The book “Work on the Move 2” was published in the fall of 2016, just in time for IFMA’s 2016 World Workplace Conference and Expo, which was held in my hometown of San Diego, California, USA. This article uses that book as framework for a new discussion on sustainability and FM, based on ideas from the following seemingly unconnected events:

- **A brief discussion:** The IFMA Environmental Stewardship, Utilities and Sustainability Community (namely Strategic Advisory Group (SAG) Chair Eric Teicholz and SAG member Sheila Sheridan) asked me to write an article that explains how the concept of sustainability is woven into all chapters of the book.

- **A new job:** I began a new job with Planon at about the same time as my discussion with Eric. In conversations I had with the CEO of Planon North America, Fred Guelen, he described concepts he learned from the Harvard Executive Education for Sustainability Leadership course. From these discussions, I learned about a new organizational model which brings together some of the concepts raised in the book. In addition, Fred made me aware of some excellent case studies presented by innovative real estate professionals in the program using this new adaptive approach.

- **A magazine article:** A recent Harvard Business Review (HBR) issue included an article that suggested facility managers should be part of a team appointed by the CEO to develop a firm’s now critical energy strategy and to ensure its execution to drive heretofore unrecognized (by many companies) business value. Our profession is rarely mentioned in this august publication, so its inclusion is significant and further confirms that we must step up our involvement with sustainability. The topic of FM’s involvement in energy strategy and execution is also critical to the value proposition we need to present to the C-suite.
For me, these combined events exhibit the continued growth, relevancy and urgency of sustainability conversations, wherein the FM voice must be present as a valuable and innovative component of organizational strategy.

“Work on the Move 2” is broken down into nine chapters, including 17 case studies which feature the accomplishments of various workplace strategies measured by what they contributed to the triple bottom line: planet, people and profit. The following are the observations of the authors with some new additions on trends, leadership, social responsibility, technology and case studies.

**TRENDS**

Alexi Marmot wrote in her chapter on global trends that FM is “in pole position to help meet sustainability targets.” As the United Nations Environmental Programme identified in 2009, the building sector can contribute to reducing greenhouse gas emissions by:

- improving the energy efficiency of buildings and appliances, as well as energy suppliers and distributors;
- changing attitudes and behavior toward energy use in buildings; and
- substituting fossil fuels with renewable sources of energy.

In the HBR article previously mentioned, the authors describe how important energy is today and how the topic is “climbing up the corporate agenda.” They remark: “The choices a company makes about its energy sourcing and consumption can profoundly influence its cost structure. And how it manages the environmental and climate impacts of its energy use — primarily carbon emissions — is an increasingly important differentiator for consumers, investors and corporate customers.”

Professor Marmot also gave an interesting example of a federal government that recognized the role of FM in sustainability. Singapore noted in its 2009 sustainability policy that there would be a need for 6,000 “green” facility managers to be educated within the next decade. In a policy update six years later, they set a goal for 80 percent of their buildings to be certified with a Green Mark rating by 2030. Therefore, sustainability, particularly an effective energy strategy, is an important differentiator for FM as well.

Chris Hood, in his chapter on a growing trend called the sharing economy, concentrates on “a workplace-related study of the shared economy through the lens of the shared workforce.” He discusses the rise of coworking places, which were not only designed to escape from the isolation of the home or serviced office, but are environments created for a new way of working. They are offices, maker spaces and creative places in which innovators can work with others who have strong concerns for the health of the planet and are enabled by technological advances in mobility and collaboration to be their most productive and imaginative.

From a literature review on the sharing economy over the last two years, the jury is out on how “green” it actually is. For example, fewer new hotels may need to be built if more people lodge in residential properties through short-term rental services (and, as we know, the most sustainable buildings are the ones not constructed). Whether these rental companies are contributing to projects or products that ensure a more sustainable environment will require more scientific, quantitative studies in the future.

Regardless of these possible deficits, the following is certainly true: “The sharing economy has been propelled by exciting new technologies. The ease with which individuals — even strangers — can now connect, exchange, share
information and cooperate is truly transformative. But technologies are only as good as the political and social context in which they are employed. Software, crowdsourcing and the information commons give us powerful tools for building social solidarity, democracy and sustainability. Now our task is to build a movement to harness the power.” This movement should be led by the FM profession.

LEADERSHIP

In chapter 4, Diane Coles Levine and Susan Weiner outline a powerful argument for why executive alliances among all C-suite members need to be “crafted” — along with business-enabling functions including FM, real estate (RE), information technology (IT), marketing and sustainability — to develop advanced workplace strategies like sustainability programs.

Organizational models that are more flexible and adaptable to new ideas for the workplace can work alongside old-guard hierarchical models. This new way of organizing talent came from the discussions I had with Fred Guelen. The core concept for sustainability leadership is built around an awareness that, when presented with a new way of doing things, organizations often:

- are resistant to changing the way they are used to doing things;
- have trouble finding the necessary funding mechanisms;
- are resource constrained when confronted with new ideas, as they already have trouble doing the jobs they have;
- are locked into silos with their own cultures and languages and do not play well with other silos;
- do not have the flexibility and agility to even think creatively, much less innovate.

Therefore, we must create a new agile organization system (AOS) with passionate and engaged people who can work with the old command-and-control system (CCOS) — a model that works well for organizational efficiency, but not for innovation projects. Due to the “urgency, scale and complexity” of introducing sustainability programs, during their implementation is also a great time to incorporate an AOS model.

Agile organizations can “sense” changes (and apply concepts like design thinking), respond by creating new products and services, prototype these new concepts, and connect the right stakeholders at the right time while generating team engagement.

The AOS environment should breed the culture of a start-up with lots of energy and creativity, but have a clear understanding of the right time to include the existing CCOS to ensure buy-in throughout the process. These two systems tend to use different languages, operating rules, priorities and processes. However, if they agree to a shared purpose at the beginning of the journey then they are both motivated to align.

The authors of the HBR article believe that an executive (such as the chief of finance or operations) should champion the creation of an energy strategy and form a cross-functional team, including leaders from “operations, facilities, finance, legal and data center operations.” However, I would argue that an AOS be formed and staffed

Use data from multiple perspectives to drive conversations (Coles, Levine and Weiner, 2016)
with, not executives, but people from those functional groups who are more representative and entrepreneurial.

A case study presented at the Harvard course by the CEO of Quo Vadis, who designed a new real estate development model for her work in Canada, offers an example of this AOS approach. The study is a good complement to the second chapter in the leadership section of “Work on the Move 2” entitled, The Real Estate Paradox: Options and Investments, written by David Karpook and Janice Cimbalo. The chapter describes a strange paradox. There is turmoil in the commercial real estate world with new technological advancements, financial models and contracts, as well as new occupancy models like “space as a service,” which are creating uncertainty and fear in a slow-to-change industry. Yet the authors see a “healthy, robust global real estate market in which businesses are making huge investments, rents are high and vacancy rates are low.”

In the middle of this real estate paradox is a great example of the AOS approach at work. In their new real estate development model, Quo Vadis takes a long-term sustainable approach to revitalization efforts in the work they are doing in a neighborhood in Montreal, Québec. They utilize the concepts of “cradle to grave” in dealing with new materials and design in renovation projects. They also created an AOS model to craft new alliances, which include not only private investment, government, consultants and residents, but also universities, foundations, startups and artists.

Even the language Quo Vadis uses to describe their role in the venture is a new twist to the old development lexicon: connector, curator, amplifier, stimulator, storyteller, supporter and collaborator. One of their projects in the 1.5 million-square-foot portfolio of properties is Le Salon 1861. It was originally built as a church, but was repurposed as a resource for events, with a restaurant, social hub, working space and an urban garden. This “purpose-driven real estate company” even coined a new term: “real UState.”

SOCIAL RESPONSIBILITY

The two chapters that make up this section of the book contain the most emphasis on sustainability. The first chapter on corporate social responsibility (CSR) by Pat Turnbull, Alexander Redlein and Lisanne Schlos describes how facility management must get involved with organizational CSR reporting. So much of the relevant data resides in this group and yet it is usually not known to the creators of critical company documents.

The authors urge facility managers to go beyond the obvious reductions in waste, particularly found in the design and construction projects, and look to “cross-border legislation, reduction in utility resources.” They also recommend deploying new technologies (particularly integrated workplace management systems (IWMS), building information modeling (BIM), Internet of Things (IoT) and artificial intelligence (AI)) and looking at opportunities through the entire building life cycle to contribute to a sustainable environment.

SOCIAL RESPONSIBILITY

In the second chapter on “Wellbeing in the Workplace,” Kate Lister and Tom Harnish make a convincing case as to why employers need to care about the health and environment of their employees. By doing so, they can increase productivity and engagement, lower health care costs and reduce absenteeism. When examining the success of various programs, management support was at the top of the list, followed by a strong internal champion, employee satisfaction and program marketing.

Behavioral modification is also key in wellness programs. In another example from the Harvard executive program, JLL presented a case study on Cadillac-Fairview’s Toronto Dominion Centre entitled, “Buildings Don’t Use Energy, People Do.” The company created an occupant engagement program, and the series of projects enabled a new building-wide culture in which occupants are empowered to be accountable for their own environmental and wellness behaviors. To accomplish this, the team crystallized various ideas, including a guide for walking in the community, a massage clinic, posters encouraging stairs usage and drinking less sugary sodas, and a method to encourage “digital detox.”
General Electric turned sustainability into a very successful game which allowed employees to have fun while becoming more aware of the costs of an unhealthy environment. Ten years ago, they created “treasure hunts” for employees to inspect their facilities, find energy and other resource waste areas and recommend improvements for increased efficiency. Since then they have conducted 300 hunts with a savings of US$150 million and even spread the gaming idea to 6,000 customer and partner firms.⁵

TECHNOLOGY
Erik Jaspers’ chapter on “Technologies Driving Smart Futures” includes a section that describes the importance of environmental data and how it can be captured more easily in the IoT era. This includes data on:

- **User experience:** This plays an increasingly important role in occupant satisfaction with the working environment, affecting talent attraction and retention, as well as employee effectiveness and engagement.

- **Climate:** Scientific studies have proven through the years that occupants in open-plan offices are more likely to perceive thermal discomfort than those in multi-person and private offices.

- **Consumption:** In the realm of sustainability, the consumption of energy and other natural resources are significant concerns in building operations. Avoidance of waste is a key issue along with the efficacy of the utilization patterns of occupancy.

- **Condition:** Measuring and maintaining the asset condition is critical for the working environment. While noise levels are recognized as a significant problem, CO₂ levels are not regularly discussed. However, CO₂ levels have been proven scientifically to impact the performance of the human brain and, therefore, should be measured and included in the conversation.

- **Demand:** This gets harder to predict, but is necessary to determine building occupancy in the future. Determining demand is getting more difficult to do in this accelerating and complex environment, hence the need for more flexible indoor environments.

In the second chapter, Joe Poskie and I describe the building digital workplace (BDW), which is defined in a section of a proposed manifesto:

Our vision for the building digital workplace is to enable the people in the real estate and facility management group to give exceptional service to their customers who are the employees, contractors, visitors and neighboring communities where we have workplaces.

Therefore, the right technological tools are necessary to enable this level of service, including sustainable processes and practices. These tools include IWMS, BIM (digital twins) collaboration platforms, AI, machine learning, mixed-reality devices, smart machines and building automation systems (BAS).
In terms of BAS, Rudin Management Company, one of New York's oldest and largest real estate developers, owners and managers recently created a commercial RE technology start-up called Prescriptive Data. Their new product is called Nantum and is a cloud-based smart building platform and control panel.

This is a nervous system for comprehensive building operations which centralizes real-time data streams from utilities, BASs, occupancy sensors, meters and analytics. This information is combined with input on building characteristics, historical utilization and external data on weather to predict and optimize building operations. Coupled with machine learning technology, this system, utilized as a competitive strategy to acquire and retain tenants for Rudin’s property portfolio, can not only diagnose building conditions, but prescribe and effect optimal operations.

One 15 million-square-foot building saved more than US$5 million in 2016, and these savings are visible and calculated daily. One tenant in the building, Blackrock, said this developer “is really thinking of his tenants and our concern for sustainability and cost savings” at a CoREtech Conference in NYC this fall.6 This is helping them surpass the goals set by the New York City Carbon Challenge. The tenant collaborated with the landlord to pay for the system, and then saved 11 percent in the first two days the system was installed.

**CASE STUDIES**

All the case studies in the book were measured by how the strategies for each company had a positive effect on the triple bottom line.

The most sustainability-rich case study is about a leading global communications marketing family firm, Edelman, which created a pioneering environmental strategy for a professional services sector purchasing standard, NSF 391.1; implemented quantitative metrics for establishing common goals and measured improvement in sustainable practices; and applied their own best practices in communications marketing to promote active engagement in this strategy by the 5,500 employees around the world.

The last chapter in “Work on the Move 2,” written by Diane Coles Levine and me, is all about what a day of work looks like in the future for the imagined character, Wendy Welch. How sustainability plays an important role in Wendy’s future will be revealed in the presentation Diane and I will give at IFMA’s 2017 Facility Fusion in Toronto, Ontario, Canada this spring. Join us there to hear further developments adding new light to “Work on the Move 2” and what FM can bring to the C-suite in leading the strategy for a company’s sustainability strategy!

**REFERENCES**

2. Ibid, p. 140.
5. Winston et al, p. 140.

You can request a complete report on the CoREtech conference via sustainability@ifma.org.

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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” and its sequel, “Work on the Move 2.” Additionally, she serves on the foundation’s board of trustees.