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IFMATM
International Facility Management Association

*IN
THIS
ISSUE*

**SIT/STAND
DESKS: THE
ANSWER TO
“SITTING
DISEASE”?**

[30]

**DESIGNING AN
EMOTIONALLY
INTELLIGENT
WORKPLACE**

[96]

WWW.IFMA.ORG/FMJ | MARCH/APRIL 2015

MATHEMATICS BEFORE GRAPHICS

**CHANGING
DATA NEEDS
FOR THE
CHANGING
WORKPLACE**

[16]





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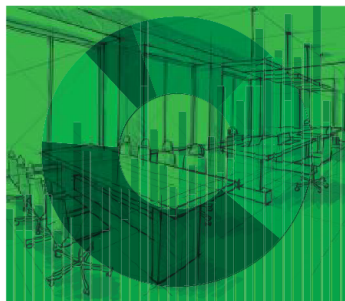


ON THE COVER

16 MATHEMATICS BEFORE GRAPHICS

Changing data needs for the changing workplace

// LISA BRINKMAN, ISILAY CIVAN AND CHERYL JEFFERIES



BEHIND THE COVER: Data development in the new workplace model seeks a variety of numbers that track multiple facets of the changing work environment. This issue's cover includes bar, line and pie charts that recede behind the main focus of our cover feature: mathematics. Without proper data development and analyses, conclusions can't be correctly drawn. Once standards are reached, the data and subsequent conversations interpreting it will result in evolving a better workplace.

SECTIONS

- 8 Editor's Column
- 10 Chair's Column
- 11 President's Column
- 12 Industry News
- 43 IFMA Foundation
- 72 Professional Development Column
- 79 Credential Recipients
- 87 Behind the Brand
Insight on IFMA's Corporate Sustaining Partners
- 88 Corporate Sustaining Partners
- 103 Resources
- 104 New Products & Services
- 106 Advertiser Index

FEATURES

- 24 Design Your Way to Change
// ALBERT DE PLAZAOLA
- 30 Sit/Stand Desks: The Answer to "Sitting Disease"?
// SHONA ANDERSON
- 58 I'm in Charge of the Ergonomics Program?
// ZACK KOUTSANDREAS
- 63 Organizational Culture Implications on Office Design and Employee Performance
// STEPHANIE HEIPLE
- 74 Secrets of Knowledge-Sharing Success
// BILL CONLEY
- 81 The Brain-Aware Workplace
Reviewing a new publication on what science can teach us about productivity and place
// NANCY JOHNSON SANQUIST
- 91 **CASE STUDY:** Leading Positive Corporate Cultural and Design Change
// SHARON HENDERSON, LISA MORRISON AND MARY SUE SUTTON
- 96 Designing an Emotionally Intelligent Workplace
// SOFIA FONSECA

FM SPOTLIGHT

- 44 Workplace and the Employee Experience
- 48 One-on-One with Kate North

- 54 In the Classroom
Washington University School of Medicine sets educational record
- 56 Are You a Thought Leader?



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ABOUT IFMA

IFMA is the world's largest and most widely recognized international association for facility management professionals, supporting more than 24,000 members in 93 countries. The association's members, represented in 130 chapters and 17 councils worldwide, manage more than 37 billion square feet of property and annually purchase more than US\$100 billion in products and services. Formed in 1980, IFMA certifies professionals in facility management, conducts research, provides educational programs and produces World Workplace, the world's largest facility management conference and exposition. To join and follow IFMA's social media outlets online, visit the association's LinkedIn, Facebook, YouTube and Twitter pages. For more information, visit the IFMA press room or www.ifma.org.

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Check out the interactive version of FMJ, featuring **videos, online extras and more!** FMJ can also be viewed on mobile devices.

THIS ISSUE

The online version of the publication includes interactive resources.

- **RESEARCH REPORT:** “Space and Project Management Benchmarks” to accompany “Mathematics Before Graphics” (p. 16)
- **VIDEO:** “A Brief Introduction to Change Management” to accompany “Design Your Way to Change” (p. 24)
- **VIDEO:** “Health Benefits of a Stand-up Desk” to accompany “Sit/Stand Desks: The Answer to “Sitting Disease?”” (p. 30)
- **VIDEO:** “An Inside Look at Google - Working at Google” to accompany “Organizational Culture Implications on Office Design and Employee Performance” (p. 63)
- **WEBINAR:** “Applying What Scientists Know About Where and How People Work Best” to accompany “The Brain-aware Workplace” (p. 81)
- **TRENDS REPORT:** “2015 Sodexo Workplace Trends Report” to accompany “The Brain-aware Workplace” (p. 81)
- **PODCAST:** “Leading at the Speed of Change” to accompany “Leading Positive Corporate Cultural and Design Change” (p. 91)
- **TECHNICAL REPORT:** “Bringing Emotional Intelligence to the Workplace” to accompany “Designing an Emotionally Intelligent Workplace” (p. 96)

FMJ EXTENDED

This exclusive online section focuses on expanded FM coverage.

- 110** Applying a City Planning Approach to Activity-Based Working
// KATHRYN O'CALLAGHAN-MILLS
- 114** Beyond Workspace: A 3-D Place Perspective
// JULIÉ GAUTHIER
- 118** Flexible Workspace Customization and the Six Types of Activity-Based Work
// M. BEIJER, S. BRUNIA, E. DE BRUYNE AND A. GOSSELINK
- 121** The Role of Emissions in Facility Management
// CHRISTOPHER LAUGHMAN AND LAURIE GILMER
- 125** 30 Years Sure Makes a Difference
Reflecting on changes to technology and the workplace
// RICHARD FANELLI
- 127** Vendor Profiles

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EDITOR'S COLUMN

ANDREA SANCHEZ
Editor-in-Chief
Facility Management Journal



ONE MAY SAY I WAS BORN ADAPTABLE.

Being born in Argentina, relocating every two to three years, attending eight different schools in my lifetime and living overseas have taught me to live day by day.

You may ask if I ever craved a life of stability, one that allows me to fall into a familiarity with my surroundings and routines. I would not change the life that I've had, although I have learned that I crave change more on the internal, rather than the external side.

I am in love with personal growth and opportunities that motivate others to be their best selves.

Setting the stage

The environment, whether people or spaces, plays a huge role in framing our motivation and behaviors.

Workplace design alone can dictate whether you will be having a collaborative or head-down type of work day. As IFMA member and workplace strategy expert Kate North mentions on page 49, "We now have much more choice about how and where we work."

Technology has introduced the concept of a workplace without boundaries. The option of working remotely from home, a coffee shop, in another country or simply hotdesking within your office is becoming mainstream. Video conferencing, intra-office instant messaging platforms and social media are only some of the tools that have reshaped conventional thinking on office design.

We live in exciting times and credit must be given to those who took the risk of thinking outside the box in an effort to allow businesses and people to grow.

Leading the pack

Someone always has to go first, to either lead change or be willing to embrace something new.

I am proud to work in an association of people who aren't afraid to innovate. IFMA members astound me with their daily drive, passion and accomplishments.

This issue provides a glimpse of some of those members and groups: Washington University School of Medicine staff (page 54), pioneer subject matter experts for IFMA's knowledge strategy initiative (page 56), IFMA's Workplace Evolutionaries thought leaders (pages 44, 48 and 81) and Frederick County Public Schools (page 12). Kudos to all for leading by example.

A chance to recharge

During the past couple of months I've had the pleasure to interact with many of you through chapter/council meetings, webinars, video interviews, office visits, social media and/or most recently, our revived FMJ podcast series. It's all about keeping the connections alive and truly investing in relationships, whether virtually or face to face.

Twice a year, at the very least, we are all given the opportunity to reunite in person. Join us at our annual March/April IFMA family reunion: the Facility Fusion Conference and Expo (more details on page 35). Reunite with your IFMA family and favorites, as well as make new connections that could prove to be a benefit to your success.

Say yes to innovation. Surround yourself with new ways of thinking.

I hope to see you at the conference, as I look forward to learning from you!

Until next issue,

Andrea

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IFMA EXISTS TO SERVE OUR MEMBERS no matter where they practice facility management. While many of us are digging out after a snowy and cold winter in much of the northern hemisphere, our friends to the south are gearing up for cooler days.

In today's mobile and global environment there are more opportunities to live and work abroad for some portion of our careers. Even if one stays close to home, rapid advances in technology that impact our lives are occurring every day all over the globe. It is clear that we have so much to gain as individuals and as a profession by thinking and acting globally.

Fresh perspectives

Over my career I have been blessed with opportunities to work across several continents. The work has opened my eyes to different cultures, new ways of thinking and a multitude of socioeconomic and political drivers that impact what we do. The one constant I have found is that for every challenge there are talented and passionate professionals worldwide developing solutions.

It is the fresh ideas and new perspectives on tackling common issues that I find so rewarding. And I can't recall a more rewarding time in my professional career than the past year as chair of the U.S. American National Standards Institute Technical Advisory Group working on the International Organization for Standardization FM standards and as chair of IFMA. Working with FM experts from more than 30 countries to advance the profession through international standards has been immensely gratifying. Equally satisfying has been IFMA's engagement working with our European chapters and the E.U. FM Coalition to support government advocacy efforts in the European Union.

FMs driving workplace strategy

Recently, I have been warmly and graciously welcomed in Canada, Sweden, Belgium and Japan to meet with IFMA chapters and tour facilities. One aspect that has consistently stood out in these visits is the evolution of workplace design across the globe.

IN TODAY'S MOBILE AND GLOBAL ENVIRONMENT THERE ARE MORE OPPORTUNITIES TO LIVE AND WORK ABROAD FOR SOME PORTION OF OUR CAREERS.

Call them collaborative workplaces, open office plans, activity-based workspaces, hoteling or work shifting offices, harmonious workplaces, flexible office environments, destination workplaces or simply technology-enhanced environments; they put my traditional office to shame. I thought IFMA's Service Center of Excellence in Houston was exciting until I walked into offices in Stockholm and instead of being greeted by a receptionist at a desk I encountered a barista and IT helpdesk. Another exceptional office had a high-definition flat screen showing an activity-based office plan and occupied spaces using heat sensors in chairs and global positioning system smartphone apps.

IFMA members today are in positions to drive these new office designs. They implement workplace strategies to improve worker health, reduce space and overhead costs, improve the quality of life at work, and boost worker productivity, performance and morale. They are giving decision makers great new options by assessing company DNA to determine what type of workplace fits the needs of the workers.

Yes, I have learned a lot about the evolving workplace and we have a lot to learn from IFMA members across the globe. Let's keep expanding our horizons, friendships and knowledge.

Regards,

A handwritten signature in black ink that reads "Jim". The signature is fluid and cursive, with a long, sweeping tail on the letter "m".

PRESIDENT'S COLUMN

TONY KEANE, CAE
President and Chief Executive Officer



WORKPLACE HAS BECOME A DAILY CONVERSATION in business. It is a topic that IFMA has been involved with since its inception 35 years ago. But why all of the fuss today? Haven't we been working in places for hundreds of years?

People have been "going to work" ever since there was a concept of working for money. Over most of history, work took place where the work was located. In more recent times we have seen that broaden to also include work taking place wherever the worker happens to be.

In the past, human resource professionals have provided fantastic models for working where work is located. Today they are challenged to create new models to handle activity-based work. Facility management has been and can continue to be a huge catalyst to bringing new work models into organizations. Working closely with human resources teams, FMs enable workplace change and productivity enhancements.

Technology has led to this shift in workplace strategy, creating additional FM challenges (such as supporting the mobile workforce) and at the same time opportunities for FMs (such as improving workplace productivity). I encourage IFMA members to research and become educated about the various aspects of the new workplace strategies.

There is not one model or strategy that will succeed for all. It is important to understand the technology, culture and leadership of each organization before recommending a new workplace strategy. However, when the right one is implemented, the benefits can be overwhelming.

For more information on how you can impact workplace change within your organization, I highly encourage you to join the IFMA Workplace Evolutionaries (WE) Community of Practice, and attend IFMA events like Facility Fusion or World Workplace where several sessions will focus on workplace strategy.

What else is going on at IFMA?

We have three major initiatives underway which are designed to enhance your IFMA membership experience. The first is the implementation of new association management software

(AMS). This is the customer relationship management system that IFMA uses as the backbone of our technology.

After more than 20 years we are switching to a new platform that we feel will better serve our members and customers. The AMS impacts every aspect of what we do at IFMA and your online interface with us. The new software is scheduled to go live later this year. As we get closer to that time we notify you of any possible service interruptions; however, we will keep these to a minimum.

The second initiative is our knowledge strategy (KS). The KS is designing our path forward to bring you access to FM knowledge and solutions when you need them. The first phase of this project will be highlighted at this year's World Workplace Conference and Expo in Denver, Colorado, USA. We anticipate that the content management system that drives the delivery of this knowledge will become a regular part of your professional life — your IFMA window to the FM world.

The third initiative is our global organization strategy (GOS). This project is bringing much-needed resources to our European and Asian chapters which currently do not experience the same level of support as those in the U.S. and Canada. The GOS will build upon our Service Center of Excellence model by placing resources in regions with concentrations of members and chapters in order to better serve the local population.

The culmination of these three initiatives will provide IFMA members worldwide with enhanced support, service and value. By the end of 2016 you will be seeing an improved IFMA that enhances the FM profession and industry worldwide.

Have you invited a new colleague to join IFMA this month? If you haven't, please make the effort to share your IFMA family with your colleagues so that they can, like you, benefit from IFMA membership!

Thank you,

MARYLAND SCHOOL SYSTEM RECOGNIZES FM EXCELLENCE

Frederick County Public Schools (FCPS) recently recognized 19 of its maintenance and operations department supervisors for achieving IFMA's Facility Management Professional (FMP®) designation.

FCPS, a public school system for pre-kindergarten through grade 12 in Frederick, Maryland, USA, acknowledged this accomplishment at its Jan. 14, 2015 Board of Education meeting. FCPS Executive Director Facilities Services Division Ray Barnes and IFMA Chair Jim Whittaker presented the recognition.

To earn the FMP designation, the FCPS facilities employees completed coursework, training and testing in four areas: operations and maintenance, project management, finance and business, and leadership and strategy. This will:

- Proliferate a standard foundation of knowledge and terminology
- Ensure competency and professionalism
- Improve staff loyalty and retention
- Inspire staff to strive for efficiency and excellence



Achievement of the credential supports the Board of Education of Frederick County goals of staff development and professional growth.

The individuals recognized included Jim Baker, Gary Barkdoll, Ann Bonitatibus, Steve Brako, John Carnahan, Randy Connatser, Charles Dalphon, Todd Englar, Richard Gue, Gary Hill, Rob Johnson, Pat Little, Michael Madrake, Erik McKay, Laura Olsen, Curtis Orndorff, George Tracey, Dave Wade and Robert Wilkinson.



CALIFORNIA COUNTY AGENCY EARNS PUBLIC FACILITIES AWARD

The Maintenance Division of the General Services Agency for the County of Ventura, California, USA has earned the Public Facilities Award of Excellence for 2014. The award is presented annually by the California Counties Facilities Services Association to counties and cities that demonstrate exceptional dedication to facility management. The County of Ventura is one of only four jurisdictions recognized for 2014.

M.C. Urquhart, president of the CCFSA, said in the notification letter that the award recognizes "...the continuous efforts taken to enhance the development of programs and processes designed to extend the life of your public facilities."

The maintenance division is responsible for the routine and corrective upkeep of 3,600,000 square feet of county-owned facilities, consisting of office buildings, detention facilities, courts, libraries and fire stations. This work keeps the various

facilities attractive and welcoming while reducing the need for new facilities by lengthening the service time of the buildings.

Programs and practices that helped the agency to win the award included:

- A computerized maintenance management system that includes a detailed preventive maintenance program which schedules maintenance tasks and tracks status and associated costs for countywide equipment.
 - A comprehensive capital improvement plan (required maintenance list), which is compiled by conducting condition assessment reports for every GSA facility.
 - Developing and maintaining a focus on environmental issues including installing solar arrays, performing lighting retrofits and other energy savings projects, achieving two
- Leadership in Energy and Environmental Design-certified buildings, and developing water conservation and greenhouse gas reduction conservation plans.
- A staff development plan, including hiring and maintaining managers with advanced degrees, professional certifications and credentials; and developing and maintaining a comprehensive training and annual evaluations program for the line staff.
 - Developing continual improvement programs, including customer surveys and quarterly customer meetings, and maintaining open communications through intranet and Internet accessibility and other automation tools.

The award was presented during the CCFSA winter conference in February.

IFMA EARNs ANSI ACCREDITATION WITH SEVEN COMMENDATIONS FOR ITS FM CREDENTIAL PROGRAMS

IFMA is proud to announce that it has earned accreditation and seven commendations from the American National Standards Institute (ANSI) for its facility management credential programs. ANSI, which oversees thousands of standards and guidelines that directly impact businesses in a range of sectors, accredited IFMA for the Facility Management Professional™ (FMP®) and Sustainability Facility Professional® (SFP®) credentials.

IFMA was awarded accreditation as ANSI Accredited Program Certificate Issuer Accreditation Number 1057. Both the FMP and SFP programs were described as “world-class, gold-standard models of learning and development.” Additionally, IFMA received seven commendations, including:

- The solid foundation provided by IFMA's Global Job Task Analysis process.
- Comprehensive needs assessments.
- Subject matter expert selection process.
- Alignment of learning outcomes and assessment instruments.
- The International Credentials Commission (ICC) structure, scope and responsibilities enabling stakeholder oversight of all credential program activities.
- The ICC's diversity.
- IFMA's partnership with Holmes Corp., “a world-class model of best practices.”

With an increasing focus on elements of the built environment as tools to achieve efficiency goals while improving quality of life, the role of the facility management professional is more important than ever before. This is true in both the public and private sectors around the world as building

operators look for ways to save money, increase productivity and preserve the environment.

IFMA's globally recognized FMP designation is a knowledge-based credential for FM professionals who study and successfully complete a series of comprehensive assessments covering four knowledge domains: operations and maintenance, project management, finance and business, and leadership and strategy.

Displaying the highest rate of growth among IFMA's credentials, the SFP designation is an assessment-based certificate program delivering a specialty credential in sustainability. FM professionals undertaking the SFP learn to develop environmentally responsible facility management practices.

Those interested in more information about either of these credentials, or the esteemed Certified Facility Manager® certification, should visit IFMA's credential page online at www.ifma.org/professional-development/credentials.

This accreditation would not be possible without the hard work and dedication of the IFMA International Credentials Commission, including current members: Chair James E. Loesch, IFMA Fellow, P.E., CFM; Patrick H. Okamura, CFM, SFP, FMP; Stephen J. Jones, CFM; Paul A. Ratkovic, CFM, FMP; Meredith Thatcher, IFMA Fellow, CFM, FMP; David Wilson, CFM; Mark R. Sekula, IFMA Fellow, CFM, FMP; Laurie A. Gilmer, P.E., CFM, SFP, FMP, LEED AP; Dean Hitchcock, CFM and former members Albert Pilger, IFMA Fellow, CFM; Sharon Harrington, IFMA Fellow, CFM, FMP; Yvonne Holland, CFM, ARP; Arnald Pui Shan Ng, CFM, MRICS, LEED AP.

For more on the accreditation and IFMA's credentials, turn to page 72.

FM EVENTS IN 2015



IFMA'S FACILITY FUSION 2015 CONFERENCE AND EXPO

April 21-23, 2015
Orlando, Florida, USA



EUROPEAN FACILITY MANAGEMENT CONFERENCE 2015

June 1-3, 2015
Glasgow, Scotland,
United Kingdom



IFMA'S WORLD WORKPLACE ASIA 2015 CONFERENCE AND EXPO

Aug. 3-5, 2015
Singapore, Republic of
Singapore



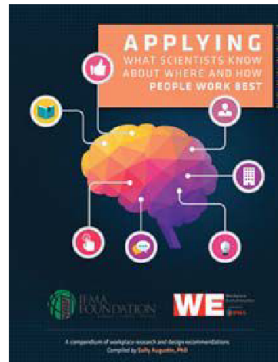
IFMA'S WORLD WORKPLACE 2015 CONFERENCE AND EXPO

Oct. 7-9, 2015
Denver, Colorado, USA

INDUSTRY NEWS

NEW REPORT BRINGS DATA INTO THE WORKPLACE STRATEGY CONVERSATION

Workplace Evolutionaries (WE), a community of practice within the International Facility Management Association (IFMA), has teamed up with the IFMA Foundation to produce a comprehensive research-based document to demystify modern workplace strategies with scientific data, analysis and research. "Applying What Scientists Know About Where and How People Work Best," by Dr. Sally Augustin outlines hundreds of scientific workplace strategy guidelines, each supported with complete citations.



- General studies
- Implications of sensory experiences
- Worker experience and basic architectural forms
- Psychological factors affecting worker performance
- Workplace design and worker behavior (general)
- Particular workplace configurations and their repercussions
- National culture and workplace design

The wide-ranging research compendium is a product of Workplace Strategy Summits, industry polls and surveys and a remarkable amount of expertise derived from first-hand experience. This piece not only informs contemporary debates about workplace strategy, it sets the stage for the workplace of the future.

The variety and detail of the content in this report is suggested by the breadth of the publication's table of contents, which includes:

The more than 50-page report includes relevant excerpts from studies, reports and articles that can be easily referenced by facility management professionals. Full bibliographical information is included for each excerpt.

The report was published with support from the WE research team and the IFMA Foundation. The full version is available for download in the IFMA bookstore, online at: <http://bit.ly/1BC7VIQ>. For more on this research report, read "The Brain-Aware Workplace" on page 81.

ASHRAE, IAQA APPROVE CONSOLIDATION

A consolidation between the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and the Indoor Air Quality Association (IAQA) has been finalized by both organizations. The consolidation was approved by the boards of directors for ASHRAE and IAQA at ASHRAE's 2015 Winter Conference in Chicago.

In July 2014, ASHRAE announced it had agreed in principle to join forces with IAQA, combining resources to improve indoor air quality in the built environment. Since August, the two groups have been undergoing a period of due diligence. That diligence was completed in January 2015.

Under the consolidation, IAQA will become a part of the ASHRAE organization while maintaining its own brand and board of directors. IAQA will operate independently within ASHRAE's organizational structure.

More information can be found at www.ashrae.org/news.

HAVE RELEVANT FM INDUSTRY NEWS TO SHARE?

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MATHEMATICS BEFORE GRAPHICS

CHANGING
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BY LISA BRINKMAN, ISILAY CIVAN AND CHERYL JEFFERIES

The ability for workers to become truly mobile has arrived. Advances in portability and secure technology delivery are prompting more organizations to embrace flexible work programs.

Today's star performers are looking for the freedom to work anywhere, anytime. This does not necessarily mean working from home or in another office. They expect employers to trust them to manage their time and to decide for themselves the most productive place for them to work.

While a management shift that supports this ability to work in various locations helps with the attraction and retention of the best people, it also leads to much lower utilization rates within traditional office space. Corporate real estate and facility management groups must make a business case for holding and maintaining square footage while responding to this rising demand for different types of non-traditional workspaces.

The workplace design community has reacted to this change with astounding creativity. We are experiencing the reinvention of the workplace as we know it. Designers are moving organizations away from the cubicle farm and providing space with different work settings that respond to how occupants actually work. One strong trend is a migration from dedicated, assigned "I" space to more flexible, open "we" space.

Why is workplace design so important? The 2013 Design Value Index Survey¹ tracked the value of publicly held companies and monitored the impact of their investments in design and innovation on stock value over time relative to the Standard & Poor's 500 Index. From a pool of 75 businesses, just 15 (20 percent) of the companies met a rigorous set of six Design Management Institute criteria. Over the past 10 years, the results show that design-centric organizations have maintained a significant stock market

advantage, outperforming the S&P by an extraordinary 228 percent.

The dilemma for CRE and FM professionals is that the evolution of the workplace is rewriting the traditional rules for real estate planning and facility management. There are no simple formulas or easy answers.

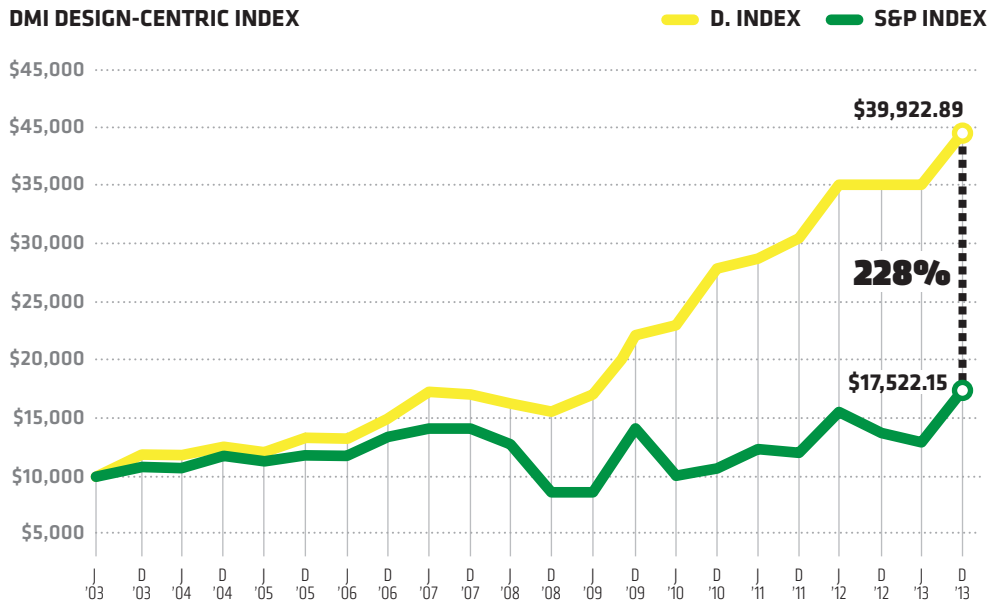
Setting a common language

As we develop strategies for an organization's real estate, it is important to establish a common language for defining requirements and developing consistent, repeatable baseline data. Organizations should identify their preferred tools and methods for analyzing current space utilization and planning for future use.

Organizations need to decide which standards to adopt for naming and measuring space types. Options include space standards from the International Facility Management Association (IFMA), the Building Owners and Managers Association (BOMA) or the Open Standards Consortium for Real Estate (OSCRE). Organizations also need to identify how many space types they want to define and how they will measure their effectiveness over time.

As measurement standards, IFMA and BOMA don't focus on the details of space use. Yet CRE groups often apply these external standards to

DMI DESIGN-CENTRIC INDEX



DESIGN-CENTRIC ORGANIZATIONS

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Whirlpool

THE EVOLUTION OF THE WORKPLACE IS REWRITING THE TRADITIONAL RULES FOR REAL ESTATE PLANNING AND FACILITY MANAGEMENT.

internal space, with business units as the tenants and CRE as the landlord.

Primarily used for leasing purposes, BOMA standards are geared toward commercial property management and do not measure how tenants use internal space. BOMA standards are intended to enable a landlord to charge rent for all areas in a building, including the tenant's space and a proportionate share of the building's common areas. This includes spaces like building lobbies, security areas and electrical rooms.

IFMA's space planning standards are useful for organizations that either lease space or own and occupy it for their own business purposes. IFMA's standards do not address building common areas as part of the rentable area and are primarily used for facility management, not lease negotiations. IFMA's standards provide a definitive procedure for measuring and classifying floor area in buildings, specifying occupant requirements, and for developing space plans and strategic facility plans.

OSCRE's data standards greatly reduce the cost companies incur for customized integrations, data scrubbing, manual data entry and data re-entry. These standards allow the real estate industry to collect and analyze data more effectively by using standardized terms.

OSCRE's classification standards focus on space use and provide flexibility for a variety of space types. The challenge is to take advantage of this flexibility while not overcomplicating the process. Organizations should ensure that their definitions of space types are adequately documented and clear enough to allow for correct selections without providing hundreds of choices.

Every CRE and FM group should study the advantages and disadvantages of the standards from BOMA, IFMA and OSORE. Unlike the generally accepted accounting principles (GAAP) required for releasing financial statements, there are no compliance rules. This freedom can make it difficult to decide which standards are best for an organization. In the end, there is no right or wrong answer. It is most important to select the appropriate standard for your organizational needs, be rigorous in its implementation and validate its proper use on a regular basis.

Mathematics before graphics

Traditional facility programming methods of gathering headcount forecasts and comparing them to business requirements once provided most of the information needed to define an organization's space requirements. In our current world, though, that's only one piece of the puzzle.

Space utilization studies show that 40 to 50 percent of assigned space goes unused in a given day. Using this as a rule of thumb, an organization could develop various gearing ratios for sizing an envelope with unassigned seating. But broader questions about the correct composition of the space will ensue. Simply moving to a smaller footprint for workstation space probably is not the answer.

It's vital to understand the functions and unique work styles of the occupants of a workplace. This will equip CRE and FM teams to develop the optimal combination of work settings to support the productivity of the workforce. Doing this, however, requires a deep level of analytics.

Bernard Marr, author of "Big Data: Using SMART Big Data, Analytics and Metrics to Make Better Decisions and Improve Performance," predicts that specialized software designed to create visualizations from data will make it easier for us to spot patterns and links between cause and effect. This software will become increasingly sophisticated and widely used. The market is expected to grow 2.5 times more quickly than that for other business intelligence software products.

CRE and FM groups that master the big data mystery will be well positioned to model space options and to create solid baseline data that will define the future workplace envelope. In many cases, the sharing ratios for flexible work environments will have been developed using a combination of available data such as security access badge swipes, data collection from occupants about how they use their space and observational studies. Some organizations will make the leap to using technological means of measure.

According to a new market research report, "Occupancy Sensor Market by Technology (Passive Infrared, Ultrasonic), Network (Wired, Wireless), Components, Application (Education, Health Care, Hospitality, Industrial, Retail) and Geography — Analysis and Forecast to 2013-2020," the occupancy sensor market is estimated to reach US\$4.67 billion by 2020, increasing at a compound annual growth rate of 18.36 percent from 2014 to 2020.

Utilization and metrics

We are experiencing dramatic changes to what must be measured. With most space significantly underutilized, traditional measures of space will be changed to gauge

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the time spent in a given seat or space. Planners must use multiple data points and will heavily leverage technology.

Today's CRE and FM leaders are continually asked about cost per employee versus the past question of cost per square foot or seat. Managing space will require planners to view it through a different lens. Utilization will be calculated based on actual use rather than assignment. The utilization rate will no longer come from the simple equation of 100 seats assigned to 80 people equals 80 percent utilization. More robust data will be needed to assess utilization to manage the "I," "we," shared, collaborative and concentrative spaces within a workplace.

An organization's data sources should be as sustainable and automated as possible. This will enable planners to extract periodic updates to analyze against the baseline and inform future space forecasts. Abundant new products are mining various data sources to include things like data port utilization, seat and room sensors and security badges. These new products provide dashboards that highlight utilization factors while also providing predictive analytics using algorithms that forecast future demand.

Benchmarking internally and with external sources, such as IFMA's Benchmarks Exchange (BEX) online platform, continues to be valuable for many organizations. The migration to software as a service (SaaS) space planning platforms will make this benchmarking easier and more effective.

The future of data

Data drives good decisions. Making timely decisions about future space needs requires a deeper data structure. As the level of data gets more detailed, it will become more robust and readily available.

Organizations can use highly automated data to:

- Validate a strategy
- Refresh assumptions
- Reimagine the workplace based on changing work styles

For example, a solution that serves those functions may provide:

- Consistently applied standards based on the adoption of primary space calculation guidelines
- An automated space data feed from the IWMS model
- A three-way look at space requirements: modeled (per set guidelines) versus actual (current condition, fed from the IWMS) versus planning recommendations for the future, based on periodic revisions and changes
- Variation tracking between modeled versus actual

- The ability to plan for additional amenity requests and to flag the output if certain conditions are not met

This demonstrates a possible scenario for identifying and managing the necessary data points that CRE and FM managers will need to analyze space needs for their organizations moving forward. No single metric will tell the complete story so we must triangulate data points from various sources to make well-informed decisions.

The validity of future utilization data and metrics, along with the ability to compare actuals with the planned/targeted guidelines, will need to be built on a common language. Whether it is custom or a purchased solution, the dataset must be consistent, repeatable and accessible. It needs to be agile enough to deal with current and upcoming challenges, such as calculating the right number of seats to people, considering the significant rise in freelance or contract-only employees in comparison to traditional full-time employees.

It's critical for CRE and FM teams to understand how their data needs will change as they implement mobility/flexible work programs. Establishing consistent terminology, documented references, data standards and the data points required to track utilization will help.

Planners have already made the transformation from measuring square foot per seat to square foot per person in occupancy planning calculations. It's now time for another paradigm shift as we begin implementing different ratios for different types of employees in space need calculations. **FMJ**

REFERENCE

1. www.dmi.org/?DesignValue



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A Brief Introduction to
Change Management



design way your to **CHANGE**

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 GROUP	WHERE ARE THEY TODAY?	WHAT DO WE WANT THEM TO FEEL?	HOW DO WE WANT THEM TO BEHAVE IN THE FUTURE?	WHAT TOOLS (PRODUCTS) DO THEY NEED?
SENIOR MANAGERS	<ul style="list-style-type: none"> - Unclear as to how this will support their teams - Fear of losing benefits (offices) - May have change fatigue/be change weary 	<ul style="list-style-type: none"> - This project will help teams and employees be more productive - Will be a net positive for their teams 	<ul style="list-style-type: none"> - Adopt and demonstrate work practices that employees should mimic - Reward employees who adopt new ways of working/thinking 	<ul style="list-style-type: none"> - Training: How to manage virtual teams - Training: How to manage in a collaborative workplace
SALES AND MARKETING TEAM	<ul style="list-style-type: none"> - Positive anticipation - Seen by some as an effort to follow new workplace trends 	<ul style="list-style-type: none"> - A win for clients - Positive anticipation - Proud of being part of company innovation efforts 	<ul style="list-style-type: none"> - Increased connection to external customers - Stronger unity between new and legacy teams 	<ul style="list-style-type: none"> - Specific outreach plan to clients to ensure they are informed about the change - New tools for remote working - New workplace guidelines
ENGINEERS	<ul style="list-style-type: none"> - Unclear as to the “why” of the change - Fear the change will be disruptive to everyday operations - Seen by some as an effort to only save money 	<ul style="list-style-type: none"> - Excited, enthusiastic, “ready to move yesterday!” - Seen as innovators - Proud of being part of the overall brand 	<ul style="list-style-type: none"> - Increased collaboration across internal customers - Better sense of community across remote teams 	<ul style="list-style-type: none"> - 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 audiences

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?

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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 go-to-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 high-quality 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 people-centered 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.

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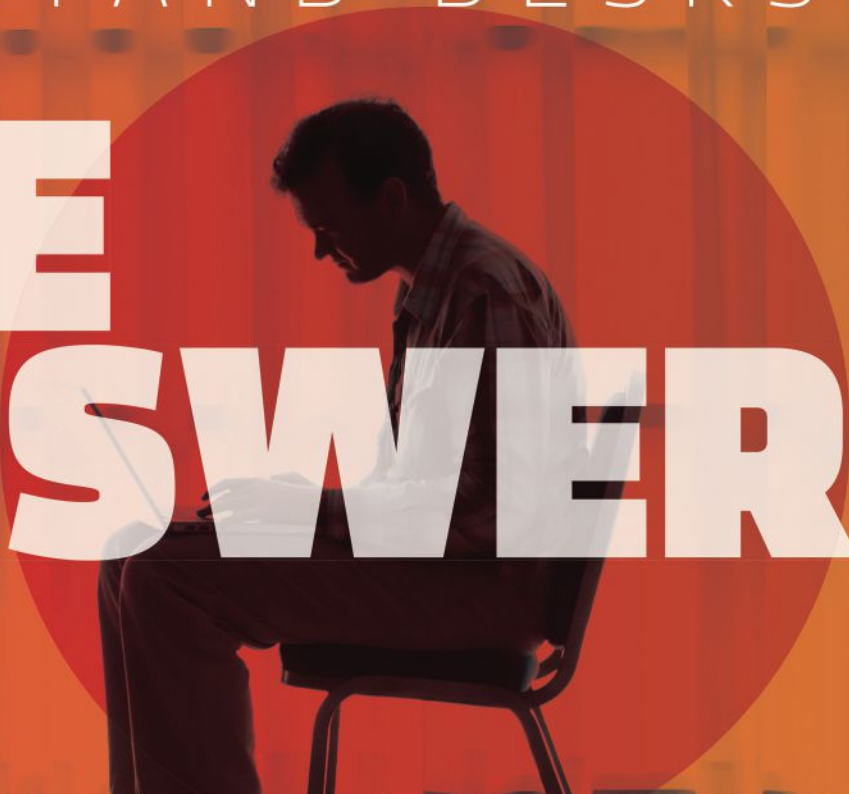
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SIT/STAND DESKS:

THE ANSWER TO “SITTING DISEASE”?

A man in a light-colored shirt and dark trousers is sitting on a black office chair, leaning forward and working on a laptop. He is positioned in front of a large, semi-transparent red circle. The background is a blurred office setting with warm orange and red tones. The man's reflection is visible on the floor below him.

FMJ EXTRA



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Health Benefits of a
Stand-up Desk

BY SHONA ANDERSON

Think about the position you are in right now, reading this article. If you are like most of us, you are sitting at your desk, perhaps even slumped over it, maybe as you have been for hours already. Are you at risk of getting “sitting disease”?

“Sitting disease” has been mentioned and/or published by many major media outlets in North America during the past year. It is a term coined for the negative effects associated with sitting all day and, although we have been doing this for decades, it has now brought to light some fear surrounding how sedentary our society is. Some media even say “sitting is the new smoking,” suggesting it is as bad for our health as smoking is. So, how much of a risk is sitting and what is best for us?

Research shows that prolonged uninterrupted sitting time has been associated with poor health outcomes, such as musculoskeletal discomfort and obesity.^{1,2} One major study showed that women who sit longer than 30 minutes per day were found to be 2.5 times as likely to be obese as women who reported sitting for 30 minutes or less.³ However, in another review of 43 papers on the topic, there was “limited evidence to support a positive relationship between occupational sitting and health risks.”⁴

Often data that supports increases in coronary heart disease and kidney disease (from sitting) are correlational and it is unclear whether sitting is causing these problems or whether people with these problems just sit more.⁵ Obesity has a strong correlation to

other health-related issues, including cardiovascular disease and diabetes.

Is standing all day the answer?

Some suggest we should stand to work. However, prolonged standing has been found to correlate with discomfort in the lower back, increased fatigue, increased blood volume in the lower limbs and a higher incidence of varicose veins.

Researchers agree that having the option to alternate between a seated and a standing position can be helpful in achieving better health in desk workers, but it has also been found that simply standing is not enough to counteract the negative health effects of sitting for hours on end. What people do during their time outside of work is also very important, as sedentary behavior during non-work hours can add to these health issues. Moving our bodies is of the utmost importance.

So, what is best? As a facility management professional, you are likely getting requests for sit/stand desks as people in your company seek answers to this same question. But is it necessary to provide them? It’s true that people should alternate between sitting and standing to achieve the most comfort and health benefits. However, studies have shown that “users of sit/stand desks only stand

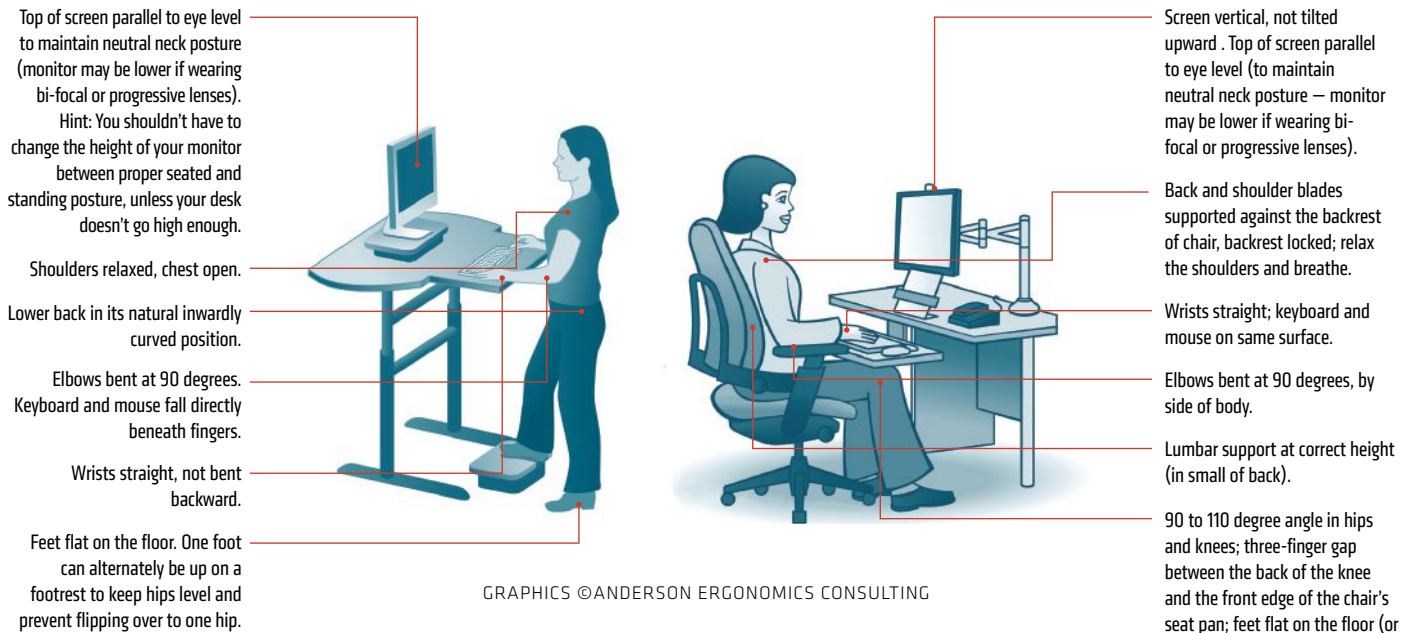
for very short periods (15 minutes or less total per day) and their use rapidly declines so that after one month, a majority of people are sitting all the time, so compliance can be problematic.”⁶ Most people can achieve enough movement by getting up every hour.

Some companies offer an alternative by providing one seated desk and one desk at a higher (standing) height. The seated desk can be used for some activities, such as the majority of computer work, while the standing desk can be used for laptop work or doing reading/writing activities. This can work well as long as the users have enough variety of activities between which they can alternate.

Ergonomics consultants typically find that only a small percentage of people really need a sit/stand desk; those with either acute or chronic soft tissue or joint issues in their lower back or hips that make it very difficult for them to sit for too long. But these same injuries often prevent them from standing for too long.

Before you decide to provide someone with a standing option to work at his or her computer, it is important to properly assess the individual to determine if a sit/stand desk is an appropriate option. It’s often best to get medical approval for the person’s use of a sit/stand desk

PROPER WORKSTATION SETUP The illustrations below outline the ideal postures for both seated and standing computer desks.



“SITTING DISEASE” IS A TERM COINED FOR THE NEGATIVE EFFECTS ASSOCIATED WITH SITTING ALL DAY.

to ensure that it is the right solution for his or her issues. Several factors are important to consider:

- The capacities of the individual compared with the physical demands of the job
- The work tasks that he or she performs (if someone is rarely in an office but sits in meetings all day, a sit/stand desk won't help)
- The current furniture layout (standing to work at a computer is not conducive in an open work environment where the person will tower over the employee beside them if the wall is too low)
- The individual's medical health (if he or she has varicose veins or is prone to them, standing frequently is not a good idea)

Once a person has been deemed to need a sit/stand desk, it is very important that it suits the individual and is set up properly. A few things need to be considered:

- Minimum and maximum height ranges. The desk should adjust between the individual's seated elbow height (when the person is sitting with feet flat on the floor and elbows bent at 90 degrees) and standing elbow height (when the person is standing upright with shoulders relaxed and elbows bent at 90 degrees).
- The entire desk, rather than just the keyboard section, needs to move up and down. The problem with only the keyboard section moving is that the monitor ends up being too low when a person is standing. This can contribute to a hunched forward posture and/or neck flexion.
- How much non-computer work the individual does. If he or she is doing a lot of reading and writing tasks, non-computer surfaces should move with the computer surface (unless the person is going to work standing for one activity and seated

for another, as discussed above). However, if the person needs to do a lot of reading/writing while working at the computer, there needs to be room available for papers.

Types of sit/stand desks

There are a few different kinds of mechanisms for moving a desk from a seated to a standing position: crank, torsion or counter-balanced and electric. Each of these has pros and cons in relation to sit/stand workstations.

Crank is not a good choice for a sit-to-stand desk as it requires too much work for people to move it the large distance between seated height (typically between 24-30 inches from the floor) and standing height (typically between 34-47 inches from the floor). An injured person may find the mechanism too difficult to crank and a non-injured person will likely find it too cumbersome and time consuming. Also, crank desks often don't adjust to the higher ranges needed for standing.

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Torsion works on a counter-balanced mechanism and once it is set to the weight of the items on the desk, it typically works quite well. A paddle beneath the desk is pulled upward to adjust the desk and it can generally move the desk within the seated to standing range quite easily.

The main problem with this type of desk is that different users typically add or remove items, such as monitors and/or the computer itself, thus considerably changing the weight on the surface of the desk. This causes the desk to no longer be properly counter-balanced, which makes it very difficult to lift to a standing height. This can be easily corrected by someone with the right tool and knowledge to adjust the balance, but most often these desks are placed into a companies in which the people sitting in the offices don't have that ability.

The other issue with this type of desk is that the paddles are often located directly in the front bottom of the work surface and some people will hit them with their legs as they try to get close to the workstation or move to the side of the desk. This can be very bothersome for those people.

Electric desks move up and down very easily with the push of a button. If purchased with the correct height-adjustment range in mind (ensure that it goes to the lower height ranges), it is the best alternative for an injured person to move and works well with all other people. However, it is the most costly type of desk.

Other characteristics to consider

- Overhead bins or shelves that don't move with the desks may prevent them from going high enough without the monitors hitting them.
- Bulletin boards or whiteboards on the walls may prevent the

desks from going high enough as the desk hits the boards or papers attached to them.

- If the computer is stored on the floor, the keyboard, mouse and monitor cords to it, as well as phone cords, need to be long enough to allow the desk to be raised properly. If they are not, these items will be pulled off the desk as it is raised.
- If the computer is stored in a CPU holder attached to the desk, the desk may not go low enough. It is a shame to purchase a sit/stand desk only to have to put a keyboard tray onto it.

Alternatives to sit-to-stand desks

There are additional ways to encourage movement if your company is not investing in sit/stand desks. If you want to get people moving more, here are some design and company culture ideas to consider:

- Place printers and photocopiers in central location so that people must walk to them
- Encourage a culture of talking to each other versus sending emails and walking meetings
- Provide some stand-up-only meeting rooms and comfortable open stand-up spaces in which to meet
- Provide wireless headsets for employees so they can stand up and talk on the phone
- Reminder software/tools (such as an app encouraging employees to move and stretch)
- Encourage gym memberships or onsite gyms and remind employees to drink lots of water
- Design an open, inviting staircase

in your office environment and encourage its use

If your organization's employees are at risk of sitting too much, all is not lost. There are many ways to get moving more. And I now challenge you to reread this article in a less sedentary position! **FMJ**

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Shona Anderson is a Canadian Certified Professional Ergonomist and the president of Anderson Ergonomics Consulting, Inc. She has

a degree in kinesiology from the University of Waterloo and 25 years of office and industrial ergonomics experience within the petroleum, municipal, telecommunications, transportation and manufacturing sectors.

Her company provides assessments and training courses to educate employees and help them set up their work environments to reduce their risk of developing injuries in the workplace.

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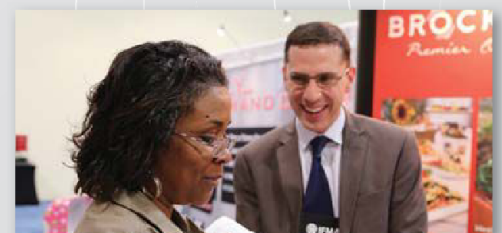
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Tuesday, April 21

8 a.m. - 11 a.m.

11 a.m. - 11:30 a.m.

11:30 a.m. - 1 p.m.

1:30 p.m. - 2:30 p.m.

4 p.m. - 7:30 p.m.

Council-led Sessions 1.01-1.08, Levels 1&2

CFM®, FMP® & SFP® Info Session, Level 2, St. Johns 33

Power Speaker Luncheon, Level 1, Gatlin D

Concurrent Educational Sessions 3.01-3.08, Levels 1&2

Expo Grand Opening, Foundation Auction & Welcome Reception, Level 1, Gatlin C

Wednesday, April 22

8 a.m. - 9 a.m.

9:30 a.m. - 10:30 a.m.

10:30 a.m. - 2 p.m.

2:15 p.m. - 3:15 p.m.

Keynote Speaker, Level 1, Gatlin D

Concurrent Educational Sessions 6.01-6.08, Levels 1&2

Concurrent Educational Sessions 6.01-6.08, Levels 1&2

Concurrent Educational Sessions 7.01-7.08, Levels 1&2

Thursday, April 23

8 a.m. - 9 a.m.

10:30 a.m. - 12 p.m.

2 p.m. - 5 p.m.

Concurrent Educational Sessions 9.01-9.08, Levels 1&2

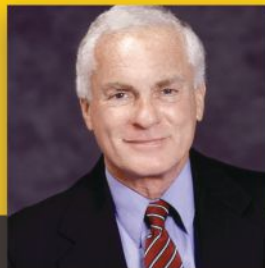
Closing Power Speaker, Level 1, Gatlin D

Facility Tours, Meet on Level 1, Gatlin Foyer



Tuesday @ 11:30 a.m.

Opening Power Speaker **Rex Miller**
"Change Your Space, Change Your Culture: How Engaging Workplaces Leads to Transformation & Growth"



Wednesday @ 8 a.m.

Conversations With **Harris Rosen**,
Founder & COO, Rosen Hotels & Resorts



Thursday @ 10:30 a.m.

Closing Power Speaker
Seth Mattison
"The Future of Work Today: Insights From the New World of Work"

Educational Program: Day 1 | Tuesday, April 21

 Best Practices	 IFMA Leaders Training	 Religious Facilities Council	 Workplace Evolutionaries	 Food Service & Restaurant Council
 Leadership & Management	 Utilities Council	 Corporate Real Estate Council	 Public Sector Facilities Council	 Research & Development Council
 IFMA Research Roundtables	 Information Technology Council	 IFMA Council- or Community-led Sessions	 Sustainability & Environmental Stewardship	

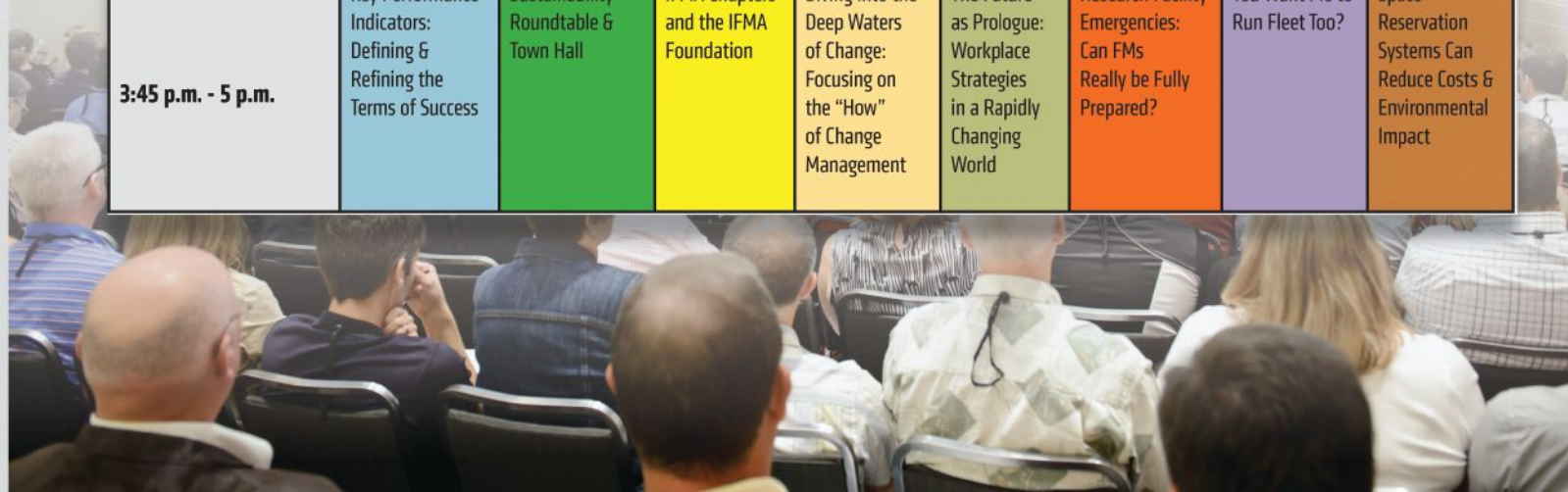
	1.01	1.02	1.03	1.04	1.05	1.06	1.07	1.08
9 a.m. - 11:30 a.m.	Public Sector Council Hot Topic Panel	Council- or Community-led Session	Religious Facilities Council Roundtable	Utilities Council Session	Workplace Evolutionaries 3-part Session: The Facility Customer Experience; Work, Place & Wellness; New Roles for FM/RE Technologists	Information Technology Council Session: BIM & FM: Creating a New Standard Practice	Food Service & Restaurant Council Session: Exploring Trends in Space Planning	Corporate Real Estate Council 2-part Session: FM Controls the Site Selection Process; Top 10 Ways to Avoid Becoming a Statistic
11:30 a.m. - 1 p.m.	2.0 Opening Power Speaker Lunch With Rex Miller: "Change Your Space, Change Your Culture: How Engaging Workplaces Leads to Transformation & Growth"							
1 p.m. - 1:30 p.m.	Power Speaker Book Signing							
	3.01	3.02	3.03	3.04	3.05	3.06	3.07	3.08
1:30 p.m. - 2:30 p.m.	The Nuts & Bolts of Successful Strategic Planning for the FM Organization	Sustainability: Proven Methods That Affect Your Bottom Line	The Gift of Leadership	The Next Generation of the Facility Manager	WorkSENSE & the Individual: Increasing Engagement, Productivity & Satisfaction by Designing for the Five Senses	Environmental Health & Safety Council Session	Food Service & Restaurant Council Session	Crafting the FM Message: Melding Metrics & Meaning
	4.01	4.02	4.03	4.04	4.05	4.06	4.07	4.08
2:45 p.m. - 4 p.m.	Doing Unto Ourselves: What Our Renovation/Relocation Taught Us About Our Clients	Understanding the Role of Emissions in Facility Management	Improving the IFMA Brand Through Great Presentation Skills	Religious Facilities Council Roundtable	Workplace Social Media: An Industry-informative, Employee-empowering Tool for Navigating the Workplace Effectively	IFMA Research Roundtables	How a Mobile Device Initiative Shaped a Better Maintenance Program	Global Real Estate Market Trends: What's Hot, What's Not
4 p.m. - 7:30 p.m.	Expo Grand Opening & Welcome Reception							

Educational Program:

Day 2 | Wednesday, April 22

 Best Practices	 IFMA Leaders Training	 Religious Facilities Council	 Workplace Evolutionaries	 Food Service & Restaurant Council
 Leadership & Management	 Utilities Council	 Corporate Real Estate Council	 Public Sector Facilities Council	 Research & Development Council
 IFMA Research Roundtables	 Information Technology Council	 IFMA Council- or Community-led Sessions	 Sustainability & Environmental Stewardship	

8 a.m. - 9 a.m.	5.0 General Session: Conversations With Harris Rosen, Founder & COO, Rosen Hotels & Resorts							
	6.01	6.02	6.03	6.04	6.05	6.06	6.07	6.08
9:30 a.m. - 10:30 a.m.	Private Industry Need + Government Mandate + Consultant Expertise = Integrated Talent Development Program	The Facility Strip-out, Renovation & Improvement Process: Avoiding Environmental Pitfalls	Credentials & Your Chapter: Successful Course Offerings for Your Members	The Leadership Fast-track: Accelerating or Stalling?	Unlocking Your Corporate DNA	IFMA Research Roundtables	Public Sector Council Session	How Much Money is Lost Due to Lack of a Coherent Real Estate, FM & Workplace Strategy?
10:30 a.m. - 2 p.m.	Expo Floor							
	7.01	7.02	7.03	7.04	7.05	7.06	7.07	7.08
2:15 p.m. - 3:15 p.m.	The Planning Paradox: Why Strategic Plans Fail	Building Re-Tuning: The Two-day ROI	Meeting Planning Tips That Save Dollars (and Time)	Dare to Think Differently	The Place Just Right: The Workplace as a Talent Attraction Tool	IFMA Research Roundtables	Getting More Work Done is Not About Increasing Staff Size, But Enhancing Staff's Productivity	How Updated Technology Makes Life Cycle Costing More Effective
	8.01	8.02	8.03	8.04	8.05	8.06	8.07	8.08
3:45 p.m. - 5 p.m.	Key Performance Indicators: Defining & Refining the Terms of Success	Sustainability Roundtable & Town Hall	IFMA Chapters and the IFMA Foundation	Diving Into the Deep Waters of Change: Focusing on the "How" of Change Management	The Future as Prologue: Workplace Strategies in a Rapidly Changing World	Research Facility Emergencies: Can FMs Really be Fully Prepared?	You Want Me to Run Fleet Too?	Space Reservation Systems Can Reduce Costs & Environmental Impact



Educational Program: Day 3 | Thursday, April 23

-  Best Practices
-  IFMA Leaders Training
-  Religious Facilities Council
-  Workplace Evolutionaries
-  Food Service & Restaurant Council
-  Leadership & Management
-  Utilities Council
-  Corporate Real Estate Council
-  Public Sector Facilities Council
-  Research & Development Council
-  IFMA Research Roundtables
-  Information Technology Council
-  IFMA Council- or Community-led Sessions
-  Sustainability & Environmental Stewardship

	9.01	9.02	9.03	9.04	9.05	9.06	9.07	9.08
8 a.m. - 9 a.m.	Building High Performance Into Integrated Facility Management	Select the Right LED for Energy-efficient Lighting Retrofit	Attracting, Developing & Retaining Young Professionals	Leadership & Management Session	Creating FM Value: Utilizing Workplace Strategy to Boost Productivity & Innovation	Designing for Security & Safety	Roundtable: How Do You Measure the Effectiveness of Your Maintenance Program?	IFMA Credentials Session
	10.01	10.02	10.03	10.04	10.05	10.06	10.07	10.08
9:15 a.m. - 10:15 a.m.	Delivering Strategic Value Through the Deployment of Mobile Technology in a Retail Environment	Sustainability: An FM Practitioner's Guide	Best Practices for Chapter & Council Leaders	Combined Heat & Power	Introducing CAPTIW: The Comparative Assessment & Performance Tool for Innovative Workplace	The FCA Has Evolved: The Importance of a High-performance Facilities Condition Assessment	The Role of the FM in Attaining & Maintaining AAALAC Accreditation	RE & FM: New Players in the Urban Workplace
10:30 a.m. - 12 p.m	11.00 Closing Power Speaker Seth Mattison: "The Future of Work Today: Insights From the New World of Work"							
2 p.m. - 5 p.m.	12.0 Corporate Real Estate Council World Café							

Facility Tours | 2 p.m. – 5 p.m.

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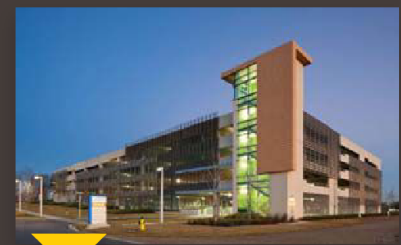
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Council-led Sessions | Tuesday, April 21

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Expo Grand Opening | Tuesday, April 21

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As the IFMA Foundation continues its efforts to encourage FM as a career of choice, its new Global Workforce Initiative (GWI) is reaching high school students in three cities where pilot programs are currently in place.

The Foundation is pleased to present a report on the pilot initiatives in San Bernardino County, California, where the Foundation is working with the county's Alliance for Education. The IFMA Foundation, the Inland Empire Chapter of IFMA and Southern California IFMA members are an integral part of the CAREER proposal developed by San Bernardino County schools and consortium partners. The county has formally adopted a Cradle-to-Career Roadmap that identifies research-based indicators of success for all students. An essential component of program success is the achievement of readiness for both college and career.

The IFMA Foundation is actively seeking to establish or work with existing K-12, community college and higher education FM degree programs. While there are 30 accredited FM degree programs around the world, the Foundation continuously looks to identify regions where it can support the development and implementation of FM curriculum, internships, teacher externships and secondary school programs. Based on the growth of the San Bernardino job market predicted for 2015, this is an ideal area ready to increase awareness and enrollment in FM education.

Through this GWI pilot, the IFMA Foundation acts as a connector between industry "Sector Navigators" to provide

the right type of engagement, investment and actions. Some programs planned in the county include:

- Scholarships
- Student Internships
- Career Fairs
- Mentorships
- Teacher/Guidance Counselor Training
- "A Day in the Life" of a Facility Manager
- IFMA Student Chapters
- Speakers for Special FM Programs & Educational Sessions
- Presentations to Students, Teachers & Counselors
- Behind-the-scenes Facility Tours & Lectures
- Easier Access to IFMA Credentials, Especially the FMP & SFP
- Establishment of an Accredited FM Degree Program (ADP)

The Foundation estimates the number of volunteer and staff hours, resources and support of this initiative in San Bernardino to be worth at least US\$20,000 per year in the first two years of in-kind support.

The Global Workforce Initiative calls for this kind of collaboration in each city and region – strong partnerships sustained by dedicated educators, businesses, labor, government, economic development and industry partners, students and families who understand and believe that the key to a successful future includes FM education at multiple levels.

Stay in touch with the progress of GWI pilot programs and access more information about the GWI from the Foundation website at www.ifmafoundation.org.

Workplace and the Employee Experience

Workplace Evolutionaries (WE) is a vibrant global community that aims to positively influence the future of the workspace and the people it supports. Spawned by a passionate group of workplace strategists, change managers, facility managers, architects, designers, office furniture experts, IT managers, HR professionals and academics, WE is a community of practice within IFMA.

Part of the core philosophy that unites WE members is an emphasis on the intersection between the workplace and the employee experience.

FMJ recently had a chance to hear from five WE members on this topic.

CHRIS HOOD

FMJ: What role does the workplace play in creating and maintaining a positive employee experience?

HOOD: I have spent my career in a discipline in which many managers are quick to volunteer that the physical workplace rarely ranks in the top 10 list of reasons why an individual leaves one company for another. In so doing they seem to be downplaying the value of investments in physical and technical infrastructure. Imagine not wanting to invest in the wellbeing, productivity and attitudes of people who represent approximately 80 percent of their cost structure and 100 percent of their ability to succeed as a company.

Furthermore, in the industry standard surveys of employee engagement, there is not a single question about the physical infrastructure.

Times are changing, though! More examples are coming to light of prospective employees skipping the interview

after getting a view of the cube farm or finding out that the technology platforms are archaic.

The workplace, and the strategy that defines it, do matter...a lot!

They matter to employees and to the organizations whose future success relies on doing the right work, the right way with the right people. This is something the workplace is highly capable of impacting, as evidenced by the recent spate of impassioned arguments by those advocating for either open or private work arrangements.

One way to take the emotion out of the debate is to accept that we are all different and that a solution that appeals to one may not appeal to another. This brings about the need for choice. There is mounting evidence that individuals who are offered a choice (even a suboptimal one) are the most satisfied. Choices need to respond to the spectrum of factors which might establish deeply rooted workplace preferences: generation, culture, experience, personality type, etc.

On top of the deep experience factors governing choice are a series of dynamics which may even conflict with one's core preferences, such as what work needs to get done, mood, thermal comfort or accommodating coworkers. Today's best workplaces deliver great experiences by providing dynamic choices of space, technologies and services for which individuals and teams can vote with their presence.



Chris Hood is managing director and platform lead for occupancy services in CBRE's Global Corporate Services organization. He is responsible for the ongoing development of tools, practices and methodologies designed to ensure the future success of clients as they strive to develop innovative workplace solutions.

Prior to joining CBRE, Chris spent 30 years at Hewlett Packard leading the development of their Global Workplace Initiative, a program designed to integrate and deliver space, technology, collaboration and services solutions into a single efficient and effective package which best supports the way people work.

KATE LISTER

FMJ: What does research tell us about the importance of focusing on the employee experience?

LISTER: The research is clear. What employees of all ages want is choice about how, when and where they work. They also want to be trusted, to do good work and to feel that they are a part of a greater whole. Studies show that when employees get what they want, they're happier, more productive, more loyal, more engaged and even healthier. All of that translates into greater shareholder value.

What is also clear from research is that cookie-cutter solutions belong in the kitchen, not the workplace. People are different. They think differently, work differently and relax differently. How can we possibly expect them to thrive in a one-size-fits-all environment? We can't.

What's more, we can't expect what works in one industry, culture, region, division or group to work in another, nor can we expect it to remain static over time. Change is one of the few things we can count on in the future.

We will be working differently in the near future and certainly in the distant future. It's time for CRE and FM to think "agile;" to design places and processes that can support whatever comes and can change with the times.

It's time to focus on people.

Over the past half-decade, the pendulum of what drives workplace strategy has swung from what's good for people to what's good for profits. The result, in many cases, has been noisy, inefficient offices that people don't want to occupy; some even making popular press headlines. And while the initiatives may have saved employers money, those savings have proven to be false economy when the detrimental impact on people is considered.

Employees may have been willing to play along with lousy workplaces when they were happy just to have a job, but those days are behind us, particularly for top performers.

People drive value. They are the reason organizations exist. And they are what will drive the future of work.



Kate Lister is president of Global Workplace Analytics (GWA), a consulting firm that helps organizations understand and communicate the business case for agile/sustainable workplace strategies.

Drawing on its proprietary knowledge base of thousands of academic and business insights, GWA helps clients engage stakeholders in the success of their workplace change programs. The firm's research has

been cited in the Harvard Business Review, Wall Street Journal, New York Times and dozens of other publications.

ARNOLD LEVIN

FMJ: How can we measure the impact of the employee experience?

LEVIN: A critical reason to measure employee experience is to understand its impact on organizational performance. Measuring employee experience as a result of a particular workplace strategy and design should be assessed through two lenses: the employee and the organization.

The shortcoming of employee satisfaction surveys is that they only look at one element of this impact: individual satisfaction. They ignore the many factors that can contribute to that satisfaction and miss how an employee's satisfaction potentially contributes to organizational performance.

Each perspective is contingent on the other. The additional benefit of measuring both is that the business can assess their congruence. This is critical for organizational performance and points to the problems associated with employee satisfaction surveys as a means to measure the success of any executed workplace strategy.

A good framework to accomplish this is through the components of the Organizational Congruence Model developed by the late organizational guru Jay Galbraith which theorizes that every organization has five basic components: strategy, structure, processes, people and rewards. For any organization to be successful, each of the components needs to align or be "congruent," otherwise organizational performance will be negatively impacted.

This provides a unique lens through which to measure the impact of the employee experience because it captures the issues that are meaningful to the employee (rewards and impact on hiring and retention). At the same time it captures how the employee experience impacts the organization and contributes to its success through examining the implementation of its business strategy, work processes and structure.



Arnold Levin is a workplace and design strategist with more than 45 years of experience across the U.S., Europe and Asia, working with a broad spectrum of clients (Microsoft, Bloomberg and GSK).

His use of research-based organizational methodologies that blur the boundaries between design and business helps clients face disruptive environments and enable innovation. Levin has held workplace strategy director positions at Gensler, Mancini Duffy and IA, and has worked for clients in the corporate, science and health care arenas.

GARY MICIUNAS

FMJ: What role does change management play in creating a positive employee experience?

MICIUNAS: The role of change management in creating a positive employee experience is twofold:

- Ensuring a positive employee experience during the process of place making.
- Ensuring a positive employee experience with the resulting work environment.

Engaging and communicating with employees, rather than telling and selling to them, approaches change management with an attitude and stance of “Ready, willing, able!” rather than “Ready, aim, fire!” Readiness for change, willingness to change and ability to change are a personal journey which involves making choices. Change cannot be forced upon people in the manner of a program implementation checklist.

The likelihood of success in transforming a workplace will be greater if a positive employee experience is integral to the process of creating it, not simply a result of experiencing the new work environment upon occupancy at completion. A process that is engaging and communicative is in stark contrast to one based on the manner of telling and selling. The first approach relies on means of co-creation. The latter relies on prescribed ends in which a predetermined solution is offered for adoption only to meet resistance.

By engaging and communicating with employees, the role of change management is to open minds to new ways of working, appeal to emotions including fear and excitement, and expand possibilities before converging on a solution. As the solution emerges, this creates a shared understanding of the need for change, anticipation of a desired future, a sense of ownership in the outcomes and personal responsibility to make it work.

Any process needs a starting and an ending point. The change management process begins with each conversation that results in action. Every interaction is an opportunity to initiate change by questioning, listening and responding, not informing, persuading and convincing.

It’s human nature that people do not like being told and sold to in an authoritative manner. People are willing to be drawn toward an attractive future. Effective change management cannot be a technocratic approach. It must balance intellect and emotion; objectively how it works and subjectively how it feels.



Gary Miciunas is principal of advisory services leading workplace strategy and change management for global design firm NELSON (www.nelsononline.com).

STEPHEN MONACO

FMJ: Can you share some examples of ways in which Motorola has enhanced the employee experience?

MONACO: We should congratulate ourselves that we have evolved the definition of “workplace” beyond Fred Flintstone’s two-story headquarters at the Slate Rock and Gravel Company and that we strive to replicate George Jetson’s Spacely’s Space Sprockets campus setting.

Leveraging a workplace to create a positive experience for the employee needs to extend beyond the cartoon versions of dinosaur slides and glass elevators. The destination desired by today’s workforce has to be meaningful in both a personal and corporate dimension. I believe it is the manifestation of the shared and divergent values of the collective whole.

Motorola’s workplace has been transformed over the last few years through numerous fingerprints and business challenges.

One example of this intangible ingredient is when we conducted a massive cleanup of more than 200,000 square feet of outdated office equipment. We invited local universities and high schools to dig through our electronic waste to create an art exhibit. Strange forms of art were produced by both students, employees and even some employees’ children. These displays of creativity now adorn our walls as a small reminder of teamwork, inclusiveness and being playful.

We need to find the heartbeat and add the drumbeat to create a unique theme song that is carried through the space in various forms and functions. When Google was our parent company, we immediately had access to their whimsical pedigree, but only a portion of their workplace experience was fused with the Motorola Mobility DNA.

Our new engineering flagship in Chicago at the Merchandise Mart was designed with an open plan, free snack kitchens, adjustable-height desks and shared offices, but the employees have added the experiences, such as hosting hack-a-thons with local schools. Now that we are a Lenovo-owned company, opportunities for new workplace experiences and synergies will be available for our continued evolution and transformation.

When the manifestation of values is tailor-fitted for each company and adjusted for regional differences, a meaningful workplace will curate itself. Our job is to be the art director who highlights unique characters like Fred and George without emulating Mr. Slate or Mr. Cosmo Spacely.



Stephen Monaco is head of global real estate and workplace services for Motorola Mobility, LLC.

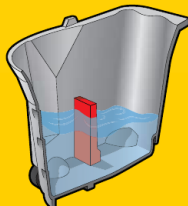


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ONE- ON- ONE

WITH KATE NORTH



BY ANDREA SANCHEZ

KATE NORTH IS THE VICE PRESIDENT of global development for e-Work.com, the leader in interactive Web-based courses designed to easily “prepare the workforce for the workplace.” For more than 25 years, she has been helping organizations create innovative workplaces and adopt new ways of working. Her global expertise includes change management, workplace strategy, research, sustainability, design and leadership.

North’s passion for creating community and the desire to explore the evolving workplace led to the creation of the Workplace Evolutionaries (WE) group, a community of practice within IFMA of which she serves as the global chair. During World Workplace 2014, North received IFMA’s prestigious International Associate Award of Excellence for her contributions to the industry.

FMJ had the pleasure of discussing workplace strategy with North.



A WELL-DESIGNED WORK ENVIRONMENT IS THE KEY TO OPTIMIZING BOTH PEOPLE AND PERFORMANCE.

FMJ: How many years have you been involved with IFMA?

NORTH: I joined IFMA as soon as I graduated from college with a degree in design. I really wanted to keep learning, be able to network and expand into the professional field. I found IFMA and became involved with the Salt Lake City, Utah chapter and then in Los Angeles.

Over time, my interests focused on the power of place and its impact on people and organizations. I actually left IFMA to join other organizations more focused on the topic.

In 2011, long-time IFMA member Diane Coles-Levine asked me to serve as a contributing author for the IFMA Foundation book, "Work on the Move." I was surprised and delighted to see a high level of interest about workplace from IFMA, and we had a lot of fun creating the book. I was glad to be back with IFMA and have enjoyed doing presentations for various IFMA conferences and chapters. Before long, I was hooked!

FMJ: It seems like you've found your niche at IFMA. What do you see as the value of IFMA membership?

NORTH: I see so much value. IFMA is a large global organization with amazing members who are genuinely interested in expanding their knowledge. I love the embedded culture of learning and sharing and really appreciate the commitment to research, knowledge and globalization. I have also enjoyed working with IFMA's internal team to create something new.

FMJ: You are extremely passionate about the nature of work and how the workplace is rapidly transforming. When did your interest in workplace strategy begin?

NORTH: For more than 25 years I've been very interested in how the physical environment impacts how people feel and, more specifically, how they work. In the early years of my career I was blessed to have worked with some large furniture manufacturers that heavily invested in research

and development to help them better understand the future of work. As my knowledge and network of global thought leaders grew, so did my passion for understanding what might truly be possible.

It's rewarding to look back 15 years, when we were creating scenarios for what work would be like in 2015, and see how many of our predictions actually came to fruition. Thanks to the escalation of technology, we now have much more choice about how and where we work. I have no doubt that 15 years from now, we will have witnessed a massive transformation in how we think about and orchestrate work.

Today, I am most passionate about helping FM and CRE teams understand the potential for workplace strategy and design to shape organizational culture, attract and retain talent, improve employee health and wellbeing, increase engagement and enhance collaboration and innovation. I'm all about looking for ways to make workplace change easy and preparing the workforce for its new workplace(s).

FMJ: Workplace innovation is your forte. Is there one thing you find people take for granted when attempting to create a great workplace?

NORTH: Outside of creating a workplace strategy that uniquely aligns with their own organization and not copying a strategy based on trends, I would say the need to honor and support all types of work and all types of people. For example, in an attempt to reduce costs over the past few years, many organizations have not allocated enough space for concentrative work and privacy. The result has been unhappy employees and reduced performance.

FMs need to become more strategic in the role they play in the organization. A well-designed work environment, one that offers a choice of places and spaces, together with a good change management program, is the key to optimizing both people and performance.

FMJ: Let's turn to a topic that is dear to you: *Workplace Evolutionaries*. How did the group originate?

NORTH: It all started when Diane Coles-Levine had the notion of a how-to manual to help FMs create workplace strategy. Eleven months later, thanks to the virtual collaboration of experts from around the globe, "Work on the Move" was proudly released by the IFMA Foundation. The more we presented the content from the book at various IFMA events, the more interest and synergy we saw.

The next big step occurred when the IFMA Foundation hosted the Workplace Strategy Summit at Cornell University. The buzz that resulted and our desire to keep the dialogue going led us to a conversation with IFMA CEO Tony Keane about creating a workplace group that would allow people to learn and connect with each other globally. This is when Workplace Evolutionaries (fondly referred to as WE) was born. It's been a fantastic journey so far and we've only just begun!

FMJ: To clarify, to be a member of WE you must be a member of IFMA, correct?

NORTH: Yes. It's so simple. Join IFMA and for an additional US\$25, you can become an official member of WE. When we first launched, both IFMA's Corporate Real Estate Council and the Corporate Facilities Council took us under their wings and offered WE to all of their members. As of July 2014, IFMA made WE an official community of practice. In addition to our active WE LinkedIn site, we have a new website (we.ifma.org) that contains a wealth of information and resources on the future of work.

FMJ: What additional value can IFMA members get by joining WE?

NORTH: So much! Being a global community of practice commits us to creating a great experience for our members both virtually and face to face. Each month we host stimulating WE:binars on various workplace topics and whenever there is an IFMA event like Facility Fusion or World Workplace, we rally to create great programs. WE's research and knowledge teams are continually working to deliver cutting-edge content.

For example, in January of this year, WE worked with the IFMA Foundation to release a new workplace strategy guide, "Applying What Scientists Know About Where and How People Work Best" by Dr. Sally Augustin. It is a comprehensive compendium of research of the social and physical sciences applicable to workplace designers and strategists that makes it easy for them to apply evidence-based design principles to their projects (read more about this report on page 81).

FMJ: How else can people engage with WE?

NORTH: At every IFMA event in North America since WE's inception we have hosted a number of great learning and networking events and our hope is to expand globally this year.

For example, at both of the Facility Fusion events this spring, WE will host a one-day learning event prior to the conference which will include some of the best workplace case studies in our industry. In addition, we will provide a WE Genius Bar and the chance to experience a global movement called "The Workplace Conversation," which engages real estate and facility management professionals with human resources, IT and sustainability disciplines to work collectively in making a difference in how work gets done.

Of course, our famous WE EAT dine-outs are always a hit too.

FMJ: What is the key to your success and how can one empower others to follow your lead?

NORTH: First of all it's not me...it's WE! The key is surrounding yourself with smart, passionate people; people who want to learn, evolve and contribute. It's contagious. I truly believe as a collective body, we can do anything. It starts with one idea and before you know it, you've created something really great.

IFMA is full of the kind of people who are ready and willing to lead change. When I step back to reflect on our journey over the past two years, I am in awe of what we have collectively created. The level of receptivity has been worth it all. I feel blessed to have re-found IFMA; it's opened the doors to a wealth of incredible people and opportunities.

FMJ: What you've done has involved embracing risk and being a thought leader. What are your tips for people to "give it a go" and embrace change?

NORTH: My hope is that with every engagement we have with FMs they go away bolder, intrigued and filled with new ideas about the work they are leading. I know WE will be successful when FMs act upon what they have learned.

Look at where you can add value, where the business is going and how the work environment (both physical and virtual) aligns with it. Start building bridges with HR and IT and make your voice heard. Contribute fully and help others see what might be possible. Last but not least, stop thinking about it and "just do it." Beg for forgiveness if necessary, but lead the change. Sometimes you just have to step away from what's safe and go for opportunities that can really make a difference. You won't regret it! **FMJ**

For more information and/or to join WE, go to www.we.ifma.org. For a full list of IFMA's communities of practice, visit www.ifma.org/community/communities-of-practice.



Creating an
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in facility
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Our approach aligns with the Lean philosophy and 5S methodology. In fact, we've developed a Lean Facility Maintenance program in which our sales professionals become Lean certified, CIMS certified and have to complete the 10-hour OSHA Hazard Recognition training.

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- Technology

As a result of the most recent IFMA global job task analysis, the CFM Exam has been updated to include 11 competencies!

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- Students entering the profession from colleges, universities, certificate or technical programs.
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- Experienced FMs intending to pursue the CFM credential.

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Project Management: Facility managers make use of all aspects of project management beginning with planning, scoping and scheduling, and ending with evaluating. Project planning and management are core skills in facility management. The skills are particularly important because of the wide range of projects assigned to the facility organization. Projects vary in scope, complexity, duration and financial risk.

Finance and Business: Facility managers manage/oversee high-value assets that represent significant financial investment in technology, buildings, structures, interiors, exteriors and grounds. Since facility managers are typically responsible for the oversight, operation and maintenance of the buildings and grounds, as well as oversight of various service contracts, understanding the basics of finance and business is critical.

Leadership and Strategy: To be effective, facility managers must develop strategies to successfully carry out major initiatives by influencing the decisions and attitudes of others. Effective strategies require that facility managers are able to integrate people, places, processes and technology. They must be able to align the facility portfolio with the entire organization's missions and available resources, and to be innovative in order to move forward with their staff and processes to respond to the ever-changing requirements.

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

- Brian Rush, CFM, FMP

In the Classroom

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE SETS EDUCATIONAL RECORD

LEFT TO RIGHT: Beth Fasching (IFMA credential programs support, Holmes Corp.), Michelle Gubin (communications coordinator, FMD), Melissa Hopkins (assistant vice chancellor and assistant dean of facilities, WUSM), Randy Olson (vice president of global business development, Holmes Corp.) and Jon Martens (IFMA Fellow and founder/CEO of JEMCOR, Inc.) at the WUSM FMP recognition ceremony.



WASHINGTON UNIVERSITY SCHOOL OF MEDICINE (WUSM) is achieving national recognition after setting a historic record in facility management professional development through a strategic partnership with the International Facility Management Association, with 79 staff members earning the Facility Management Professional (FMP®) credential in less than three months.

IFMA also recently recognized its 5,000th FMP, Mary LaMar, who is a WUSM Facilities Management Department (FMD) employee. The recognition took place during a special WUSM ceremony honoring the 79 staff members receiving the FMP, as well as all 93 staffers who completed training and eventually achieved the designation.

IFMA's globally recognized FMP designation is a knowledge-based credential for facility management professionals seeking to increase their mastery of the foundational FM skills deemed critical by industry leaders. Attaining the FMP credential affirms that the recipient has undertaken a prescribed course of study and successfully completed a series of comprehensive exams covering four knowledge domains: operations and maintenance, project management, finance and business, and leadership and strategy. (Learn more about the FMP on pages 2 and 53 of this issue of FMJ.)



Awards given at a special WUSM Facilities Management Department banquet for those who achieved their FMP



Mary LaMar, 5,000th recipient of IFMA's Facility Management Professional designation

FMJ goes one-on-one with Hopkins

Melissa Hopkins, WUSM assistant vice chancellor and assistant dean of facilities management, was instrumental in helping achieve this milestone for the university. She also encouraged FMP training in other departments at the School of Medicine, the Facilities Management Department on the university's Danforth Campus, Saint Louis University, Barnes-Jewish Hospital and the Donald Danforth Plant Science Center.

Hopkins believes that departmental sustainability expands beyond the physical environment and includes three critical realms: staff resource development, programs management and community engagement. Through the FMP training, her team and its partners gained support of their internal strengths and dedication in furtherance of their core values of professionalism, respect, integrity, dedication and excellence.

FMJ: You have been a huge advocate for FM education within Washington University and the institutions with which you've previously worked. What makes you so passionate, in particular, about IFMA's FMP?

HOPKINS: People and service are my passion. Over the last 24 years I have learned that in order for people to really embrace the values and service mission of an organization, they must understand not only their roles, but the roles of all members of their teams. The FMP training and credential program reflects all of the roles and responsibilities encompassed in our department – from operations to finance, project management and leadership. Creating a balanced program will enable us to create balanced leaders.

The FMP training provided our team and select partners with a common understanding of the complexity of the organization and each other's roles. It also helped break down past barriers, encourage and align natural collaborations and create a sustainable culture that can be further developed and shaped.

FMJ: What benefits have you seen come out of obtaining the FMP?

HOPKINS: Since staff are the key to fueling the success of our services, we strive to create a team-based leadership approach. This has improved communication and understanding of all services and functions within the department, as well as worked to touch and support the surrounding community



Melissa Hopkins, WUSM
assistant vice chancellor and
assistant dean of facilities

(internal and external) in a collegial and positive way. Leadership development and furthering our staff's core competencies are an integral part of changing the culture and enabling staff to embrace strategic change.

FMJ: Seventy-nine people earned the credential in 79 days, plus national recognition. How do you top that?

HOPKINS: We have reached a collective total of 96 FMP designees through this effort! Our goal is also to continually train all new management members of our extended leadership team as we have attrition and will surpass 100 this year.

Including the staff who were credentialed during my tenure at my previous employer, the total number of staff who have achieved the FMP under this plan is now 141. We know that learning is continual in higher education and anywhere in today's market. We will work to not only earn credentials, but to deploy the knowledge into university programs in support of their missions.

FMJ: What's next on your FM education agenda?

HOPKINS: In the next few months, 36 WUSM staff members will attend IFMA's Sustainability Facility Professional® (SFP®) training. This, along with my credential, will bring us to 37 total SFPs. The SFP will help us to introduce the human element of sustainable facility management, which has not traditionally been a significant concern in facility organizations. **FMJ**

To learn more about the programs and services of Washington University School of Medicine's Facilities Management Department, please visit the website at facilities.med.wustl.edu or contact Michelle Gubin, communications coordinator, at +1-314-362-0214 or gubinm@wusm.wustl.edu.

For more information on IFMA's credentials and to find out which one is right for you, go to www.ifma.org/professional-development/credentials or contact education@ifma.org.



ARE YOU A THOUGHT LEADER?

IF SO, IS YOUR NAME IN THE LISTING BELOW?

As you may have heard, IFMA's knowledge strategy initiative is underway – focusing on bringing a simpler and more efficient way of searching for and sharing content. In addition, the enhanced online knowledge library will offer a robust selection of content that has not been accessible before.

With the initial launch scheduled to ready by fall 2015, we continue to be in need of subject matter

experts who will assist in placing the IFMA stamp of approval on each piece of content. We are looking for members who are experts in one or more of IFMA's core competencies.

To sign up or to learn more about how you can be a part of this game-changing initiative for the association, go to www.ifma.org/sme or contact danielle.francisco@ifma.org.

SOMEONE ALWAYS HAS TO GO FIRST.

Thanks to the following superstar members for joining the initial content vetting group. Stay tuned for more exciting incentives!

THANK YOU

- Matt Anderson, CFM
- Steve Bettwy
- Eddie Clayson
- Mary Day Gauer, IFMA FELLOW, CFM
- Joseph Geierman, CFM, FMP
- Richard Greco
- Markus Groll

TO IFMA'S KNOWLEDGE STRATEGY INITIATIVE PIONEER SUBJECT MATTER EXPERTS

- Sharon Harrington, IFMA FELLOW, CFM, FMP
- Erik Jaspers
- Francis Kuhn, IFMA FELLOW, CFM, CFMJ
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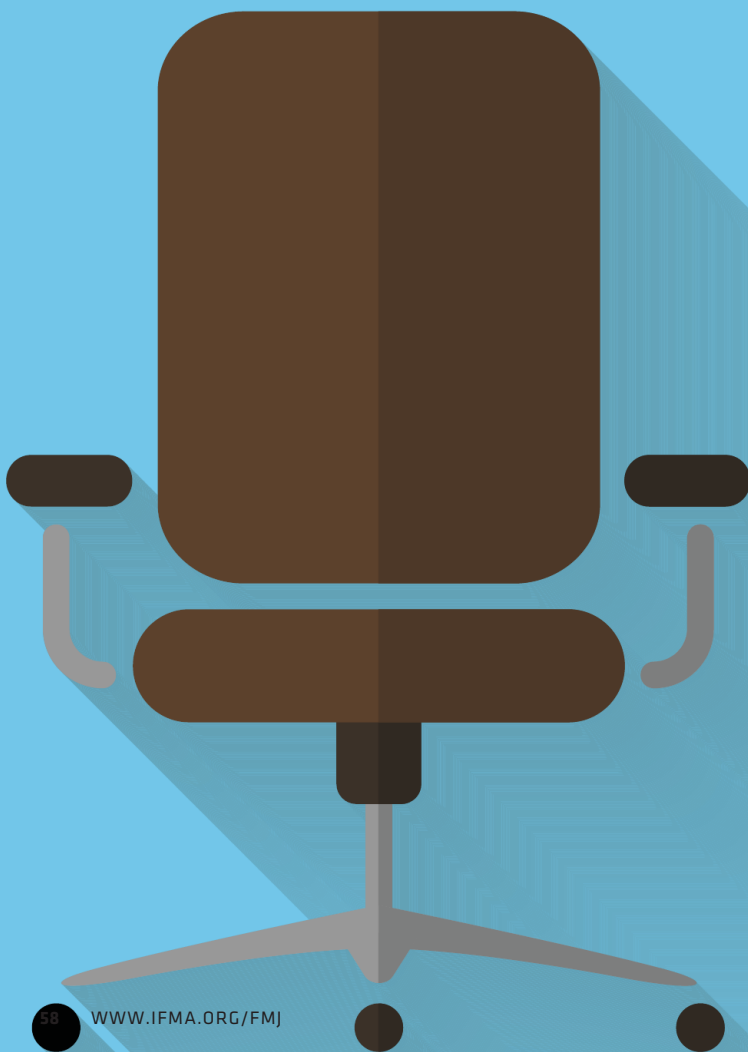
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I'm in Charge of the Ergonomics Program?

BY ZACK KOUTSANDREAS

You were not asked about it, you did not get a say in it and you did not get to vote on it, yet before you knew it, you were placed in charge of running your organization's ergonomics program. Now what? Don't panic – all is not lost. In fact, this could even help improve your status with senior management in the long run.



Ergonomics typically falls into one of three areas within an organization.

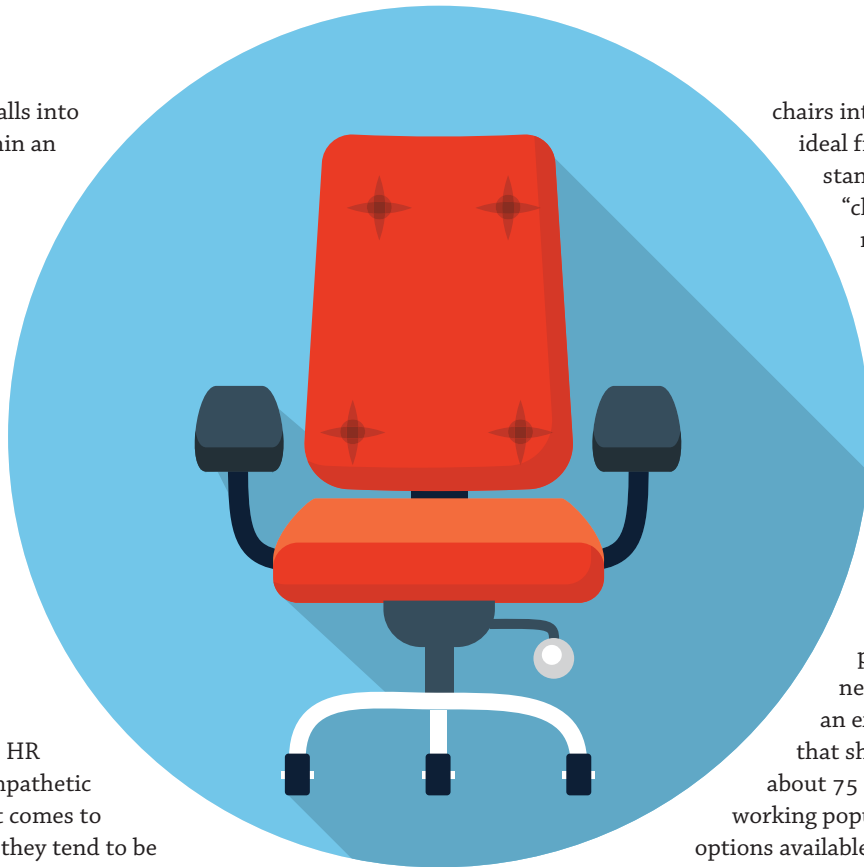
The human resources department has been the traditional resting place for ergonomic concerns. With the implementation of the Americans with Disability Act in the U.S., worker's compensation claims and as the catch-all place for employee distress, HR has been the go-to resource for resolving ergonomic issues. However, while HR personnel are often empathetic and structured when it comes to paperwork and policy, they tend to be less experienced in implementation of physical resolutions.

Another logical team to tackle ergonomic issues is the occupational health and safety department, or as it is often affectionately called, SHE (safety, health and environment). Since ergonomic disorders do not typically generate panic like the occurrence of mold spores or a leaky roof, they often remain uncultivated or are addressed reactively rather than proactively.

Today, more often than not, the person in charge of resolving ergonomic issues in the workplace is the facility manager. In the traveling evolution of the workplace ergonomic process, the FM team may be the best equipped to handle these issues. Why? Quite simply, because FMs are able to make change happen quickly and efficiently. Facility managers are implementers (but more on your superhero abilities later).

Ask the right questions

So what are you to do when the ergonomic process falls into your lap? The first step is to get organized and to start asking the right questions. These should include:



- What resources (furniture options) do I have at my disposal?
- What does upper management want accomplished?
- Are there any guidelines or support materials from HR?
- Does this relate to a medical issue or is it proactively addressing an employee need?
- Have I been properly empowered to make change in the company?
- Will my actions be supported?

Begin the process by being proactive now. Start to get answers to these and related questions so that you know your options before the requests are even generated.

For example, let's say that your company has a current furniture/ chair contract with a company and an employee presents a doctor's note stating that he needs a new ergonomic chair. Contracting with a new vendor and introducing a different line of

chairs into the company is not ideal from a procurement standpoint and could cause "chair envy." However, by researching alternate chair models available through the existing vendor in advance you can have some answers ready and keep the process simple by retaining the relationship.

Typically companies pre-approve three chairs to meet 98 percent of employee needs. There is usually an existing "go-to" chair that should be able to serve about 75 to 80 percent of the working population with two other options available for special needs, such as petite people (5 feet 1 inch range or shorter) and employees who are larger/ taller than average.

Implementation and communication

Being proactive is a good start, but make sure you know how you will fulfill ergonomic requests by asking questions such as:

- What is an acceptable timeframe for responding to an employee request?
- To whom do I need to report and in what manner?
- Will I keep a tracking log of these requests and who will see this information?

The first step is to outline the company's communication process. The next step is to develop a process to manage and track ergonomic requests. In particular, track the basic items to be accounted for and demonstrate a systematic method for receiving and processing issues. For example, a simple chart that logs employee names, request date, resolution date and resolution type can track

FMs are able to make change happen quickly and efficiently.

accountability for both supervisors and under requirements such as those mandated by the U.S. Occupational Safety and Health Administration.

Tracking additional information can also be useful. For example, one firm actually keeps records of all employee heights, desktop measurements and tool specifications for each workstation so that when an employee moves to a new office it is set up correctly.

When addressing ergonomic issues, be careful not to disclose private employee medical information, which is not allowed due to workplace guidelines (such as the Health Insurance Portability and Accountability Act in the U.S.). Consult the human resources team for guidance, and use generic terms when describing an employee need.

For example, do not go into specifics regarding an employee's diagnosis of a disease or condition. Instead, simply state that the employee has a medical condition and is under a doctor's care. Also, refrain from using the word "complaint." Employees do not complain, they express "discomfort" (which only becomes a complaint if it is not addressed).

Who should receive information?

Multiple departments within the organization should be involved in the ergonomic process. For example, the human resources team can assist by informing FMs of any pending issues or concerns such as worker's compensation claims or the hiring of new employees. Having information ahead of time allows the ergonomics point of contact to plan accordingly and proactively institute necessary processes. While many parties may

play parts within the process, the FM team may ultimately orchestrate it all. The more players in the band and the more knowledgeable the conductor, the better the sound.

Other departments typically involved with the ergonomic process include:

- **Purchasing:** Often assists with selection and acquisition of furniture such as chairs, adjustable keyboard trays, etc.
- **Accounting:** Can provide real-time financial information to support your cause
- **Senior management:** Verbal and visual buy-in by senior managers is very helpful to the program
- **Safety managers:** Also aim to reduce workplace risk factors

Avoiding liability

Lastly and perhaps most importantly, FMs need to be aware of legal limitations and be careful not to overstep boundaries. FMs should not give medical opinions to employees. Even well-meaning advice can cause potential problems and liability issues.

Stick to the plan and the process. FMs should know the basics of setting up a good ergonomic office environment, including what tools work best in the designated workspace. It's a good idea to be able to articulate the basics of ergonomic postures, but do not go past the "medical advice" line.

When asked or even pressed for more information, politely respond by referring the employee to his or her medical professional. If the employee is dealing with a medical issue, ensure a human resources professional is involved as soon as possible to help direct the process. Particularly in

more complicated situations, it may be appropriate to request that the treating physician become involved with the case.

Also, be careful about office furniture that is marketed as "ergonomic." Furniture manufacturers and distributors make money by selling products, so keep that in mind when offered all-in-one or one-size-fits-all ergonomic solutions. FMs can control the purchase of ergonomically correct items by utilizing the company's established vendor network and by enlisting the assistance of a professional ergonomist for particularly complicated situations.

A proactive approach

Being the company's ergonomic resource is not as bad as it sounds; it just takes some planning and being proactive with regard to process. Helping employees by offering solutions, especially when they are experiencing discomfort, can be very fulfilling and can even help FMs to earn respect.

So, don't run or hide if asked to wear the ergonomics hat for the company. Just get organized, and remember — always keep a spare cape in your locker in case your primary one is at the cleaners. **FMJ**



Zack Koutsandreas, CPEE is vice president of ERGOWORKS Consulting, LLC (www.ergoworksconsulting.com). He has been a consulting

professional ergonomist for 25 years helping establish and run ergonomic programs for the federal, private and military work environments. He is also a member of IFMA and can be reached at zack@ergoworksconsulting.com or +1-301-417-2077.

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ORGANIZATIONAL CULTURE IMPLICATIONS ON OFFICE DESIGN AND EMPLOYEE PERFORMANCE

BY STEPHANIE HEIPLE

In the past decade, the term “company culture” has been avidly utilized to describe the synergy among employees in office environments. The concept of company culture relates to a formation of individuals sharing in values or beliefs to represent a unified group identity. As humans differ in personality, values and family background, the physical workplace environment is challenged to house this diversity of people. It is estimated that Americans spend a third of our lives working, and company culture impacts an organization’s ability to attract and retain.

Long gone are the days of staying with a sole company for an entire career. According to the Bureau of Labor Statistics, the average worker stays at his or her job for 4.4 years. This lack of time span spent at a company may relate to disinterest in the job position, management style or the workplace environment. It is believed the Millennial generation expects to stay in one position for less than three years. This may relate directly to company culture, as a 2012 survey led by Net Impact found that 88 percent of workers considered “positive culture” essential to their dream job.

How exactly is culture defined, and how is it differentiated among companies?

Culture is a ubiquitous word that is used to define human activity outputs, physical space and boundaries, attitudes, ideas, values and communication style. It’s a word that can often be so interchangeable that the definition becomes lost. The Oxford English Dictionary defines the word culture as: “The arts and other manifestations of human intellectual achievement regarded collectively.” This ideation promotes the concept that culture revolves around the success of the team, rather than the individual. Workplace culture essentially cannot exist without its employees; it is something that is learned through peers and interactions between them.

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THE WORKPLACE CONFIGURATION MUST BE BASED UPON THE GOALS ESTABLISHED BY THE COMPANY'S LEADERSHIP.

Just as visiting someone's house can intimate a vast amount of personal information, the environment silently communicates the values of its residents. The same can be said about a workplace configuration, in that the values of the organization should be apparent to the visitor when walking through the space.

Organizational culture

Organizational culture is another phrase used to describe the personality of a company, specifically related to business operations.

The concept of organizational culture began in a 1998 study by MIT's Sloan School of Management. It is described as: "a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation." Organizational culture is ever evolving mostly due to generations of humans possessing different traits and methodologies working diversely at tasks.

The idea of organizational culture is based on three common characteristics:

- Concept of "shared" is critical to the success of the organization
- Culture is constructed socially and is affected by the physical environment and its past history
- It resides at all levels and layers within a company

Physical environment fosters organizational culture

When entering a workplace, it can often be very apparent why the overall mood and organizational culture of a company exists as it does just by viewing the physical environment.

Historically, workplace and corporate facility design allocated square footage allotments based upon status of the organizational chart. The CEO's office was often the most luxurious space, regardless of whether or not he or she used it often. Since the technology boom in early 2000s, open office configurations have become a popular way to address equalizing square footage allocations.

Facility design should be thoughtfully created around users and their needs to be successful, not the other way around (fitting users into the environment). Many companies in the past have failed tremendously due to the "stay or leave" mentality when it comes to the physical space. If employees are unable to interact and alter their space based upon the needs of the organization or the culture, there becomes a disconnect which can lead to employees leaving the company.

As no company's values, missions and management style are the same, neither is the physical environment. The workplace configuration must be based upon the goals established by the company's leadership — a top-down approach. Workspace should be designed so employees are able to utilize the physical environment in a way that adds the most value to their employer's bottom line, enabling for choice on how much interaction they want at any given time. There is no true right or wrong way to design to an office space; it just must be for the people and their organizational culture.

There are five design attributes that can differ based upon a company's organizational culture. These attributes can shape a successful productive environment.

- Ratio of individual to team spaces
- Workplace amenities
- Daylighting accessibility
- Materiality, color and furniture selection
- Technology

Ratio of individual to team spaces

If the nature of a company's work output is highly confidential and work is based on individual assignments, the office design will typically have more closed offices and fewer collaborative spaces. Higher walls allow for individuals to focus on tasks and meeting deadlines without the distractions of surrounding peers. In this circumstance, conference rooms and break rooms may be the only areas in which users come together to interact.

If teamwork is especially important to a company, the ratio of shared areas will be high and individual space allocations will be smaller. Smaller footprints will be allocated to the individual than the team and one will often see a diverse spread of high square footage space for groups. Workstation panel heights will be lower to allow for teams to interact effectively with one another in close proximity.

Despite the presence of four different generations in the workforce, each generation prefers to meet face to face to exchange information and ideas. The style of the meeting room can signify a lot about a company's culture. The orientation and shape of a table can signify cultural values; for example, a rectangle table is seen as more hierarchal and triggers feelings of individuality, whereas a circular table is seen as a collective perspective, with equal participation encouraged.

Workplace amenities

Workplace amenities have become more prevalent in office design as an indicator of exceptional organizational culture. A break room with some vending machines is not cutting it anymore as a nice place to which employees can retreat.

Google has unveiled the building plans for its new London headquarters, set to open in 2015, which will house one million square feet of space. They plan to include amenities like an outdoor swimming pool, full-length indoor football field, rock climbing wall, rooftop garden, indoor bicycle and scooter tracks, on-site shower



facilities, as well as break away rooms for relaxation and contemplation. The goal of these spaces is to keep employees on site as much as possible. By observing employee behavior patterns, Google found that the way to keep employees engaged and happy is to allow for a one-stop shop for all their health, wellness and mental wellbeing needs.

Access to daylighting

In the past, daylighting has been a coveted resource reserved for management. Today, one can understand the organizational culture of a workplace based upon the placement of daylighting opportunities.

In Ron Friedman's book, "The Best Place to Work: The Art and Science of Creating an Extraordinary Workplace," a study completed in 2003 found that when call center employees are placed near a window, an additional US\$3,000 is generated per year based on their productivity. Friedman sites another study completed in 2013, which found that office employees who have a window

within their personal workspace sleep up to an average of 46 minutes more per night than those who operate out of a space with no windows or daylighting.

The view from the window can also have an effect on the user's experience, promoting happiness and healthy wellbeing. It has been found that visions of natural landscapes are more healthful, when compared to urban landscapes of city concrete jungles. In some cases, urban landscapes were even found to have a negative effect on one's health. Research indicates that natural landscapes and scenery views promote short-term recovery from stress, faster physical recovery from illness and an improvement in employees' wellbeing (Velarde, Fry, Tvelt 2007).

Materiality, color and furniture selection

Materiality and furniture selection immediately signify if a company culture respects and values the comfort of its employees. If employees are working in 30-year-old furniture from the 1980s,

with low dropped ceilings and outdated carpet tiles, this signifies companies are not valuing the employees' experience at work. Investing in the design of an office allows building occupants to understand where profits are being spent and creates a comfortable environment in which they can spend the majority of their day.

Color can truly brand a space, signifying what interactions are to occur in areas. A research white paper entitled "Exploring the Effect of Color on Cognitive Task Performances" which was conducted by Ravi Mehta and Rui Zhu, found that blue and green wall colors have been utilized to enhance performance on brainstorming tasks. Red has been linked to aiding with employee heads-down work, especially with minute details that require heavy concentration. Stark white walls should be avoided as they promote feelings of being in a hospital, leading to tension and discomfort.

Some human primal instincts relate to animal behaviors experienced in the wild. Often large land mammals choose

not to walk through an expansive open meadow toward their prey, walking instead along the tree line to feel protected from view. The same is true with workspaces in that there should be enough of a visual barrier so employees are able to feel comfortable to do their work without the notion of being watched at all times.

The same theory applies to the closed environment, as sightlines are important, especially for security measures. The less vulnerable employees feel within their work environment, the more apt they are to produce meaningful and often profitable work.

Are employees able to personalize their space? Personalization allows employees to carve a little piece of their life into their work environment. The Journal of Environmental Psychology has found that “workplace personalization (plants, awards, pictures of family and friends) is positively associated with physical work environment satisfaction, job satisfaction and overall employee wellbeing.” If employees have no space to call their own, the organizational culture may suffer as workers may not feel vested.

Technology

Are different levels of management utilizing technology at your work? Organizational culture is best learned through action and observing others, so the more utilized a space or a technology, the better. Choosing tools and solutions based upon the culture of the workplace will enable creativity. The University of Exter’s School of Psychology revealed that if employees are involved in the design layout and technologies of their workspace, they are likely to be 32 percent more productive than employees who were not included.

Integrating top technology into a workplace can be a point of attraction for the Millennial generation. According to Accenture, Millennials have grown

up with access to information at their fingertips and are accustomed to that on-demand lifestyle. Companies that possess outdated technologies may hinder the organizational culture, as not implementing these necessary tools can hurt communication.

How to assess workplace organizational culture

Taking a stroll around an office environment and analyzing the five physical design attributes mentioned above will allow for a deeper understanding of the organizational culture. If employees are happy and given the tools and real estate they need to effectively succeed in their positions, one can quickly tell by walking around the facility.

Other ways to observe a company’s organizational culture based upon the physical environment include:

- How is individual space allocated? Are there standards for square footage based upon position within the company?
- What visuals are posted to drywall?
- In what ways are employees personalizing their allocated spaces?
- How flexible is the furniture to be modified per the use of the individual?
- What spaces are the most commonly occupied?
- Where do employees eat lunch?
- What complaints have been vocalized about the facility?
- Are employees able to regulate the level of artificial light, sunlight and temperature?
- In what areas are employees laughing and chatting with one another?

- What physical spaces do employees avoid?
- How is this environment unique from other offices/departments?
- Are there spaces within the building that are off limits to certain levels within the company?

Research suggests that employees who feel valued and that their needs are met are more apt to stay with a company. The physical workplace can help shape these needs. According to Harvard Business Review, “Happiness raises nearly every business and educational outcome: raising sales by 37 percent, productivity by 31 percent and accuracy on tasks by 19 percent, as well as a myriad of health and quality of life improvements.” Holding interviews and surveys to gauge the population’s perspective on culture can be a fantastic starting point for real estate renovations.

In conclusion, it is thoughtful to consider the physical real estate as a silent communicator for organizational culture. The concept of possessing and understanding a strong organizational culture is so important that even in a down economy, culture can pull through and retain employees. Organizational culture is not “one size fits all,” and the physical environment should be an extension of the culture, showcasing the values of the workforce. **FMJ**



Stephanie Heiple, M.S., NCIDQ, LEED AP BD+C, EDAC, FMP, IIDA, is a workplace strategist at Goodmans Interior Structures in Phoenix,

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PROFESSIONAL DEVELOPMENT COLUMN

CATHY PAVICK,
Senior Director,
Professional Development



2014 WAS A BUSY YEAR in the professional development area and we are excited to share some great news. In late December, the ANSI Certificate Accreditation Program Accreditation Committee (CAPAC) recognized IFMA as an Accredited Certificate Issuer, Accreditation Number 1057, under ANSI/ASTM E2659-09, for our two certificate programs, the Facility Management Professional (FMP®) and Sustainability Facility Professional® (SFP®) credentials.

Reaching this level of accreditation is a major accomplishment and benefits those who have or are in the process of earning the FMP and/or SFP. The hallmarks of third-party accreditation include an impartial assessment of program quality and verification that international standards are being met. For an increasing number of businesses and government agencies, third-party confirmation of compliance is a strategic factor in ensuring the quality of training for their employees.

The journey

This effort started a few years ago when the decision was made by the IFMA Board of Directors and the International Credentials Committee (ICC) to seek ANSI accreditation to ensure IFMA and its credentials were positioned to be recognized as globally advancing the FM profession. For those of you who may not be familiar with the American National Standards Institute, it is the official U.S. representative to the International Organization for Standardization (ISO). ISO oversees thousands of standards and guidelines that directly impact businesses in a range of sectors.

Although the process to obtain this level of recognition was significant, the ability to maintain it is just as important. This means implementation of the ICC and three scheme committees (one for each credential) and the development of operating rules under which the ICC operates, as well as a comprehensive credentials management plan for the certificate programs.

To ensure our continued success, those who serve on the ICC and scheme committees provide independent oversight of the credentials following the key guiding principles of independence, transparency, fairness and conflict of interest. The ICC is made up of 11 members, including seven appointed commissioners, three scheme committee chairs and an overall chair. The ICC commissioners represent a diverse group, as representation from various geographical regions worldwide is a priority.

Thanking volunteers for their support

This great accomplishment was only made possible due to the many volunteers who participated in a number of activities over the last few years, including the Global Job Task Analysis, providing input on content development for the FMP and SFP, serving on the ICC or scheme committees and much more. This level of dedication resulted in ANSI's CAPAC assessors noting that both programs are "world-class, gold-standard models of learning and development."

In addition, IFMA received seven commendations in the following areas:

- The solid foundation provided by IFMA's Global Job Task Analysis process.
- Comprehensive needs assessments.
- Subject matter expert selection process.
- Alignment of learning outcomes and assessment instruments.
- The International Credentials Commission structure, scope and responsibilities enabling stakeholder oversight of all credential program activities.
- The ICC's diversity.
- IFMA's partnership with Holmes Corp., "a world-class model of best practices."

In conclusion, I would like to especially thank the following current and past members of the ICC who have put in a number of hours to reach this milestone.

These accreditations would not be possible without the hard work and dedication of the IFMA International Credentials Commission, including current members: Chair James E. Loesch, IFMA Fellow, P.E., CFM; Patrick H. Okamura, CFM, SFP, FMP; Stephen J. Jones, CFM; Paul A. Ratkovic, CFM, FMP; Meredith Thatcher, IFMA Fellow, CFM, FMP; David Wilson, CFM; Mark R. Sekula, IFMA Fellow, CFM, FMP; Laurie A. Gilmer, P.E., CFM, SFP, FMP, LEED AP; Dean Hitchcock, CFM and former members Albert Pilger, IFMA Fellow, CFM; Sharon Harrington, IFMA Fellow, CFM, FMP; Yvonne Holland, CFM, ARP and Arnald Pui Shan Ng, CFM, MRICS, LEED AP.

This has been an incredible journey which we look forward to continuing as we seek accreditation for the Certified Facility Manager® (CFM®) credential in the coming months. **FMJ**

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SECRETS OF KNOWLEDGE-SHARING SUCCESS



BY BILL CONLEY

Restaurants have their “secret” sauce – their secret herbs and spices. Sodas have their “secret” ingredients. That’s understandable, as they are in a competitive market aiming to outdo their rivals. Having a secret lends itself to the perception that they are special, that they have something no one else has that makes them better.

In facility management, the opposite should be true. Competition and secrets have no place in the FM world. Collaboration and full disclosure should be part of an FM’s creed. Really...what is there to hide? In this profession, a secret saved benefits no one; a secret shared benefits everyone. Achievements and discoveries in the FM world should be publicized, advertised and broadcast, as they are the true indicators of a facility manager’s ability to innovate, create and improve within the profession.

It is incumbent upon facility managers to present a full picture of the profession: to not only perform the job functions, but to explain them as well. The general public does not understand facility management. It is important to develop a picture that will appeal to the incoming workforce. To carry on the tradition and role of the profession, those new to the field must receive the right education and relevant information. Just as important is an FM’s willingness to increase the visibility and totality of facility management by sharing and publicizing best practices to the benefit of others.

Practitioners should be primed to help set up their peers to succeed, whether they are new to the discipline or old hands. The first generation of FMs has already gone through the experimental phase of professional development. Those experiences and the gains that have been realized must be passed along. New or less experienced FMs can learn from the past to better address the added responsibilities that technology, resource management and efficiency have brought to the forefront of facility management. Further, every facility manager faces different challenges in the workplace. How these are met and overcome are important messages that can benefit the profession as a whole.

Today’s world has more new challenges for FM than ever before. Current and new FMs can’t afford the trial-and-error exercises that were part of early facility management. Those lessons should be conveyed and documented to eliminate or mitigate the risk of repeating past failures. There will more than enough opportunities in the future to keep FMs on their toes without them being vulnerable through ignorance of the past. They



need to be both efficient and effective in their management of the workplace.

How this is done, though, is where paths diverge. Some practitioners have mastered the art of streamlined operations and cost savings. Others struggle with it. Part of the community's informal etiquette is to assist compatriots with these challenges.

In the know

Knowledge is information that changes something or somebody, either by instigating action or by enabling different or more effective action. Facility management is, as always, people-centric. Today, the tasks have become more tech-enabled, but the mission of serving the employee base remains the same. The job now demands utilizing shared resources. Where there exist silos of information, FM professionals need to bridge and fill in the gaps by being more collaborative, both within the workplace and among peers.

With more tools available, FM professionals must have the ability to utilize and customize new technology and resources to work in their facilities. This relies on knowing the past and building on it to create a better future, becoming more sustainable. FM professionals need to be put in the position to propagate the long-term success of their organizations and the profession. Left to their own devices, they will not have all the answers. But, someone else probably has some of them.

Knowledge transfer

Knowledge transfer is a process in which facility managers must get involved. It entails the passing on of knowledge, information, research findings and/or innovations while ensuring the adoption and/or adaptation and utilization of such resources. Ideally, the industry will make efforts to ensure that professionals receive the information they need proactively.

Of course, having the requisite knowledge and information in hand may not be enough to ensure use by potential users. Improving the knowledge transfer

process must involve individuals who understand the purpose of the exercise. They have to be willing to facilitate and orchestrate what they learned so that the potential of the knowledge can be as fully realized as possible.

In the context of facility management, knowledge transfer has two distinct flavors. Institutional knowledge can be defined as explaining how things have been done in the past: what worked and what didn't. This is especially important in the workplace. Discovery knowledge is comprised of the creativity and innovation exercised in the workplace and how new approaches and different applications have saved money or time. This type of knowledge is what sets professionals apart and contains the lessons that should be shared throughout the FM world.

Fact or friction

Psychodynamics, also known as dynamic psychology, emphasizes systematic study of the psychological forces that underlie human behavior, feelings and emotions with a focus on the dynamic relations that impact motivation. The term psychodynamics was inspired by the theory of thermodynamics and the term is used to describe the processes of the mind as flows of an organically complex brain.

The first law of thermodynamics states that energy can neither be created nor destroyed. Knowledge as psychological energy is constant. It can be distilled; it can be derived; but the circumstances that combine to create knowledge have always existed. It is the manipulation of facts to fit appropriate situations that transforms thoughts into knowledge. It is a continual process of learning by acquiring a new context; a new view of the world. It evolves by overcoming individual boundaries and those self-imposed constraints created by habits within existing information parameters.

The second law of thermodynamics states that the whole world trends toward entropy. In order for the profession to thrive, everyone

involved in facility management needs to ensure that advances and developments are encouraged to grow, not left untended to dissolve into the chaos of the unknown.

Some feel that keeping secrets protects their competitive edge. For example, some older workers hoard knowledge because they are insecure and threatened by younger workers. They also fear change, failing to recognize that status quo is the enemy and complacency is a vice. The challenge and opportunity is not to hide things, but to ensure that new FM professionals fully understand all that has gone on before them. New skills may be useful as long as they are complemented by those capabilities that have driven facility management from its inception.

Knowledge sharing in the workplace can be influenced by motivators and de-motivators. Knowledge does not move without a motivating force and some people will not give away valuable possessions such as knowledge without concern for what they may gain or lose in the process.

There are two types of motivation: extrinsic and intrinsic. To instill motivation, factors such as recognition for achievement and the opportunity to lay the foundations for job advancement must be present. Workers share knowledge because they expect or hope for recognition and appreciation of their expertise or because of a sense of responsibility.

To create a culture in which knowledge is transferred to successors, intrinsic motivation is the more effective and permanent solution. Intrinsic motivation views workers as social beings striving to fulfill internal gratification. Sharing can lead to personal satisfaction and may help achieve the self-actualization level of the hierarchy posited by Abraham Maslow, which according to that theory is the ultimate innate human need. Fear of replacement and job security should be replaced by an ambition to progress upward or outward rather

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than staying stagnant, immersed in a cone of silence. A rule of thumb is that an FM can't climb to the next rung of a career ladder without a knowledgeable person to take his/her place. In an FM's efforts to truly sustain an organization, it is awareness of the need and a sense of professionalism that will drive knowledge sharing.

Delivering the message

Oral tradition consists of the transmission of information from one generation to another. It refers to a dynamic and highly diverse oral-aural medium for evolving, storing and transmitting knowledge and ideas. This practice would be most relevant when teaching new employees who need to be brought up to speed in-house in the most effective manner.

Face-to-face communication is one of the better ways to impart knowledge and adds a personal touch to a complex matter. In addition, it assumes an active role for the audience and fulfills a clear and important function in knowledge transfer. Moreover, numerous studies conducted on six continents have shown that oral tradition remains the dominant mode of communication in the 21st century, despite increasing rates of literacy.

This is not to sell the written word short. Documentation and relating practices are a critical part of the communication process. Even with the Internet, the spoken word can only reach so many people. Vehicles like IFMA's FMJ magazine, online communities and blogs have the ability to reach thousands of readers. But, whether in person, in print or electronically, the object is to share lessons and pick up tips for development and success.

Sharing is critical to the success or failure of knowledge management inside and outside of organizations and is singularly perceived as a key process. The sum of knowledge extant in any community constitutes

a sustainable resource for overall excellence in performance.

The strategic approach

There are a number of activities currently transpiring in the world marketplace which are aimed at establishing the facility management profession as a dynamic and integral part of global effectiveness.

- IFMA's knowledge strategy initiative is a part of the association's attempt to provide added value and resources to its members.
- ISO standards and guidelines are being developed devoted to the facility management field so that the profession is viewed and performed with a consistent set of references.
- A standalone designation for facility managers to the Bureau of Labor Statistics, Standard Occupation Classification (BLS-SOC 11-3140), is being proposed.

These programs will add greatly to the positive perception and more complete understanding of the value of facility management. The long-term view is to have stratagems in place that will strengthen the profession over time. However, these plans are symbiotic in nature. Valuable output to members and the general public can only be provided based on the input of members.

The participation and contributions of leaders in the profession are vital so that the best possible picture of facility management on the global stage is presented. This mutually supportive process is an investment that anticipates a future return. Knowledge acquisition positively affects attitudes toward knowledge sharing. It can be said that what goes around, comes around (in a good way).

Looking forward

Strategy, succession planning and sustainability all have a common cause:

the long-term success of an enterprise or a process. It takes a diverse skill set to manage a complex, technology-driven facility and it would be of immeasurable benefit to everyone concerned if talent, knowledge and information were all pooled for common consumption.

Every pocket of veiled knowledge or experience in the FM world diminishes all the positive work being done by visionary, committed professionals and organizations like IFMA. Taking a holistic view of the profession from a universal perspective should evidence the strength that can be derived by contributing to the knowledge of fellow professionals. This helps sustain the profession and the organization of which an FM is part.

The collective repository of knowledge held by facility managers is vast. FMs know how to save money, save lives, conserve resources and even sustain companies. Every tool, every device, every new thought or improved process should be shared to allow continual success throughout and thereby sustain the profession. It's no secret that information leads to knowledge and knowledge leads to wisdom. A wise person would pass that along. **FMJ**



Bill Conley, IFMA Fellow, CFM, SFP, FMP, LEED AP is facility manager at Yamaha Motor Corp. in Cypress, California, USA. Prior to that, he served as

owner and chief sustainability officer of CFM2, a facility management and sustainability consulting company. Conley has more than 35 years of experience in the facility management profession and has been a proponent of sustainable operations for more than 20 years.

Conley has served on the IFMA board of directors, is a recipient of IFMA's distinguished member of the year award and has twice received the association's distinguished author award.



Credentials

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THE BRAIN-AWARE WORKPLACE

REVIEWING A NEW PUBLICATION ON WHAT SCIENCE CAN TEACH US ABOUT PRODUCTIVITY AND PLACE

BY NANCY JOHNSON SANQUIST

FMJ EXTRA

CLICK TO VIEW

Applying What Scientists Know About Where and How People Work Best

FMJ EXTRA

CLICK TO VIEW

2015 Sodexo Workplace Trends Report

The *raison d'être* of the facility management team is to foster a workplace environment for employee wellbeing and innovation to fuel new products and services for customer delight while increasing corporate social responsibility as well as profits.

The above mission statement encapsulates many of the features of a brain-aware workplace. Dr. Sally Augustin's new compendium of evidence-based research, "Applying What Scientists Know About Where and How People Work Best" explores this concept via citations from more than 40 research publications on psychology, environment, behavior, health, human resources, organizational management, ergonomics and the built environment.

Dr. Augustin includes an abstract for each research paper written in "workplace language" to distill the concepts for professionals concerned with optimizing the built environment. Topics include:

- Implications of sensory experience
- Worker experience and basic architectural forms
- Psychosocial factors affecting worker performance
- Workplace design and worker behavior
- National culture and workplace design
- Particular workplace configurations and their repercussions

In order to describe how critical this document is to the workplace community, Dr. Augustin recently summarized its key concepts in an IFMA Workplace Evolutionaries (WE) Community of Practice webinar.

**DESIGN EQUALS
JOB SATISFACTION,
PERFORMANCE AND
ENGAGEMENT.**

1. Subscribe to the design mindset, which is a future skill noted in Sodexo's 2015 Workplace Trends report.¹ As Fred Gage, a neuroscientist and one of the founders of the Academy of Neuroscience for Architecture has said, "Change the environment, change the brain, change the behavior."²

This design mindset is embodied in the work done at Stanford University's d.school, which is a hub of innovation for students and faculty in engineering, medicine, business, law, the humanities, sciences and education.

**WORKERS
RESPOND
TO VISUAL
CUES...**

2. Humans are always taking in our environments and this perception trumps reality. We need to visually represent what concepts, beliefs and activities we value.

The British Council for Offices in 2006 published "The Impact of Office Design on Business Performance," which stated that "the messages sent by environments help workers understand and embrace the 'brand promise' so that employees who believe in the brand work harder and better, and in doing so create brand differentiation."

News flash: Pay attention to the design of workplace bathrooms, as people are spending more time in them to escape the noise of open-plan workplaces.

**...PARTICULARLY
IN GREEN DESIGN.**

3. The United States Government Services Administration has proven that higher occupant satisfaction in sustainably designed buildings correlates with higher personal and team performance. This 2008 research was based on a post-occupancy evaluation of 12 building types which measured overall building and workplace quality, indoor air quality, cleanliness and maintenance.

**COORDINATE
FOCUS WITH
STIMULUS.**

4. While seeing and hearing other people increases energy levels, the presence of fewer stimuli is better for focused work.

Ethan Bernstein from Harvard University wrote a 2012 paper on his research at the second-largest phone factory in China where he tested implications of transparent organizational design on worker productivity and business performance. He discovered that watching employees work may actually reduce their performance, while creating zones of privacy can, under some circumstances, increase operational output.

**WORKERS
VARY,
GENERATIONS
DON'T.**

5. While some Dutch research argues that there may be a generational difference in workplace preference, the works cited by Dr. Augustin prove that it is the type of person doing the work that varies and must be understood in order to provide the right workplace configuration.

As Susan Cain taught us in her best-selling book on introverts, "Quiet," all human beings need to be able to focus to get work done. Steelcase has teamed up with the author to create a series of five workspaces that address this need for privacy and focus.

Culture also matters in workplace design, as is so aptly described in Geert and Gert Jan Hofstede's 2004 work on cultural differentiation in design decision making.

**PURGE
STRESSORS.**

6. In 2012 an important study on workplace stress by four colleagues from Cornell University pointed out that previous work on the topic has not captured its complex, dynamic ecological context. They found that "if one examines the accumulation of relatively minor work problems in the social and physical setting of modern office buildings...as the level of cumulative risk exposure escalates, adverse health and behavioral outcomes emerge."³

**CONTROL,
CONTROL,
CONTROL.**

7. In a 2010 research publication, Michael O'Neil links employee control of the physical environment (both actual and symbolic) to enhanced individual, group and organizational performance. He believes that by making control a central component of a workplace strategy, organizations can increase their competitive advantage.

**USE MOTHER
NATURE'S DESIGN
PRINCIPLES.**

8. Harvard Business Review's "Rules for Designing an Engaging Workplace" (October 2014) shows how design can be informed by nature with the chipmunk test:

"When you're thinking about furnishings and architectural features in workplaces and engagement, keep chipmunks in mind. Humans are comfortable in the sorts of protected seats with a view over the surrounding area that give us the same secure feeling we'd have in a comfy nest nestled in tree branches. Similar spaces are easy to introduce into modern workplaces. Tuck small meeting spaces into alcoves off hallways or floors of workspaces. Give yourself bonus points if these spaces are raised a step and a tiny bit darker than the surrounding area. Next time you see seats lined up with their backs to a walkway, ask yourself, would a chipmunk want to sit with his back exposed like that? Is the positioning natural? The answer to questions you might ask about chipmunk comfort — in other words, testing whether we would feel vulnerable or at ease — will direct you toward the development of spaces where workers are likely to feel engaged."

NOW IS THE TIME TO FOCUS ON CREATING A NEW BRAIN-ENABLED WORKPLACE FOR THE 21ST CENTURY.

9. COLOR WITHIN THE RULES. Remember when you saw a red mark on your paper when you were in grammar school and felt sick at the low grade you received? According to a 2007 article in the *Journal of Experimental Psychology*, it's possible that seeing that shade of red reminds you of that experience and hinders your work performance. However, another study indicates that shades of green improve creativity.

10. DON'T FORGET THE OTHER SENSES. A 2011 article in the *Psychological Bulletin* reviewed all existing literature on workplace noise and found that noisy environments have a negative effect on performance for cognitive and communication-related work. An earlier study discovered that it could take workers 23 minutes to get back on task following an interruption.

Another research project determined that there was a significant positive relationship between the pleasantness of a lemon scent in the air and being in a good mood.

11. NOTHING BEATS FACE-TO-FACE — YET. A laboratory experiment conducted in 2012 by Edurne Martinex-Moreno and his colleagues determined that “relatively rich communication media, such as face-to-face and video conferencing, provide an advantage of enabling team members to transmit verbal and nonverbal cues” when working on a complex team task. Another study by Stryker and Santoro in the same year examined the level of face-to-face communication and found that it was dependent on the location of team members' workstations within the overall configuration of the space.

12. DESIGN FOR HUMANNESS. An emerging field of practice called design anthropology aims to define what it means to be human and how design translates these values into tangible experiences. This will be one of the skillsets needed to define the 21st-century workplace.

Following this concept, the University of Aberdeen in Scotland, Swinburne University of Technology in Australia, University College of London in England and University of North Texas and Harvard Graduate School of Design in the United States have collaborated on research with students and the public and private sectors to integrate work in anthropology, design, engineering, language/communications, business and innovation.

CONCLUSION

Hopefully, “Applying What Scientists Know About Where and How People Work Best” will not only be useful for workplace strategy efforts, but for ending the great open plan versus cubicle debate, which began soon after Frank Lloyd Wright's “open plan” design of the Johnson Wax building in 1939. This was followed by the 1950s German “burolandshaft” (open landscaping) concept which transformed European office design, after which Herman Miller's Action Office birthed the dreaded cubicle in the '60s.

After 75 years this debate continues to rage, as evidenced by the January 2015 *New York Times* discussion “Are Cubicles Preferable to the Open Plan Layout?” The evidence presented by Dr. Augustin's compendium supports the opinion Adam Stolz of HOK summarized so well: “Designing an effective workplace environment requires a commitment to customization based on each organization...solutions that offer employees flexibility, choice and control over where to do their best work.” End of debate.

Now is the time to focus on creating a new brain-enabled workplace for the 21st century. Let the games begin. **FMJ**

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Nancy Johnson Sanquist, IFMA Fellow, Associate AIA is real estate and workplace solutions industry leader for Manhattan Software, Inc., a Trimble Company. An internationally recognized technology specialist with 25 years of diverse experience in corporate real estate and facility management, Sanquist is a leader in the field and created the first seminar for IFMA more than 20 years ago.

She has contributed substantially to the research and development of CRE and FM through her many written works, including the award-winning IFMA Foundation publication “Work on the Move.” Additionally, she currently serves on the foundation's board of trustees.



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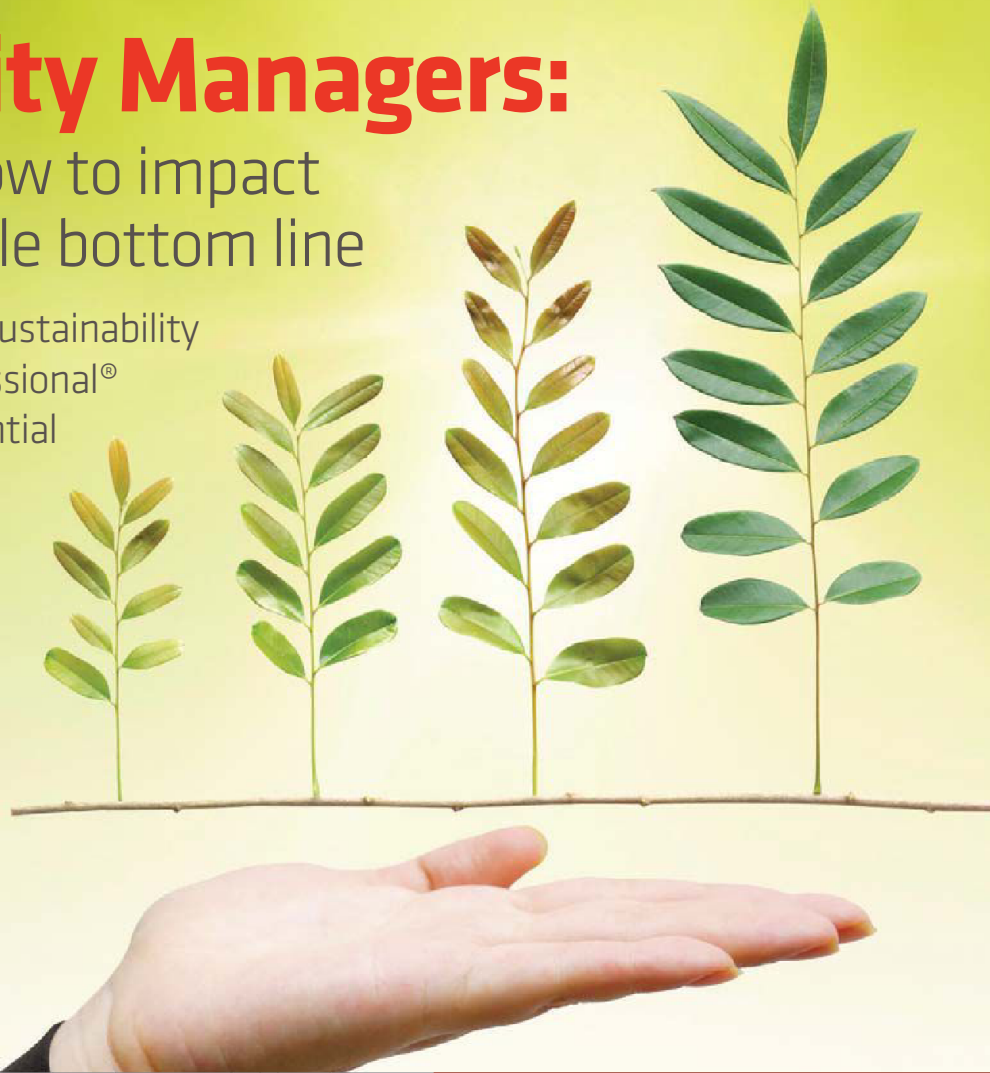


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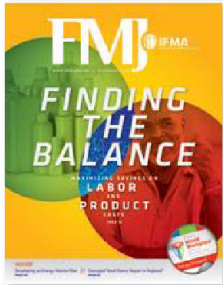
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Behind every successful FM are a host of product and service providers that offer solutions to make the hectic task of ensuring seamless facility operations a little smoother. This showcase goes behind the brand to reveal the culture that makes IFMA's Corporate Sustaining Partners (CSPs) the best in class.



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We believe that the purpose of the workspace is to enhance the productivity of the workforce. As a result, iOffice is designed to improve operations but it is also designed to engage the entire workforce so they are able to access the workspace and services. Access to services is available via the desktop and through a host of mobile apps allowing you and your workforce to work on the go. Providing access to the workspace and services with cutting-edge technology improves the work environment and ensures your organization attracts the top talent, resulting in a competitive advantage.

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IOFFICE: Communication is key to any business. Facility management is no different and, in fact, real-time communication is a critical element to delivering high-quality workspaces and services. Technology, like iOffice, creates a bidirectional communication platform.

iOffice allows operations to publish availability of and track and monitor space, services and assets. Because the iOffice tool is customer facing, the workforce is able to easily access needed workspace-related resources. iOffice not only ensures operations is able to efficiently communicate available resources but it also enhances internal communication to ensure all tasks are completed correctly, the first time.



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Leading Positive Corporate Cultural and Design Change

BY SHARON HENDERSON,
LISA MORRISON AND
MARY SUE SUTTON

FOR COMPANY LEADERS, LESSONS FROM THE

recession still influence current workplace strategy planning. CEOs want clear indications that they are not spending too much on space, yet are still doing something positive for their employees. As the job market gradually opens up, retention and attraction efforts are higher on the C-suite to-do list. Fresh, creative strategies are needed to attract new talent.

While some companies are still scrutinizing every financial decision, arriving at the end of a lease brings the opportunity to renegotiate for tenant improvement allowances. Leaders often want to use this opportunity to enhance corporate space, but their employees, who may have foregone pay raises, could question where the resources to implement such improvements came from. They may not understand that those funds can only be used for tenant improvement. Effective communication is key.

Major workplace change can exacerbate an employee's uncertainties, under any conditions. Leading by example and communicating change help to minimize concerns and assure staff that any corporate cultural and design shifts will be positive. A design team that understands a company's culture can be an effective facilitator in making positive change happen.

Here are some key issues for corporate leaders to consider when undertaking workplace change management in our post-recession era.

Reflecting company culture

How can an office design support and showcase a company's mission and unique culture? Undertaking a new office design is a perfect opportunity to physically incorporate a



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company's mission, vision and values into the work environment.

While offices continue to trend toward selection of smaller spaces, the cycle to more open-office workstations is coming around again. Within this context, finding what is unique to each company, its efficiencies and objectives, is a design team's basis for designing and facilitating change.

For example, general contracting company PARIC Corporation wanted a unique statement piece at the hub of the two-story space connection in its new headquarters facility. To meet this challenge, the building design, development and project delivery firm it hired designed an architectural staircase which seems to float on a central beam. This unique element incorporates walnut and steel with a light mesh panel railing system and a custom hanging sculpture at the apex. The piece was designed

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PODCAST
Leading at the Speed
of Change



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CHALLENGING
THE NORM AND
HAVING AN
OPEN MINDSET
ABOUT CHANGE
IS IMPORTANT
TO ALLOW FOR
RETHINKING
EVERYTHING
ABOUT THE
OFFICE.



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specifically for the client's space and serves to communicate the union of old and new reflected by Paric's brand.

Retaining existing employees

Focusing on culture rather than hierarchy also helps create a new attitude about the workspace as more task-oriented rather than as a reward. Leadership can redirect rewards through vacation, parking stipends, free food and other amenities. Giving the workspace a more homelike feel with cafés, lounge furniture and comfortable seating in common areas also offers rewards beyond the workstation. Glass fronts for private offices placed at the core and open workstations at the glass line can allow light to be shared and give everyone access to healthy daylighting.

Showing respect and concern for employees is foremost when redesigning the workplace. One company made a dramatic statement to this end when the president's own office was significantly reduced in size from a 20- by 20-foot space to an 8- by 12-foot workstation.

Designing change requires a two-fold balance: retaining older staff and attracting new staff. Older staff may leave if there is too much change, while the new may want more change. Including existing employees in change-

management activities and holding question-and-answer forums can help reduce anxiety.

Attracting new employees

As the job market becomes more competitive, especially for technology candidates, companies are fighting more over available talent. Designing workspaces to attract top talent requires doing something unique with the space that incorporates flexibility and life balance, something many of today's candidates expect.

New space can be used as a tool to show the company brand through design. Amenities such as food, fitness, childcare and walking trails help employees manage work/life balance. Space is an important component of the company's culture. Hospitality- or campus-like offices with lounges, cafés and entertainment can reflect that type of culture.

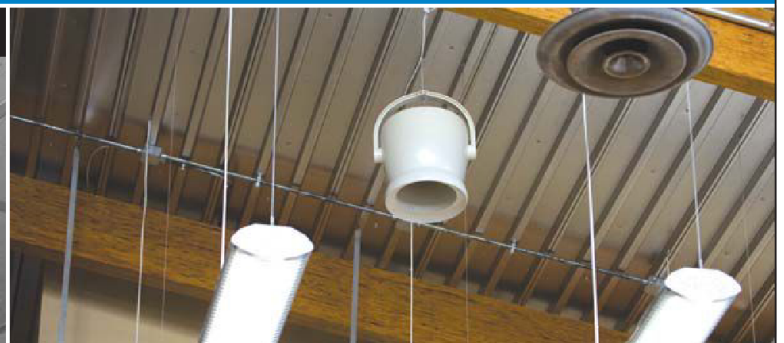
In PARIC Corporation's case, the company wanted a central hub that was anchored by an open café. The end result incorporated a casual feel with several different styles of seating, media and even a beer tap with outside views to help promote wellbeing. The company utilizes this space for small meetings, casual lunches and even company-wide parties and happy hours.

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Additionally, although some employees were skeptical at first, PARIC Corporation added a second central area for drawing storage cubbies due to the success and usage of the first one, which allowed for a decrease in the size of individual workstations.

Balancing collaboration and privacy

The biggest challenge with open office environments always has been and continues to be the impact on privacy and acoustics. Designers can offer solutions such as sound-reductive finishes, location of collaborative areas away from private work stations and white noise solutions.

“Retreat” spaces can also provide a calming atmosphere and a place to make private calls. Typically about seven feet square, these rooms should include a solid door and can be furnished with items such as a lounge chair, small table and refrigerator.

Cafés, lunchrooms and conference rooms are no longer single-function spaces that waste valuable real estate for large parts of the day. Designing a variety of room sizes and seating (high, low and clustered) can create highly used multi-functional spaces.

Increasing flexibility

Adding attractive areas for gathering supports the growing shift to a collaborative workplace culture. These areas also can provide space for the private conversations minimized by an open plan. The more cost-effective lounge spaces become shared spaces that everyone can use versus more individual spaces.

Highly collaborative groups may find the “free desking” approach more efficient. Rolling work stations and plug-and-play connectivity allow flexibility in teaming areas. Some groups like creative, IT or sales may work better in revolving space than others, such as accounting and human resources.

Having the flexibility to sit and huddle with project teams has been a successful change in the way these offices work. It allows for more open collaboration and saves the time it may have previously taken to leave individual workspaces to seek out a fellow team members. Groups that work closely benefit from overhearing other team members’ interactions with a client or issues on a project. This type of intense teaming allows for open and free exchange of ideas and experiences that can make groups stronger and more cohesive.

Communicating change

Designers today are more involved in the actual change management process. A key component is to circulate communication about the design change early and often

with the entire staff, informing, involving and giving everyone a sense of ownership.

Several techniques can keep employees aware of and educated about the changes that are unfolding.

- Newsletters with regular updates dispel rumors and give information to keep rumors from starting.
- Project tours for small groups held throughout the construction process allow for questions and answers to ease fears and prevent surprises.
- Mock ups of workspaces, including furniture, clusters of workstations, finishes and ergonomic benefits, give people a test run and alleviate anxiety.
- Explaining economic reasons behind change shows that by reducing lease costs, salaries or company perks can be improved.
- Offering mini-presentations of renderings to small groups provides visual information. Intranet photo blogs of construction also keep people from interrupting to look at the job site in progress.
- Providing welcome binders for employees on their first day explains how to find everything in the new office and who to contact.

Challenging the norm and having an open mindset about change is important to allow for rethinking everything about the office, from storing paper to reducing space utilization. Changing a workplace should be a thoughtful process leading to a work environment that both reaches leadership’s measurable goals and makes employees happy. **FMJ**



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Bringing Emotional
Intelligence to the
Workplace

DESIGNING AN **EMOTIONALLY INTELLIGENT WORKPLACE**

BY SOFIA FONSECA

Emotional intelligence is the leading predictor of performance in the workplace and the strongest driver of leadership and personal excellence. People with high levels of emotional intelligence can recognize and understand emotions in themselves and others and then use this awareness to manage their behavior and relationships. Designers and facility managers need to understand the role of emotions in the workplace. When we incorporate strategies for enhancing people's emotional intelligence, the work environments we create can improve employee engagement, health and productivity.





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Studies show a link between engagement and significantly higher performance levels. Work teams with the most engaged employees achieve higher productivity and profitability, better quality, higher customer satisfaction ratings and better employee retention rates. Meanwhile, they incur fewer safety incidents with less employee theft and absenteeism.

The American Psychological Association found that companies with highly engaged employees generate 19 percent more operating income. CEOs get excited by a 2 percent increase in earnings. Unfortunately, employee engagement rates are low. In a recent HOK study, only 11 to 13 percent of respondents reported feeling emotionally engaged at work. This is consistent with other industry studies.

This gap between engaged and unengaged employees represents an enormous opportunity for companies to make positive changes. If workplace designers can create environments that improve employee engagement, we can

make dramatic contributions to our clients' success.

Engagement is a CEO priority

Many companies have made employee engagement a priority. The 2014 CEO Challenge Survey, which queries leaders from more than 1,000 companies worldwide, has identified human capital — how to best develop, engage, manage and retain talent — as the leading CEO challenge.

Respondents universally recognize the importance of developing an engaged workforce and a diverse, accountable leadership team.

For companies facing talent shortages, engagement can mean the difference between winning and losing the best people. Winners of the talent war will enjoy a snowball effect, as engaged employees will attract and create more people like them. Millennials, the young adults ranging in age from 18 to 34 in 2015, will not be wooed by money alone. Driven by purpose, many will move on if their jobs do not engage them.

Why are so few employees engaged? **Stress impairs engagement**

Stress often triggers disengagement. Though it is an emotional response,

stress causes physical reactions that make an individual feel highly alert but cognitively less productive. This is a powerful distraction with enormous workplace costs:

- In the United States, a study estimated the cost to employers of workplace stress that caused absenteeism, productivity losses and sick leave in 2010 to be US\$300 billion (Worldcrunch.com).
- Sixty percent of lost work days are caused by stress (Centers for Disease Control and Prevention).
- Healthcare expenses are 50 percent higher for stressed workers (Journal of Occupational and Environmental Medicine).
- Forty percent of productivity losses come from cognitive overload, which occurs when people have too many emails, intense schedule demands, overlapping meetings, long to-do lists and unmet goals (American Psychological Association).

One physical stressor that has a harmful impact on employee wellness and engagement is the amount of time people spend sitting every day. Too much sitting causes our organs to begin to shut down and hinders our ability to process energy.



Workplace designers can minimize physical stress by providing standing desks, exercise areas, access to daylight, ergonomic furniture, good acoustics and personal controls for lighting and temperature. But physical discomfort is not the only source of stress.

Emotional suppression causes stress

Though many people are comfortable talking about stress in the workplace, few acknowledge or are willing to talk about the emotions that contribute to this anxiety. Yet we have emotional reactions to almost everything. When we process information coming in from our senses, it first passes through our “reptilian brain.” This reactive part of the brain produces emotions before an experience reaches the higher levels of our conscious, rational brain, where it can be defined and controlled.

Our schools teach reading, writing and arithmetic and test for linear, logical thought. Yet they typically deemphasize emotional development, which devalues it as a success factor. Long before we enter the workforce, we have learned to leave our emotions at home. Traditional offices with cubed-off spaces then send a signal that only the rational part of an individual is welcome. Flexibility, agility and creativity don’t appear to have a place.

This history of emotional avoidance leaves many ill-prepared to deal with emotions in the workplace. If you’ve ever witnessed someone crying at their desk, tears falling onto the keyboard as they stoically try to carry on, you understand the futility of this emotional suppression and the stress it can cause. Yet that person will not be productive until he or she can control this emotion. If employees cannot speak about emotions in an intelligent, rational way at work, companies will miss opportunities to improve wellbeing, productivity and engagement.

The employee-employer relationship is not authentic

Burying our feelings creates dishonesty in our conversations and relationships at work, which fosters disengagement.

Disengaged employees may be facing a personal or social crisis. They may be bored, confused about their responsibilities or irritated by environmental factors. Perhaps they perceive that they don’t have the tools, support or opportunities they need. Company leaders cannot address disengagement without having honest conversations about these emotional factors. In most cases, however, the employee-employer relationship lacks the foundation of trust required to achieve this level of honesty.

In “The Alliance: Managing Talent in the Networked Age,” LinkedIn cofounder Reid Hoffman and coauthors Ben Casnocha and Chris Yeh state that the reason 70 percent of American workers are not engaged is that the employee-employer relationship is based on a dishonest conversation. Neither is committed to a long-term relationship and neither will openly acknowledge this truth. Knowing that employers can fire them at will, employees spend lots of time searching for their next job.

The solution: Emotional intelligence provides a path for change

A 2012 study by Ipsos found that while 91 percent of supervisors agreed that emotional intelligence is important, 75 percent of them were not strong in any of the four key areas of emotional intelligence. The good news is that emotional intelligence can be taught.

People can improve their emotional intelligence by identifying the emotions they are feeling, deciding how and when they will address them, and evolving into a less reactionary, more deliberate state of being.

Work environments can support this by providing spaces where people can go to relax and recharge. This makes them feel like management has given them permission to deal with their emotions, which helps them feel engaged.

Emotional intelligence helps organizations support their future leaders

Ensuring that their workplaces support emotional intelligence will help organizations attract and keep engaged employees, especially as the workforce continues to change.

Baby Boomers (aged 50 to 68), who were taught to keep their emotions to themselves, are retiring and a higher proportion of the workforce is made up of Generation X (34 to 49) and Millennial employees. The people from these younger generations grew up talking more about their emotions and having their feelings considered in family decisions from an early age. They expect two-way communication about their feelings, and the workplace can help accommodate and manage these expectations.

Emotional intelligence can help us create holistic spatial outcomes

Workplace design specialists are in a position to incorporate emotional intelligence to create holistic environments that promote the wellbeing and engagement of employees. We can support unique company cultures and create spaces where employees feel comfortable having honest, emotionally intelligent conversations. We can reduce stress and enhance productivity; help people focus and collaborate; and foster creativity, innovation and a sense of community.

We experience spaces like we experience people. We have a first impression and then, as a space becomes more familiar, a “deeper reality” sets in. An external design intention communicates to our senses and an inner intention is gradually revealed as we experience the space. As we use a space, we create muscle and neurological memories. For better or worse, we adjust to noise, uncomfortable chairs, rooms that are too small and technology that doesn’t meet our needs.

The workplace can cause or fulfill emotional needs. Abraham Maslow’s hierarchy of needs states that people are motivated to focus on higher-



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level needs only after they meet their lower-level needs. Fully engaged employees — those who create the most value — work at higher levels of the pyramid. Their biological, safety, social and esteem needs often have been met, and, ideally, the environment supports their cognitive, aesthetic and self-actualization needs. This enables them to contribute the most creativity, innovation and leadership. As designers and facility managers, it's our job to create spaces that inspire people to function at these high levels.

By considering emotional intelligence during the design process, we can engage users on a deeper level. We can go beyond satisfaction surveys to measure feelings and emotional responses and then incorporate this intelligence into space planning, design and implementation.

Emoticons enhance our ability to measure feelings and emotions

Though we use hundreds of words to define specific emotions, they all stem from a few basic emotions. In 1972, anthropologist Paul Ekman described six core emotions based on universal human facial reactions: happiness, sadness, surprise, fear, disgust and anger.

Graphic depictions of these universal facial reactions have evolved into the emoticons used today to visually express emotion in printed or electronic communications. Emoticons, which may provide a more accurate measure of how people really feel at work, can add a new dimension to data collection. People can use emoticons to indicate their predominant emotions about workplace features. We can gauge emotional responses by showing images of different environments and asking people how they would feel in these spaces. Designers then can measure what's important to their wellbeing and prioritize workplace elements that fill performance gaps.

Measuring emotional perceptions allows us to gain insight into differences within

companies. Employees have different needs and expectations that influence their engagement levels. Different generations often have different reactions to their environments. Millennials may feel stifled in a cubical farm, while Baby Boomers may prefer a cubical to a shared desk in an open space. Culture, economic conditions, type of job and education are others factors that shape the workplace experience.

By leveraging emotional intelligence, designers can improve our awareness of the factors most relevant to engagement within client organizations and gain a deeper understanding of each client's culture to optimize spatial outcomes.

We must integrate change management into the design process

An emotionally intelligent approach to workplace strategy requires change management.

Change management is a process that helps people through the change of moving to a new work environment. It is typically separated from the design process and led by experts who are well-versed in organizational strategy, HR and financial results. Though they may be familiar with emotional intelligence, change management specialists cannot achieve effective results if they don't understand how space affects people and their performance.

A design team that understands the workplace strategy and that was involved in collecting the emotional data that informed that strategy will be better equipped to manage change. This team understands the space and how it will enhance the employees' lives, relate to users' needs, promote collaboration and enhance interaction, and reflect a company's culture and work processes. This team can help people move from a cubical or siloed office to an open environment, where they must expand their sense of personal boundaries and property.

Workplace strategists seek holistic, integrated outcomes that bring balance into people's work lives. We want to provide spaces that help people integrate the emotional and rational parts of themselves so they can perform at the highest level. If we ensure that change management is part of the workplace design process — and enhance it to become "change engagement" — we can build bridges that allow this to happen.

The responsibility of workplace designers

Emotional intelligence enables employees to understand and harness emotions — their own or those of co-workers — to improve their performance.

Work environments have a powerful impact on people and their emotional needs. As designers, we can contribute more to employee engagement, wellness and productivity when emotional intelligence is fully embraced in the workplace and reflected in the design strategies.

We have a responsibility to understand the role of emotions in the workplace, both obvious and hidden, and to adjust our design approach to achieve spatial outcomes that lead to highly engaged employees and dramatic bottom-line results for clients. **FMJ**



Sofia Fonseca is vice president and regional leader of workplace strategy, HOK. She has 20 years of experience in pre-design services

providing visioning, workplace innovation, change management, programming and space planning services for institutional and corporate clients with a specialty in educational and corporate campuses.

Fonseca's expertise spans through the U.S., Canada, Mexico and South America. She is the editor of the fourth edition of *Problem Seeking*, the architectural primer in programming, and has lectured about the role that consultants play in pre-design services. She currently teaches workshops at the University of Houston College of Architecture master's thesis program.



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RectorSeal® Corp., the U.S. and Canada representative for Aspen Pumps, introduces the MicroV ductless mini-split air-conditioner condensate pump, which combines the industry's quietest-running Silent+ technology with a univolt power supply and installation labor-saving "plug-and-play" power/communication connection cable.

The violet color-coded MicroV is ideal for mini-split condensate management applications requiring compactness, high capacity and low noise. The MicroV's Silent+ technology features an anti-vibration bracket, an acoustic dampener, a proprietary sound-attenuating high performance motor and one of the industry's quietest pump ratings of less than 21 decibel A. The powerful pump removes 3.8 gallons per hour of evaporator drain pan condensate on all



minisplit brands ranging up to 66,000 British thermal units per hour or 5.5 tons.

The univolt power supply automatically recognizes input voltages from 100 to 250 volts without any capacity changes, therefore it eliminates potential performance fluctuations caused by electrical supply variations. It also prevents mismatched voltage connections. The compact MicroV includes a five-foot-long power cable and reduces the number of condensate pumps that need to be stocked.

The MicroV's labor-saving plug-and-play wiring enables quick pump installation

or replacement without requiring a second pair of hands, because power and communication cables are connected with easily attachable/detachable, slide-together pre-wired plugs. The MicroV is also classified as a Class II appliance, which eliminates the requirement for ground wires.

The MicroV's ultra slim design and compact reservoir allow for aesthetic, flexible concealment inside mini-split evaporator housings, within wall-mounted line set protection duct or in a remote location.

For additional information on all of RectorSeal's Aspen Pump products and its comprehensive range of mini-split installation accessories, please visit www.rectorseal.com.

NEW SOFTWARE ALLOWS CUSTOMERS TO CONTROL SOUND MASKING ACROSS MULTIPLE LOCATIONS

Cambridge Sound Management, a global leader in direct-field sound masking solutions and a Corporate Sustaining Partner of IFMA, announces the launch of the Qt® Command Center, a new enterprise software application that allows administrators to manage multiple networked QtPro sound masking systems anywhere in the world from a single dashboard.

The Qt Command Center allows facility managers or IT administrators to set up and update the settings on any Qt Control Modules, regardless of its location on a corporate LAN. It also allows users to copy settings from any controller and apply them to one or more controllers, eliminating the need to do this manually. The Qt Command Center makes it possible for users to add, label and map independent control modules, which enhances the ease of scalability in a facility. Users can also export settings from the Qt Command Center for easy backup or transfer.

For more information, visit cambridgesound.com or call +1-800-219-8199.



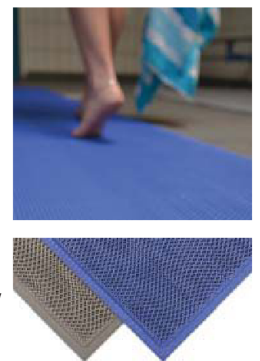
FLOOR MAT PROVIDES MAXIMUM SLIP RESISTANCE IN WET ENVIRONMENTS

Superior Manufacturing Group, Inc., makers of NoTrax®, Akro™, APEX™ and HomeTrax Designs™ floor mats, has introduced Web Trax™, the newest addition to the NoTrax® family of floor matting products.

Web Trax™ is a multi-functional vinyl floor mat that can be used in a variety of wet applications. The unique wave pattern design creates a slip-resistant walking surface while an open construction allows for easy drainage of liquids further increasing traction on wet and slippery floors.

Web Trax™ is made from an industrial-grade vinyl compound that is soft enough to be comfortable on bare feet in applications such as locker rooms, pool decks and shower facilities, yet also provides greater resistance to caustic chemicals, oils and greases for use in more industrial environments.

The PVC material has an antibacterial treatment that prevents the growth of fungi or bacteria and is also UV-resistant for both indoor and outdoor environments. For more information on Web Trax™, visit <http://bit.ly/1DcxY4E>.



BREAKTHROUGH WATER TECHNOLOGY FEATURES SINGLE INDICATOR OF OVERALL COOLING SYSTEM EFFICIENCY

Aquanomix™, a leader in water reuse technologies, is proud to introduce its new Symphony™ intelligent water quality and efficiency software system. A critical risk management tool, Symphony bridges currently separate building management data sets of water chemistry and heat exchanger efficiency.



Symphony™ produces warning alarms immediately upon detection of a suboptimal system environment and delivers them via multiple communications interfaces. The system also generates an audit trail of all user data activities, edits or deletions.

The aggregated data of key performance indicators is calculated into a single number representing the overall efficiency of a cooling system called the Nexus Number™.

This innovation supports ISO 55001 and failure mode effects analysis (FMEA) with real-time data to provide early-stage warnings for mitigating potential critical asset failures. The benefit to sustainability and environmental stewardship is also significant.

The system features continuous commissioning architecture with 24/7 remote access for building owners and facility managers. Symphony™ uses an open protocol software platform for communication and a data analytics package for control. It offers scale, corrosion, microbiological and fouling indices while simultaneously incorporating atmospheric condition data to enhance system operations and control.

Symphony's monitoring system mitigates operational shut down and supports a comprehensive program to deliver operational success. The system incorporates water chemistry key performance indicators such as biofilm growth, corrosion rate coupled with heat transfer efficiency. Atmospheric condition data is driven in the proprietary algorithm set to allow for more advanced predictive control.

Additionally, the benefits of Symphony extend to risk management professionals who are tasked with reducing regulatory compliance risk. A good example of this is California's new Title 24, California Code of Regulation.

Symphony addresses some of the new LEED v4 Water Efficiency credits that specifically call for tighter water management in cooling tower systems. Learn more at <http://aquanomix.com/symphony/>

NEW RANGE OF 2G DEVICES SOLVES DATA COLLECTION ISSUES AT REMOTE SITES

For companies struggling to collect data from remote sites where broadband connectivity is either not possible or appropriate, WEMS International is now offering a cost-effective solution with its GX Site Gateway range of 2G connected devices.

To maximize access to a 2G signal, GX Site Gateway devices are fitted with a multi-network data SIM that roams automatically to locate the best signal. Initially, the range consists of two products: the GX30 has three inputs for metering and monitoring applications, while the GX42 has two relay outputs in addition to four inputs and adds battery back-up to enable alarming in power fail conditions. These will be joined soon by the GX20, which is a battery-powered IP67 version for external gas and water metering where there is no local power supply. The GX30 and GX42 are DIN rail mounting in a compact housing that includes a 230V power supply to minimize the time and cost of installation.

Integrated flexible inputs can be configured to accept either analogue sensors, digital status, meter pulses and a Modbus serial network. If the latter option is taken, up to 32 Modbus devices can be supported.

Meter and other data is logged in the GX unit and transmitted to the WEMS Energy Bureau Services team via the Internet (data is exportable in .CSV format). From here, it is possible to remotely manage the energy profile of each remote site in the estate. Both the GX30 and GX42 come complete with an external antenna.

The default configuration enables GX Site Gateway devices to operate internationally without the need to amend any settings, although units can be configured remotely depending on specific site requirements.

The GX range is suitable for a wide range of simple metering applications, while the GX42 is ideal for standby generator switching or other simple scheduled control applications. For more complex metering or control tasks, users are advised to take advantage of the WEMS IX Site Manager range with wireless I/O modules.

Learn more at www.wems.co.uk.



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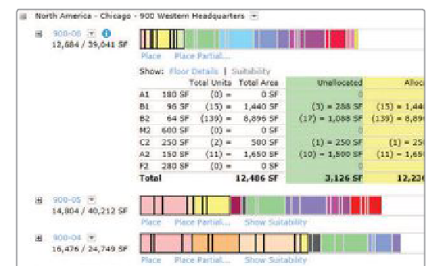
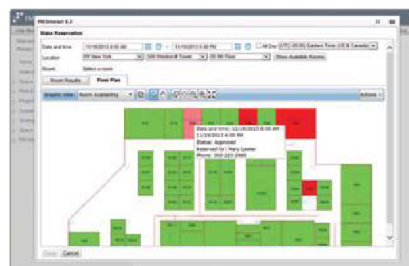
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THIS EXCLUSIVE ONLINE SECTION FOCUSES
ON EXPANDED FM COVERAGE.

110

Applying a City Planning Approach to Activity-Based Working

KATHRYN O'CALLAGHAN-MILLS

114

Beyond Workspace: A 3-D Place Perspective

JULIÉ GAUTHIER

118

Flexible Workspace Customization and the Six Types of Activity-Based Work

M. BEIJER, S. BRUNIA, E. DE BRUYNE AND A. GOSSELINK

121

The Role of Emissions in Facility Management

CHRISTOPHER LAUGHMAN AND LAURIE GILMER

125

30 Years Sure Makes a Difference *Reflecting on changes to technology and the workplace*

RICHARD FANELLI

127

Vendor Profiles

APPLYING A CITY PLANNING APPROACH



TO ACTIVITY-BASED WORKING

BY KATHRYN O'CALLAGHAN-MILLS

Cities and workplaces are intrinsically linked and their productivity, performance and success revolve around space efficiency and quality.

Major cities are densely packed, with every inch of space from basements to roofs used to maximum effect – basements are designed for storage, gyms or bars; at street level there are enticing retail units and then offices before penthouse apartments, rooftop restaurants or green roofs. Multi-use outdoor spaces ensure that a park is one day an open relaxation space for office workers, and the next shipped-in sand turns it into a beach for volleyball. On weekends it might become a playground for children, a music venue or a beer or craft festival. Every city has defined areas for different activities, whether these involve learning, exercising, relaxing, working or discussing issues.

Space efficiency is also a key factor in organizational success with research showing that it has implications for wider business interests and financial wellbeing. But statistics show that the typical office is a poorly used asset.

Offices are available for occupancy for 365 days a year, but only open 12 hours a day most days and are unused at weekends. Even when offices are open, desks are only used between 40 and 50 percent of the time. And there are high levels of dissatisfaction with the status quo — a quarter of employees surveyed by the British Council for Offices said their workplace hinders their wellbeing and productivity.

Taking a town planning approach to the workplace by establishing different spaces for different activities helps organizations create a better environment that allows employees to align their space with their task. This results in happier and more productive employees and a better bottom line.

Cities and workplaces: Parallel lives

In response to technological advances and the Gen Y/Millennial trend of working anywhere, today's workplace is becoming increasingly dynamic. People are no longer chained to their desks but work in break-out spaces, staff restaurants, at hotdesks or even on soft seating.

Outside of the office, that trend is being played out across cities with people working in cafés, shops and parks and on the street. At the same time, consumers no longer purchase items in physical shops; they might shop online from home, trains or their own offices. Exercise is no longer confined to gyms or leisure centers. Instead, people run around city streets and exercise in parks. There is a growing democratization of our space.

City spaces are traditionally multi-use. Once the school bell rings, school premises can be taken over by local community or political groups, or used as voting stations; libraries are no longer just for studying but are occupied by a variety of

community meetings, exercise classes or book groups. Each space within the city is flexible and adaptable to a variety of needs and uses. That trend is increasingly moving into the workplace with economic necessity, coupled with more sustainable and agile ways of working, meaning that a meeting room can serve to hold a yoga class, a crèche, a project space or a quiet zone — all in the same day.

Of course, just as certain cities have unique characteristics, workplaces also differ. Some cities are magnets for particular types of industries: financial services, technology and tourism in London; the manufacturing sector in Moscow; or the food services, export and meetings and events sector in Barcelona. They all attract a variety of different people influenced by factors such as climate, architecture, leisure and sports facilities, family friendliness and population demographics.

In the same way, different companies attract people with hugely varying skills, needs and requirements. A multinational tech company, a law firm or a luxury car manufacturer will attract different types of staff.

Activity-based working

You wouldn't go to a library for a workout, the council chamber for an informal chat or invite a huge group of people into your sitting room for a big discussion. In towns and cities, we use certain spaces for specific activities without thinking about it. But that instinct doesn't necessarily translate into the workplace. Traditionally people stay at their desks to work and only move to eat or for meetings. We even send emails to people sitting across the room, rather than walk over to them.

There are typically six area types within cities where inhabitants go to perform different activities. Each of these can be adapted for the workplace to enable people to choose the best space in which to perform particular tasks.

1. Recreation areas

These are spaces for creativity that promote relaxation and stimulation, where people go to unwind, exercise or practice hobbies; to be on their own or with friends and colleagues. In a city, these could be shopping centers, gyms, leisure centers, parks, craft spaces, church halls or any number of public spaces.

Organizations are increasingly blending work and play in their workplaces by creating relaxation spaces for staff. Football, pool and ping-pong tables in break-out spaces, chill-out rooms, prayer rooms, studios for exercise classes, yoga or meditation, craft sessions at lunchtime or simply the humble staff restaurant — today's office mirrors the city in the ubiquity of relaxation opportunities. These allow people to take a break from work, recharge, maintain a healthy lifestyle, pursue their hobbies and help them feel that they are valued by their employers.

2. Personal spaces

These individual spaces allow people to be themselves, either on their own or sometimes with others. They are for both downtime and thinking time, activity and inactivity. In the city, these spaces are represented by the home, and in the office by a personal work area, desk, cubicle or even home office. Individual space in the workplace is a private sphere that is both familiar and personal in which to produce high-quality work.

A lack of privacy in the typical open-plan office is increasing demand for personal spaces, where people can retreat away from noise and distraction to an area that is personalized to their exact requirements. With the advent of agile working and the move from "me" space to "we" space, this area is increasingly being challenged and organizations need to look at other ways to allow workers to create personality and individuality within the work environment, and to provide relaxing downtime.

3. Marketplaces

These are areas in which negotiation, buying and selling take place. In cities, these are exchanges, markets or shopping centers. They are places for open, often informal or spontaneous dialogue and discussion, haggling and mediation.

In the workplace, these are important spaces in which individuals and teams debate issues internally or with clients or other stakeholders. These are spaces such as meeting rooms, atriums, staff restaurants and cafés, kitchens or the area around water coolers.

4. Assembly spaces

Assembly spaces are places for discussion, decision making, planned communications and presentations. In cities, towns and villages, they are epitomized by town halls, church halls or university debating chambers. While much workplace communication is informal, there is still a place for formal debate areas such as boardrooms, conference rooms or meeting rooms.

The benefit of designated spaces for discussion is that everyone understands the aim is to reach a decision and the environment can be planned and designed to reflect this.

5. Team areas

Team areas are spaces for working together, flexible group work, interactive collaboration and sharing ideas and information. In an office these may be break-out spaces with comfortable furniture, beanbags, booths, rugs and softer lighting, all of which need to be easy to configure in order to encourage easy collaboration.

Providing people with a space that supports team communication makes it easier for them to overcome

challenges and reach solutions, helping everyone develop and improve results that benefit the business.

Outside of the workplace, team areas can include town squares, sports stadiums, golf courses, leisure centers, churches and coffee shops. Team spaces foster a sense of community and working toward collective goals that leads to shared achievements.

6. Concentration spaces

Our lives are increasingly noisy, both inside and outside of work. People need time away from the noise of traffic, conversation, music and general background hubbub to concentrate. In the city, a library, drop-down space, café or the quiet zone of a train can fulfill that purpose.

In an office this could be a quiet screened-off area, a booth or a single office for concentrated work or phone calls. Even prayer or quiet rooms in buildings can achieve the same result. In these spaces, it's important to pay attention to acoustics, color schemes and the style of furniture.

These spaces allow people to totally concentrate on task work without distractions or opportunities to be sidetracked.

How to introduce an activity-based working approach

No two workplaces will ever be the same because each organization has its own culture and specific requirements. A financial institution would find the introduction of a Google-style office unpalatable, while a media company would find that the cellular offices common in law firms inhibit creativity and interactions.

An activity-based approach to offices allows each business to analyze which spaces it needs for each type of task to create a unique environment.

Conduct an audit of the office. Initial questions to ask could be:

- How many of each of the above areas do we have?
- Do we understand how and why people make their location choices?
- How many areas do we actually need?
- How can we migrate to the next area?
- Are new furniture and facilities required to make the new space work?

Space planners or external consultants can provide excellent advice, but occupants are usually the best people to answer questions such as, "What does the workplace do well, and not so well? How could it be improved?"

Moving toward new ways of working can be a culture shock for organizations, just as it is for residents and

visitors when a city's infrastructure is altered. In a city, the council will typically consult with stakeholders to ensure a democratic outcome. This same approach is essential in the office environment to ensure that people engage with the change and that the change reflects their needs and those of the organization. Management doesn't always know best.

Workers can be uncomfortable using specific designated zones owing to their own preconceptions; for example, some may fear being perceived as not working if they're in a recreation zone. This must be overcome by having senior staff members lead by example and regularly use different areas, demonstrating to all staff that they're not being judged on their choice of work zone.

People often go with their instinct and work or locate where they feel most comfortable and welcome. Finding the right blend of location, furniture and ambiance is often a process of trial and error that is necessary in order to understand how citizens and employees think and work.

Right space, right here, right now

Creating the right space for the right activity is the same in both cities and workplaces. The city is an extension and enhancement of office workspace, and contemporary office environments are a reflection of city life. Both share the same problems, challenges, innovations and opportunities for doing things differently, together or alone.

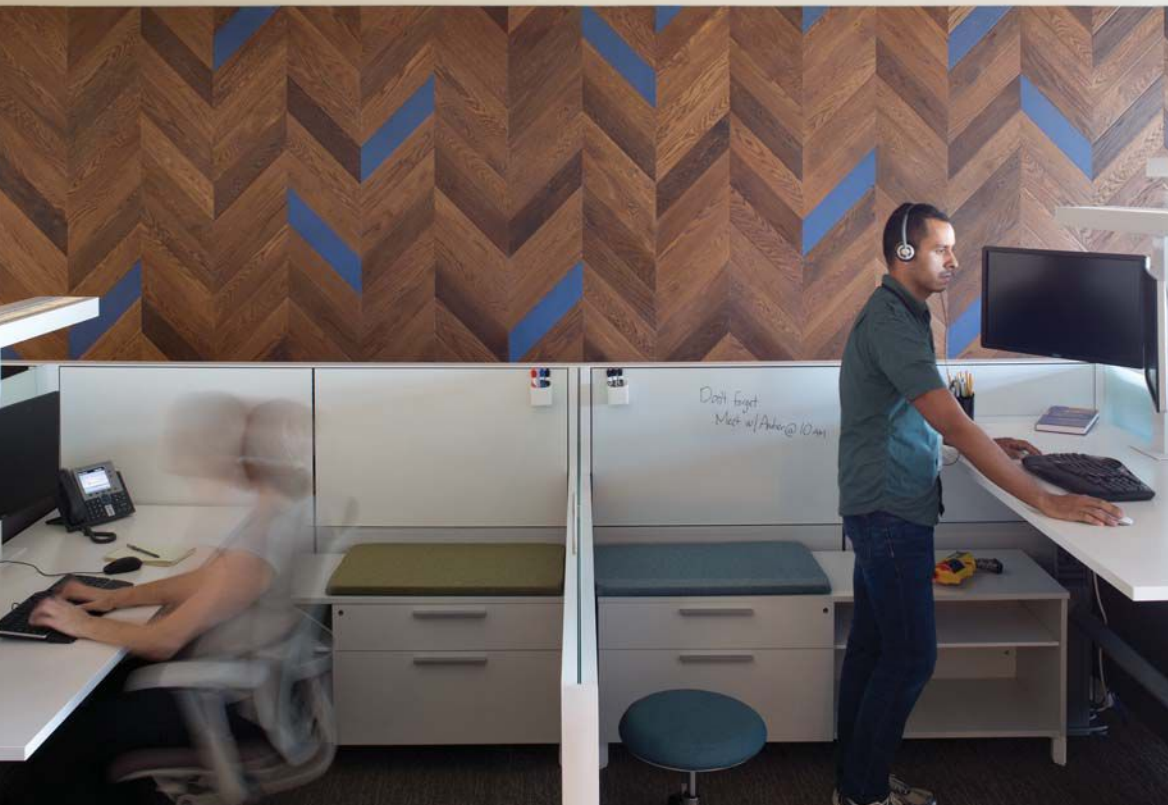
City dwellers can vote with their feet, literally deciding where they live, work, relax and have fun, and office workers are doing the same. The increasing democratization and socialization of the workplace means senior leaders must give people what they need to be creative and productive.

It is important to recognize that while an activity-based working approach can be achieved through a complete refurbishment or overhaul of the workspace, excellent results can also be achieved through small steps. Versatile spaces can be created using flexible, reconfigurable furniture and foldable partitioning. There are numerous incidental and cost-effective ways to introduce activity-based working without a total workplace transformation. **FMJ**



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She has a wealth of knowledge and experience in all aspects of transforming buildings, both inside and out. Her creative and pragmatic approach results in exciting design-led solutions that deliver real value to clients.





BEYOND WORKSPACE:

A 3-D PLACE PERSPECTIVE

BY JULIÈ GAUTHIER
PHOTOS BY PAUL BARDAGJY
(WWW.BARDAGJYPHOTO.COM)

DETERMINING WHAT WILL DRIVE an office environment from a space, “where work happens” to a place, “where an organization can expand its knowledge, reach and expertise,” starts with thoughtful consideration of the qualities that will support the organization’s most valuable resource — its people.

In any programming or strategic planning exercise, it’s important to evaluate both the quantitative and qualitative needs of a project. The goal is to create an environment that provides efficient, flexible and collaborative spaces for today’s workforce. However, there is more to creating engaging and inspiring workplaces that elevate the user experience.

The number and sizes of offices versus workstations and conference rooms are a few examples of the kind of quantitative data that is the basis of strategic planning exercises and is critical in delivering effective workplace design. The people and room counts of a programming exercise can be imagined as a two-dimensional aspect since this collected data informs the project from a flat perspective.

In exploring the more intangible qualities of an office environment, it is critical to consider what will create dynamic and inviting places that draw the space into a three-dimensional experience. The 3-D place considers amenities and resources within and beyond the boundaries of a building

floorplan, thus directing the discussion to the arrival progression, amenities and other qualitative aspects of the space. In all, this creates the “office experience” and contributes to employee satisfaction, attraction and retention.

Presented here are some aspects that reach beyond physical accommodations and drive the success of the place that we call the office.

Progression and arrival **Getting there is half the fun**

The average U.S. worker spends approximately 50 minutes a day driving to and from work according to the U.S. Census Bureau’s annual American Community Survey for 2011.¹ This number rises dramatically for workers in the largest metropolitan areas within the U.S. Time spent in the car is not necessarily considered part of the work day, but it certainly can set the tone for a staff member.

That being said, when planning for workplace change, organizations should consider anchoring their location close to their employee base and keep in mind the travel distance and routes for the employee population. This should extend beyond the car and take bikes, mass transit routes and even pedestrian travel from nearby neighborhoods into consideration.

Once employees overcome the commute to the office, it is also worthwhile to consider their access to the site and entry into the building. Consider questions like: Is the

travel path safe, well lit and clean? Is the distance from vehicles and the main entry convenient, protected from weather and inviting? In a standalone campus or a multi-tenant environment, the travel path from the garage, driveway or sidewalk to the main entry should be considered from both the visitor and the employee standpoint, as this influences first impressions.

Views and green space A room with a good view

Natural light has long been proven to provide physical and mental benefits to workers in interior environments. Sun exposure enhances productivity and studies have shown that fewer sick days are reported from staff members who have access to natural light.

Building designers have embraced concepts that bring natural light deep into the structure's core, such as exterior glazing technology. The challenge is to inspire users to recognize the benefit of daylight exposure. A great view is the key to users acknowledging and taking advantage of the sunlight and the scenery beyond their work environment. Exterior views provide relief of eye strain by changing focus and increasing perspective and can contribute to creative thinking and idea generation in the human brain.

While views of scenic nature may not be available in every locale, there are other considerations for green space outside of the office. Congested urban environments like downtown business districts and suburban sprawling campuses alike should also consider on-site or nearby green space. Parks, nature trails or rooftop patios can offer a change of environment for employees seeking to take a break, recharge or exercise, and change their surroundings to spark their creativity.

Available amenities Variety is the spice of life (and the workplace)

The most commonly provided amenities outlined by IFMA's Workplace Amenities Strategies Research Report #36 include



break rooms, multi-purpose spaces, on-site fitness areas and cafeterias, lactation rooms and lounges. The frequency of the use of these spaces among those polled has break rooms at the top of the list at 93 percent of respondents including these spaces in their facilities.²

While these spaces do have a well-established place in office environments, there are opportunities for organizations to capitalize on their location to consider amenities within or proximate to the building that will support the workforce. This goes beyond the typical variety of lunch spots and gyms/fitness facilities to include services such as child care, dry cleaning, personal care services and health care providers, that are convenient and contribute to a work/life balance opportunity for staff.

The advent of mixed-use developments offers small and large businesses the ability to offer a workplace that is close to other lifestyle amenities that support the blended efforts required for today's time-challenged workforce.

Qualitative aspects of place

Space is a functional environment that meets basic user needs. Place is a space that is engaging and dynamic, providing a variety of environments that support users and tap into nearby resources.

There are elements of a strategic planning exercise that make up the softer side of a finished workplace and

can enhance the project goals. These include appealing to various age groups, visual art, expression of culture and brand, user personalization, health and wellness initiatives and social interaction for staff. When these elements are part of early programming efforts, the result is a robust development of the qualitative aspects of a place.

MULTI-GENERATIONAL APPEAL.

At the forefront of workplace trends is the need to consider how the work environment will support to the needs of various age groups. The U.S. workforce currently includes the broadest age ranges for employees: Baby Boomers, who are staying in the workforce beyond 65, to Millennial, just entering the job market. Work environments will need to adapt to users young and old. Furniture and equipment that are comfortable, easily accessible and offer user-controlled or intuitive adjustments will appeal to users across age ranges.

VISUAL ART. Whether a curated collection or local in-house talent on display, art contributes to the beauty of an environment, provides visual interest and engages viewers. Featured art can also reinforce diversity, expand and inform on a company's culture and brand or explore local/regional themes.

CULTURE AND BRAND. The integration of the organization's culture and brand into the work environment offers a reminder of the organization's core values and how these are broadcast. Alignments of the physical environment with the mission and values of the organization can provide inspiration and build community. The brand is the visual cue to the organization's mission and culture. The association of the brand and the company culture should be closely linked and on display in the workplace.

EMPLOYEE PERSONALIZATION. With the advent of mobile technologies and work styles that allow working from anywhere, the basic human need to have an identity within an organization becomes very important. People naturally

want to “leave their mark” on a place and this can take many forms. While personalizing an office or workstation fills this need in a traditional work environment, new free-address work settings are finding unique ways for employees to identify themselves within the organization. Interactive displays, staff image walls and digital directories are just a few examples.

WELLNESS AND SUSTAINABILITY PROGRAMS. Much of the discussion of sustainable and healthy environments is impacted through the planning and construction phases of a project. Instead, the focus on wellness and sustainable programs is about supporting the human capital of an organization and the mental and physical health of the individual by offering health-related activities that are part of the work day. Fitness facilities and group exercise programs offered during and after work are widely incorporated by larger corporations and multi-tenant buildings at little or no cost to individuals.

Going beyond fitness facilities and planning for staff activity throughout the day can be very beneficial as well. Considering opportunities to increase walking distances, encourage the use of stairways, provide adjustable furnishings for different work postures and incorporate live plants into the work environment are a few examples of wellness programming that can contribute to a healthy work environment.

ENCOURAGING SOCIALIZATION. Workplaces naturally breed relationships that can build employee satisfaction and commitment to the organization. This aspect of the work day requires thoughtful planning to accommodate social interactions.

A variety of spaces, from intimate lounge areas for a handful of uses to large cafés where multiple groups or one large group can convene, provides excellent opportunities for social interaction. These spaces should incorporate unique finishes and furnishings, differentiating

them from other work-focused areas to promote conversation and relaxation. Opportunities for impromptu conversations to occur along circulation paths or at popular locales within the space should be sought out and recognized as social zones.

Project approach Jumping off and landing on both feet

The direction of a strategic planning project starts by establishing goals with the project leadership but is elevated when the process makes room for new ideas to emerge. It’s important for organizations to consider an honest evaluation of their current work environment — to discover what works, what could be better and what is missing.

Engaging stakeholders at every level to discover ideas is also critical to uncovering perceptions and habits within the organization that might not be fully understood. Surveys and interviews with staff that allow for free discussion of issues and work practices also build confidence and buy-in among the general population while providing real insight into the day-to-day workings of the office. Along with employee engagement exercises, it is worthwhile to consider space usage studies, which may support or contrast employee perceptions, point out inefficiencies within the current work environment or uncover imbalances in space usage.

While transforming a space into a place that is fully appreciated by everyone who interacts within it, it is important to recognize that with change comes uncertainty. This can breed negative attitudes among employees and requires a communication plan and leadership involvement that can build excitement among all ranks.

The most successful transitions to a new workplace must include active participation of IT, HR and real estate/facility executives. These should effectively share the goals and strategies behind all aspects of the project and deliver them in

a way that redirects negativity. Often, the qualitative features of a new environment can offer unanimous support and calm anxiety around changes in other aspects of the workplace.

Choices and considerations for the workplace End on a high note

The modern realities of the workplace have pushed the functions needed within and around the office beyond traditional paradigms. To be an attractive and useful place, the work environment needs to expand its definition to include spaces, tools and resources that accommodate the work/life blending and social interaction that is required for today’s informed and dynamic worker. Choices made in the strategic planning and programming phases of a project and inclusiveness will ensure that new or updated work environments are thought-provoking and engaging for users.

Getting beyond room counts and exploring creative ideas for an environment that reflects the organization’s vision and goals can help teams create an inspiring workplace. **FMI**

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Gauthier has acted as project designer for several large Houston corporations including NRG, Shell, Gulf States Toyota and Sysco Corporation. She has designed and planned more than 2,000,000 square feet of workplace interiors, including five projects that are LEED certified.

FLEXIBLE WORKSPACE CUSTOMIZATION AND THE SIX TYPES OF ACTIVITY-BASED WORK

BY MARION BEIJER,
EVI DE BRUYNE,
SANDRA BRUNIA AND
ANCA GOSSELINK

This article was contributed by IFMA Alliance Partner Facility Management Netherlands (FMN). It originally ran in FMN's official magazine, FMI, and has been translated from Dutch for FMJ Extended readers.

Office design – and thus the working environment – is changing. For many employees, a fixed workplace is no longer a given. In order to provide the proper and necessary functionalities to enable employees to do their work well (or even better), it is important to gather information about employee activities.

Because it is becoming increasingly common to share workplaces or to work in an activity-based way, companies are renting and outfitting less office space. The question is, what do we know about the activities of employees? Can we discern activity patterns? And are these underpinned by gut feelings, experience or solid data?

Flexible working environments are increasingly designed according to the principle of activity-based working. This means employees select the space that best suits their current work. So, for instance, if an employee needs to focus on reading a policy document, he would ideally opt for a quiet work area or a space in a quiet part of the building. But if instead he needs to urgently discuss the policy document with a coworker, he'll choose a meeting area or a spot that facilitates interaction.

The more an activity-based working environment is suited to the work processes, the more it will support the work being done.

What exactly are people doing?

It's not easy to gain insight into the precise activities in which employees are engaged, and organizations are often unable to pinpoint which activities employees are performing each



FIGURE 1 Six generic activity patterns of workers in the Netherlands.

day. There is, of course, information on job content, but an actual detailed description of activities and how much time they take is not generally available. However, it is precisely this knowledge that is essential for calculating the number of different types of spaces needed to create a suitable office.

Decisions on the mix of workspaces are often made based on gut feelings or on the activity patterns of other organizations. A better way to gain a deeper understanding of activities is by measuring them through observation, surveys and/or discussions with employees, or even by using generic activity profiles.

Gaining insight into people’s activity patterns naturally raises questions from both managers and employees. A measurement of activities is always a snapshot; it captures data that is known at

BOX 1
 Since 2003, the CfPB has been systematically collecting data on activities, preferences and employee satisfaction at the office. It collects the data using an online questionnaire referred to as the Working Environment Diagnosis Instrument (Wodi). More than 20,000 respondents from 80 buildings have contributed to the Wodi research. The findings provide organizations with insight into the success factors and bottlenecks of housing and activity patterns in offices. Among other things, the systematic collection enables data to be compared and benchmarks to be created, not only for employee satisfaction but also for office activity patterns.

that moment in time. But how solid is the data? Do the current activities fit into the organization’s vision of the future? What happens when activities change? Will the

office require a new design, or will such changes be minimal? In other words, can these activities stand the test of time?

Activity patterns are fairly static

For more than 10 years, the Center for People and Buildings (CfPB) in the Netherlands has been studying various aspects of the working environment, including the activities performed by employees at the office and how well the working environment is suited to those activities. What an employee does at the office is considered his activity pattern.

This research shows that activity patterns have barely changed in recent years. In examining the trends over the past eight years, it is striking that almost no activities show an appreciable increase or decline, with the exception of a decrease in the percentage of time employees spend on the phone. This decline in phone calls may be related

to the growing number of emails, smartphones and chat programs or, for example, the increase in mobile phone use while commuting or at home. There is also an increasing trend of working at home or at other locations.

Given that activity patterns at the office have essentially remained the same, they appear to provide a good basis for creating an activity-based office environment that is suited to long-term use and is therefore future-proof. Offices designed in recent years based on a well-argued activity-based plan will be well adapted for use over the coming years without major adjustments. This is reflected in practice at a number of buildings (see Box 3).

Generic activity patterns

Recent research by the CfPB reveals that statistically, six generic activity patterns can be discerned which are well-suited to a large number of organizations in the Netherlands (Figure 1).

1. The largest group (around 30 percent) of all office users shows activity patterns that primarily include general office work.
2. Another 30 percent of employees have a mixed pattern with more emphasis on meetings.
3. One in five employees spends a lot of time on office work that requires an undisturbed environment.
4. Around one in 10 employees primarily focuses on general office tasks for nearly 90 percent of the time. This is considerably more than the first group of employees.
5. Around 5 percent of the employees perform a lot of other activities. These may include teaching (for instance at a college or university), laboratory work or counter work helping customers.

BOX 2

The CfPB uses the PACT calculation and reasoning model to translate activity patterns to the necessary space mix. Thanks to PACT, the characteristics of work types and consultation spaces can be linked to the organization's prominent activities. Different variants of space mixes are then calculated based on chosen starting points (such as the degree of flexible workplace use, taking into account the presence/absence of employees, etc.). PACT thus not only serves as a calculation tool but also an instrument to support decision making, which provides input into the discussion of choices and consequences concerning the use of the office environment.

BOX 3

One good example of a future-proof building is the office complex of the tax authority on the Tiberdreef in Utrecht. The activity-based working environment in this building was completed in 2004 and has so far not been renovated, nor have any changes been made to the workspaces. The building was evaluated in 2004 and 2009, and at both times the employees still felt the working environment was suitable for their activities.

6. Finally, 3 percent of employees spend a large portion of their working hours on the phone.

If many employees fit a pattern similar to the first profile, a different mix of activity-based workspaces will be needed than for an organization in which a majority of employees follow the patterns described in the second or third profiles.

These profiles also prove quite useful when organizations transition from a traditional cellular office to an activity-based environment. There are only a few small differences.

Observations indicate that on average, employees in traditional cellular offices

spend slightly more time in meetings compared to those who work in more innovative office environments.

Future-proof

Activity patterns are used as input for statistical exercises to calculate the necessary space mix (Box 2). In doing so, it is important to keep the organization's vision of the future in mind. If that vision includes stimulating more cooperation or knowledge sharing, for example, this will have to be incorporated in the location of facilities and placement of various workspaces in relation to one another.

Knowledge of activity patterns and the matching diversity of workplaces can benefit organizations when planning future moves or renovations. The activity patterns can serve as a guideline in discussions and the patterns can be tightened or fine-tuned to the desires or ambitions of the organization.

Customization versus flexibility

An essential question is how far the employer will go in customizing the design of the working environment. Specific customization means less flexibility. If every team gets its own workspace mix, this will create problems if teams are relocated or their composition changes. In practice, it is more common that changes are anticipated in advance due to, for instance, changes in the size of departments or a restructuring.

Such changes require investments in order to create a newly suitable working environment, or the team must accept a less suitable environment. A case can therefore be made to opt for a more generic workplace mix that fits the activities of the entire organization. This still involves customization, but is also more flexible and future-proof. **FMJ**

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The Role of Emissions in Facility Management

THIS IS THE THIRD ARTICLE by IFMA's Environmental Stewardship and Sustainability Strategic Advisory Group (ESS SAG) featured in FMJ Extended, the online-only section of IFMA's official magazine. This piece consists of two parts which both focus on emissions. The first, authored by Christopher Laughman, describes the various types of emissions and their relationship to facility management. In the second, Laurie Gilmer discusses the role of emissions in the context of net-zero energy buildings.

Current SAG members include: Bill Conley, IFMA Fellow, CFM, SFP, FMP, LEED AP; Laurie Gilmer, P.E., CFM, SFP, LEED AP O&M, CxA; Chris Hodges, IFMA Fellow, P.E., CFM, FRICS; Christopher Laughman, CFM, SFP, LEED AP O&M; Sheila Sheridan, IFMA Fellow, RCFM, LEED AP O&M; Eric Teicholz, IFMA Fellow (SAG chair); and Kit Tuveson, IFMA Fellow, CFM, SFP.

We invite readers to comment on this article by emailing IFMA staff liaison to the SAG Melissa Reyes at melissa.reyes@ifma.org. Or, visit the sustainability area of IFMA's online community at community.ifma.org to research and participate in the SAG's initiatives.

THE INFLUENCE OF FACILITY ENERGY ORIGIN AND EMISSIONS

BY CHRISTOPHER LAUGHMAN

Emissions and FM

In nearly every professional journal there exist articles alerting us to the risks associated with climate change and the potential consequences of ignoring it. With increasing internal and external forces demanding that organizations be accountable for their footprint, more companies are positioning themselves to reduce the factors that result in climate change. This is often a catalyst for the development of business sustainability strategies.

The built environment represents 30 percent of total U.S. greenhouse gas emissions,

making it critical for facility managers to understand the link between property strategy and overall organizational sustainability strategy.

It is equally important to understand that in globally competitive markets, profit margins require that facility portfolios be efficient, in terms of both cost and energy usage, and increasingly in terms of emissions. This puts facility managers in a unique position to impact the success, or failure, of organizations' overall sustainability strategies.

Facility managers make daily decisions that have real

FACILITY MANAGERS MUST UNDERSTAND THE RISKS INHERENT IN EACH FUEL SOURCE.

impacts on their organizations' environmental footprint. When shareholders, investors and regulatory requirements demand reduced emissions or energy reduction goals, facility operations are often the determining factor in whether the targets can be met.

What is an organization's emissions impact and what does it have to do with the facility? The Global Reporting Initiative (GRI), discussed on page 98 of the January/February issue of FMJ Extended, sets internationally recognized guidelines concerning sustainability reporting. Within those guidelines are the standards by which emissions are measured and reported, as outlined through the Greenhouse Gas (GHG) Emissions Standard. This standard outlines sources (called scopes) that are either required or voluntarily reported.

A scope refers directly to where the emissions are created. GRI requires that direct emissions, also known as Scope 1 emissions, be reported. In addition to actually burning fuel, the release of greenhouse gases, such as fugitive refrigerant leaks, may also be considered Scope 1 emissions.

GRI also requires that certain indirect emissions, known as Scope 2 emissions, be reported. Scope 2 emissions are those produced on the organization's behalf (e.g., the use of electricity generated by offsite sources). The GRI also provides voluntary reporting of Scope 3 emissions, which are indirect emissions and can include sources such as corporate travel, waste stream emissions, third-party carrier emissions and employee commuting.

Reducing emissions and resultant cost savings

In order to consume energy, organizations must either purchase or produce fuel. The less fuel is burned, the less it must be bought or produced; therefore reducing emissions directly reduces the cost of operations. This can be supported by either decreasing the amount of energy used or improving efficiency to get more energy from the fuel used.

In addition to ensuring that equipment is properly maintained and performing as designed, typical strategies include lighting retrofits and controls, HVAC upgrades,

envelope sealing and building system controls. IFMA's SFP® credential provides many strategies that facility managers may use to improve operational performance for their facilities.

In addition, alternative energy sources can be used to generate electricity without burning a fuel source, essentially producing energy without emissions. Such strategies not only provide fuel cost stability, but also often provide the facility with a more reliable energy source not based on fuel which is either limited in nature or impacted by regulation. In fact, strategies that focus on alternative energy sources can help facilities achieve net-zero emissions (detailed by Laurie Gilmer on the following page).

Operational impact of emissions: Why do we care?

As facility managers, we manage risk on a daily basis. This may be the risk of accident, the risk of mechanical failure, the risk of exceeding our monetary resources or the risk of interruption of our organizations' business operations.

The fuel used to generate energy for facilities carries with it risk. It is therefore important for facility managers to understand the origin of their organizations' energy by asking questions such as, "Where does the electricity come from? How it is delivered, and how is it generated?"

Understanding the energy origin can help facility managers understand potential risks related to the fuel source(s) and if use of alternative sources is possible or appropriate. For example, facilities that receive a majority of their electricity from power plants using coal as the fuel source may face rate increases as regulations impact the costs of using coal as a primary fuel source in electrical generation. Likewise, facilities that rely on hydro-generated power, which has limited emissions, may face other risks associated with the reliability of the water source used by the hydroelectric plant.

Facility managers must understand the risks inherent in each fuel source, as well as other risk factors. As weather continues to increase in intensity, facility managers must also evaluate the need for business continuity planning.

GETTING TO ZERO

BY LAURIE GILMER

Each facility sits in a unique geography and has unique risks associated with its location, from facilities near the ocean that may be impacted by sea level rise, to those located in the mountains that may be impacted by reduced snowcaps or reduced water supply. Whatever your unique geography provides, the influence of more intense weather patterns will most likely have a real effect on planning.

Additionally, weather intensity is directly linked to climate change and the greenhouse gases produced by facility emissions. We do not live in a vacuum and our operations impact those of our neighbors and the communities in which we reside. Our facilities represent significant emissions for the organizations we represent. Those emissions have unequivocally been demonstrated to contribute to increased greenhouse gases.

Science has provided incontrovertible evidence that those gases are responsible for trapping heat causing the climate to change and the Earth to warm. Many scientists say that greenhouse gases caused by emissions are the greatest challenge ever faced by humankind. Facility managers have an outstanding opportunity to demonstrate value to the organization and alignment with the overall sustainably business strategy.



Christopher Laughman, CFM, SFP, LEED AP O&M is corporate facility manager at Graybar Electric, Inc., a Fortune 500 distributor of electrical and communication/data products. He oversees facility operations and manages interior space use and environment, the exterior site, facility

contract services, tenant relations and leases, operational and capital budgets, energy usage and sustainable operations.

In addition, Laughman serves on Graybar's corporate green team, leading projects that impact the triple bottom line and providing assistance in sustainability planning at the strategic and tactical level. He is a Green Globes Professional and a trained climate educator for the Climate Reality Project.

Laughman currently serves on the board of directors for the St. Louis Chapter of IFMA.

In facility management, our environmental stewardship efforts have been focused on three areas: greenhouse gas emissions, energy and water. This has been and remains fairly consistent. Our charge is to balance the organizational mission needs and operational costs with using less, becoming more efficient and decreasing our impact. While we have made some strides forward in specific facilities, at a big-picture level what we have been doing to decrease our consumption levels isn't enough. This is where the concept of the net-zero building comes in. Net zero primarily addresses energy and greenhouse gas emissions.

There has understandably been confusion over what net zero is and what is required, especially for existing facilities. The initial definition from the Executive Order 13514 defined a net-zero energy building as one that is "designed, constructed and operated to require a greatly reduced quantity of energy to operate, meet the balance of energy needs from sources of energy that do not produce greenhouse gases, and therefore result in no net emissions of greenhouse gases and be economically viable."

This definition has proven to be not quite explicit enough. The U.S. National Renewable Energy Laboratory (NREL) published "Net-Zero Energy Buildings: A Classification System Based on Renewable Energy Supply Options," which provides several sub-definitions of net zero. The NREL publication "Getting to Net Zero" defines four categories of net-zero energy buildings:

- **Net-zero site energy:** A site net-zero energy building (NZEB) produces at least as much renewable energy as it uses in a year, when accounted for at the site.
- **Net-zero source energy:** A source NZEB produces (or purchases) at least as much renewable energy as it uses in a year, when accounted for at the source. Source energy refers to the primary energy used to extract, process, generate and deliver the energy to the site. To calculate a building's total source energy, imported and exported energy is multiplied by the appropriate site-to-source conversion multipliers based on the utility's source energy type.
- **Net-zero energy costs:** In a cost NZEB, the amount of money the utility pays the building owner for the renewable energy the building exports to the grid is at least equal to the amount the owner pays the utility for the energy services and energy used over the year.
- **Net-zero emissions:** A net-zero emissions building produces (or purchases) enough emissions-free

A NET-ZERO ENERGY BUILDING MUST OFFSET ENERGY CONSUMPTION WITH RENEWABLES.

renewable energy to offset emissions from all energy used in the building annually. Carbon, nitrogen oxides and sulfur oxides are common emissions that NZEBs offset. To calculate a building's total emissions, imported and exported energy is multiplied by the appropriate emission multipliers based on the utility's emissions and on-site generation emissions (if there are any).

Regardless of the category, a net-zero energy building must offset energy consumption with renewables.

In addition to the NREL documents that have helped clarify terminology and definitions, there are a few key documents that have shaped where we are today as well as our path forward. These documents plot the path from what has largely been a voluntary and goal-oriented concept to what is increasingly pushing toward mandates.

The U.S. Energy Independence and Security Act (EISA) of 2007 set in motion the Zero-Net Energy Commercial Buildings Initiative which identified a phased goal for accomplishing net zero in commercial facilities:

- **2030:** Any commercial building newly constructed in the United States.
- **2040:** 50 percent of the commercial building stock of the United States.
- **2050:** All commercial buildings in the United States.

The 2009 Executive Order 13514, targeted to federal facilities, requires planning efforts for new federal buildings beginning in 2020 to be designed to achieve net-zero energy by 2030. The 2030 goal is aligned with EISA.

Net zero is getting closer all the time. As part of a larger plan to ensure reliable access to energy, caretakers of the built environment need to be on board. The key for facility managers is to start now by incorporating net-zero concepts into energy management plans and facility performance metrics. This will this position organizations for future success with coming compliance requirements. **FMJ**



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Gilmer is chair of IFMA's Sustainability Facility Professional® credential scheme committee, chair of the Northwest Energy Efficiency Council's Building Operator Certification program advisory committee and an instructor for IFMA's Sustainability Facility Professional and Facility Management Professional programs.

FIVE STEPS TO SUCCESS WITH NET ZERO

1. Measure and benchmark building energy use

How is your building doing?

2. Reduce consumption

Use less! Start with the simple things. Leverage energy management policies and communication channels.

3. Improve efficiency

Look at building controls for the best opportunities. Install more efficient equipment and systems when renovating or retrofitting. For large projects, incorporate technologies such as ground-source heat pumps, combined heat and power systems, efficient windows, efficient lighting and plug load management.

4. Measure and monitor

How is the building performing?

5. Renewables

Once you have reduced consumption and are managing the building and systems efficiently, how much energy generation do you need to offset your consumption? What renewable offset sources are available?

30 YEARS SURE MAKES A DIFFERENCE

REFLECTING ON CHANGES TO TECHNOLOGY AND THE WORKPLACE

BY RICHARD FANELLI

I founded Fanelli McClain 30 years ago in early 1985. Things have dramatically changed since then in the way we all work and the technologies that we use to get our work done. I've had time to reflect on these dramatic changes — here are some that came to mind.

Technology

In 1985 we started to use the modern version of the fax machine. It allowed us to get information and graphics to our clients and vendors quickly without having to hire a courier to bike an envelope across town. Now fax machines are gathering cobwebs in our offices, but for some reason many forms today still ask for a fax number. As we all strive to go paperless, hopefully one day even legal documents won't have to be faxed anymore.

Many companies in 1985 had some standalone PCs or Macs but few companies had networked computers and servers. Very few companies had email and the Internet had not yet been invented, so access to information came from books and libraries.

Fanelli McClain's first computer was one of the original Macs that came off of the Apple assembly line. It even had Steve Jobs' engraved signature on the back. (Boy, I wish I

Five people today can do the work of 10 people in 1985.

had held onto that historic piece of computer equipment.) One of the first pieces of equipment that I bought was an IBM Selectric typewriter that had a feature that allowed you to quickly correct your documents. I thought that was great technology at the time.

I remember buying Marvis Beacon typing software to learn how to touch type in the mid '90s so that I could generate my own documents, rather than making multiple markups and handing them to a secretary to produce. I wish my parents had forced me to take a touch-typing class in high school. There are no longer secretaries in offices today, just administrative assistants, primarily due to how technology has changed the way we work. Maybe that is why there are so many typos in documents since secretaries aren't around to proof them anymore.

The volume of correspondence and information we receive today via email is mind boggling compared with the dozen or so "While You Were Out" pink slips that people once received in the mid '80s. Today we can sometimes spend hours processing useful and useless emails in the course of a day. This does not necessarily lead to increased productivity, but when offset by the speed of communication and the faster turnaround time for the production of deliverables due to CAD and BIM technologies, we are more productive today overall. Also, expectations for the turnaround of deliverables are exponentially shorter today than in 1985.

Healthy offices and workspaces

It is amazing that we are all still alive after the way we treated our lungs back in the mid '80s. People smoked in offices without giving it a second thought. You were lucky to have a smoke extraction fan in your conference room. Ceiling tiles were a dingy shade of yellow from the cigarette smoke. If you had to replace a broken ceiling tile, the new tile wouldn't match the adjacent, yellowed surface.

Design firms used Diazo blueline printing machines which gave off huge amounts of ammonia fumes. Eventually they came out with fume absorption boxes, but you still smelled the ammonia. The people who worked in the blueline print

shops were exposed to the ammonia all day long and walked around like zombies due to the health issues caused by these unhealthy fumes.

Synthetic carpet was not off-gassed before it was shipped to job sites and was installed using highly toxic adhesives containing volatile organic compounds (VOCs). When we moved into our newly renovated office space in Arlington in 1988, I remember that everyone was getting migraine headaches due to the VOCs for at least two weeks.

We were still specifying vinyl asbestos tile and lead paint back in 1985. We didn't realize that we would have to abate this stuff in the future while wearing sealed suits and respirators. I guess that this was right in line with our parents allowing us to play with little balls of mercury from broken thermometers back in the '60s without a thought to the health hazards.

Reflecting on today

Things have certainly improved over the past 30 years when it comes to health and safety. The speed of work has dramatically increased. Five people today can do the work of 10 people in 1985 (what happened to those other five people?).

When I hear people say that all the major advances in technology have already been invented, I have to laugh. New technologies that increase productivity, reduce costs and improve quality will continue to evolve. In another 30 years, we will look back at 2015 and wonder how we ever lived without the technologies and methods of 2045. **FMJ**



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