatic, disingenuous and even desperate. These suggest a reactionary response to a change that was not anticipated. The reality is that if your business platform is burning, a new workplace configuration isn't going to save it.

Play offense instead. Visualize a better future for employees without threats. Position the change as way of achieving a business goal or how the organization is innovating to stay ahead of the game, not to catch up. Be honest and inspirational, but don't oversell.

One very useful change product is highquality renderings, visuals of the new space or a visually compelling future illustrating a day in the life. Invest in this and treat these products like works of art. Change products should help people feel excited about the change. The cool factor goes a long way.

### Communicate less

Change management programs focus too heavily on communicating to employees, often over email, operating under the assumption that that if people are informed of the change, they will embrace it. Leaders are often taken aback when employees say, "I didn't know this was happening," even after various emails were sent informing employees of an event or change.

Corporate email has become one of the lowest common denominators of communication. When was the last time you were inspired to change your mind or your behavior after reading a corporate email? Don't rely on email as a primary channel when working to affect change.

Instead, invest strategically in change programs that develop products that people will want use, like the ones described above. These products are meant to be interactive and initiate high levels of engagement. They work to make the change tangible and to address related emotional and logistical concerns. They also require increased time and resources to develop but are well worth the investment. Just like with any other product or service, users recognize craftsmanship and attention and consequently desire it more.

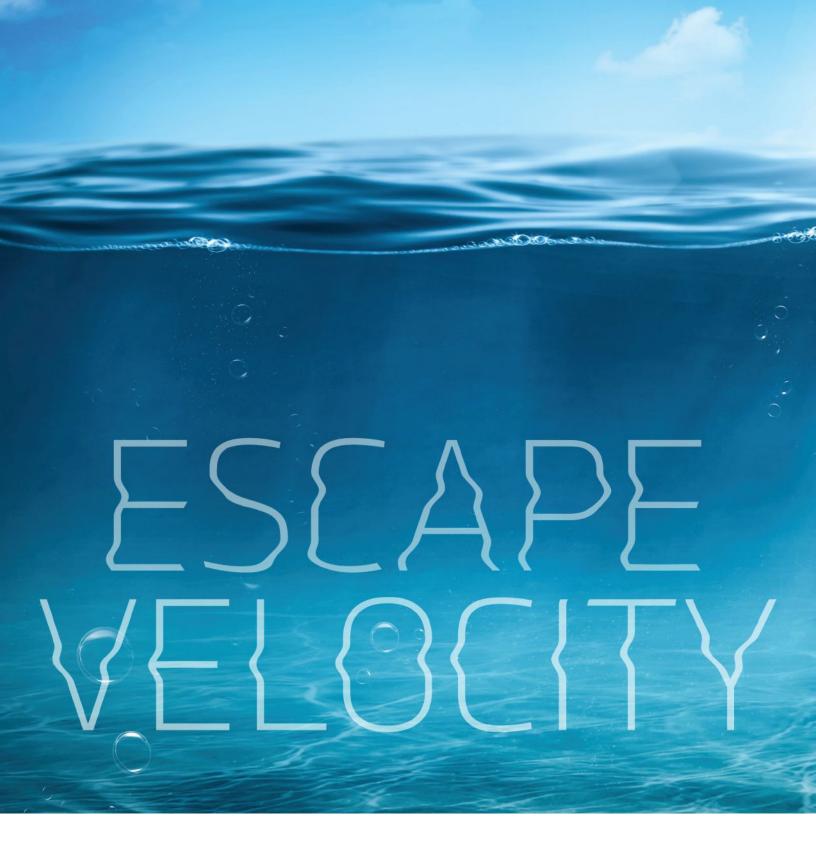
Employees want a pleasant workplace experience. Design change products for your organization to deliver on that promise. FMJ



Albert de Plazaola is a strategy consultant with more than 14 years of experience in peoplecentered design and change strategies for

private and public institutions. By leveraging design thinking and a user-centric approach, he moves beyond the typical motivations to explore how meaningful change can occur to foster greater organizational responsiveness, adaptability and innovation.

078 // EXTENDED



Technically speaking, escape velocity is the lowest velocity which a body must achieve in order to escape the gravitational attraction of a planet or other object.

I propose an alternate definition: "The lowest velocity of humanity's efforts to stem the effects to climate change in order to escape irreversible damage to the planet that will imperil human existence."

JULY/AUGUST 2019 EXTENDED // 079

# So, the big question for today is whether we are making progress, and will it be enough?

We hope civilization has the collective resolve to achieve this velocity. While we do not have a precise moment in time when this jeopardy tipping-point might be reached, all evidence indicates that moment may be too close for comfort.

So, the big question for today is whether we are making progress, and will it be enough?

On a positive note, renewables eclipsed coal for electrical generation in the US for the first time in April 2019. Costa Rica generates enough electricity from renewables to serve the needs of the entire country for 300 days of the year. Cities such as St Paul, Minnesota, USA and Denver, Colorado, USA have committed to reduce their carbon footprint 80-100 percent by 2050. New York City recently approved some of the most aggressive commercial building energy/efficiency legislation in the country.

But — not all the news is encouraging. The 2018 Intergovernmental Panel on Climate Change (IPCC) report warns we have 12 years to curb global warming (limiting it to 1.5 degrees Celsius) to avoid catastrophic effects. This suggests a disconnect between cities heralding a 2050 carbon reduction goal and the IPCC's warning for 2030. While 20 years is insignificant on a cosmic scale, could it mean the difference between survival or extinction?

Another report in April indicates climate change is eliminating giant chunks of ice from Greenland at such a speed that the melt has already made a significant contribution to sea level rise, according to a new study. With global warming, the island will lose much more, threatening coastal cities around the world.

Approximately half of the planet's population is in cities that are

vulnerable to sea rise, and the recent study published in the Proceedings of the National Academy of Sciences is bad news for places in the United States like New York, Miami, Los Angeles, or major Asian cities like Tokyo and Mumbai. Inland cities high above sea level may become beachfront property at some point in the future.

It is the convergence of social and industrial milestones that has brought us to this moment in history — the actions of governments, industrial innovation, commerce and individuals. Advocating loudly for stronger environmental regulation and advancements in sustainability innovations will only take us so far.

We, as individuals, must examine our own behaviors and choices. If we don't choose to adopt more sustainable norms in our daily life, no amount of legislation or regulation will prevent catastrophe. We must start thinking of Climate Change as our own personal problem to solve, and not someone else's responsibility in some other part of the globe. Collectively — we either achieve escape velocity together or we suffer the consequences together.

**Dean Stanberry,** CFM, LEED AP O+M, is an FM professional and active industry advocate; serving in a number of volunteer leadership roles as a member of the International Facilities Management Association, the IFMA Foundation, and the U.S. Green Building council. He is currently a member of IFMA's Global Board of Directors and chairs the Environmental Stewardship, Utilities & Sustainability (ESUS) Community.

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