

2016

WORKPLACE TRENDS



INNOVATIONS 2 SOLUTIONS

sodexo
QUALITY OF LIFE SERVICES

FOREWARD



How best to sum up our 2016 Workplace Trends? This year, more than ever, our report represents a confluence of forces that can't be described in one word. We are leaders in an era of ever-increasing complexity and change. Clearly, leadership today requires understanding and foresight across a landscape that is both wide and deep.

With this in mind, for this year's report Sodexo invited thought leaders from a wide range of backgrounds to share their insights regarding the top issues facing the C-Suite today. As with previous years, our research team leveraged Sodexo's six dimensions of Quality of Life as a strategic lens, as we know that an employee's workplace experience is largely defined by these dimensions. We also uncovered several key themes during our research that guide our discussion of this year's report and provide insights that fuel leadership principles.

From our synthesis, we can point to these themes that signal opportunities for leaders:

Leading beyond the "four walls" of the organization.

Throughout the report, we see the importance of leaders defining programs that extend externally to drive results. The role of community partnerships and involvement is illustrated in our Population Health Management trend. Our Urban Transformation trend highlights the ways in which Corporate Real Estate is driving the transformation of communities, which, in

turn, impacts organizations and our ways of working. In these and other trends, we see how organizational leaders are delivering positive impact for their organizations that goes well beyond their workplaces.

Addressing employee needs holistically, with a blending of work and life, and avoiding a "one size fits all" approach. From how leaders are recognizing and rewarding employees, to more effective health and wellness program design, we see the importance of a personalized, holistic approach. Programs that effectively reward and recognize the varied individual employee motivators are essential in today's multigenerational workplace. In our Humanizing the Workplace trend, we see the opportunity to leverage a range of design principles to help keep the "humanness" in our work. Throughout our report, we emphasize a blending of work, life and play as the new standard driving employee engagement.

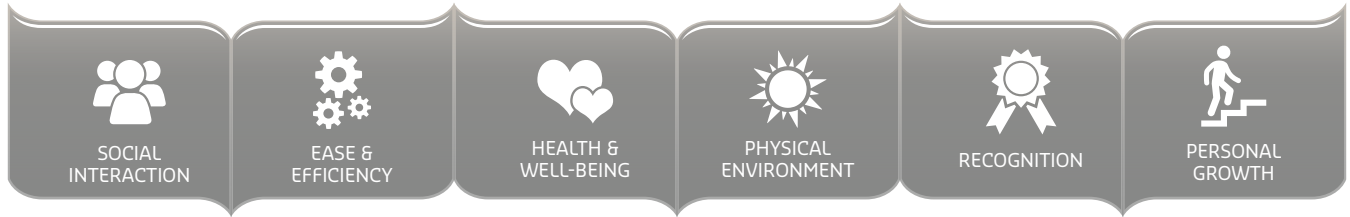
Leveraging technology to enable AND connect all dimensions of work. In today's digital business era, technology is the glue binding many facets of the workplace. We see many organizations leveraging big data to drive productivity and enhance employee quality of life. We also observe the need for scientific service providers to deliver technological solutions that truly bring value to the life sciences industry. In our Smart Energy Management trend, we discuss how effective energy management and energy awareness programs are delivered through technology in today's workplace. Technology is delivering key insights to leaders and helping them to better understand the interconnectedness of various workplace components.

These three themes — leading inside and out, leading holistically, and leveraging technology as an enabler and connector — summarize how leaders are driving efficiencies in today's complex environment, and delivering a positive impact on the health of people, the environment, and the community. In this year of exciting possibilities, we hope that these trends will inform and enhance your workplace strategies. As always, we welcome your feedback and discussion.

Best regards,

Mark Bickford
CEO, Corporate Services
Sodexo North America

TABLE OF CONTENTS



01
p. 7

Population Health Management:
A New Business Model for a
Healthier Workforce

06
p. 41

Smart Energy Management:
A Win for the Environment,
People and Business

02
p. 13

Workplace Violence and
Terrorism: Best Practices for a
New Reality

07
p. 46

Humanizing the Workplace:
Using Design Principles to Inspire
Workplace Thinking

03
p. 20

Stories of Urban Transformation:
The Rise of 18-Hour Work/Live
Communities

08
p. 51

Gender-Balanced Teams Linked
to Better Business Performance:
A Sodexo Study

04
p. 27

Big Data in the Workplace: Can It
Enhance Employee Productivity
and Quality of Life?

09
p. 55

Creating The Lab of the Future:
A Shift Toward Greater Agility,
Flexibility and Efficiency

05
p. 37

Reaching Every Employee in an
Organization: Engagement
Through Recognition

10
p. 62

Meet the Authors

TRENDS AT A GLANCE

POPULATION HEALTH MANAGEMENT: A NEW BUSINESS MODEL FOR A HEALTHIER WORKFORCE

Population Health Management, or PHM, is a broad effort whereby individual-, organizational- and cultural-level interventions are used to improve the disease burden of entire groups or populations. By keeping people well at the onset, PHM strategies can be used to decrease overall healthcare usage and avoid future overuse of the healthcare system. PHM takes a systematic approach by stratifying populations across health-risk profiles and applying different behavioral strategies to mitigate further risk.

While PHM is typically thought of in the context of hospitals, employers in the business and industry sectors are also able to play a critical role and are increasingly applying PHM principles in the workplace. The meaning of workplace PHM is still evolving, and traditional wellness programs and their components will remain an important element of population health. However, in order to bend the curve on health costs, programs that go beyond the typical employee wellness models toward a more integrated and comprehensive approach are required.

WORKPLACE VIOLENCE AND TERRORISM: BEST PRACTICES FOR A NEW REALITY

Each year, nearly 2 million American employees are victims of workplace violence. This violence has far-reaching negative consequences for employers, employees and the larger society, primarily because of the central role the workplace has in our lives. It is clear that boundaries are shifting and, at times, disappearing: work and home life, work and health, work and political values — all are becoming more closely intertwined. As the workplace continues to touch more elements of our personal lives, we must acknowledge the increased risk of negative spill-over effects, including violence.

Because of this shift, the concept and implications of workplace violence are changing to become more encompassing. The traditional view of workplace violence has identified four types of perpetrators: criminal, customer, employee and personal. This paper discusses the emergence of a fifth type of workplace

violence — terrorism. Alongside implications for costs and risk factors, this new understanding also impacts future prevention efforts.

STORIES OF URBAN TRANSFORMATION: THE RISE OF 18-HOUR WORK/LIVE COMMUNITIES

Cities all over the world are hotbeds of ideas, blending new and old concepts to create exciting urban experiences for residents, workers, enterprises and visitors. Experts in a wide variety of fields are collaborating to transform the urban environment in today's digital business era. In the workplace, this has led to the closer merging of work/life/play in these growing cities, where previously these activities had been clearly separated.

The three themes of these urban transformation stories are:

- New Work/Live Places
- Corporate Real Estate and the Community: A New Partnership
- Horizontal and Vertical Villages

This piece focuses on a few of the most interesting stories that demonstrate early signs of these urban transformations, which will spread into more and more cities around the globe in 2016 and beyond. Each story is about how the various city players are using innovation and technology to transform the work they are doing and shape the world's future cities.

BIG DATA IN THE WORKPLACE: CAN IT ENHANCE EMPLOYEE PRODUCTIVITY AND QUALITY OF LIFE?

Organizations today have an unprecedented ability to capture data about both their facilities and their workforce's activities. However, while facilities management (FM) professionals hear a great deal about smart buildings and how big data supports facilities management, there seems to be far less attention being paid to smart behaviors and almost nothing to smart management. IFMA and Sodexo collaborated to

host a Future of Work Roundtable conversation on the challenges and opportunities surrounding Big Data at IFMA's Facility Fusion 2015 Conference.

A number of questions were raised during the discussion. How can FM leverage the data already being captured about workplaces and the workforce in order to raise the bar on employee productivity, engagement and quality of life? What additional data can take FM to the next level of relevance and enhanced organizational performance? How can FM leaders ensure that the data they capture is used appropriately and responsibly? This piece is a summary of the roundtable conversation and focuses on exploring some of these issues.

REACHING EVERY EMPLOYEE IN AN ORGANIZATION: ENGAGEMENT THROUGH RECOGNITION

The vast majority of today's employees are disengaged, and study after study indicates that engagement is one of the key drivers of business success. Corporate managers understand this imperative. Despite laser-like efforts, however, employee engagement scores in the United States remain lackluster. The stakes are increasing as the economy strengthens, the war for talent heats up, and recruiting, engaging and retaining the best and brightest employees becomes even more crucial.

Many organizations are embracing a corporatwide approach to employee engagement today. Armed with recognition training, resources and best practices, diverse and inclusive teams from across the enterprise are increasingly speaking authentically and realistically about the challenges employees face and the most effective programs to engage them. There are generally two key areas that these organizations focus on in order to boost engagement and business performance: improving quality of life for employees and reaching every employee in an organization.

SMART ENERGY MANAGEMENT: A WIN FOR THE ENVIRONMENT, PEOPLE AND BUSINESS

There is growing recognition that human activities are major contributors to climate change. Aggressive action is needed to stem this tide. None of this bodes well for the construction of additional fossil fuel power

generation despite increasing demand. The new normal is likely to require consumers to become more active participants in the creation and use of energy.

The trend of energy consumers playing a key role in energy consumption and potential reduction carries over to the workplace. The value placed on reducing energy in the workplace will grow if business consumers are educated that a unit of energy saved at the meter represents more than that one unit. This will broaden responsibility by showing how individual action affects the energy chain. With more education and resources, the workplace consumer could strategically plan how and when they use energy — from lowered use when energy prices are highest to initiating front-line plans to conserve energy.

This piece evaluates these trends and recommends steps that business consumers should take to prepare for this new normal. Waiting for utility companies to take responsibility will result in higher expenses. By implementing an action plan, businesses can reduce carbon footprint, lower cost and obtain financial incentives to offset efficiency improvements.

HUMANIZING THE WORKPLACE: USING DESIGN PRINCIPLES TO INSPIRE WORKPLACE THINKING

No one doubts that business, life and the world at-large have become evermore Volatile, Uncertain, Complex and Ambiguous (VUCA). With this in mind, leadership, management and newly empowered workers are anticipating challenges, understanding the consequences of actions, appreciating the interdependence of multiple variables, preparing for alternative realities, and owning their own transformation and even disruption.

In these times of transition and change, it is increasingly difficult to make the right decisions in creating the right work environments. When the journey is about humanizing the workplace in meaningful and compelling ways, heading in the right direction has its own special VUCA characteristics. Design principles, acting as a set of guardrails, can help shape the promise and trajectory of approaching the design and maintenance of workspaces, by inspiring new thinking, fine-tuning directions and guiding decision-making processes. This piece highlights seven design principles that can guide managers and leaders who are charged with humanizing the workplace for today's employees.

GENDER-BALANCED TEAMS LINKED TO BETTER BUSINESS PERFORMANCE: A SODEXO STUDY

Achieving gender balance is important for workplaces not only because it is “the right thing to do,” but also because it makes good business sense. To better understand and leverage this trend, Sodexo initiated an internal study to explore and understand the correlation between gender-balanced teams and performance.

The Sodexo study analyzed key performance indicators (KPIs) from 100 global entities and 50,000 managers in 80 countries. For this study, the performance measures were focused on employee engagement, brand awareness, client retention and three indicators of financial performance. The preliminary results were powerful, indicating that entities with gender-balanced management performed better on all of the performance indicators.

The breadth of the data collected and the geographical diversity of the study sample confirm that the results are solid and shed new light on the strategic importance of gender diversity within organizations — not just at the top, but at all levels of management.

CREATING THE LAB OF THE FUTURE: A SHIFT TOWARD GREATER AGILITY, FLEXIBILITY AND EFFICIENCY

Aging populations, chronic diseases, market expansion, and treatment and technology advances are expected to spur life sciences sector growth in 2015. However, efforts to reduce costs, improve outcomes and demonstrate value are dramatically altering the demand and delivery landscape. At the same time, the patent cliff remains steep, and there is a well-understood need to create more collaborative partnerships across industry and academia. The sector also faces significant difficulty in attracting and retaining talent.

It is increasingly evident that the global life sciences sector is operating in an era of significant transformation. Most companies have adapted by adopting more agile and flexible operating models, and, in doing so, have demonstrated a renewed focus on their laboratories. This includes reviewing the best way to obtain value from their scientific services, a function that in most cases is outsourced. Accordingly, service providers must adapt to the new demands placed on them by more effectively anticipating trends in the industry.

As a result of extensive research and analysis, combined with nearly 50 years of experience, Sodexo has identified six dimensions essential to Quality of Life.

The icons highlighted in red at the beginning of each piece indicate which dimensions align with each trend. At the end of each piece you'll find a more detailed explanation of how the trend links to the dimensions.



Social Interaction – Factors that strengthen bonds among individuals and facilitate access to activities or events.



Ease & Efficiency – Ability to devote your full attention to the task at hand and carry it out with ease, efficiency and minimal interruption.



Physical Environment – Factors that contribute to a person's comfort and sense of well-being.



Personal Growth – Everything that allows an individual to learn and make progress.



Recognition – Factors that contribute to an individual feeling truly valued and appreciated.



Health & Well-Being – Promoting a healthy lifestyle through a well-balanced diet and physical activity.

POPULATION HEALTH MANAGEMENT: A NEW BUSINESS MODEL FOR A HEALTHIER WORKFORCE



Colleen Conklin, MSPH, Director of Research, Corporate Services, Sodexo

Nebeyou Abebe, MA, PMP, Senior Director, Health & Well-Being, Sodexo

Jennifer Petrelli, SM, MPH, Nutritional Epidemiologist, Sodexo

INTRODUCTION

"Good health is good business."¹ This is the basic value proposition of population health management in the workplace.

Population Health Management, or PHM, is a broad effort whereby individual-, organizational- and cultural-level interventions are planned and implemented to improve the disease burden of entire groups or populations. By keeping people well at the onset, PHM strategies can be used to decrease overall healthcare usage and avoid future overuse of the healthcare system. Taking into consideration the social, economic, environmental and behavioral factors that contribute to health disparities along the continuum of care, PHM takes a systematic approach by stratifying populations across health-risk profiles and applying different behavioral strategies to mitigate further risk.

While PHM is typically thought of in the context of hospitals, employers in the business and industry sectors are also able to play a critical role.

Out of concern about the impact of chronic disease on employee health and well-being, the rising cost of healthcare coverage, utilization and competitiveness, employers are increasingly applying PHM principles in the workplace. The meaning of workplace PHM is still evolving, and traditional wellness programs and their components remain an important element of population health. However, in order to bend the curve on health costs, programs that go beyond the typical employee wellness models toward a more integrated and comprehensive approach are required.

The purpose of this piece is to discuss the high cost of poor employee health and well-being, define PHM in the workplace, and highlight PHM initiatives and outcomes

within the corporate environment. As PHM continues to mature as a model for keeping populations healthy, the programmatic elements of employer PHM efforts will also evolve.

THE HIGH COST OF POOR EMPLOYEE HEALTH

Well-being is a multidimensional construct that considers a broad range of important life domains related to work, finances, emotional health, physical health and behavioral risks, as well as the quality of one's social connections and community.² The World Health Organization has broadly defined health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."³

Poor health has a financial impact on business, industry and the economy. Furthermore, although chronic disease was once thought to primarily be a problem among older age groups, there is a shift toward onset during Americans' working age that adds to the economic burden. The secondary costs of chronic disease are from illness-related loss of productivity; namely, absence from work (absenteeism) and reduced performance while at work (presenteeism). A recent study showed that for every dollar of medical and pharmacy costs, employers are burdened with two to three dollars in health-related productivity losses.⁴

In a first-of-its-kind longitudinal study, researchers examined the well-being of employees at a Fortune 100 company and found that overall well-being is not only a predictor of healthcare costs, but also other business outcomes related to productivity and retention (see Figure 1).⁵

KEY COMPONENTS OF PHM IN THE WORKPLACE



SUPPORT NETWORK

including Registered Dietitian Nutritionists (RDNs) and lifestyle/health coaches.

DISEASE PREVENTION STRATEGIES

that prevent the onset of conditions like Type 2 diabetes through programs targeting at-risk individuals.



The CDC's National Diabetes Prevention Program cuts the risk of developing Type 2 diabetes by **58%**

INDIVIDUALLY FOCUSED INTERVENTIONS

tailored to each participant's risk and readiness.



STRATEGIC PARTNERSHIPS

that allow organizations to expand their reach and provide resources for employees outside of the workplace.



STRATEGIC USE OF INCENTIVES

incorporating behavioral economics designed to "nudge" participants to make healthy choices.



ACCESS TO HEALTHY FOODS

in the workplace, along with nutrition education and promotion of healthy choices.



EVIDENCE-BASED HEALTH & WELLNESS PROGRAMS

backed by research, to increase the likelihood of participant success.

The Core4 program produces an average weight loss of **4% to 7.6%**

COMMUNITY SETTING

and the inclusion of family and friends to boost employee participation and success and decrease overall healthcare usage.



TECHNOLOGY

leveraged to boost participant engagement and participation.

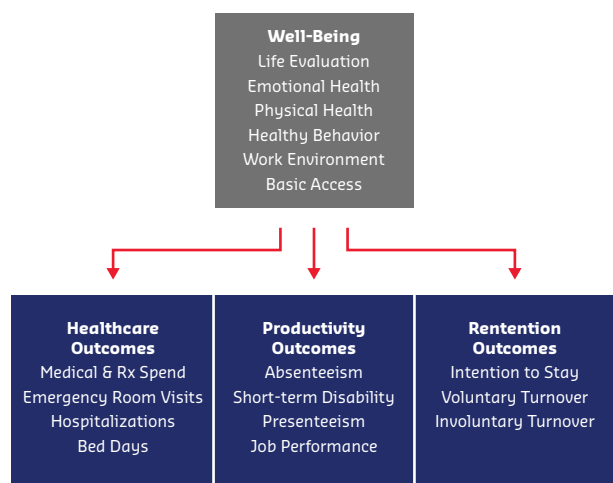


AN INTEGRATED PLATFORM

to simplify program management, and allow for easy employee access and communications.



Figure 1. Model of Well-Being Improvement and Employer Outcomes²



After one year, employees who had a low well-being score at baseline incurred \$857 more in medical and pharmacy costs than employees who had a high well-being score. Furthermore, those who started in the low well-being segment had approximately two more days of annual unscheduled absence and more than double the likelihood of short-term disability, reported over three times the level of presenteeism, and were rated almost half a point lower on performance on a five-point scale by their supervisors as compared to those in the high well-being segment at baseline.

Retention and turnover outcomes also improved in relation to overall well-being at baseline. Intentions to stay with the company were highest for those who started in the high well-being segment in the prior year. Moreover, employees who were in the high well-being segment at baseline had 30% fewer voluntary departures from the company and three times fewer involuntary departures than employees who started in the low well-being segment. These study results build a strong business case for well-being as an organizational performance strategy.

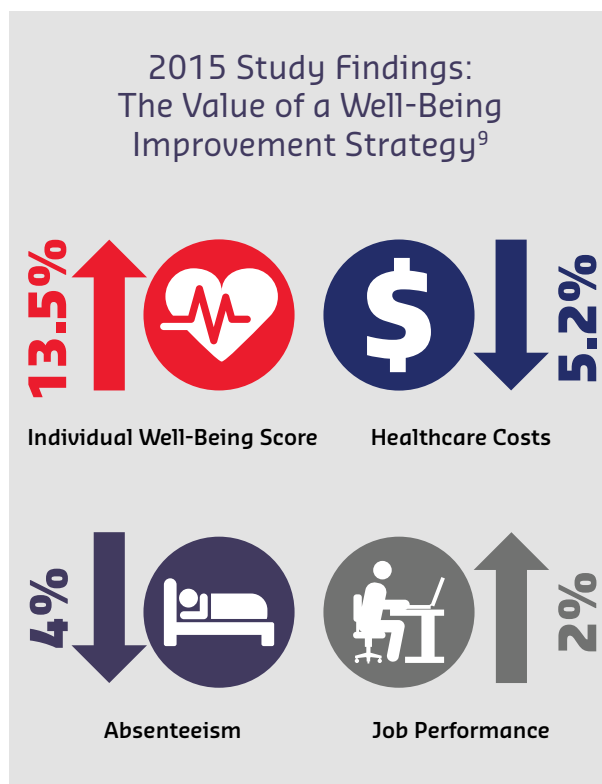
OVERVIEW AND BENEFITS OF PHM IN THE WORKPLACE

The core elements of effective PHM programs include a combination of data analytics and population-based strategies, paired with individually focused interventions designed to decrease chronic health risks by promoting healthy behaviors.⁶ In the report “Workplace Wellness Done Right,” the author emphasizes that “PHM requires a fully integrated platform for clinical data, wellness programs, one-on-one health coaching and workflow support systems. When paired with incentive management strategies,

this approach allows for greater engagement of the right people, at the right time and with the right message — basic core requirements of an effective PHM program.”⁷ The author also notes the importance of developing customized risk mitigation and intervention strategies based on individual member “readiness” to embrace healthy lifestyle behaviors.

PHM strategies can be used to decrease healthcare usage, encourage good employee health, and improve other organizational outcomes. Managing risk by improving health makes economic sense. However, to truly have an effect on the bottom line, “employers must look beyond healthcare benefits as a cost to be managed toward the benefits of good health as investments to be leveraged.”⁸

A 2015 longitudinal study by Guo et al. evaluated the effectiveness of a firm’s five-year well-being strategy for improving total population health and employee performance. Results demonstrated that in addition to cost savings and well-being improvement, clinical (obesity), behavioral (smoking) and presenteeism and absenteeism outcomes improved significantly. The average Individual Well-Being Score (IWBS) increased by 13.5%, healthcare costs declined by 5.2% on average over five years, job performance improved by 2%, and absenteeism decreased by 4%.⁹



It is evident that both the employee and the employer reap financial benefits as well as improved health-related outcomes from well-executed PHM programs. Figure 2 below illustrates the responsibilities and rewards for employees and employers in managing healthcare costs, improving health, and fostering an environment for an adaptable and resilient workforce.

Figure 2. Responsibilities and Rewards of Key Stakeholders in Workforce Wellness¹⁰

	Responsibilities	Rewards
Employees	<ul style="list-style-type: none"> » Health management » Disease management » Job performance 	<ul style="list-style-type: none"> » Improved health » Incentive-based rewards » Enhanced productivity & resilience
Employers	<ul style="list-style-type: none"> » Corporate culture of health » Investment in prevention » Healthier workplace environment 	<ul style="list-style-type: none"> » Optimal health & business performance » Ability to attract great employees » Employee satisfaction and retention

INCORPORATING PHM INTO TRADITIONAL WORKPLACE WELLNESS PROGRAMS

Typical workplace wellness programs strive to promote a healthy lifestyle for employees, maintain or improve their health and well-being, and prevent or delay the onset of disease. Programmatic elements typically include nutrition guidance, fitness activities and environmental modifications. Employers may also choose to add more nutritious options to their on-site dining program, and they may incentivize employees to make healthier choices.

Workplace wellness programs may also incorporate disease prevention strategies. Disease prevention programs aim either to prevent the onset of diseases (primary prevention) or to diagnose and treat disease at an early stage before complications occur (secondary prevention). Primary prevention addresses health-related behaviors and risk factors — for example, by encouraging a healthy diet to prevent the onset of diabetes mellitus. Secondary prevention attempts to improve disease control — for example, by promoting medication adherence for patients.

Workplace wellness programs that utilize a population health approach typically include both health promotion and disease prevention strategies. An important part of PHM is the need to stratify employee populations across health-risk profiles and apply tailored behavioral strategies to specific workforce segments.

In addition, well-designed population health programs typically modify multiple risk factors and offer structure, motivation and a variety of tools that drive positive change.

COLLABORATION AND COMMUNITY PARTNERSHIPS: CORE TO PHM IN THE WORKPLACE

PHM solutions must focus on interventions that promote the health and well-being of employees beyond the traditional “four walls” of the employer.

In essence, population-based wellness is more about the spokes than the hub. PHM in the workplace involves taking traditional, and often underutilized, workplace wellness programs and adding key elements outside of the business itself, including engaging and leveraging community partnerships, and the extension of programs to employees’ family members, friends, and community members.¹¹

Community partnerships are an essential part of any PHM approach and play a critical role in achieving program goals.

The essence of PHM strategies is collaboration.

The creation of public-private partnerships, or P3s, is one strategy organizations are using to expand their reach into the community. P3s are typically partnerships between private enterprises, insurance organizations and public outreach organizations. *The Communities for Health* pilot, described in greater detail later in the piece, is an excellent example of a program that successfully incorporates a P3.

The premise behind this approach is that improvement in the burden of healthcare can be achieved by improving employee health as well as the health of an employee’s family members — also recipients of care under an employer’s family health benefits. Furthermore, in the context of health behavior improvement, research has shown that people are more successful in achieving their goals when they have a support system. While employees may seek support from co-workers, they are likely to rely on family members and friends as well.

THE KEY ROLE OF RDNs IN PHM

Registered Dietitian Nutritionists (RDNs) are an important element of PHM strategies, as they can apply their unique skill set to translate the science of nutrition into practical solutions for healthy living. RDNs are often tasked with developing health promotion programs, increasing the effectiveness of program delivery and achieving better outcomes for participants. For example, they may work to maintain or improve health and well-being among low-risk employee populations and combat chronic diseases, like diabetes and heart disease, among high-risk groups. Typical outcomes of these efforts are better health and lifestyle choices related to diet, exercise, and smoking cessation.

Core4™ is an evidence-based program for weight management developed by RDNs at Sodexo. Through this program, RDNs teach participants how to improve their eating habits, lifestyle and activity choices, and how to maintain these behaviors in the long term. The program for adult weight management is offered as either a three-month or 12-month program, and has been shown to have statistically significant outcomes: the three-month program produced an average weight loss of 4% and the 12-month program's weight loss increased to 7.6%. What sets this type of program apart is that it gives participants the support they need not only to lose weight, but also to maintain weight loss.¹²



PHM CASE STUDY

COMMUNITIES FOR HEALTH PILOT

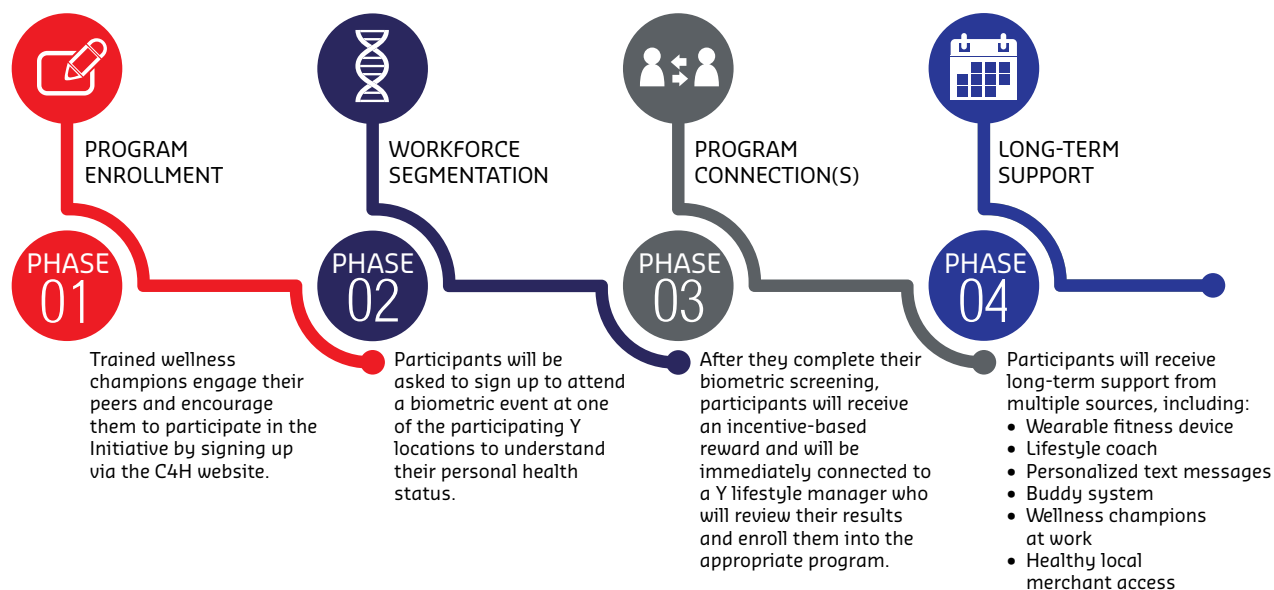
An example of an innovative workplace PHM program is the *Communities for Health* pilot, which centers on a collaboration between Sodexo and the YMCA of Central Florida. *Communities for Health* is designed to combat preventable chronic illness through a personal and coordinated approach that engages employees both at work and at home. The program triages participants for their level of risk and readiness for change, connects employees with a lifestyle coach, embraces a peer-to-peer approach, encourages a “buddy system” that extends into the community, leverages technology and strategically uses incentives throughout.

Communities for Health aims to achieve five specific objectives:

1. Engage individuals to participate in a robust health and wellness program through their employer by building a network of support, both in the workplace, the community and at home;
2. Leverage community health partners, local and national merchants and integrated technology systems to support health management and incentive-based rewards for healthy behaviors;
3. Strategically segment the workforce to connect participants to the appropriate evidence-based program, based on risk level and readiness to change;
4. Reduce employee and family health risks by encouraging healthy behaviors that will positively impact performance and reduce healthcare costs; and
5. Leverage healthier behaviors of the employee to change the behaviors of their neighboring community.

The three-year pilot is organized in phases, as it is designed to take a systems-based (integrated) approach to improving health at the population and individual levels. The four phases of the pilot are described in greater detail in Figure 3.

Figure 3. Phases of the Communities for Health Pilot



CONCLUSION

Like the healthcare sector, the workplace is also undergoing an unparalleled transformation. PHM in the workplace is designed to shift the focus toward wellness using a broader perspective that promotes improved health outcomes for employee groups, as well as employees' family members, friends and even extending into the community. There is a variety of ways to incorporate population health in the workplace, but at the core of this approach is the need to stratify employees and address both prevention and treatment of disease — with an emphasis on the former. By achieving better health and well-being among their workforce, organizations can benefit from increased cost savings, productivity and retention.

KEY INSIGHTS & IMPLICATIONS

- The core elements of effective PHM programs include a combination of data analytics and population-based strategies, paired with individually focused interventions designed to decrease chronic health risks by promoting healthy behaviors.
- PHM strategies can be used to decrease healthcare usage, encourage good employee health, and improve other organizational outcomes.
- An important part of PHM is the need to stratify employee populations across health-risk profiles and apply tailored behavioral strategies to specific workforce segments.
- PHM in the workplace involves taking traditional workplace wellness programs and adding key elements outside of the business itself, including engaging and leveraging community partnerships, and the extension of programs to employees' family members, friends and community members.
- Registered Dietitian Nutritionists (RDNs) are an important element of PHM strategies.

LINKING TO SODEXO'S QUALITY OF LIFE DIMENSIONS

- **Health & Well-Being:** PHM strategies in the workplace are designed to improve the health and well-being of employees, their family members, friends and others in the community.
- **Physical Environment:** PHM programs typically include environmental modifications (e.g., the addition of a walking path) designed to encourage healthy behaviors among employees.
- **Social Connections:** Effective PHM programs engage the community and incorporate a support system for employees; for example, through a buddy system or using a peer-to-peer approach.



WORKPLACE VIOLENCE AND TERRORISM: BEST PRACTICES FOR A NEW REALITY



Bill Tandeske, Vice President of Operations, Security, NMS Security

Helen Nichols, MSW, Research Consultant, Sodexo

The world has seen many incidents of violence in the past few years, and it is becoming increasingly hard to classify them — particularly when the crime scene is a place of work. The San Bernadino shooting in 2015 was initially called an example of workplace violence; later it was classified as an “act of terror.”¹ The verbiage continues to change. Similar reactions can be found for other tragedies, including Charlie Hebdo, Fort Hood and Navy Yard. Are these examples of workplace violence, terrorism or both?

According to the Occupational Safety and Health Administration (OSHA), each year, nearly 2 million American employees are victims of workplace violence.² Workplace violence is defined as any threat or act of physical or psychological violence intended to cause harm, from harassment and intimidation to sexual assault and murder. The traditional view of workplace violence has identified four types of perpetrators: criminal (someone with no connection to the workplace), customer (or clients, patients), employee (current or former), and personal (someone who has a relationship to an employee).³



Violence that occurs in the workplace has far-reaching negative consequences for employers, employees and the larger society, primarily because of the central role the workplace has in our lives. It is clear that boundaries

are shifting and, at times, disappearing: work and home life, work and health, work and political values are all becoming more closely intertwined. As the workplace continues to touch more elements of our personal lives, we must acknowledge the increased risk of negative spill-over effects, including violence. Along with this shift, the concept and implications of workplace violence are changing to become more encompassing.

This paper explores the “new normal” of workplace violence, particularly the emergence of a fifth type of workplace violence — terrorism. Alongside implications for costs and risk factors, this new understanding also impacts future prevention efforts. The idea of transporting skills and lessons learned from safety and anti-terror disciplines into the workplace, alongside the adoption of an integrated approach transcending departmental functions, constitutes the new reality of workplace violence prevention.

TERRORISM — A NEW CONTEXT FOR WORKPLACE VIOLENCE

Many recent media-prominent examples of violence at workplaces (e.g., San Bernadino, Charlie Hebdo, Fort Hood, Navy Yard) have sparked massive discussion about how to label these tragedies. Terrorism is designed to make people change their beliefs or actions and to undermine their sense of safety — a motivation unique from other forms of workplace violence.⁴ Yet the workplace has become a primary target of terrorism, due to the harmful impact work disruption has — not only on citizens and communities, but also on the national economy and infrastructure.

In light of the indistinct line between workplace violence and terrorism and the new challenges terrorism has created,⁵ we may wish to add a new category of workplace violence: terrorism/hate crimes. This type of workplace violence would refer to any violence directed at an organization, its people and/or property for ideological, religious or political reasons.

Terrorist attacks seek to destabilize trust in public institutions and erode people’s sense of safety. Attacks at the workplace disrupt daily life and business, paralyzing our economic, intellectual and social capital.⁶ This clearly has wide psychological ramifications, but it also greatly affects the economy.

One of the most significant examples is the 9/11 attacks in the United States. Economically, the short-term impact of the attacks was tremendous. In the month following the attacks, retail sales fell by \$6 billion (2.1%), new orders for durable goods fell \$11.6 billion, and industrial production fell by 1%. Stock markets were incapacitated and when trading reopened, the S&P and NASDAQ dropped by 7% and 9.9%, respectively. Shopping centers and restaurants across the nation were closed for 24 hours, high-risk office buildings were evacuated, major scheduled flights were cut by 30% and still left unfilled, and hotels experienced a surge in vacancies. Through the end of 2011, the Bureau of Labor Statistics attributed 408 major layoff events (defined as those shedding 50 or more jobs) as either a direct or indirect consequence of the attacks.⁷

Similar calculations can be undertaken for more recent attacks. Current projections of the 2015 [Paris attacks](#) estimate ramifications in the tens, if not hundreds, of billions of dollars. This is primarily due to the impact on the tourism industry, which accounts for 8% of the country's GDP. In the week following the attacks, hotel bookings dropped 30% and stock prices of international travel agencies and airlines took big hits (i.e., Delta DAL -0.48%, Hilton HLT -0.22%).^{8,9}

Historically, these events have also been followed by a short, sharp contraction in either overall consumption or purchases of high-priced consumption goods,¹⁰ which illustrates clearly how extensive the effects of terrorist-related workplace violence can be.

As we acknowledge this new context for workplace violence, there are clear implications for organizational prevention strategies. Security experts can transport lessons and best practices from initiatives targeted at terrorism and hate crimes to the workplace (and vice versa). Before delving into best practices, however, this piece will describe the high cost of workplace violence and important risk factors organizations should be aware of.

THE COST OF WORKPLACE VIOLENCE

The Bureau of Labor Statistics estimates that between 1.5 and 2 million incidents of workplace violence occur annually, though this is likely to be underreported by as much as 50%. Furthermore, this estimate only refers to incidents of criminal and physical contact; what we still need to consider are the multitude of everyday situations that include arguments, threats, harassment, bullying and intimidation occurring in great numbers but unlikely to be reported.

Nevertheless, what can be said with certainty is that workplace violence takes an enormous toll — not only

on employees, but on employers and society as well. An incident of workplace violence is not just an isolated experience that affects a limited number of employees. There are ripple effects throughout:

- **Employees.** In 2014, more than 31,000 Americans were intentionally injured by another person at their workplace,¹¹ resulting in an estimated 188,280 missed work days and \$25 million in lost wages.¹² Employees who are victims of workplace violence may have the financial burden of meeting immediate and long-term medical costs, as well as harmful psychological consequences, such as post-traumatic stress and the related fear of future violence.¹³
- **Employers.** Direct costs include those stemming from violent acts, such as physical site damage, healthcare costs (both for direct victims and those who are impacted psychologically by witnessing violence), and liability expenses and negligence lawsuits. Indirect organizational costs include diminished employee morale, reduced productivity and greater absenteeism.¹⁴ Workplace violence not only causes employees to lose confidence that they are safe at work, but can cause customers to seek services elsewhere and associated companies to sever ties due to negative publicity.¹⁵ Some estimates propose that up to 40% of businesses affected by either natural or human-caused disaster — including severe manifestations of workplace violence — never reopen.¹⁶
- **Society.** Society also pays a price for workplace violence and terror. Victims of workplace violence are more likely to experience relationship problems. Even those indirectly affected, such as a family member or friend, are at an increased risk for a range of health issues including mental illness, distress and behavioral changes.¹⁷ This adds to an escalation of health care costs in a context where healthcare already accounts for as much as 17.5% of GDP. Workplace violence also negatively impacts culture and values. We have seen the emergence of a culture of fear and mistrust, starting with individuals affected by violence and their acquaintances, and then escalating up to an organization's culture and even politics. Two-thirds of Millennials say that “you can't be too careful” when dealing with people — clearly an attitude that is detrimental to collaboration and innovation in the long term.¹⁸

Nearly **70%** of U.S. organizations have **insufficient** or no **programs/policies** to combat workplace violence.

WORKPLACE VIOLENCE

In 2014, workplace violence resulted in an estimated **188,280 missed work days** and **\$25M in lost wages.**

2 million U.S. employees are victims of workplace violence each year.

Cost of reacting to serious workplace violence incidents is **100 times** more than the cost of preventing these incidents in the first place.

Up to **40%** of businesses affected by severe workplace violence never reopen.



For employers who fail to prevent workplace violence, **jury awards** in liability cases average **\$3.1 MILLION** per person, per incident.

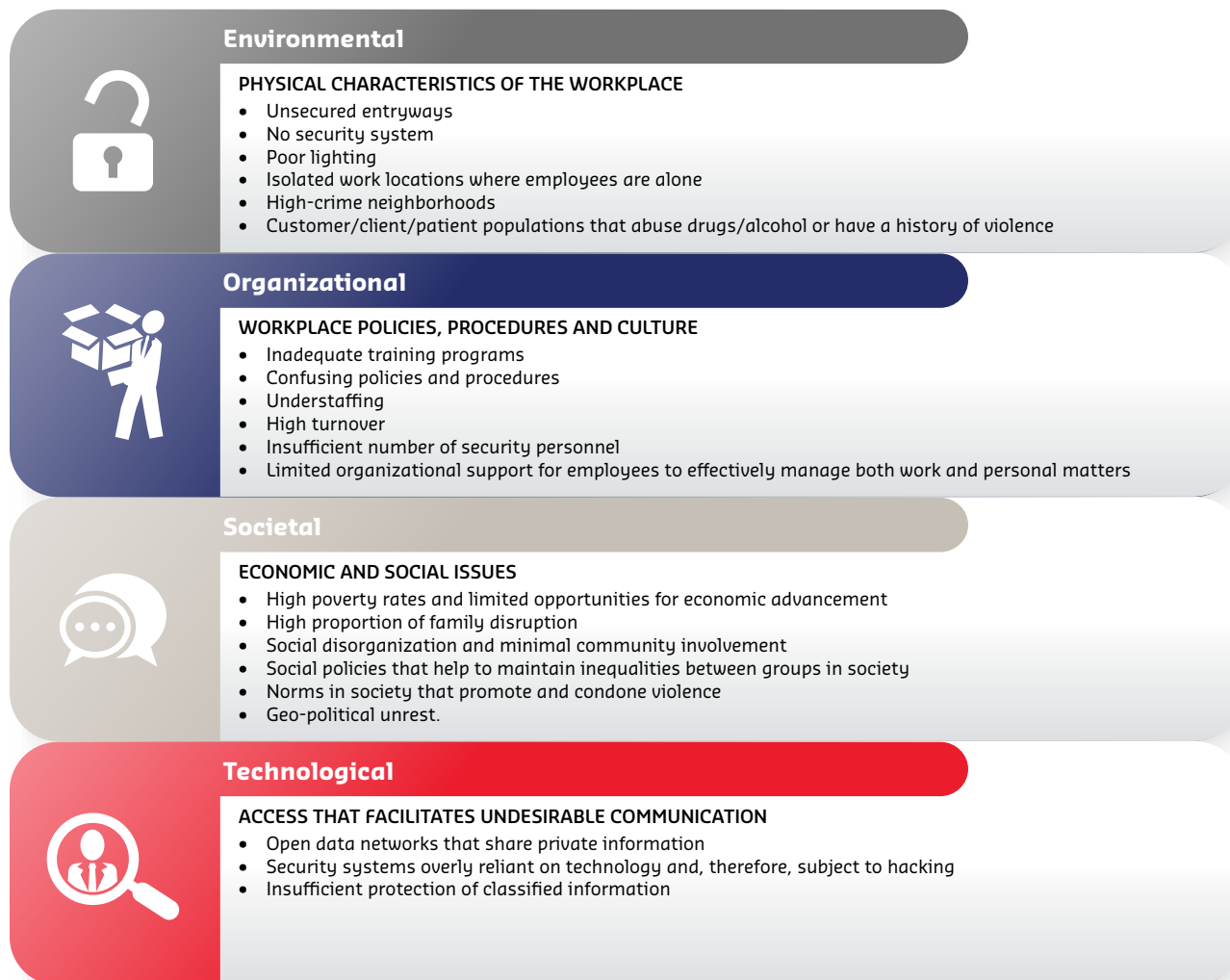


Types of Workplace Violence

RISK FACTORS OF WORKPLACE VIOLENCE

While it is difficult to anticipate when and where workplace violence may occur, psychological and statistical methods have allowed researchers to identify several risk factors. Certain environmental, organizational, societal and technological factors have been shown to increase the risk of workplace violence (see Figure 1).

Figure 1. Example Risk Factors of Workplace Violence^{19,20}



PREVENTION IS CRITICAL

Most people think that workplace violence occurs elsewhere — at someone else's job — but no organization is immune. In fact, workplace violence affects more than half of U.S. organizations, but nearly 70% have no or insufficient programs and policies in place to combat it.²¹ The expanding realm of workplace violence calls for a new look at preparedness, response and recovery strategies. In particular, with disappearing distinctions between "terrorism" and other safety hazards, a fully integrated approach is needed to mitigate risks — one that spans organizational departments.

The approach to workplace violence should always be proactive, rather than reactive. The cost of reacting to serious workplace violence incidents is estimated to be 100 times more than the cost of preventing these incidents in the first place.²² For employers who fail to proactively take action to prevent workplace violence, jury awards in liability cases average \$3.1 million per person per incident.²³ Therefore, while it is crucial for every workplace to have procedures and strategies in place for when an incident does occur, future efforts ought to focus on prevention.

WORKPLACE VIOLENCE PREVENTION — BEST PRACTICES MEET A NEW REALITY

There are many existing lists, strategies and action plans surrounding the prevention of workplace violence. Moving forward, employers should augment existing strategies with lessons learned, insights and best practices from tactics utilized for terrorist threats. In particular, **early detection mechanisms and processes** are an essential part of any prevention plan. The table below highlights 10 best practices and steps for workplace violence prevention in the future.

10 Best Practices for Workplace Violence Prevention

Best Practice	Explanation	Leader Actions
1. Lead by Example	Supervisors committed to preventing workplace violence will have the most impact.	Leadership must work to integrate Security, HR, Risk Management, Facility Management and other functions, by creating a shared, collective focus on preventing violence. Cross-functional collaboration at the leadership level shows employees that preventing violence is not an isolated function.
2. Listen to Employees	Employees are a key source of information.	Create a safe haven for employees to speak openly and freely about any concerns. The U.S. Homeland Security has recognized that “it takes a community to protect a community” and established the motto, “If you see something, say something.” Transfer this to the workplace.
3. Identify Threats	Existing and potential threats must be identified if they are to be remedied.	Utilize intelligence analysis and anti-terror tools, adapting them to be workplace appropriate. Review existing security procedures and practice escalating situations to uncover loopholes.
4. Take Corrective Action	Minimize the risk presented by existing potential threats.	Implement physical solutions in line with technological standards (e.g., controlling building access with badges). Support employees with resources, for example, an Employee Assistance Program. Address grievances and risk factors, following anti-terrorism guidelines.
5. Provide Training	Ensure employees have proper and the most up-to-date knowledge and skills through training.	Increasing awareness, not just preparedness, is a key element of any violence prevention campaign, from domestic abuse to terrorism. Recognize the new landscape of training in this field and share new insights on tools and techniques.
6. Communicate Regularly with Employees	Build trust and security by keeping everyone informed.	Employees are rarely informed when an attack was successfully thwarted. Employers should tell employees about any occurrences in order to make them more engaged, and to help them understand the purpose of prevention measures. Ensure that procedures are in place to update and check in with affected employees in case of an event.
7. Evaluate Programs	Review policies and procedures regularly.	Expand the definition of workplace violence. Integrate new tools. Form new interdisciplinary teams to evaluate existing measures.
8. Seek Technical Expertise	Objectively identify gaps in procedures and awareness.	Not every company has technical security expertise. Acknowledge if resources are limited and determine when and where external technical expertise should be brought in for consultation.
9. Inform all End Users	Everyone who enters the workplace is at risk, not just employees.	Make all visitors and end users aware of the plans and procedures in place. Ensure that they have internalized — not simply accepted — the importance of safety features such as registering for the on-site text service for mustering.
10. Collaborate with Other Companies	Violence prevention is not an isolated company-specific effort.	Go beyond reliance on governmental guidelines and form inter-organizational collaborations to share best practices. Engage guest speakers and host informative events with other companies and professional associations.

PREVENTION THROUGH TECHNOLOGY

The foundation of any prevention program is information, and technology unquestionably enables the collection, analysis and sharing of information. Both corporations and national security agencies have adopted technological systems that help them to monitor and predict potential threats.

In the corporate setting thus far, the primary aim of employee-level data analysis has been to improve productivity and to prevent future litigation due to leakage of sensitive information. However, with more advanced technology, the extent to which we can collect and analyze data is rapidly expanding. Counter-terrorism agencies have developed sophisticated processes and systems that send out alerts in response to trigger words, activity “hot-spots” and any suspicious patterns. Many organizations are integrating these types of systems into their existing violence prevention frameworks.

Another important consideration is the integration of technology and communication systems across functions. On a macro scale, we have seen success of integration in the collaborations between homeland security agencies and the corporate sector, including the technology leaders of Silicon Valley, as well as other organizations including marketing and social media.²⁴ On an enterprise level, the same principle could be applied for workplace violence prevention. Involving a cross-functional team can lead to more efficient management of the prevention process, expanded program oversight, and a well-balanced solution approach.²⁵ The best starting point to enable collaboration is to simply link the technological systems of the various functions so that they can more easily share information.

THE NEW NORMAL OF WORKPLACE VIOLENCE

In political rhetoric, news coverage, and even business messaging, we see a culture of fear. This fear permeates our day-to-day lives, with implications at home and at work. As the boundaries between our personal and work lives continue to disappear and individual values increasingly infuse the workplace, we are seeing new types of violence emerge. Today’s definition of workplace violence is becoming much broader and all-encompassing, to include terrorism and other hate crimes.

Armed with this more comprehensive understanding, employers must adopt and adapt new systems, processes, and technologies from other disciplines in collective prevention efforts. While a direct collaboration between every corporation and homeland security to implement one wide and comprehensive violence prevention initiative is unrealistic, **the idea of transporting certain ideas and lessons learned into the workplace merits consideration.** Employers must also adopt an integrated approach that spans organizational functions.

The workplace as we know it is fundamentally altered, and it will never be the same again. In these challenging times — and with technology requiring fewer face-to-face interactions and an increasing number of employees working virtually — it is essential that employees relearn how to trust one another and build strong relationships with colleagues. In doing so, we all can collectively strive to prevent workplace violence and overcome the “culture of fear” in the workplace. Ultimately, preventing and responding to workplace violence is everyone’s responsibility.

HELPFUL RESOURCES FOR EMPLOYERS AND EMPLOYEES

- Occupational Safety & Health Administration: Safety & Health Topics – Workplace Violence (<https://www.osha.gov/SLTC/workplaceviolence/>)
- U.S. Department of Labor – Workplace Violence Program (<http://www.dol.gov/oasam/hrc/policies/dol-workplace-violence-program.htm>)
- National Institute for the Prevention of Workplace Violence (<http://www.workplaceviolence911.com/>)
- Centers for Disease Control – National Institute for Occupational Safety & Health – Occupational Violence (<http://www.cdc.gov/niosh/topics/violence/>)
- Federal Bureau of Investigation – Workplace Violence: Readiness and Response (<https://leb.fbi.gov/2011/january/workplace-violence-prevention-readiness-and-response>)



KEY INSIGHTS & IMPLICATIONS

- As the workplace continues to touch more elements of our personal lives, there is an increased risk of negative spillover effects, including violence.
- Workplace violence is typically categorized into four types: criminal, customer, employee and personal. In light of the indistinct line between workplace violence and terrorism, terrorism/hate crimes can be added as a fifth category.
- Workplace violence takes an enormous toll on employees, employers and society. Terrorist attacks at the workplace can have an even more extensive impact — by disrupting daily life and business, and paralyzing our economic, intellectual and social capital.
- Certain environmental, organizational, societal and technological factors have been shown to increase the risk of workplace violence. Prevention plays a critical role in mitigating these risks.
- Security experts can transport lessons and best practices from initiatives targeted at terrorism and hate crimes to the workplace.

LINKING TO SODEXO'S QUALITY OF LIFE DIMENSIONS

- **Health & Well-Being:** Workplace violence prevention focuses on preserving the physical and psychological health and well-being of employees and society in general.
- **Physical Environment:** There are multiple physical characteristics of the workplace (e.g., secured entryways) that play an essential role in managing workplace violence risk.
- **Ease & Efficiency:** Victims of workplace violence may cope with harmful physical and psychological consequences for years that unquestionably affects their ability to work with ease and efficiency. For all employees, minimizing the risk of workplace violence increases productivity and morale.



STORIES OF URBAN TRANSFORMATION: THE RISE OF 18-HOUR WORK/LIVE COMMUNITIES



Nancy Johnson Sanquist, IFMA Fellow and AIA Associate, Real Estate and Workplace Strategist, Trimble
Diane Coles Levine, MCR, Managing Partner, Workplace Management Solutions

Cities all over the world are hotbeds of ideas, blending new and old concepts to create exciting urban experiences for residents, workers, enterprises and visitors. Like never before, experts in different fields are creating and deploying new technologies in their collaboration to transform the urban environment in the digital business era. Digital business is the creation of new business models enabled by innovative technologies that create different types of value chains and expanded opportunities in all industries worldwide.

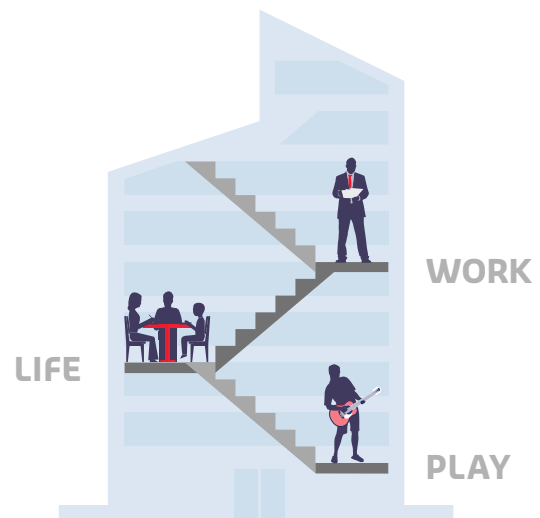
These experts who are transforming urban and, in some cases, suburban neighborhoods, include developers, investors, technologists, economic developers, business people, urban planners, architects, interior designers, retailers, entrepreneurs, co-workers, co-livers, transportation planners and lastly, real estate and facility management professionals. This is an era characterized by the blending of these disparate skill sets, and in their work, the blurring of the physical and digital places in the urban environment.

One of the new urban trends is the rise of the 18-hour city, which is making secondary real estate markets a more compelling place for investment than the big 24-hour markets of Boston, New York, Washington, D.C., Seattle, the Bay area and Southern California. Smaller cities like Nashville, Charlotte, Greenville, Indianapolis, Louisville, Portland, Austin and Raleigh/Durham are attracting people who want a lower cost of housing and more opportunities for employment in the downtown area. These cities are called 18-hour cities which, unlike the 24-hour ones, do close down at some point in the day. And corporations are following the talent and opening or expanding facilities in these locations.

Real estate pundits predict that 2016 will be the year of these cities in the secondary and tertiary markets, where investors/developers do not necessarily have to compete with the major foreign investment going into the larger urban areas. If you take the 18-hour city of Nashville as an example, it has several universities and a diverse economy, with a concentration of employment in the healthcare and transportation industries in the downtown area. The city also has a great music scene, a high walkability “score” and a

good transportation system, all of which is drawing new talent to its downtown.

This trend is relevant to the workplace in terms of the closer merging of work/life/play in these growing cities, where previously these activities had been clearly separated. Many people lived in a house in the suburbs and took a train or car into the city for work or entertainment. When corporations are right in the midst of a city, it is easier to foster after-work networking and social interaction amongst employees — which may take place either within the office if adequate facilities are provided, or “next door” in the nearby downtown area. When work and home are more physically concentrated in the downtown areas of 18-hour cities or in Live/Work buildings, this can tighten the connection between workers and creators. For larger employers, this connection can be further fostered through the provision of additional services for employees (e.g., dining, wellness centers, and concierge services). By expanding their multiuse functions, these 18-hour cities are attractive to all age types, including Millennials and Boomers.



22% say **QUALITY OF LIFE FEATURES** are the **most** important factors when choosing where to live.¹

HIGH PRIORITY COMMUNITY PREFERENCES: METRO FEATURES¹



65%

AFFORDABLE
HOUSING
OPTIONS



36%

VIBRANT CENTERS
OF ENTERTAINMENT
AND CULTURE



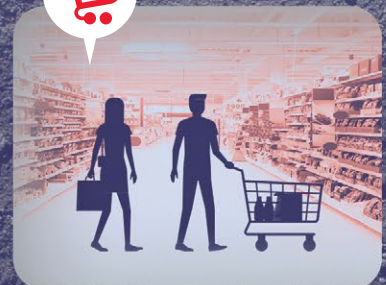
46%

SIDEWALKS, BIKE
LANES, HIKING TRAILS,
AND FITNESS CHOICES



33%

AFFORDABLE AND CONVENIENT
TRANSPORTATION CHOICES



This piece focuses on a few of the most interesting stories that demonstrate early signs of the type of urban transformations (and one suburban) that will catch the wind and blow into more and more cities around the globe in 2016 and beyond.

Each story is about how the various city players are using innovation and technology to transform the work they are doing and shape the world's future cities. They include stories about young entrepreneurs, new corporate/community leaders, architects, urban planners, developers and investors, all of whom have new insights into how the facility management and corporate real estate professions need to be more interdisciplinary and work more closely with these types of urban innovators.

The three themes of these urban transformation stories are:

- New Work/Live Places
- Corporate Real Estate and the Community: A New Partnership
- Horizontal and Vertical Villages

1. NEW WORK/LIVE PLACES

Cities of all sizes are branding themselves as meccas for urbanites (from all generations) who want to have access, any time day or night, to all the types of places that can accommodate their lifestyle choices. These cities also typically require only the simplest of transportation to move around. In Crystal City outside of Washington, D.C., the area has been undergoing a rebirth whereby a resident can live, work, shop and play without leaving its perimeters. Underground corridors connect the living quarters of the high-rise buildings with the office buildings, to make the transitions of activities as easy as possible. It is here that an outdated office building is being renovated into apartments with two floors designated for co-working, in the same building as residential. This is the first of many such conversions that will occur in the future, solidifying the blur of work and private life.

Co-working is a movement that started in 2005 and has grown today to include 781 workplaces in the U.S. and 3,100 around the world. The movement is predicted to grow to 12,000 co-working centers globally. This is a natural consequence of the emergence of the contract worker who would rather move from project to project than work full-time for an organization. This free agent type of worker is predicted to be almost half of the workforce by 2020. While the digital workplace and all of the mobile, cloud and social media technologies have allowed today's worker to be untethered from place, the free agent or contractor who has chosen the life of the entrepreneur still needs a physical place.



Co-working places answered this need in the market for more flexible, casual, engaging open work environments designed to fit into the local urban culture. It is only natural that these fun-oriented environments with strong community building orientations should then grow to add co-living spaces. Why not have all the “stuff” related to living be provided by the co-living service company that allows it to be so easy to sign up for a space to work for a day, month or years with all amenities included.

The Young Entrepreneur's Story

Imagine you are just out of college and have been partially funded by a small family trust to create a new tech product. You can live anywhere you want, but have very limited funds for the first year. You want to be where the creative people live, which usually means in the coolest cities in the world, but places like New York and London are so expensive. What choices do you have today? You could:

- a. Choose a WeWork co-working office in 19 different cities around the world. WeWork is a company started by Adam Neumann (now valued at \$10 billion). Adam, along with his architect partner, has created a new real estate model called “asset lite.” WeWork is not an owner of real estate like Regus, but rather signs long-term leases on buildings, turning them into trendy open office spaces, and provides all the services one would need for an uninterrupted work experience; this includes not only coffee, beer and staples, but also social events and venture and financial advice. You can pay by the hour or day, week or month and even choose to live in a new WeLive micro-apartment space nearby. The co-living option is low cost and like

the co-working space, has services built into the rent, with amenities like common areas, libraries, gardens and bike parking.

- b. Choose a co-living space called the Brownstone where you could have a bedroom in a 20-room residential building in the downtown of a city. The space includes four shared kitchens and a common eating room that can turn into a work area during the day, which means no commuting. This would allow you to roll out of bed and into a separate area for creating your awesome new product, while still having the comradery of passionate professionals around you.
- c. Finally, you could choose to live and work in a few cities according to the time of year. For example, let's say that you have a good friend in Mexico City so you have decided to be part of an ecosystem of places allowing you a global co-live/work subscription. This allows you to have your main residence in Mexico during fall and winter, which also includes living and workspace. Then you can sub-lease that space while you work from another similar location in Bali in the spring and Lisbon in the summer. For many of today's workers — but especially Millennials — this is living the romantic life of the global nomadic entrepreneur.

All of the aforementioned choices evolved out of community living concepts of sharing spaces. But this is different from the communes of the hippies or the Israel kibbutz, since there is not shared work involved. The purpose of these communities is to make life as easy as possible for the urban dweller who not only wants to concentrate on their work, but simultaneously wants to have fun in an engaging environment.

2. THE NEW ROLE OF CORPORATE REAL ESTATE IN THE COMMUNITY

Millennials, more than previous generations, want a sense of purpose at work. Add to this the fact that corporate social responsibility is more important now than ever, making "community impact" a new driver for workplace change. While corporations have an excellent record of giving to local charities and foundations, there is a new closer connection with the community. Corporate real estate groups are taking on redevelopment of existing neighborhoods in cities and are being asked to open up their workplaces to co-workers from outside their organizations who can work alongside employees of the company. While once isolating the work of the organization from the local community, now these workplaces take advantage of the partnership between corporations and community groups to encourage serendipitous encounters that can

occur when people of different backgrounds and skill sets mingle in the work environment.

The Corporate Community Leaders' Stories:

Tony Hsieh is an unconventional CEO and unlikely community investor and developer as the CEO of Zappos. On July 22, 2009, Amazon.com announced the acquisition of Zappos.com in a deal valued at approximately \$1.2 billion. Tony still runs the downtown Las Vegas-based Zappos.com and is trying a controversial management experiment called "holocracy," where employees have no titles, just roles. He is also the investor with \$200 million dollars in blocks of real estate in what was once seedy downtown Las Vegas. There he moved Zappos headquarters into a renovated old city hall and invested another \$150 million in small businesses, bars, restaurants, a bookstore and a trailer park called Llamaland where he and visiting coders live. Tony has kicked up the notch from being concerned with work/life balance to what he calls "work life integration." In the works: a hotel and housing for the neighborhood.

Coca-Cola's April Redmond Echols, Project Coordinator for Global Innovation, opened her company's co-working space to the community to encourage Atlanta entrepreneurs to have encounters with Coca-Cola employees. At first, the Coke employees were hesitant to use the space, but soon they got in the groove and were engaging with the non-Coke freelancers. This represents a new way for organizations to open up their corporate facilities and engage with their local communities to share innovative ideas.

Coke is not alone — other corporations like Google, Sprint, AT&T and State Farm are reaching out and inviting local entrepreneurs into their co-working spaces. The latest to do so is Verizon. They are partnering with Grind to renovate a landmark building in New York City. Grind has years of experience in the design and management of membership-based co-working communities and will "curate the experience." Gensler will convert 10,000 sf of their headquarters into Verizon-enabled space for 120 startups and entrepreneurs, while Verizon Ventures, the venture capital part of the firm, will provide mentorship to the innovators. This initiative is far more beneficial economically to the community than just giving money away to local charities or foundations, as it can spawn new business growth as these entrepreneurs turn their ideas into profit-making companies.

Another example is BankMuscat, in the Sultanate of Oman, who wanted their workplace to be a catalyst for community engagement. They introduced an interactive "Main Street" on the ground floor connecting their four buildings with retail outlets,

restaurants, fitness center and child care — all to support their multicultural community, employees and their families. One final example is ASICS America, a sportswear company known for their culture of health and wellness. ASICS recently rebuilt their California headquarters to include a state-of-the-art sports institute that is open to community teams and elite athletes, ultimately designed to promote the ASICS brand. These companies are using the workplace for both community impact and as a marketing tool.

Corporate real estate professionals are also renting out parts of their unutilized real estate portfolios. This is not unlike the LiquidSpace model, which takes unutilized corporate and hotel spaces and puts them up for hourly rent through a mobile app. This is a win-win for everyone: CRE professionals who want to maximize the use of their built resources, freelancers looking for temporary space and corporate employees who seek to have other non-company workers around them to provide a different type of stimulation.

3. HORIZONTAL AND VERTICAL MULTIUSE ARCHITECTURE

Architects are now using new technologies and processes in the planning, design and construction of both new and renovated buildings described in the previous sections. They are also building massively large, horizontally oriented open plan workplaces that transform the suburban landscape. While inside the densely packed city, multiuse neighborhoods are being stood on their heads and rising up into the

airspace, drastically altering the skylines of many urban landscapes. These skinny, tall buildings piercing the skies are a response to the increased need for densification and a reaction to urban sprawl.

These horizontal and vertical villages, as well as other developments containing multiuses in a single complex, are causing the urban planners to rethink current zoning regulations. Cities like Los Angeles are using a type of form and use based code from new urbanism concepts to provide would-be builders guidelines for dealing with these multiuse functions and forms, designed around the characteristics of the individual neighborhoods. In the case of LA, this will allow them to throw away the ancient 700-page zoning book currently in use.

The Architects' Stories:

Frank Gehry is considered by some to be the most famous architect in the world today. At 87, his partnership with Mark Zuckerberg, the CEO of Facebook, was a rather unlikely pairing. Not only for the vast difference in age, but because Zuckerberg did not really care so much for having the world's most famous architect design his new headquarters. He just wanted someone who could bring it in on time and on budget. Now that was not what Gehry is known for, but he did do just that with the new headquarters. This amazing partnership has produced the largest horizontal open plan workplace ever built, in Menlo Park, California, just outside of San Francisco in the Silicon Valley. Gehry was able to accomplish this by working with his team of architects/technologists who

Facebook Headquarters, Menlo Park, California





E37 Street Residential Tower, New York, New York

designed a building information model (BIM) using cloud-based software they had created. This enabled the tight collaboration of all of the stakeholders throughout the building process.

The concept for this metal, concrete and glass structure was to create the same type of environment Zuckerberg had created in the converted Sun campus: an open, inspiring “work in progress,” with no convoluted forms typical of Gehry buildings. It is fascinating that when you look at the new floorplan, it is directly reminiscent of the 1960’s bunderlandshaft open plan that the Quickborner team had designed in Germany to increase communication and workflow. Half a century later, it appears again to accomplish exactly what was intended so long ago.

The concept of the rest of the Facebook Neighborhood is to turn this mostly industrial landscape into the same type of live/work/play environment discussed previously. In the master plan, there will be a hotel, residential units, a neighborhood service center and retail.

Back in urban environments, vertical villages are the new, hot urban real estate development, but like the huge open planned floorplan in the Facebook building, this is not a new concept. The idea goes back to the German architect and urban planner, Ludwig Hilberseimer, who in 1927 created the “high-rise

city” in the form of a tall block, with people living and working in the same building.

Today architects and developers are getting closer to Frank Lloyd Wright’s “Mile High City,” which would be the combined height of two of the highest buildings in the world today — hardly imaginable. Perkins+Will’s Robert Goodwin describes how he took “the urban fabric of Greenwich Village — a series of row houses with a small park at the end of the street — and tipped it vertically” for his design of the new E37 Street Tower.² This vertical village includes not only condos, but gardens, an outdoor cinema, wellness amenities and an observatory looking up from the 65-story tower. In other vertical villages there are also retail, office, residential, entertainment, and even educational facilities included in the tall structures.

We see these phenomena all over the world, as we are running out of space on the ground and now reaching higher and higher into the sky to create these vertical villages. But there is a lot of controversy in the architectural community as to how these new structures are affecting view corridors, shading and other aspects of urban living and working. New urban regulations are being created in some cities to address these problems.

CONCLUSION

Today, more than half of the world's population is living in a city. By 2030, it is estimated that there will be 5 to 7 billion people living in urban environments and generating 80% of the world's GDP. This leads to many questions about what the city and workplace of the future will look like:

- How will the new urban landscape and live/work places transform the field of FM, real estate and workplace strategy?
- Will corporations provide living options for workers in the future?
- How will the new “free agent worker” movement transform the corporate office and field of FM and real estate?
- Who will manage the multiuse work/live places of the future?
- Will cities be able to keep up with new zoning requirements to accommodate the migration and sky-high multiuse buildings?
- How will this change the real estate market?

All of these questions cannot be answered here, but the stories described in this piece highlight some of the most interesting urban transformations that have occurred in the past few years. Hopefully these stories give us insight into how various professionals are shaping the cities of the future and demonstrate how real estate and facility management can join them to change our concepts of living, working and playing in the urban environment.

KEY INSIGHTS & IMPLICATIONS

- One of the new urban trends is the rise of the 18-hour city. Corporations are following the talent and opening or expanding facilities in these locations.
- This trend is relevant to the workplace in terms of the closer merging of work/life/play in these growing cities.
- This piece shares several urban transformation stories, with the following three themes:
 - » **New Work/Live Places:** Cities of all sizes are branding themselves as meccas for those who want to have anytime access to the places that accommodate their lifestyle choices.
 - » **Corporate Real Estate and the Community – A New Partnership:** Corporate real estate groups are taking on redevelopment of existing neighborhoods and are being asked to open up their workplaces to co-workers from outside their organizations.
 - » **Horizontal and Vertical Villages:** Architects are building large, horizontally oriented open plan workplaces that transform the suburban landscape. Inside cities, vertical multiuse neighborhoods are being constructed in response to the increased need for densification.

LINKING TO SODEXO'S QUALITY OF LIFE DIMENSIONS

- **Physical Environment:** The essence of urban transformation is the creation of multiuse work/live/play places through conversions, renovations, new building construction and architectural models.
- **Ease & Efficiency:** The 18-hour city is designed to make life as easy as possible for residents, so they can work, shop, and play without leaving its perimeters — and easily transition between these activities.
- **Social Connections:** An 18-hour city fosters after-work networking and social interaction amongst employees. Workplaces that are open to outside employees encourage serendipitous encounters that can occur when people of different backgrounds and skill sets mingle.
- **Health & Well-Being:** Residents in 18-hour cities enjoy convenient access to amenities like fitness centers, healthy dining options and grocery stores, and dedicated green spaces. These cities also encourage walking through the proximity of activities and amenities.



BIG DATA IN THE WORKPLACE: CAN IT ENHANCE EMPLOYEE PRODUCTIVITY AND QUALITY OF LIFE?



A Future of Work Roundtable

April 21, 2015
Orlando, Florida



*The Future
of Work...
unlimited*

James Ware, PhD, Executive Director, The Future of Work...unlimited

BACKGROUND

Organizations today have an unprecedented ability to capture data about both their facilities and their workforce's activities. However, while Facilities Management (FM) professionals hear a great deal about smart buildings and how Big Data supports facilities management, there seems to be far less attention being paid to smart behaviors and almost nothing to smart management.

There is plenty of buzz about Big Data, but the reality is that Big Data is nothing without Big Judgment. How can FM leverage the data already being captured about workplaces and the workforce in order to raise the bar on employee productivity, engagement and quality of life? What additional data could take FM to the next level of relevance and enhanced organizational performance? How can FM leaders ensure that the data they capture is used appropriately and responsibly?

IFMA and Sodexo collaborated to sponsor and host a Future of Work Roundtable conversation on the challenges and opportunities surrounding these questions at IFMA's Facility Fusion 2015 Conference in Orlando in April 2015.

The Roundtable was facilitated by Dr. James Ware, Executive Director of *The Future of Work...unlimited*, Global Research Director for *Occupiers Journal Limited*, and immediate past president of IFMA's Corporate Real Estate Council. Jim also prepared this summary of the roundtable conversation.

Participants

The roundtable participants were invited by IFMA, Sodexo and *The Future of Work...unlimited*. As a group, they represented a broad range of industries, professional roles and geographic regions. They are senior FM practitioners, consultants, workplace designers and FM service providers.

The Conversation

The roundtable conversation, which lasted approximately two hours, focused on exploring the issues surrounding the collection and analysis of data that describes employee demographics and behaviors in the workplace. The group was particularly interested in how the FM function can affect both the benefits and the risks of tracking employee activities. The following questions drove the conversation:

1. What are the newest and most powerful opportunities for capturing data about employee work activities and experiences?
2. What are the most compelling benefits of work activity data for employers? For employees?
3. What are the dangers and risks?
4. What are the most important do's and don'ts regarding work activity tracking? Should organizations establish and communicate formal policies about tracking and using work activity data?
5. What is the appropriate role for FM leaders to take in defining and enforcing employee monitoring policies and practices?

1

2

3

4

Big Data
in the
Workplace

5

6

7

8

9

10

ISSUES AND INSIGHTS

Opening Comments

Our conversation began with a broad overview of the “state of the art” regarding the monitoring and analysis of employee-related data. Employee monitoring is already very common, whether it involves video surveillance of lobbies and other “public” areas within corporate facilities or more discrete behavioral data like keystrokes or individuals’ movements within a facility.

Employee monitoring is already very common.

With the growth of the Internet of Things, or “IoT,” and the advent of smart buildings (and smart chairs, smart floors, wearable computing and more), it is also possible (and happening with increasing frequency) to monitor employees virtually anywhere they go, including their work activities at home and anywhere else they access their laptops, tablets or smartphones.

The most exciting aspect of the Internet of Things is the potential for remote sensors to capture and transmit useful data automatically (and at very low cost), enabling all kinds of predictive and preventive information to enhance employees’ performance as well as their quality of life, and to reduce risks. For example, though not technically a workplace example, consider smart concrete that can warn drivers of patches on ice on the road ahead. What could smart buildings tell us about their physical condition that would help determine preventive maintenance, minimize costs, and reduce the risks of accidents and physical deterioration?

And on the behavioral side, there are now smartphone apps that can, for example, monitor and report on the tone of voice that individuals use during phone conversations. That may seem a little creepy and more than a bit invasive, but it is also possible to imagine that a group-based emotional assessment could alert management to a brewing controversy or degradation of employee engagement.

The important management question, of course, is how this kind of data can enhance individual and organizational productivity as well as employee quality of life.

There are also important ethical questions about capturing and using behavioral data of which individuals may not be aware. As one expert said recently in a private conversation:

We know that, in parts of the world, you are on camera almost anywhere you go. If you have ever worked at a retail store or gone into one, you’re on camera. Why does it come as such a shock that it is now being brought into the office? I believe Samsung has admitted that their TVs can actually listen to you, record what you say and share it with third parties.

WebEx can monitor and report your attention level. I recently heard, although I haven’t verified it, that the WebEx conversation, including the voice, can actually be retrieved even if the record button wasn’t turned on.

There is software that can turn your computer audio and video on without your knowledge. I keep what I call a “camera condom” over my webcam. I use a little round bandage [to cover the camera] on my workstation computer.

Certainly what you look at on the Web is being monitored, along with what you buy at the grocery store, which is why those pop-up coupons are remarkably like what you were just looking for. You really want to be careful what you share with the application[s] you are using.

Certainly, it is now possible to capture and analyze far more data about employee work activities than ever before — and it is happening on a regular basis. The promise of Big Data is powerful; it presents opportunities for deep learning about work activities — learning that can lead to significant redesign of work flows and dramatic improvements in office ergonomics and employee quality of life. It also offers the ability to enhance the quality of the work experience and to mitigate workplace risks (e.g., liability insurance costs, health insurance costs, business continuity planning).

For example, monitoring the body temperatures or coughing frequency of a group of employees could raise a yellow flag about an impending flu outbreak, which could lead to some preventive measures, or if it’s too late for prevention, at least some advance warning about multiple sick leaves and the need to bring in substitute employees to maintain a critical work flow.

Similarly, proactive monitoring of keystroke patterns could enhance productivity by identifying employees who are using the delete key regularly and might benefit from additional training. Or tracking and analyzing food consumption patterns in the company cafeteria could identify employees at risk of obesity or

heart disease (which could predict health problems and increased absences in the future).

Today, there are chairs that can tell an employee to get up and move around after sitting for too long (of course there are personal wearable devices like the Fitbit® and the Apple Watch that can do the same thing), and also track pulse rates and even blood pressure — all information that can enhance employee health and identify potential risks as well.

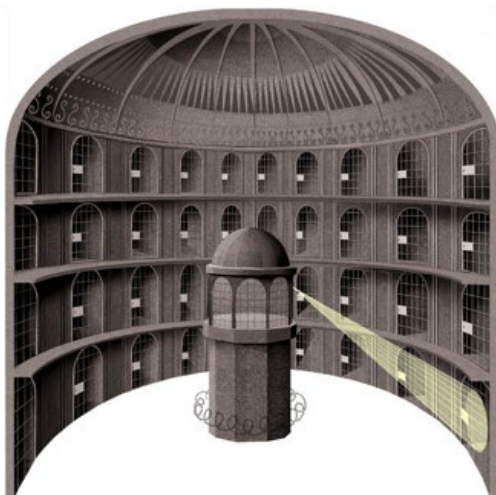
On the facilities side, there are also major opportunities to monitor more closely building data, producing more effective management of variables like air quality, temperature variations, energy costs, lighting impact, and a wide variety of safety and maintenance issues. These environmental factors have a major impact on performance and productivity, as well as quality of life and workforce satisfaction.

All that is promising, but it also raises the question of when does Big Data become Big Brother?

As with all technologies, Big Data is a tool that can have positive impacts, but its value depends on how it is used. Employees may balk at what they consider excessive monitoring, and they may resent even well-intended efforts to enhance their health and safety if they feel the surveillance is being imposed on them without their knowledge or consent.

It is imperative for organizational leaders to approach Big Data thoughtfully and responsibly. We don't want to reinvent the panopticon, which was a device used in the 18th century to enable prison guards to see into every cell and monitor even the private activities of their prisoners (see Figure 1).

Figure 1. The 18th-Century Panopticon



(Image: Adam Simpson, New York Times)

As sociologist William Bruce Cameron said in a 1963 book, **“Not everything that counts can be counted, and not everything that can be counted counts.”** In other words, Big Data is nothing without Big Judgment.

When organizations implement Big Data strategies, they must build commitment and understanding of its implications across the entire organization. Management must ensure that there are proper controls and meaningful supervision policies and practices in place, both to leverage the data and to be certain it is interpreted and applied in a meaningful way.

How will the “Internet of Things” impact FM?

That broad opening question led to an intense conversation, not so much about the Internet of Things as about the fundamental impact of Big Data — the information-rich environment that the IoT creates.

Big Data has the potential in some cases to displace or replace some middle management functions (and some middle managers). As we develop more comprehensive databases in the FM arena, we may see a reduction in our need for middle managers. Systems are providing the information we need in a less labor-intensive way. And while that may enable us to reduce the cost of providing FM services to our organizations, it may also make it more difficult to recruit and grow the next generation of FM leaders. And this is not just a “big corporation” issue; Big Data is now available and cost-effective even for small businesses.

The information that we can produce today enables FM to provide services at lower cost; it makes FM more efficient. But more importantly, it enables the workforce at large (not just FM) to make more effective decisions and to run the business more productively.

It is also important to realize that the concerns about privacy and opt-in/opt-out are really not part of the Big Data equation. By definition, Big Data is aggregated information about patterns and broad implications; data that is used for individual feedback or assessment purposes is something else altogether (although it may come from the same sources, individual data raises very different management and ethical challenges).

One insurance company implemented a work-from-home program that was justified and validated on the basis of group productivity data. The data was so positive that the program survived two complete turnovers in the C-Suite. Even though the new executives were focused on turning the company around, they supported the program because it was clearly producing business value; the remote employees were 18%–22% percent more productive than their in-office colleagues.

Big Data Provides Big Insights



Workforce management company Evolv analyzed performance, retention, demographic and **behavioral records** from the world's most influential global brands

121M

KEY INSIGHTS

Only **50%**

of hourly workers stay on the job for one year or longer

Shorter Work Commute = **20%** ↑ Employee Retention

Remote Workers = **28%** ↑ Tenure
1.6% ↓ Productivity

Employees using **3 or 4** social networks

perform better than their less social peers

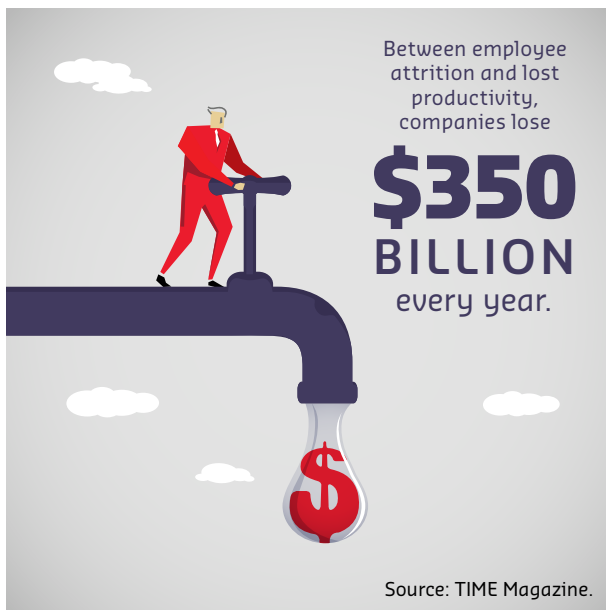
Employees who identify as rule-followers break the rules

67%

more often than those who don't make that claim

Office Locations with High Walking Scores = **58%** Longer Employee Retention

[Employees using Chrome & Firefox vs. Internet Explorer] = ↑ Productivity Customer Satisfaction + **15%** fewer work days missed Sales



Unfortunately, however, the executives began boring into the group data and using individual keystroke metrics to reward and punish individual employees. Tragically, but unsurprisingly, those actions essentially destroyed employee support for the program; it communicated (accurately it turns out) that senior management did not trust the employees.

From a workplace strategy viewpoint, Big Data used correctly can very effectively enable strategic decision-making around big-picture issues like space utilization, cost and energy usage. Again, that's using Big Data to understand broad overall patterns, not to monitor individual behaviors.

We need to educate FM professionals about how to use Big Data effectively — how to make data-driven decisions and what kinds of information they should be tracking to operate their facilities more efficiently and more effectively.

Understanding what data is important is the first step. All too often, FM professionals get all excited about benchmarking even though they don't have any basic Key Performance Indicators (KPIs) or performance indicators even defined, let alone in place and in use.

Before getting all caught up with Big Data or even defining KPIs, FM leaders must get clear about what outcomes they want to achieve, for only then will Big Data be useful; it is an enabling capability that is forcing FM leaders to get more focused on what outcomes are important.

The data is nothing but a bunch of numbers; it's an enabler, not an end in itself.

However, we also cannot ignore or fail to pay attention to Big Data. The Internet of Things will have a broad and fundamental impact not just on FM, but on the nature of work and business itself. FM is part of it, but we're going to see a much more intense focus on data and data-driven decision-making in all functional areas. FM cannot afford to be left behind.

One question we have to pay attention to is who within the organization is going to "own" the Internet of Things. It represents a basic paradigm shift in the way business is conducted.

For example, the kind of discrete and detailed data that we can collect and analyze now about individual health and well-being is going to change the whole concept of personal insurance and, perhaps, even property and liability insurance as well. FM should be thinking through what that means for building life cycles and cost management.

And given the growing talent shortages in key areas, in combination with the globalization of talent markets, it is very likely that the future will include fewer and fewer full-time employees on W-2s and more and more "free agents" or solopreneurs whose talents are attractive to many different organizations. That will impact not only HR and the whole meaning of employment, but it will also lead to more distributed project teams, where a high percentage of work is being done outside traditional corporate facilities (or in multiple facilities spread all over the world rather than in one physical place).

We may see corporate organizations shrinking to their essential core functions — and FM having to provide facilities for fewer full-time employees along with many more short-time "visitors" who come and go as they are needed on particular projects.

It is also important to pay attention to data about the communities or cities that surround the organization's facilities.

Community development efforts affect the services (restaurants, grocery stores, mass transit, etc.) that are available to employees and contractors, let alone the families of employees who live nearby.

Again, Big Data and the Internet of Things are generating broad and wide-reaching changes in the nature not only of business and work, but of society more generally. And those changes may drive basic shifts in the role of FM. Some experts are predicting that FM may evolve to become responsible not just for the physical facilities, but also for the people, teams and even communities who use those facilities.

And that evolution leads to questions about what we mean by quality of life and healthy communities (not just healthy individuals). Identifying (and then tracking and analyzing) the metrics that contribute to quality of life, while challenging, will become imperative for the FM function.

As several people pointed out during the roundtable, organizational spending on people (payroll, benefits, etc.) far exceeds spending on support tools like facilities and technology. So **the only appropriate way to view FM is in terms of how well it leverages people.**

And that means that FM's incorporation of Big Data is ultimately leading to more complex questions about how to track organizational productivity — meaning the impact of facilities on people. It's not just about cost per square foot or air temperature anymore. That means FM must develop new skill sets — and not just about how and what data to capture.

Communication with other functional areas has also become much more important. It's not just a new skill set; we must develop a whole new mindset about FM's role as well as its responsibilities.

The most important skills and mindsets we need to explore include areas such as:

- Interpersonal communications and relationship-building
- Knowledge of functional areas like marketing, finance, product design and marketing
- Understanding of organizational culture and how to influence attitudes and values
- Knowing how to formulate organizational change programs and deal with resistance to change
- Program and project leadership
- How to lead effective meetings that engage others and produce meaningful results

FM must also become more forward-looking, offering anticipatory guidance to the larger organization rather than simply reporting historical data. The past is far less important now because conditions are changing so rapidly. Research and benchmarking have taken on a different focus; the kind of research we do, and the things we benchmark, must be re-examined from the ground up.

Another impact of extensive data collection capabilities is the ability to define more discrete “employee market segments” and determine the particular needs and desires of different categories of employees. For example, mid-career marketing professionals no doubt have very different workplace design preferences than younger IT workers.

Just as consumer product companies have learned to define and market to small market niches, Big Data is helping FM learn more about the connections between workplace design and individual work styles. In the future, FM may find itself under pressure to provide custom-fit (but cost-effective) workplaces for specific project teams and even individual knowledge workers. The good news is that data to inform those design decisions will be readily available.

What are the benefits of capturing employee data? What are the dangers and risks?

One of the primary values of having employee productivity data is that it enables FM to report on workplace ROI and effectiveness to senior management. One FM leader was able initially to sell senior management on supporting a work-from-home program because of a decision support tool that projected how workplace, HR and IT costs could change as a result of implementing the new program.

More importantly, she was able to “resell” the program after the company replaced its senior leadership team — and then do it all over again several years later when that team was replaced once again (the organization as a whole was experiencing serious performance deterioration in a very dynamic and unpredictable economic environment). Being able to demonstrate the program's bottom-line impact on productivity was the only reason it survived a major cost-reduction initiative.

However, when an organization begins monitoring employee work activities, there is a risk that the employees will see the effort as micro-management and “Big Brother,” and even a precursor to workforce reductions. Management must be very careful that this kind of data collection is not seen as indicating a lack of trust in employees.

There is a core principle in scientific research (known as the Heisenberg Uncertainty Principle) that you cannot measure anything in the physical world without having an impact on the thing you are measuring. For example, to measure the speed of an electron, you have to bounce a photon off it, which then deflects the electron and changes its speed.

The same idea generally holds true with the measurement of human behavior; knowing they are being observed and measured often leads people to change their behavior — which may have either positive or negative consequences. But it is almost never neutral.

It is well worth remembering that most employees are not totally oblivious to how work and personal data might be used and what it can imply. They usually know (or think they know) what management is looking for, and they are often capable of manipulating the data to produce the results they think management wants or that will make them look good in management's eyes.

The management risk is interpreting data without context. And people are generally becoming far more sensitive about personal data and its possible misuse. That is partially attributable to the several instances of major data theft that have been in the news over last year or two. But it also reflects a general fear of how personal data will be used.

On the other hand, social media tools like Facebook and Twitter enable people to voluntarily share all kinds of personal data. While many of it seems trivial (cat videos, selfie pictures at parties, family gatherings), it is also affecting society's mindset about having and sharing personal data. Some people have become much more comfortable with having information about them and their activities widely available online; others are far more concerned about privacy issues.

As many as 30 million Europeans have requested that all of their digital identity information be removed from the Internet. And while accomplishing that may be essentially impossible, the desire for it is a social force to be reckoned with. There has been a very vigorous debate at the highest levels in the European Union about digital privacy and how to balance the interests of individuals with those of society.

An article in *The Guardian* ("How to Delete Your Digital Life," April 13, 2013) offered several suggestions about how anyone can minimize their online presence and remove much of their personal information.

However, the article concluded:

Expunging yourself from the internet is very, very hard. As far as is known, nobody's succeeded — though of course if they had, how would we know?

Professor Alexi Marmot of University College in London commented in a private conversation that:

...we increasingly have lots of data and very little knowledge of what to do with that data. The concept that you can fundamentally hide was part of the creation of the United States. I think this is going to be more and more important as we move on, and I think this is a very important [issue] to be watching.

Within the social research community there are very strict requirements about what is called "informed consent." Research subjects must be clearly informed about any data that is captured during a research project and how it will be used. No research data can be collected without first of all conforming to a set of very clearly delineated ethical practices, which describe what the researcher is allowed to gather, how the data is stored, who can see it, and how it can be used.

This "opt-in" approach, along with restrictions on data storage and use, will likely become an important component of organizational "research" in the workplace as well.

And one way to move in that direction and to convey respect for and trust in employees is to communicate transparently with them about any data-gathering initiatives. And an even more powerful means of engaging staff is to include them in planning and design conversations about the data collection effort and its purpose, intended use and benefits.

One of the biggest risks organizations take is to begin collecting data without informing their employees — and then having the employees discover that the data is being collected and used without their knowledge.

However, the biggest risk of all may be not thinking big enough. The potential value of becoming much more data-intensive is enormous; it is now possible to be far more analytical about what skills, personality types and work experiences characterize successful employees.

1

2

3

4

Big Data
in the
Workplace

5

6

7

8

9

10

And that knowledge can guide future hiring decisions that produce dramatic improvements in productivity, creativity and organizational performance.

For example, HireVue (www.hirevue.com), an online recruiting and candidate selection service, records online video interviews and then applies up to 50,000 different characteristics to determine the best candidate for a particular job. Those characteristics include the content of what you say, your tone of voice and other nonverbal communication). HireVue claims that its process produces:

- A 44% reduction in external recruiting costs
- A 25% reduction in time to hire
- A 23% cost-per-hire savings within one year

While this makes a very compelling case for using data to guide decision-making, it also raises many yellow flags. For example, what if this kind of data is stolen or leaked? Could a small mistake in a candidate's response to a question become a life-long stigma that makes it difficult for that person ever to be hired again? And, perhaps most importantly, what is the risk that relying on this kind of data could lead an organization to make numerous hiring decisions that reduce diversity and intensify its culture rather than encouraging the creativity that deliberate diversity so often enables?

WHAT ARE THE DO'S AND DON'TS SURROUNDING BIG DATA?

It is important to remember that, while the capability to capture so much data (and so many different kinds of data) is relatively new, the experience of learning to use new technologies and to apply them effectively is not. Organizations have been assimilating new technologies and other drivers of change in work processes that impact decision-making for decades. We have learned many lessons in the past that are just as important today as they were then.

We can almost certainly expect the development of new and stricter data privacy and data security laws. There have been so many examples of data thefts in the last few years that it is only a matter of time before consumer protection and labor laws will require the signing of consent and opt-in agreements.

Ultimately, the issues surrounding Big Data come back to the employee experience. Even with opt-in programs and various incentives for providing work activity data, employees are likely to feel social pressure to conform or to behave in certain ways. Realistically, that's a good news/bad news situation. Employees can certainly benefit from programs that reward them for health behaviors (weight loss, stop-smoking programs), but they can also be at risk of being micromanaged in their work activities.

HireVue Findings: Benefits of Big Data for Online Recruiting and Candidate Selection



Here are several important, time-tested principles for ensuring that Big Data enhances organizational effectiveness:

- ✓ Involve all employees in the conversations about what data to track and how to apply it to management decisions;
- ✓ Stay focused on data that will help employees and the organization as a whole become more efficient and more effective;
- ✓ Require employee agreement to any data collection efforts;
- ✓ Focus on continual improvement;
- ✓ Offer employees some benefit in return for sharing their data (i.e., lower insurance premiums for reporting weight losses or healthier eating habits or regular exercise);
- ✓ Be very clear and open about how you are using the data;
- ✓ Recognize that your organizational culture will affect the way any data is understood — and the very act of becoming more data-driven will change the culture;
- ✓ Treat data as an enabler and an input to decisions, not as a formula that determines outcomes; and
- ✓ Be completely transparent about both data capture and data use, and establish opt-in policies and programs.

In contrast, here are several don'ts:

- ✗ Don't allow any surprises — in other words, don't track behaviors in secret and then suddenly surprise employees with the information you have captured;
- ✗ Don't collect data and then let it disappear into a vacuum — share what you learn with the people who produced the data;
- ✗ Don't collect data for its own sake — always know why you are gathering any particular kind of data and how you will use it;
- ✗ Don't manipulate data or use the data to justify a decision you intended to make anyway;
- ✗ Don't sell the data without the permission of those who produced it; and
- ✗ Don't set up opt-out programs that require employees to take positive action to prevent you from collecting data about them or their work activities.

What is the appropriate role for FM leaders to take in defining and enforcing employee monitoring policies and practices?

In the end, we want to enable FM leaders to be more successful at ensuring that the built environment provides cost-effective support to their organizations and employees. FM will be judged on the outcomes it produces relative to the cost it takes to achieve those outcomes.

Data can help FM discover cost-reduction opportunities, but it can also help identify workplace designs and strategies for increasing employee productivity, creativity, engagement and satisfaction — ultimately enhancing their work experience and quality of life.

Big Data is nothing more or less than a tool for fulfilling those responsibilities.

And this brings the issue of Big Data full circle; the most important principle to remember as organizations implement data collection efforts is that Big Data is nothing without Big Judgment. As with so many other organizational tools, the first question that must be asked is “Why?”

QUESTIONS TO ADDRESS BEFORE EMBARKING ON A BIG DATA INITIATIVE

Why are you collecting this particular data?

What results are you attempting to achieve?

How will the data help achieve those results?

What decisions will be influenced by the data?

Who will have access to the data?

Whose interests will be served?

What are the risks of the data being misused?

KEY INSIGHTS & IMPLICATIONS

- With the growth of the Internet of Things (IoT) and the advent of smart buildings, it is possible to monitor employees virtually anywhere they go.
- From a workplace strategy viewpoint, Big Data can enable strategic decision-making around big-picture issues like space utilization, cost and energy usage.
- Data can also help FM identify workplace designs and strategies for increasing employee productivity, creativity, engagement and satisfaction — ultimately enhancing their work experience and quality of life.
- Given these developments, facilities managers must learn to communicate with other functional areas. FM professionals must also develop a whole new mindset about their roles and responsibilities.
- Although Big Data entails the use of aggregated rather than individual information, there are important ethical questions about capturing and using behavioral data that must be addressed.

LINKING TO SODEXO'S QUALITY OF LIFE DIMENSIONS

- **Physical Environment:** Big Data capabilities allow facility managers to more effectively control environmental variables like air quality, temperature, lighting, safety and maintenance issues, all of which have a major impact on employees.
- **Ease & Efficiency:** Proactive monitoring of employee activities and identification of areas for improvement (e.g., workflow or workplace redesign), can enhance productivity.
- **Health & Well-Being:** An enormous amount of information is already being collected around employees' health status. Identifying the appropriate metrics and contributing factors to worker health and well-being will become imperative for the FM function.



REACHING EVERY EMPLOYEE IN AN ORGANIZATION: ENGAGEMENT THROUGH RECOGNITION



Mia Mends, CEO, Benefits and Rewards Services USA, Sodexo

The vast majority of today's employees are disengaged — and this is a serious problem, because study after study indicates that engagement is one of the key drivers of business success. "Becoming Irresistible: A New Model for Employee Engagement," published in 2015 by Deloitte, explains that "business leaders [must] learn how to build an organization that engages employees as sensitive, passionate, creative contributors."¹

Corporate managers understand this imperative. In a 2014 Deloitte study, 78% of top executives rated engagement and retention as urgent or important priorities.² But, despite laser-like corporate efforts, employee engagement scores in the United States remain lackluster. The 2014 Towers Watson Global Workforce Study found that 24% of employees are disengaged and another 36% can be described as either unsupported or detached.³ A full 60% of employees lack the elements required to be highly engaged.

The "2015 Trends in Global Employee Engagement Report" by Aon Hewitt confirms this trend by noting that the average employee's work experience is down 28% versus 2013.⁴ The Aon Hewitt report also tries to get at the root of the problem by zeroing in on the core challenge areas — enablement, autonomy and sense of accomplishment. Only about half of employees feel enabled and both autonomy (choice) and sense of accomplishment have decreased by 1% since 2013.

Gallup estimates that employee disengagement costs the U.S. \$450 billion to \$550 billion in lost productivity per year.⁵ But the stakes are increasing as the economy strengthens, the war for talent heats up, and recruiting, engaging and retaining the best and brightest employees becomes even more crucial.

EMPLOYEE ENGAGEMENT — A CORE BUSINESS STRATEGY

Perhaps the persistently low employee engagement scores of the past decade or so can be attributed to the fact that employee engagement has traditionally been the responsibility of Human Resources, even though engagement can be impacted by every department in an organization. Seen from this broad vantage

point, employee engagement becomes a core business strategy, as opposed to an HR function.

Many organizations are embracing this corporatewide approach to employee engagement today. Indeed, armed with recognition training, resources and best practices, diverse and inclusive teams from across the enterprise are increasingly speaking authentically and realistically about the challenges employees face and the most effective programs to engage them.

There are generally two key areas that these organizations focus on in order to boost engagement and business performance: improving quality of life for employees and reaching every employee in an organization.

IMPROVING QUALITY OF LIFE FOR EMPLOYEES

Improved quality of life helps lift employee engagement. But enhanced quality of life isn't just about increased income, although commensurate compensation is always important. Work-life balance — or life balance, since we seem to be connected to our digital devices 24/7 — also matters to employees. This point was driven home in a recent Ernst & Young survey, in which 33% of the full-time employees interviewed said that it has gotten more difficult to manage work/family in the last five years.⁶

There are many other ways to improve the quality of life for employees, including well-communicated employee programs based on management, peer and social recognition that reaches every level of an organization, as well as health and well-being programs that promote a healthy lifestyle for employees at work, at home and in the community.

Recognition programs generally increase engagement scores by 20%, but leveraging recognition in partnership with other important company programs has proven to be the best method of improving overall employee engagement.

An example of combining programs to maximize outcomes is recognizing and rewarding employees for making healthy choices within a workplace wellness

1

2

3

4

5

Reaching
Every
Employee
in an
Organization

6

7

8

9

10

program — for instance, choosing a healthy meal at the cafeteria or attending a yoga class. A recent study of more than 2,000 U.S. employees by Benz Communications and Quantum Workplace notes that among employees who say their manager supports their efforts to be healthy, 83% say there is open communication between employees and managers.⁷ When managers don't support healthy living, just 43% report an open dialogue.

REACHING EVERY EMPLOYEE IN AN ORGANIZATION

When it comes to engagement, inclusion is just as critical as higher quality-of-life standards for employees.

And that's why the second key area of engagement focus must involve reaching every employee in an organization.

Approximately 30% of the workforce works remotely today, and this requires a special emphasis on implementing the right tools and communication strategies to touch all segments within an organization — from desk workers to front-line employees alike.⁸

It's often challenging to recognize and communicate with customer-facing front-line employees. But, as the face of the enterprise — the brand's ambassadors — these employees play a valuable role in the success of a company's mission, vision and values. They're pivotal when it comes to attracting and retaining customers, too. And, since front-line workers account for about 80% of the total workforce, and front-line managers comprise 50% to 60% of management, they're also essential to employee engagement programs.⁹

Unfortunately, mission-critical front-line employees often feel ambivalent about the communication they receive from management. In a national employee survey by Tribe Inc., 84% of the participants said that having a way to communicate with top management was "very" or "extremely" important.¹⁰

Communicating effectively with each employee in an organization is complex, to say the least. Technology can certainly help reach people as a beneficial bonding agent — both at headquarters and in the field, and with digitally focused Millennials through Baby Boomers. But, in the end, it comes down to a company's priorities and initiatives. In other words, how much does employee engagement really matter to corporate leadership?

A report by Harvard Business Review Analytic Services, "The Impact of Employee Engagement on Performance," explains that companies who actively and formally communicate with employees often utilize all-company

meetings, executive management briefings and training and leadership development.¹¹ Companies that passively and informally communicate with employees are more reliant on corporate intranets, social media and recruitment and employee familiarization programs. There is no right answer, and no one-size-fits all here; companies need to align their employee communications and engagement strategies so that they are consistent with their corporate cultures.

Leaders who start the conversation with their teams by talking about quality of life considerations do benefit when it comes time for deliverables and actionable outcomes.

BEST PRACTICES FOR EFFECTIVE EMPLOYEE ENGAGEMENT

The following best practices are effective engagement tools for beginning a recognition program framework and can be used to facilitate goal-setting discussions among the team:

- Be sure that programs are directly tied to corporate values, that way it will be easier for employees to make the connection between the recognition they receive and what the company stands for.
- Be sure that tools or solutions truly support the workforce's needs. For example, mobile apps can be very effective tools but may not be the preferred solution for front-line employees with limited access to technology during their shifts. Likewise, employees who spend most of their time with customers will benefit from a solution that allows customers to recognize them.
- And, finally, be sure that programs don't follow a one-size-fits-all approach. For example, a program focused on social recognition, with an online community where employees can see and follow when their peers are recognized, may need to be accompanied by a service anniversary program with tangible awards. This will ensure that all employees feel recognized, even if they prefer not to participate in the social aspects of the recognition program.

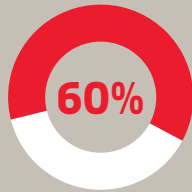
Employee engagement is one of the most pressing human capital challenges that organizations face today. And it's a key determinant of business success. Unfortunately, though, organizations often miss opportunities to truly connect with their workforces. But it doesn't have to be this way. If the right thinking, right leadership and right tools and programs are deployed and sustained over time, there's no reason why the United States can't have the world's most engaged employees in the 21st century.

THE VALUE OF EMPLOYEE ENGAGEMENT

DISENGAGED



\$450B to \$550B
in lost productivity
per year



60%
of employees lack the elements
required to be
highly engaged

Only about
HALF
of employees
feel enabled



The average employee's
work experience is

↓ 28%
versus 2013



ENGAGED

Recognition
programs
generally
INCREASE
engagement
SCORES BY
20%



Improving Quality of
Life for Employees



80%
of the workforce are
frontline workers and
50%-60% of
management are
front-line managers —
they're essential to
employee engagement
programs



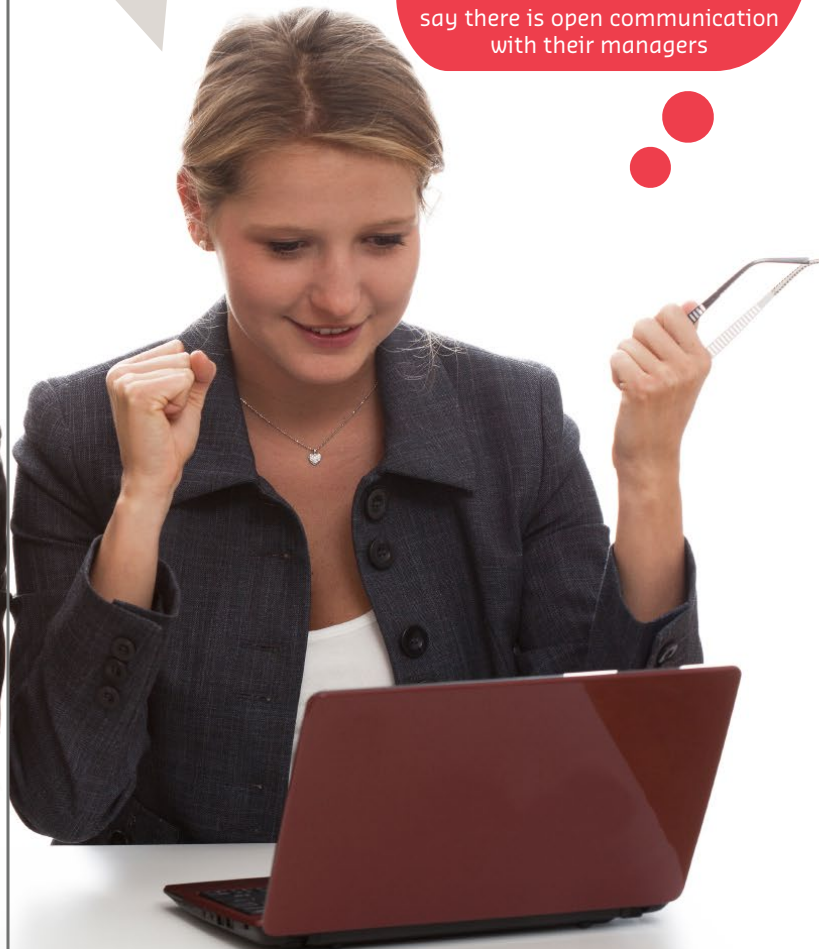
84%

of employees say
that having a way to
communicate with top
management is "very"
or "extremely" **important**

Among employees
whose managers support
their efforts to be healthy,

83%

say there is open communication
with their managers



RECOGNITION & EMPLOYEE WELLNESS PROGRAMS

Corporate wellness programs have traditionally tried to change employees' behavior and gain their participation by offering incentives and rewards. But including employee programs based on management, peer and social recognition can help achieve these important objectives more easily. In addition, recognition can also boost overall employee engagement.

Here are three best practices to drive engagement through wellness programs:

1. First, employers should structure wellness programs in a way that rewards specific actions and results — moving away from traditional “insurance rebate” programs where larger rewards are tied to sustained participation. Smaller, lower value rewards delivered more often have a greater impact on overall results. They also prioritize behavior change above participation.
2. Second, once rewards are focused on actions, employers can start to tie those into their recognition programs. A good example is moving away from rewarding someone for attending a session on nutrition and, instead, recognizing them when they eat a healthy meal; or, better yet, when they get their peers to eat a healthy meal.
3. Finally, employers should look for programs that go beyond physical activity and fitness. Some employees, for example, may be more likely to focus on their nutrition because they may be limited in what they can do physically. Providing different ways for employees to participate and feel recognized for doing so is essential to the success of a wellness program.

KEY INSIGHTS & IMPLICATIONS

- Organizations must focus on two key areas to boost engagement and business performance: improving quality of life for employees and reaching every employee in an organization.
- Leveraging recognition in partnership with other important company programs (e.g., wellness programs) has proven to be the best method of improving overall employee engagement.
- Approximately 30% of the workforce works remotely today, and this requires a special emphasis on implementing the right tools and communication strategies to touch all segments within an organization — from desk workers to front-line employees alike.
- There are several best practices that are effective engagement tools for beginning a recognition program framework and can be used to facilitate goal-setting discussions.

LINKING TO SODEXO'S QUALITY OF LIFE DIMENSIONS

- **Recognition:** Effective employee engagement initiatives are communicated well and based on recognition, reaching every level of an organization.
- **Social Connections:** Programs should incorporate peer and social recognition to increase participation, realize greater returns, and bolster team performance.
- **Personal Growth:** Effective recognition programs boost engagement and encourage employees to be sensitive, passionate, creative contributors.
- **Health & Well-Being:** Programs can be combined to maximize outcomes. For example, a recognition platform can recognize and reward employees for making healthy choices within a workplace wellness program.



SMART ENERGY MANAGEMENT: A WIN FOR THE ENVIRONMENT, PEOPLE AND BUSINESS



Randy S. Michael, LEED AP, CEM, CEA, CEP, CDSM, Senior Director, Energy Management Services, Sodexo

INTRODUCTION

Greenhouse gases increased at an average annual rate of 1.4% between 1990 and 2013. Efforts to reduce greenhouse gases continue to escalate in the global community. More countries are expected to join a new [United Nations emission protocol](#) in early 2016.¹ The Durban Platform for Enhanced Action (ADP) focuses on achieving [climate effectiveness](#) through reductions in net greenhouse-gas emissions.² Emission reductions of at least 60% by 2050 are recommended.

There is growing recognition that human activities are major contributors to climate change. Aggressive action is needed to stem this tide. None of this bodes well for the construction of additional fossil fuel power generation despite increasing demand. The new normal is likely to require consumers to become more active participants in the creation and use of energy.

A global study carried out in 2013 by [The Institute for Building Efficiency](#) found that decision-makers in every country surveyed — from 71% in Australia to 93% in China and India — considered energy management very or extremely important to their organizations.³ Energy Awareness & Technical Expertise were among the top five barriers to achieving an organization's energy goals.

The trend of energy consumers playing a key role in energy consumption and potential reduction carries over to the workplace. The value placed on reducing energy in the workplace will grow if business consumers are educated that a unit of energy saved at the meter represents more than that one unit. This will broaden responsibility by showing how individual action affects the energy chain. With more education and resources, the workplace consumer could strategically plan how and when they use energy — from lowered use when energy prices are highest to initiating front-line plans to conserve energy.

This paper will evaluate these trends and recommend steps that business consumers should take to prepare for this new normal. Waiting for utility companies to take responsibility will result in higher expenses. By implementing an action plan, businesses can reduce carbon footprint, lower cost and obtain financial incentives to offset efficiency improvements.

THE IMPACT OF CLIMATE CHANGE

Climate change refers not only to changes in temperature (global warming) but also to changes in wind, precipitation, the length of seasons as well as the strength and frequency of extreme weather events like droughts and floods. Global warming is the term used to describe the increase in the Earth's average temperature.

Climate change is introducing new types of challenges and opportunities to businesses across the globe. Weather events, water scarcity, biodiversity loss and other climate-related changes in the environment are already and will increasingly affect businesses and how they operate.

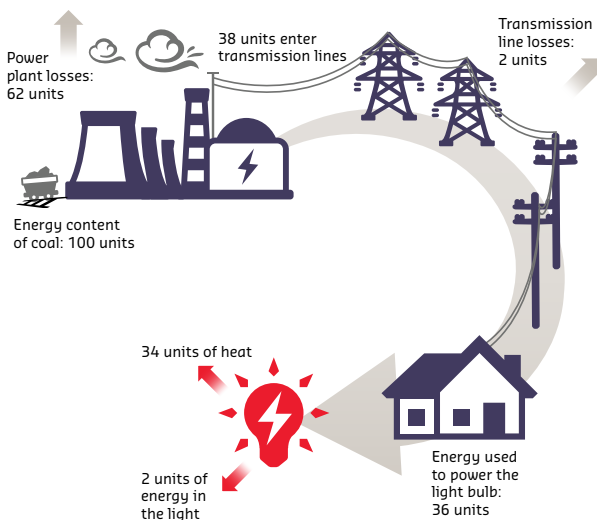
While a small quantity of greenhouse gases is produced naturally, the majority is emitted by human activities. The massive use of fossil fuels such as hydrocarbons (e.g., coal, gas, oil), deforestation and intensive livestock raising and agriculture produce large quantities of greenhouse gases, which are concentrated in the atmosphere. These emissions accelerate global warming. According to the research of the Intergovernmental Panel on Climate Change (IPCC), a temperature increase of over 2°C would lead to serious consequences, such as a greater frequency of extreme climate events.⁴

FOUNDATIONS IN ENERGY CONSERVATION

As Albert Einstein correctly observed, “Energy cannot be created or destroyed; it can only be changed from one form to another.” This basic law forms the first law of thermodynamics — the *Law of the Conservation of Energy*. We live in a world where we must transform one source of energy to another so it can be used for the required purpose. Today’s workplace transforms ideas into actionable items, similar to the energy conversion process. Likewise, the power of people in offices, campuses, warehouses, hospitals, manufacturing plants are all valuable sources of energy.

Transforming one energy source to another is a complicated and expensive process. Some of the energy contained in the original source is lost during conversion. Some of the energy contained in the original source is lost during conversion, as illustrated in Figure 1. Imagine that the coal needed to illuminate an incandescent light bulb contains 100 units of energy when it enters the power plant. Only two units of that energy eventually light the bulb. The remaining 98 units are lost along the way, primarily as heat.⁵

Figure 1. Energy lost during conversion and transmission



This waste contributes to environmental pollution. Even clean energy sources, such as hydropower, have flaws and can contribute to ecosystem disruption. The environment is best served by limiting the amount of energy we need and producing energy efficiently with no carbon emissions.

In a test environment, the conversion of energy can be performed with a high measure of efficiency, and the device using the electric energy can be designed to deliver higher levels of efficiency. Outside of a controlled setting, the consumer is responsible for

the proper use of the device. Variations in use can lower the level of performance. An example is the fuel efficiency estimate on new cars. Manufacturers state that under ideal conditions a car may achieve a certain mile per gallon for city and highway driving. Variations in speed, weather, road conditions and driver skill may skew these results to higher or lower miles per gallon.

Using this analogy, people in the workplace are the most powerful resources to curb carbon emission. By turning off the lights or raising the temperature in an air conditioned space, a business saves more than one unit of energy. It cuts the energy that the utility company uses to produce and distribute that unit. In the process of converting fuel to electricity, energy is lost and greenhouse gases are produced. When the electricity is put into the electric grid, it has to travel over high voltage wires. Some electricity is lost during the trip and converted into heat. These losses are called line losses, which equate to lost energy and dollars.

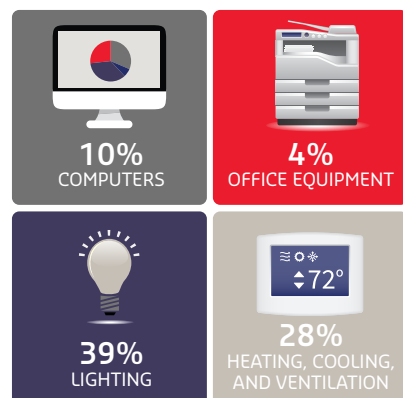
A consumer who eliminates 1 unit of energy can save an average of 1.2–1.5 units. The savings is exponential. These *negawatts* (negative watts) further reduce greenhouse gas emissions down the supply chain, from mining to transport.

ENERGY CONSERVATION IN THE WORKPLACE

People in the workplace are the key to reducing carbon emissions. They drive change not only by contributing negawatts, but also by requesting more efficient facilities, sustainable products and use of renewable energy. Demand generates a competition for efficiency and contributions that may seem small can quickly escalate into large-scale energy savings.

Energy awareness and education is the key to conservation. Teaching occupants about steps they can take will immediately reduce energy consumption in the office. The formatting of utility bills is complicated

Office Building Electricity Use⁶



BEST PRACTICES FOR A SUCCESSFUL ENERGY AWARENESS PROGRAM⁷

- Determine SMART goals and objectives for your program
- Obtain upper management buy-in and support
- Assemble a cross-functional team to lead and drive change
- Solicit input from employees to guide program development
- Develop impactful key messages tailored to your workforce
- Use appropriate communication channels to share program information
- Plan fun and competitive activities tailored to your workforce
- Incorporate rewards, incentives and recognition throughout
- Create an evaluation method to gather behavioral data and results
- Share results with your employees and publicly recognize their accomplishments

by design; rate nerds, industry slang for utility experts, devised a sophisticated system for billing. Utility bills also reflect usage that occurred in the past and cannot be changed. These two factors complicate the training process. Successful education programs should be simplified for maximum results — show users how much energy was consumed and give them ideas about how they can lower it in the future. Asking workers to contribute ideas, launching competitions and making the exercise fun will motivate change.

In addition, it is important to remember that people like competition. Like playing a game of football without keeping score, few participants will stay engaged if they aren't told how they are doing. With this in mind, energy programs must include visible measurement.

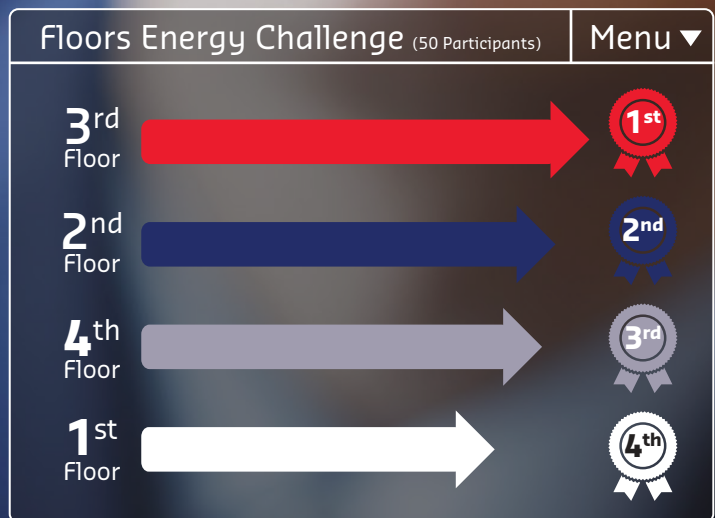
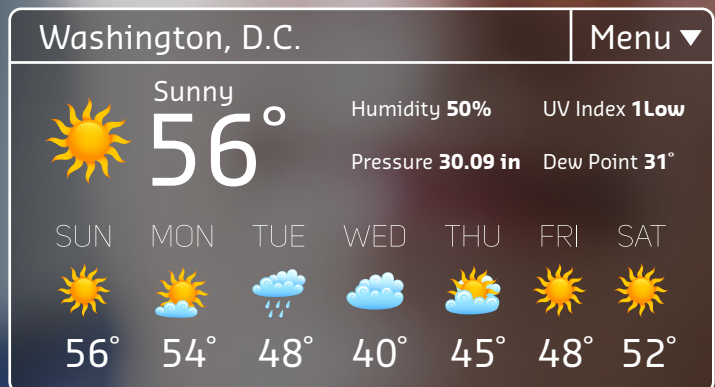
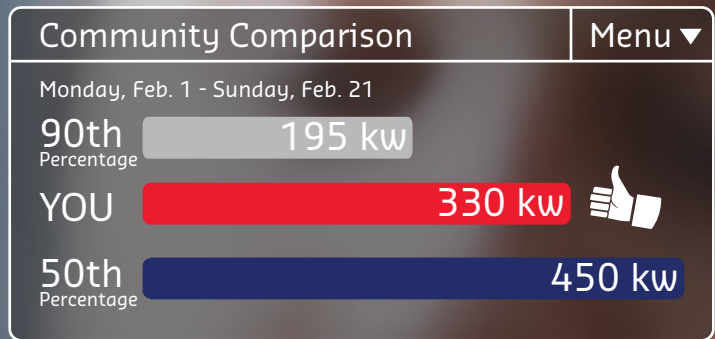
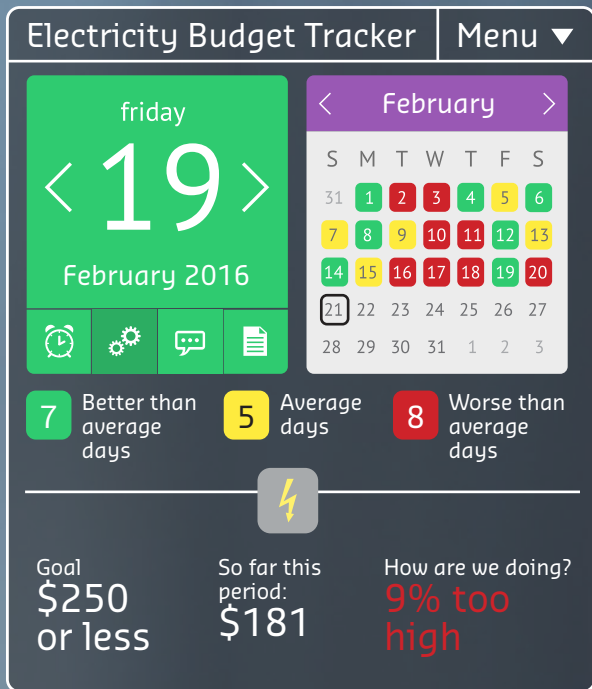
This feedback can be provided by capturing energy data at client sites and presenting it graphically on an ongoing basis through a Web portal, smartphone application or monitor display located where it can be easily viewed by employees. An example of visible metrics is the new [LEED® Dynamic Plaque™](#) by the U.S. Green Building Council, which shows the current performance of a building. It is placed in a visible location where occupants can view energy and efficiency trends and provide feedback on their experience.⁸

How can we create a win-win for people and the environment? **Businesses can approach energy as a quality of life issue.** Smart energy management can

improve several aspects of the physical environment. For example, devices using electricity generate heat. Many items drawing electricity in an enclosed space can make it uncomfortably warm for the occupants, and soaring temperatures may impact worker performance and morale. In this example, employing an energy management program addresses the environmental dimension of quality of life, thereby enabling greater worker efficiency and satisfaction.

Energy management is not only good for the environment and employees, it is also good for business. A Nielsen study of 30,000 people in 60 countries indicated that 55% of online consumers say that they are willing to pay more for products and services provided by companies that are committed to positive social and environmental impact.⁹ The U.S. Environmental Protection Agency estimates that a typical workplace energy awareness program can result in overall savings of 3% on an organization's energy bill.

Workers who drive the need for conservation are the greatest energy generators — but they can also generate new business growth. Through the cycle of creating responsible workplaces, workers encourage greater consumer demand for green products and services. Thus, the cycle of negawatt creation is renewed.



 Energy Awareness Program = 3% **\$SAVINGS** on an organization's energy bill

93% of companies
invested funds in energy
management over the
past four years.¹⁰

KEY INSIGHTS & IMPLICATIONS

- People in the workplace are the most powerful resources to curb carbon emissions. A consumer who eliminates 1 unit of energy can save an average of 1.2-1.5 units.
- With more education and resources, the workplace consumer could strategically plan how and when they use energy. Energy awareness and education is the key to conservation.
- To create a win-win for people and the environment, businesses should approach energy as a quality of life issue. Smart energy management can improve several aspects of the workplace physical environment.
- Energy management is also good for business. Consumers are willing to pay more for products and services provided by companies that are committed to positive social and environmental impact.

LINKING TO SODEXO'S QUALITY OF LIFE DIMENSIONS

- **Physical Environment:** Smart energy management can improve occupant comfort, for instance, through better temperature control.
- **Ease & Efficiency:** Enhanced workplace comfort increases employees' efficiency and productivity.
- **Health & Well-Being:** A large body of research supports the crucial role the environment plays in people's physical and mental well-being. Conserving energy in the workplace contributes toward a cleaner, healthier environment for all.



HUMANIZING THE WORKPLACE: USING DESIGN PRINCIPLES TO INSPIRE WORKPLACE THINKING



Thomas Stat, Chief Operating Officer, IA Collaborative

THE VUCA REALITY

No one doubts that business, life and the world at-large have become evermore Volatile, Uncertain, Complex and Ambiguous. The concept of “VUCA” emerged out of the U.S. Army War College in the mid 90’s and has subsequently fostered a virtual renaissance in how people view the conditions under which decisions are made, plans are strategically conceived, risk is managed, change is fostered and challenges are addressed. It has been applied to organizations from the military and governments to public and private companies, not-for-profits, educational institutions, etc.

In the rapidly changing, information-overloaded, performance-obsessed, multitasked reality of today’s workplaces, strategies that leverage the VUCA mindset of conditions, consequences and actions are permeating the boiler room and the boardroom. Leadership, management and newly empowered workers are anticipating challenges, understanding the consequences of actions, appreciating the interdependence of multiple variables, preparing for alternative realities, and owning their own transformation and even disruption.

HELLO, RIGHT BRAIN

In our evolution from an agricultural-based economy to one powered by manufacturing and production to service and information, we are entering what Daniel Pink referred to as the new “conceptual age.” In this “conceptual age,” business and our work will be largely right-brain based, guided by our ability to empathize, recognize patterns, discern new meaning, create narratives, work together and play. While the left-brain attributes of body strength, attention to detail and a reliance on knowledge will never be rendered obsolete, the “conceptual age” workforce and, more importantly, the emphasis of their work, will be focused on creativity, emotional nuance, human interaction and fulfillment. In the end, whole brain thinking will drive innovation, creating the growth and sustaining the success sought by companies.

In these times of radical transition, change and the tyranny of an abundance of choice, it is increasingly difficult to make the right decisions in creating the

right work environments. And even “right” may be in a constant state of change. As George Harrison so cleverly summarized in his song “Any Road,” which is based on a conversation between Alice and the Cheshire Cat, “If you don’t know where you’re going, any road will take you there.” And, as the Red Queen tells Alice, “Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!”

GUIDING THE JOURNEY

When the journey is about humanizing the workplace in meaningful and compelling ways, heading in the right direction has its own special VUCA characteristics. Design principles, acting as a set of guardrails, can help direct and shape the promise and trajectory of approaching the design and maintenance of workspaces by inspiring new thinking, fine-tuning directions and guiding decision-making processes.

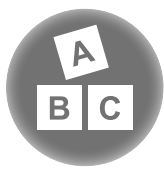
Ideally, design principles that drive workplace thinking emerge from the higher purpose and “why” of a company’s brand. There are areas common to all companies that may help guide workplace initiatives both large and small. The following set of design principles has both gaps and areas of substantial overlap. They are neither comprehensive nor discrete, as they span spatial, organizational, cultural and experiential elements of the workplace. They represent perspectives and viewpoints that may help guide or at least influence managers and leaders who are charged with humanizing the workplace for today’s employees.

Workplace Design Principles

1. Get Serious About Play
2. Mind the New Mindfulness
3. Lose Your Balance
4. Rethink Knowing
5. Recognize Recognition
6. Blur the Organization
7. Create Place, Not Space



81% Correlation between
collaboration & innovation¹



1. Get Serious About Play

Independent of all those inner-office floor-to-floor slides and the proliferation of foosball tables and bocce ball courts, play is actually a pretty important part of workplace behavior. Workplace environments that support and encourage play are critical to business outcomes. And, it is far less about relieving stress or creating some friendly competition as a proxy for winning in business and more about fostering collaboration, promoting teamwork, and establishing an environment where failure is an option. From a very early age, play is how we engage the world, develop skills and learn. At any age, play is the behavioral platform through which people connect, socialize and communicate. Play in any form, from Solitaire to Ping-Pong, teaches us about risk and reward, the power of immediate feedback, and the value of trust and failure. Especially in group play experiences, we learn about the learning, communication and personality styles of our fellow workers, and that understanding not only humanizes the workplace, but nurtures imagination, improves productivity and elevates fulfillment. However you choose to enhance the opportunities and possibilities, get serious about play.

In a survey conducted by BrightHR, psychological well-being experts examined the role of play in the workplace.² The graphic to the right highlights some of the findings; the key takeaway is that fun activities at work positively affect a wide range of workplace behaviors and outcomes.

Taken part in fun activity in last 6 months*:



* Mean scores on a number of different scales.



2. Mind the New Mindfulness

Second only to sleeping, working occupies an enormous amount of our time. As the trend for less and less private space and more and more open seating dominates today's workplace landscape, the need for quiet time and privacy are on the rise. In a noisy, sensory overloaded workplace, it is no surprise that a new focus on mindfulness, yoga and meditation has emerged. Today's powerful computers crunch numbers, apply algorithms and allow us to connect and communicate in epic ways. But despite all the automation around us, nothing has really replaced the value of human intuition, reason, the capacity to recognize patterns, and the ability to synthesize disparate elements of information into new meaning. But these devoutly human abilities require attention and concentration. Just as dead silence can be deadly to the ability to focus, the noise of the crowd can be equally distracting. But the new frontier is noise from within – that inner voice and ongoing dialogue we have with ourselves that diverts our attention and conspires to overwhelm our consciousness. The science of the new mindfulness is simple. Even very short periods of inner quiet can dramatically expand our ability to focus, improve our judgment and allow us to communicate more clearly. It turns out that the wisdom of the crowd is directly correlated with silence of the mind. Whether in a group or in the privacy of one's own cocoon, giving people the space to be quiet in the workplace can enable any organization to profit from mindfulness.



3. Lose Your Balance

Balancing work life and the rest of one's life is an ongoing battle for most people. In a 24/7/365 world, work/life balance is either an impossible dream or a fool's folly. The truth is that our quest for balance is based on the deceit of zero sum game thinking, where there has to be a loser and a winner. Balance is simply an analog for "something's got to give." Rather than trying to achieve some sort of magical balance or golden proportion, the workplace can and should sustain a more holistic version of life, where work and life are less about balance and more about selective curation and respectful integration. Curation is about dynamic prioritization, where choices are made in accordance with ever-changing context. Integration is about creative mixology, where selective attention and multitasking can actually coexist. Workplace is really a life place, where work and life collaborate. If a workplace works for work, it should work for life. Lose the search for work/life balance and embrace cohabitation.



4. Rethink Knowing

Knowledge has traditionally been the competitive advantage and prime driver of the world's most successful companies. As computer power grows and the world becomes cluttered with big data from endless sensors and instruments, what we can know will grow exponentially. But as many people come to realize, more data and information does not always mean more understanding and meaning. In the new conceptual age, the growing gap between knowing and understanding, more than any other change in business, will challenge why, how, when and where we work. As workplaces become environments that encourage and support right-brain thinking, we will have to rethink those environments to inspire optimism, curiosity, empathy and storytelling. Workplaces themselves will take on their own kind of consciousness, where a sense of wonder, a passion for deriving new meaning, and an ability to reframe and convey a new narrative will be both motivated and stimulated. Workplaces will need to animate the unique human ability to shift perspectives, synthesize information and recognize patterns. Rather than conveying comfort in the familiar, workplaces will arouse and enrich what the comedian George Carlin once referred to as a sense of "Vujà Dé" — the ability to imagine entirely new possibilities in the traditional and familiar. As we redefine work, we will reimagine the workplace to redefine and rethink what knowing means and what knowing triggers.



5. Recognize Recognition

Endless studies demonstrate that considering all forms of compensation, all other things being fair and equitable, personal recognition almost always trumps financial gain. Underlying any form of recognition are the metrics used to determine the value and worthiness of any effort, whether individual, group or the entire enterprise. In the "90-day shot clock" of quarterly earnings, a focus on revenue and profitability, as opposed to fulfilling a broader mission, growing brand equity and satisfying customers and end users, what we measure matters. And how a workplace embodies, encourages and expresses those metrics is one of the keys to success.

A workplace's sense of extreme order, tidiness or messiness, the democratization of personal space and location, and the subtle, or not so subtle, traces of hierarchy, can all conspire to inhibit imagination, turn down the flames of growth or the sparks of innovation. If a workplace feels so pristine and precious that no one would dare pepper the environment with Post-it notes, mock up a concept or build a rough

prototype, no one will. People need to be recognized for taking risks and failing as much as they are for more conventional achievement. The workplace has to physically, emotionally and experientially recognize that when people feel afraid to stretch, dare or fail, they will play it safe rather than feeling safe to play.



6. Blur the Organization

Never underestimate the propensity of large groups of people to organize, add structure and lower the entropy of any system. While this may have as much to do with the genetic makeup and the social and tribal nature of our species, we've also learned or perhaps have been trained to think, that structure, command and control are fundamental to maintaining the order and keeping the peace. This model is now almost ubiquitous, as military command and control has been applied to business, education and even the world of entrepreneurs. Unfortunately, when the business goal is innovation, growth and sustainable success, the siloed, hierarchical, command and control model has proven to be an actual barrier to the very business goals and higher aspirations that exist. Diverse perspectives, cross-disciplined and even cross-organizational thinking are increasingly fundamental to companies imagining "next" as opposed to incremental improvements to the existing offering. Blurring organizational lines and actually allowing people to "cross-pollinate" is actually a tremendous advantage when developing a "what's next" goal. Work environments can easily promote or even eliminate the departmental silos so traditional to command and control thinking. Just when it feels that defenses go up, tear down those walls and feel the blur.

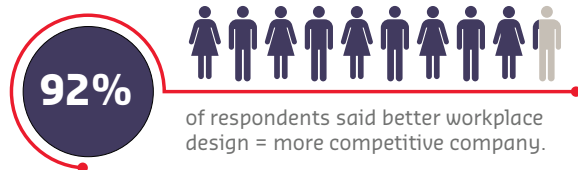


7. Create Place, Not Space

The hottest area of management consulting, including workplace counsel, is around culture and organization. While a company's culture emerges, rather than is designed, and organizational structures seemingly take shape on their own, the new role of leadership is in setting the vision and direction for both. In his book, "Start With Why," Simon Sinek's great insight is that people buy based on why you do it, not what you do. His passionate pursuit of the underlying purpose, cause and beliefs that inspire a company to do what it does, is all about a company's culture. Culture is expressed by a brand, a group of people and the environments in which they work. Workplaces communicate and nurture great, average and bad cultures in an endless variety of ways. On almost every experiential axis — the color and tone of a space, the quality, transparency or opacity of light, the ambient and active sounds and

even the smell — workplaces scream their personalities and viscerally affect everyone in them. Places, not spaces, can promote or deter collaboration and can foster or inhibit new perspectives and an environment of safe and constructive critique. They can even subtly communicate an emphasis or lack of focus on profitability, process and value. Cultural values and principles should be the primary elements in the alchemy that workplaces inevitably become. It is the infusion of culture, people and the greater “why” that transforms space to place.

Key Findings from the U.S. Workplace Survey³



CHALLENGES AND OPPORTUNITIES

The promise of big data, the magic of algorithms, the attraction of artificial intelligence, and the value of machine automation all suggest less human interactions and even less humans in the workplace. Even as computers near the processing speed, focus and memory capacity of the human brain, our ability to work in teams, empathically understand subtle nuances, reason, assess and imagine the unimaginable, reinforce the need for people in business. In an ever more complex, ambiguous, noisy, competitive and risky world, people remain our greatest asset. For the conceptual age to deliver on its promise of a better world, humans need to develop humanized environments and the technologies that enable them. Fundamental to that development are the business cultures, company organizations and workplace strategies developed by the very humans who benefit from them.

KEY INSIGHTS & IMPLICATIONS

Seven design principles can help guide managers and leaders who are charged with humanizing the workplace and inspiring new thinking.

- **Get Serious About Play:** Workplace environments that support and encourage play are critical to business outcomes.
- **Mind the New Mindfulness:** Even very short periods of inner quiet can expand our ability to focus, improve our judgment and allow us to communicate more clearly.
- **Lose Your Balance:** The workplace can and should sustain a more holistic version of life, where work and life are less about balance and more about respectful integration.
- **Rethink Knowing:** We will have to rethink workplace environments to animate the unique human ability to shift perspectives, synthesize information and recognize patterns.
- **Recognize Recognition:** People need to be recognized for taking risks and failing as much as they are for more conventional achievement.
- **Blur the Organization:** Diverse perspectives, cross-disciplined and even cross-organizational thinking are increasingly fundamental to companies imagining “next.”
- **Create Place, Not Space:** Places, not spaces, can promote collaboration and new perspectives. It is the infusion of culture and people that transforms space to place.

LINKING TO SODEXO'S QUALITY OF LIFE DIMENSIONS

- **Physical Environment:** On almost every experiential axis, workplaces communicate and nurture the workplace culture. Design principles help guide the effective design and maintenance of workspaces.
- **Recognition:** The workplace should physically, emotionally and experientially encourage employees to be imaginative and innovative, and they should be rewarded for taking risks.
- **Personal Growth:** Humanizing the workplace involves shifting the organizational culture to focus on creativity, emotional nuance, human interaction and fulfillment.
- **Social Connections:** Through social interactions and experiences, employees learn about the communication and personality styles of co-workers, which nurtures imagination, improves productivity and elevates fulfillment.



GENDER-BALANCED TEAMS LINKED TO BETTER BUSINESS PERFORMANCE: A SODEXO STUDY



Rohini Anand, PhD, Senior Vice President, Corporate Responsibility and Global Chief Diversity Officer, Sodexo

Today in the U.S., only 24 women lead Fortune 500 companies.¹ Women account for 45% of the S&P 500 labor force, yet still only represent about 25% of executive/senior-level officials and managers, 19% of board seats, and 4% of CEOs.² Furthermore, there has been minimal improvement in the gender wage gap, with men still earning 21% more than women in equivalent positions.³

These statistics are all the more surprising when juxtaposed with the plethora of research indicating that gender-balanced leadership has a positive impact on the bottom line. A recent McKinsey report compared the financial performance of companies in the upper quartile in terms of the number of women in top management with the performance of companies having no women in top management. The companies with the highest number of women in top management had the best performance, with a 41% higher return on equity than the average.⁴

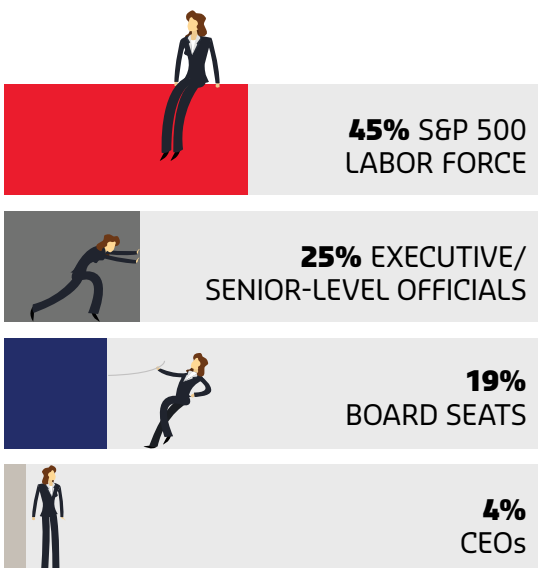
Fortunately, changes in automation and technology are creating new opportunities for women. Manufacturing and physical jobs are disappearing, making way for a service economy where healthcare and personal services are the fastest growing sectors of the economy — fields dominated by women.

The care industry values skills in which women often are seen as having an advantage. And, as work becomes more complex, interconnected and global, the ability to collaborate, build consensus and inspire virtual teams — skills many women excel in — are becoming increasingly valuable.

In addition to the shift to a service economy, globalization is driving massive changes in the business world. Corporate giants are falling to agile start-up companies from emerging economies like Brazil, Mexico and Turkey. By 2025, nearly half of all Fortune 500 companies will come from emerging markets, with 40% located in China and India.⁵ Organizations can only reach their full potential when their leadership team reflects the diversity of their customers, more than half of which are women.

To better understand and leverage this trend, Sodexo initiated an internal study to explore and understand the correlation between gender-balanced teams and performance.

WOMEN IN THE WORKPLACE



“Sodexo has long considered gender balance as a strategic issue. While it has always been our conviction that a clear link exists between gender balance and performance, our internal study gives us the numbers to provide an in-depth understanding of the range of this impact.”

– Michel Landel, Sodexo CEO

THE IMPORTANCE OF GENDER BALANCE

Gender balance is achieved when both men and women are able to access and enjoy the same rewards, resources and opportunities in the workplace. Achieving gender balance is important for workplaces not only because it is “fair” and “the right thing to do,” but also because it makes good business sense.

Consider that many of the best and brightest in every generation are women, and women hold more degrees than men in many fields. Sandrine Devillard, Global Leader of the McKinsey Women Initiative, Head of Paris Offices, says, *“By the year 2020, we will need nearly 40 million people with higher education in the global economy. If women were to work at the same level as men and stay in the labor force, this talent pool would close more than half of this gap.”*

Organizations that seek to promote the advancement of women are often confronted with attrition among women in leadership positions; the higher one goes up into the organization, the fewer women there are. Researchers call it the “leaky pipeline” and explain that the issue is not about getting women into top positions, but about creating an inclusive culture free of biases to allow everyone to reach their full potential. This includes providing the tools that allow women to thrive and enjoy equal access at every step of their advancement.

SODEXO'S GENDER BALANCE STUDY

Gender balance studies to date have looked extensively at the correlation between women in top-tier management positions and financial performance. Given the importance of the pipeline in ensuring representation at the top and the large numbers of women in management, Sodexo's study goes a step further by looking at how gender balance at all levels of its management impacts both financial and non-financial performance.

The Sodexo study analyzed key business performance indicators (KPIs) from 100 global entities and 50,000 managers in 80 countries — from C-suite to site management. The intent was to isolate whether gender-balanced entities, defined as entities having 40%–60% women in management, had higher KPI results than those entities without gender balance in management. For this initial work, the performance measures were focused on employee engagement, brand awareness, client retention and three indicators of financial performance. The preliminary results were powerful, indicating that entities with gender-balanced management performed better on all of the performance indicators.

The breadth of the data collected and the geographical diversity of the study sample confirm that the results are solid and shed new light on the strategic importance of gender diversity within organizations — not just at the top, but at all levels of management.

ACHIEVING THE RIGHT BALANCE

Sodexo's study is based on the premise that gender balance impacts performance only when the optimal balance is reached. The results clearly confirm that this balance corresponds to a male-female ratio between 40% and 60%, reinforcing that no one gender is better than the other; rather, diversity is key to enhanced performance.

The management teams that fit within this gender balance “zone” generate, on average, results that are more sustained and predictable than those of teams with less than 40% or more than 60% of either gender. The results indicate: gender-balanced teams achieved on average a four-point higher global engagement rate compared to other management groups; an increase of five points in brand image; a 12% increase in client retention; positive organic growth, growth profit and operating profit over three consecutive years.

FOCUSING ON FINANCIAL AND NON-FINANCIAL INDICATORS

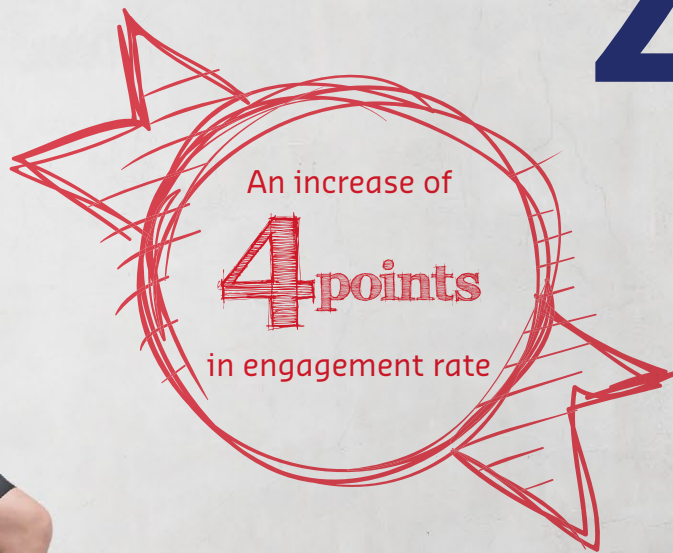
While studies of this kind commonly link gender balance with performance on a purely financial level, Sodexo's study also reveals impacts on non-financial performance indicators, such as the employee engagement rate, that are key for all organizations, especially those where people are at the heart of their mission. Notably, however, studies have found that a 5% increase in employee engagement is linked to a 3% increase in revenue growth in the subsequent year.⁶

Teams at Sodexo within the optimum gender-balanced zone have experienced on average an increase of four points in the global engagement rate versus only one point for other teams between 2010 and 2012. Similar correlations are found with other business metrics, including:

- **Brand Awareness:**
5% higher for gender-balanced teams
- **Client Retention:**
12% higher for gender-balanced teams
- **Organic Growth:**
13% higher for gender-balanced teams
- **Gross Profit:**
23% higher for gender-balanced teams

This study reinforces the conviction that gender balance is a significant driver of performance and only delivers results if it is embedded in the global strategy and systematically addressed at all levels of the organization.

THE GENDER-BALANCED ZONE



A **5%** increase in employee engagement is linked to a **3%** increase in revenue growth in the subsequent year.



BRAND AWARENESS



CLIENT RETENTION



ORGANIC GROWTH



GROSS PROFIT

TEAMS WITHIN THE GENDER-BALANCED ZONE EXPERIENCE...



“Our commitment to gender balance pushes us in the right direction, fortifies our pipeline of female managers and leads to more steady, predictable and sustainable growth and productivity. In this landmark year where we approach our goal of 25% of women in our top 300 leadership positions, this study reinforces our efforts to become an even more inclusive company.”

– Michel Landel, Sodexo CEO

*Sodexo's Commitment to Gender Balance:
Key Statistics 2009-2015*

	2009	2015
Representation of women on the Board of Directors	31%	38%
Representation of women on the Executive Committee	25%	43%
Representation of women among senior leaders	17%	31%
» In operations	10%	17%
Women's engagement rate (district managers)	51%	64%
Women involved in a mentoring program	260	2,000

KEY INSIGHTS & IMPLICATIONS

- Women remain underrepresented in leadership roles, in spite of research indicating that gender-balanced leadership has a positive impact on the bottom line.
- However, gender balance impacts performance only when the optimal balance is reached.
- The results of the Sodexo study confirm that this balance corresponds to a male-female ratio between 40% and 60%, reinforcing that diversity is key to enhanced performance.
- Entities with gender-balanced management performed better on all of the performance indicators measured, including employee engagement, brand awareness, client retention and three indicators of financial performance.
- Teams at Sodexo within the optimum gender-balanced zone have experienced on average an increase of four points in the global engagement rate versus only one point for other teams between 2010 and 2012.

LINKING TO SODEXO'S QUALITY OF LIFE DIMENSIONS

- **Social Connections:** As work becomes more complex, interconnected and global, the ability to collaborate, build consensus and inspire virtual teams — skills in which many women excel — are becoming increasingly valuable.
- **Personal Growth:** Creating an inclusive culture, free of biases, allows everyone to reach their full potential. This includes providing the tools that allow women to thrive and enjoy equal access at every step of their advancement.



CREATING THE LAB OF THE FUTURE: A SHIFT TOWARD GREATER AGILITY, FLEXIBILITY AND EFFICIENCY



Carl Stanbridge, MSc, Quality & Compliance Director - Global Pharmaceuticals and FMCG, Sodexo

INTRODUCTION

Aging populations, chronic diseases, market expansion, and treatment and technology advances are expected to spur life sciences sector growth in 2015.¹ However, efforts by governments, healthcare providers and others to reduce costs, improve outcomes and demonstrate value are dramatically altering the demand and delivery landscape. At the same time, the patent cliff remains steep, and there is a well-understood need to create more collaborative partnerships across industry and academia. The sector also faces significant difficulty in attracting and retaining talent.

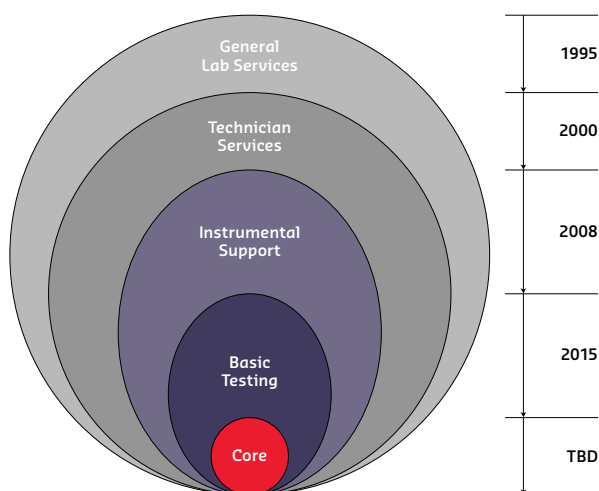
Faced with these developments and challenges, it is increasingly evident that the global life sciences sector is operating in an era of significant transformation. Most companies have adapted by not staying the normal course and changing their strategy. Faced with competitors to “big pharma,” many of whom have become significant players, they are working to adopt more agile and flexible operating models. In doing so, they have demonstrated a renewed focus on their laboratories. This includes reviewing the best way to obtain value from their scientific services, a function which in most cases is outsourced.

The life sciences sector is comprised of the pharmaceutical, biotechnology and medical technology (medtech) segments. The life sciences have applications in healthcare, as well as the agriculture and food science industries. They are helpful in improving the quality and standard of life.

THE EVOLUTION OF SCIENTIFIC SERVICES

Scientific services covers a broad spectrum of activities that have become increasingly closer to the more critical areas of the laboratory (see Figure 1). These services range from general laboratory services (e.g., cleaning, glass-washing, consumable stock control), technician services (e.g., media preparation, cell culturing) and instrument services (e.g., calibrations, servicing, repair, qualifications). The scope continues to widen, as there is also an appetite developing within the life sciences industry for service providers to include basic analytical testing among their solutions.

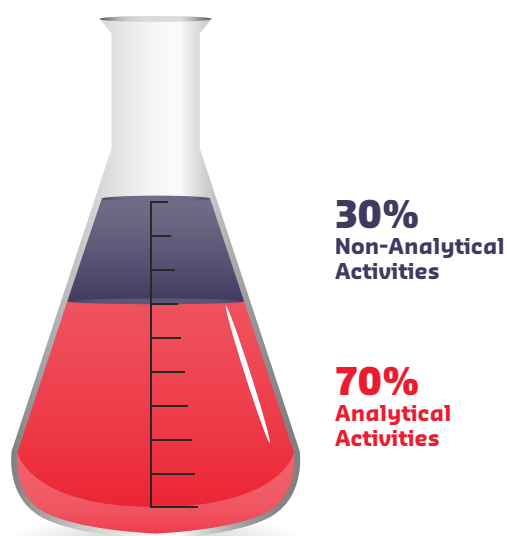
Figure 1. Scientific Services Through the Years



The increasing scope of scientific services allows companies to obtain more value from service providers. Through innovative technologies and approaches embedded in robust compliant processes, scientific services offers life sciences organizations an avenue toward the pursuit of their core business. Specifically, the fundamental benefit that scientific services seeks to deliver to the life sciences industry is the ability for scientists to spend as much time as possible working toward organizational objectives and supporting the key assets of the organization.

In fact, any activity which does not directly contribute toward the progression of an asset, should be considered an activity that can be delivered by someone else. It is these non-core activities — which make up 30% of a scientist's time² — which form part of the scientific service offer. As part of their evolution, companies in the life sciences industry have revisited the rather difficult question of "what is core and what is non-core" in an effort to re-evaluate what can be outsourced to strategic partners.

How Scientists Spend Their Time



The scientific community also increasingly acknowledges that an extremely important factor in aiding them to perform their duties are the caliber, behavior and ongoing management of the people charged with the responsibility of scientific services — at all levels. Accordingly, service providers must adapt to the new demands placed on them by more effectively anticipating trends in the industry.

AN INNOVATION-FOCUSED END-USER COMMUNITY

Given the increased engagement among the scientific community, it is appropriate to examine in more detail any trends that have been observed in recent years, with respect to their demands on scientific services — not just from a service perspective, but from a strategic perspective. Effective scientific services: (1) provides highly qualified personnel — an extension of the scientific community, (2) delivers innovative solutions, and (3) is "connected" and understands scientists' expectations and the regulatory environment.

Perhaps the most notable and potentially all-encompassing requirement is that of innovation.³ Scientific services plays an important role in providing innovative solutions in laboratory areas. When delivered correctly, it has a positive effect on the scientists' experience and in turn their productivity.

"Supply chain-driven innovation, such as novel manufacturing techniques, alternative modes of distribution, supply chain segmentation, and partnerships with third-party service providers infusing innovation where it makes sense, will be critical to sustaining a new business model focused on different types of products, services, and methods of patient engagement."

— Deloitte,
2015 Global Life Sciences Outlook Report

Today's unique culture in life sciences is also vitally important. As the pace of life science R&D accelerates, laboratories face heavy demands to produce timely, accurate results at reduced costs. It is not uncommon for senior management to push for throughput to quadruple while reducing costs by 30 percent.⁴ At the same time, social media and immediate access to information have changed the expectations of the end user. In addition to this, there is a changing viewpoint relating to compliance. It is increasingly accepted that sustainable customer satisfaction cannot be achieved through compliance alone, but instead through a shift in culture that places quality as the forerunner to cost reduction and efficiency.

The Workplace: A Sum of Its Tools

Whether it is a laboratory, a write-up area, a glass-washing room, consumables and chemicals store, ancillary area or a home office, these are all now included within the definition of "workplace." Effectively, **today's life sciences workplace is very much the sum of its parts.** Along with this, scientists have transitioned from intellectual contributors burdened with menial responsibilities to controllers of intellectual science management. They are an extension of the facility, and along with the facility, they have increasing demands on scientific service providers.

Scientific services can truly add value to the scientist. Through adopting and implementing technologies for stock monitoring, location tracking, usage-based maintenance, paperless tools and many more tasks, the end user community can significantly benefit from a specialized service provider.

At the same time, with cyber threats and other security breaches on the rise, life sciences companies should consider whether they need to assess potential capability gaps, define their security and privacy needs, and coordinate their efforts with their partners.⁵

Innovation is an area that has seen much change in recent times. With the introduction of wireless technologies, and devices from smartphones/tablets to interactive “tables,” Web broadcasting and global connectivity, scientists *should* have ample choices. However, in many parts of the industry, there has been slow progress. This has led to an overwhelming desire for scientific services to introduce the latest and greatest technologies, including the ability to access laboratory information and control laboratory equipment from remote locations.

When scientific services embraces and implements these innovations and the workplace is changed, people view and use the workplace differently. Innovation is infectious, especially among scientists. It is inspiring to work in an environment where technology in the workplace means that services “come to you.”

The Workplace: A Sum of Its Processes

Laboratory operations are constructed of processes, and advances in technologies are unquestionably correlated with corresponding improvements in these processes. An important part of a scientist’s and an organization’s responsibility is to define those processes that they consider core to their operation — that is, processes that have a direct impact on a company asset. Scientific services can add value and allow scientists to divert effort to their core business as opposed to investigating the leanest method of moving a sample through the laboratory.

Scientific services add value by allowing scientists to focus on their core activities.

The hunt for non-value added tasks and inefficiencies in the process has now escaped the confines of manufacturing operations, and has very much entered the laboratory space. Efficiency has spread like wildfire, as it has become apparent that laboratory

operations (e.g., booking in samples, allocating work, equipment reservations, testing lead times, atypical investigations) are, in fact, processes, each one with various steps and therefore opportunities to be made lean. However, the life sciences industry must continue to maintain a risk-based approach in order to remain compliant with regulatory requirements.

Scientific services is increasingly relied upon to improve processes and perform additional tasks, while taking into account these requirements.

Processes relating to scientific services often transcend any local situation at a site level. Whether it is equipment related or technical, significant process commonalities exist between sites and entire divisions within an organization. However, the scientific community does not always see this, because they are too busy to look — and if they do see the issue, they are too busy to fix it. Scientific service providers, on the other hand, can manage processes and deal with any issues that arise. It is perhaps not an innovative solution that is needed, but an innovative mindset within the scientific community and service providers alike to really challenge what is considered “core” and then to explore the full potential of outsourcing non-core to strategic partners.

THE SHIFT TOWARD INTEGRATED SERVICES OUTSOURCING

Outsourcing in the life sciences industry has been around for some time. R&D divisions make use of contract research organizations (CROs), while production divisions utilize contract manufacturing organizations (CMOs). In these areas, globally spending is in excess of \$1.5 USD Trillion, of which “over 95% of the outsourcing contracts originate in the U.S. and E.U.”⁶ Outsourcing constitutes 25% of the overall spend in R&D within the U.S. for all industries combined. However, of this, only 12% of the spend is on the “analytical” part of the R&D process, suggesting that there is a lot more potential for growth in the laboratory environment.

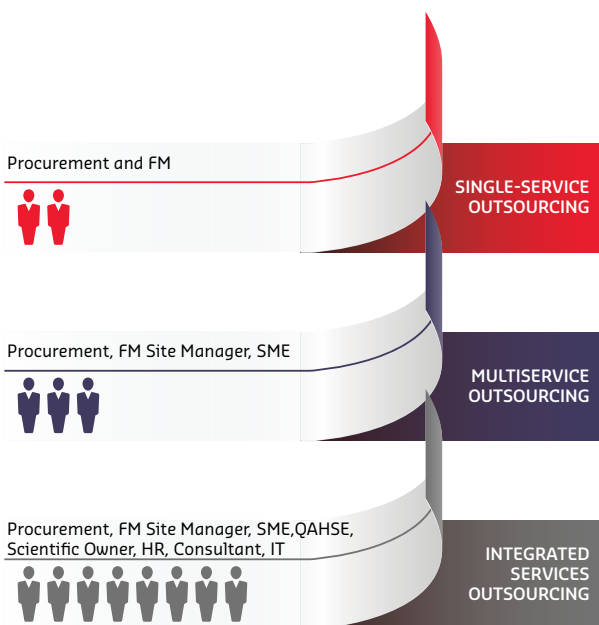
These numbers are here for illustrative purposes only, and are indirectly related to the topic of outsourcing scientific services, which is typically an “on-site” service delivered by a provider as opposed to an off-site organization. They do, however, serve to show the considerable investments being made in science. Scientific services has a pivotal role in ensuring that an organization makes the best use of that spend in aiding the scientific community, through advancing innovation, increasing speed to market, and providing amenities that promote greater talent acquisition.

Although currently considered part of Integrated Facilities Management (IFM), there appears to be an increasing trend toward separating scientific services from other facilities services, evidenced through a review of “request for proposals” (RFPs) from recent years. The transition is not at the expense of integration of services, but does mean that there is additional emphasis placed on the importance of science. As FM is often outsourced to service providers, this shift has a direct impact on FM service providers, who must either develop offers to meet the needs of this position change or maintain the stance that science is merely an extension or an integral part of FM.

A Shift From Cost to Value

In the past, providers of scientific services to the life sciences industry were asked to focus on cost reduction and as such, the contracting processes were led by the procurement function, with little involvement from end users such as scientists. However, more recently, due to the shift toward integrated FM services provision, there is a trend whereby the supplier selection panel is much broader (see Figure 2). The consequences are that while cost remains important, what becomes the defining factor is value.

Figure 2. Integrated Services Outsourcing and the Broadening Supplier Selection Panel



Despite the addition of more disciplines in the process, the key difference has been the inclusion of the end users — the scientists. As such, service providers are expected to place an emphasis on “value” as understood and desired by the end user.

Scientists are expecting the perfect blend of innovation, high standards of service delivery and supply chain leverage, all for the right price and embedded within a thorough program of compliance.

They are asking the “so what?” question, referring to the need for them to be positively impacted by the service provider’s solution, which seeks to tackle the 30% non-core activities for which scientists are currently responsible.

Drivers and Benefits of Outsourcing Scientific Services

To better understand this, it is worth exploring the drivers and benefits of outsourcing scientific services to strategic partners, which will help formulate a rationale for separating this service from other FM services.

In one review, RFP results showed that the economic benefits of outsourcing average between 15–19% savings across five-year contract terms.⁷ These results are consistently strong across North America, Europe and Asia. Even companies in the third generation of facility management contracts continue to see efficiencies.

Drivers	Benefits
Optimizing scientific talent	Removes tasks that do not align with scientists’ core role. Enables scientists to focus on data-based decisions versus data generation.
Designing workplace	More efficient use of laboratory footprint. Improves equipment utilization, reduces asset base, increases access to latest technology, provides more agile environment, promotes collaboration.
Joint investments to increase agility and risk sharing	Creates collaborative partnerships that are financially attractive to all parties involved.
Open-access lab management – shared facilities and equipment	Reduces footprint, increases utilization of equipment, aids method transfer and reduces complexity with multiple equipment types.
“Near” off-site centralization of activities (e.g., reagent preparation, compound stores)	Enables facilities to be designed and fitted to support core activities (e.g., manufacturing) rather than non-core (e.g., chemical preparation).

Pharmaceutical companies who outsource their FM average 15-19% savings over the course of the contract.

OPTIMIZING
SCIENTIFIC
TALENT

DESIGNING
WORKPLACE

"NEAR" OFF-SITE
CENTRALIZATION
OF ACTIVITIES

OPEN-ACCESS
LAB
MANAGEMENT

JOINT
INVESTMENTS

DRIVERS OF OUTSOURCING SCIENTIFIC SERVICES

The laboratory environment and the community of scientists are considered the “brain” of the organization. The laboratory is the start of the product pipeline, the beginning of the journey of the molecule to the marketplace. A major challenge is convincing the scientific community that FM as a discipline goes beyond the notion of glorified janitors; it is therefore difficult for it to gain strategic legitimacy above anything other than a cost-savings exercise. It is important to overcome this challenge in order to ensure that FM appropriately supports the scientific community that, in some cases, can be more than 50% of the workforce at the site. Perhaps this explains why scientific services are being separated from general FM.

CONCLUSION

As the industry changes and shifts its focus toward agility and flexibility, the scientific community is being asked to contribute toward meeting the objectives of the organization; as such, scientific services must play its part in this pursuit. It is difficult to know whether scientists’ expectations have changed, or whether they are just more involved in the decisions and solutions relating to how they are supported. In any case, there are clear indications that the discipline of scientific services is an important focus area for the life sciences industry. Organizations are rethinking the role of scientific services in relation to the wider facilities management function. While it may be considered a specialist area that needs to integrate with facilities management, scientific services must have a strategy of its own in order to fully support scientists so they can focus on their core activities.

BEST PRACTICES FOR OUTSOURCING SCIENTIFIC SERVICES

- Projects must start with defining and scoping the “core business” of both the life sciences organization and the service provider.
- Technology demands require clear strategy so that the solution benefits both outsourcer and service provider.
- Staff skill sets need to be clearly outlined so that appropriate staff can be recruited to achieve the objectives within the scope of the defined facility.
- The contract must be progressive and serve both the life sciences company and the service provider.
- The definition of facilities is critical — does it extend to the “human” elements of the workplace or just the physical?
- Senior management must set the overall objectives of the outsourcing arrangement and how they will be measured.

KEY INSIGHTS & IMPLICATIONS

- The fundamental benefit that scientific services delivers to the life sciences industry is the ability for scientists to spend as much time as possible working toward organizational objectives.
- The scientific community is increasingly engaged in the decisions and solutions around scientific services. As a result, service providers are expected to place an emphasis on “value” as understood and desired by the end user.
- Effective scientific services: (1) provides highly qualified personnel — an extension of the scientific community, (2) delivers innovative solutions, and (3) is “connected” and understands scientists’ expectations and the regulatory environment.
- There is an increasing trend toward separating scientific services from other facilities services. With this in mind, scientific services must have a strategy of its own in order to fully support scientists.

LINKING TO SODEXO’S QUALITY OF LIFE DIMENSIONS

- **Ease & Efficiency:** Scientific services manages non-core tasks that do not contribute toward the progression of assets, which allows scientists to focus on core activities.
- **Physical Environment:** A strategic service provider optimizes the life sciences workplace and creates an agile, innovative, and inspiring environment for end users — the scientists.
- **Social Connections:** Scientific services can foster collaboration among scientists through workplace design elements and open-access lab management.



10

Meet the Authors

Meet the Authors

Meet the Authors

MEET THE AUTHORS

POPULATION HEALTH MANAGEMENT: A NEW BUSINESS MODEL FOR A HEALTHIER WORKFORCE

**Colleen Conklin, MSPH, Director of Research,
Corporate Services, Sodexo**



Colleen Conklin, MSPH, leads Innovations 2 Solutions research activities for Sodexo's Corporate Services as Director of Research. In this role, Colleen provides insight and content for thought leadership across various business and industry sectors and

provides direction for research fellows and interns.

Prior to her current role with Sodexo, Colleen gained professional experience from various business sectors where she has served in project management, administrative management, technical and business development roles: health research; U.S. government, including Departments of Defense and Energy, Federal Aviation Administration, and National Parks Service; technology – IBM; and utility – Florida Power, New York State Electric and Gas. She has a Master's degree in Epidemiology and a Bachelor's degree in Chemistry from the University of South Florida.

**Nebeyou Abebe, MA, PMP, Senior Director,
Health & Well-Being, Sodexo**



Nebeyou currently serves as Senior Director of Health & Well-being for Sodexo North America. He is responsible for developing Sodexo's enterprise-wide health & well-being strategy, advising blue chip clients on their employee (and community) health and well-being goals,

creating and empowering an organized community of practice for wellness within the organization, and establishing mutually beneficial partnerships with private, public and non-profit entities.

Nebeyou earned his Master's degree in Social and Public Policy from Georgetown University and a Bachelor's degree in Economics from the University of Massachusetts-Amherst. From 2008–12, he served as a federal-level advisory board member for the Office of

Minority Health. In 2012, Nebeyou was honored with the prestigious "40under40" award by the Envest Foundation for his work and contributions in public health.

**Jennifer Petrelli, SM, MPH, Nutritional
Epidemiologist, Sodexo**



Jennifer Petrelli, SM, MPH, is a Consultant with the Innovations 2 Solutions (I2S) team. She has built a career as a public health expert over the last 20 years. She has used her experience in research and scientific writing to translate complex public health concepts for

healthcare professionals and lay audiences. Jennifer was the primary data analyst and co-author of the first landmark study linking obesity to risk of cancer and mortality. She has also successfully developed curriculum and taught courses on nutrition and global health to nursing students.

Jennifer's unique blend of expertise balances the need for both scientific and cost-driven priorities in health care. Her areas of expertise include nutritional epidemiology, population health, research methods, study design, and culinary culture analytics.

WORKPLACE VIOLENCE AND TERRORISM: BEST PRACTICES FOR A NEW REALITY

**Bill Tandeske, Vice President of Operations,
Security, NMS Security**



Bill joined the NMS senior leadership team in 2014, providing direction and oversight to security operations in Alaska and the contiguous U.S. Prior to his role as vice president, Bill served as director of operations and business development for NMS Security.

Bill brings more than 30 years of law enforcement experience to NMS clients. He began his career in 1973 with the Alaska State Troopers, retiring in 1999 as deputy director before serving as manager

for a company providing security services for the Trans-Alaska pipeline. In 2003, Bill was appointed commissioner of the Alaska Department of Public Safety. As commissioner, Bill managed a statewide law enforcement agency of 800 employees and a budget of \$130 million.

Bill attended the University of Alaska, where he earned an Associate degree in Justice. He is a 1990 graduate of the FBI National Academy and a lifetime member of the Fraternal Order of the Alaska State Troopers.

Helen Nichols, MSW, Research Consultant, Sodexo



Helen Nichols, MSW, is a Social Work doctoral student at the University of Maryland, Baltimore. Her professional experience comes primarily from the financial services industry, where she was responsible for investment management, client

acquisition, and marketing and sales strategy. Helen also has experience leading local service organizations, where she successfully secured grant funding to award college scholarships to local high school students.

Helen most recently worked in the field of mental health, providing therapeutic services to court-ordered clients in a diversionary program as well as mental health services to inmates in a county correctional facility. She now researches organizational workplace outcomes, primarily in the healthcare industry. Helen received her Bachelor of Arts degree in Crime, Law & Justice from Penn State University and her Master of Social Work degree from Salisbury University.

STORIES OF URBAN TRANSFORMATION: THE RISE OF 18-HOUR WORK/LIVE COMMUNITIES

Nancy Johnson Sanquist, IFMA Fellow and AIA Associate, Real Estate and Workplace Strategist, Trimble



Nancy Johnson Sanquist is a Strategist for the Real Estate and Workplace Solutions group of Trimble, as well as an IFMA Fellow and Associate of the AIA. She is a Trustee of the IFMA Foundation serving as

Co-Chair of the Knowledge Management Committee and Vice President of the IFMA Corporate Real Estate Council. Nancy is a thought leader in the fields of facility management, real estate, and technology and has lectured and written about global trends in these fields for three decades.

With Diane Coles Levine, she co-edited the book *Work on the Move*, which will be revised for publication this year. In 2012, she co-founded, along with Ms. Levine and Kate North, *Workplace Evolutionaries (WE)*, a new IFMA Community. She holds degrees from UCLA, Bryn Mawr College and Columbia University Graduate School of Architecture and Urban Planning. Her last teaching assignment was at the USD Graduate School of Business.

Diane Coles Levine, MCR, Managing Partner, Workplace Management Solutions



As Founder and Managing Partner of Workplace Management Solutions, Diane specializes in real estate and workplace strategy. She is a guest lecturer at MIT Professional Education and Vienna University of Technology. Diane is the co-editor with

Nancy Johnson Sanquist and co-author of “Work on the Move” and co-author of “Cut it Out: Save for Today, Build for Tomorrow.” Diane spearheaded an innovative workplace strategy called the AWESOME project that was written up in *Business Week* and other publications and won the 2009 IFMA George Graves Facility Management Achievement Award, the 2009 CoreNet REMmy for “Workplace Innovation” and was named a *Southern California Real Estate Journal* “Woman of Influence.”

Diane is a member of the IFMA Board of Directors, Past Chair of IFMA Foundation, CREC Treasurer, Co-Founder of Workplace Strategy Research Summits held at Cornell University and Wokefield Park, England, co-founder and Senior Advisor of the Workplace Evolutionaries (WE) Community.

BIG DATA IN THE WORKPLACE: CAN IT ENHANCE EMPLOYEE PRODUCTIVITY AND QUALITY OF LIFE?

**James Ware, PhD, Executive Director,
*The Future of Work...unlimited***



Jim Ware, PhD, is a meeting design strategist. A former Harvard Business School professor, he has invested his entire career in enabling change leaders to take charge of their organizational futures by exploring, interpreting, and leveraging the changing nature of work, the workforce, and the workplace.

Jim is the founder and executive director of The Future of Work...unlimited and the global research director for Occupiers Journal Limited. He has co-authored several books about the digital economy and its implications for leadership and organizational performance. His most recent book, *Making Meetings Matter: Leading Powerful and Effective Corporate Conversations in the Digital Age*, will be published in February 2016.

Jim holds PhD, MA, and BSc degrees from Cornell University and an MBA (with distinction) from the Harvard Business School. He lives and works in Northern California.

REACHING EVERY EMPLOYEE IN AN ORGANIZATION: ENGAGEMENT THROUGH RECOGNITION

**Mia Mends, CEO,
Benefits and Rewards Services USA, Sodexo**



Mia Mends is the CEO of Sodexo Benefits and Rewards Services, U.S. In this position, she leads the strategic evolution and growth of the business, with a focus on delivering outcome-based employee engagement solutions through recognition and

well-being programs and platforms. She joined Sodexo Benefits and Rewards in 2012 in the newly created position of Vice President, Sales for Americas Region in Sao Paulo, Brazil.

In that role, she was charged with overseeing sales processes and the strategic and profitable growth of Sodexo's products and services through diversified distribution channels in eight countries in Latin America.

Ms. Mends has also founded her own non-profit, Seven Sisters to Sisters and served on the Boards of the Education Foundation of Harris County and the Harvard Business School Global Alumni Association, where she served on the Executive Committee. She holds a BA in Economics from Wellesley College and an MBA from Harvard Business School.

SMART ENERGY MANAGEMENT: A WIN FOR THE ENVIRONMENT, PEOPLE AND BUSINESS

**Randy S. Michael, LEED AP, CEM, CEA, CEP,
CDSM, Senior Director, Energy Management
Services, Sodexo**



Randy Michael is Sodexo's Senior Director of Energy Management Services. He is a 38-year veteran of the energy industry with experience in sustainability program design and implementation, energy auditing, energy procurement, strategic energy planning,

cogeneration project development, wholesale power marketing, utility rate design and energy consulting. Randy has worked with national companies to reduce energy consumption through employee education. In addition, he advises clients on techniques to reduce their carbon footprint while lowering operating expenses, and leveraged his knowledge of LEED™ to design sustainable, cost-effective solutions.

Randy is a LEED™ accredited professional, and is certified by the Association of Energy Engineers as an energy manager, energy auditor, energy procurement professional and a demand side management professional. He holds a Bachelor of Science degree and an MBA.

HUMANIZING THE WORKPLACE: USING DESIGN PRINCIPLES TO INSPIRE WORKPLACE THINKING

**Thomas Stat, Chief Operating Officer,
IA Collaborative**



Tom is Chief Operating Officer at IA Collaborative, focusing at the intersection of culture, organization, business, brand, experience, design, marketing and growth. Prior to joining IA, Tom co-led IDEO Chicago and was a member of the firm's global leadership team.

Tom helps companies and organizations move beyond incremental ideas to more transformational futures through a human-centered design approach. His clients have included industry leaders in pharmaceuticals, healthcare, transportation, telecommunications, financial services, consumer packaged goods, retail, consumer electronics, food and beverage, real estate and the arts. He holds 10 U.S. patents and has also launched a number of startup companies. As an architect, he contributed to the design of over 12 million square feet of corporate headquarters.

Tom attended Purdue, Boston University, The Rhode Island School of Design, and Stanford. He teaches and lectures at Northwestern University, the University of Chicago, DePaul University, Lake Forest Graduate School of Management, The Kellstadt Graduate School of Business, and The Carlson School of Management, among others.

GENDER BALANCED TEAMS LINKED TO BETTER BUSINESS PERFORMANCE: A SODEXO STUDY

**Rohini Anand, PhD, Senior Vice President,
Corporate Responsibility and Global Chief
Diversity Officer, Sodexo**



Dr. Anand oversees the strategy, implementation and business alignment of Sodexo's integrated global diversity and inclusion initiatives, as well as Sodexo USA's sustainable development, wellness and corporate responsibility strategies. She leads the culture change initiatives

and their integration in business growth strategy. Under her leadership, Sodexo received the 2012 Catalyst Award and was the only company to be ranked in the top five on the DiversityInc index of Top Companies for Diversity and Inclusion for six consecutive years.

A leading expert on organizational change, diversity and inclusion, Dr. Anand has been featured in CNBC, The Boston Globe, The New York Times, and the Washington Post. She has appeared on CNN, Bloomberg TV and National Public Radio.

Her awards include the Mosaic Woman Leadership Award, the Women's Foodservice Forum Trailblazer Award, the Maryland International Business Leadership Award, the American Institute for Managing Diversity's Individual Leader Award, and Who's Who in Asian American Communities Award (WWAAC), and Ascend's inaugural Excellence in Diversity & Inclusion award.

CREATING THE LAB OF THE FUTURE: A SHIFT TOWARD GREATER AGILITY, FLEXIBILITY AND EFFICIENCY

**Carl Stanbridge, MSc, Quality & Compliance
Director — Global Pharmaceuticals and
FMCG, Sodexo**



Carl is responsible for the direction of all Quality & Compliance activities as they relate to Sodexo's pharmaceutical, consumer healthcare and FMCG business. In his role, Carl provides leadership to a global team of Quality Assurance (QA) professionals,

who are responsible for ensuring that operations are conducted in accordance with each client's requirements and regulatory expectations. To facilitate this, Carl and the QA team own and administrate Sodexo's global Quality Management System, designed specifically for the pharmaceutical industry.

Carl also chairs the Sodexo Global Centre of Expertise, which is responsible for developing the operational processes and tools in all areas of the services that Sodexo delivers to the pharmaceutical industry (national and internationally).

Previous to joining Sodexo, Carl spent 13 years working for GSK, holding a variety of roles in Quality Assurance, across laboratory, manufacturing and facilities management departments. Carl holds a Master's degree in Strategic Quality Management from the University of Portsmouth, UK, and studied analytical chemistry at the University of Greenwich in the UK.

ACKNOWLEDGMENTS



Rebecca Scott, MPH, Editor in Chief
 Rachel Permuth, PhD, MSPH, Research Editor
 Colleen Conklin, MSPH, Associate Research Editor
 Jo Jackson, Creative Director
 Payal Shah, Data Visualization Editor
 Christie Drake, Artistic Editor
 Karen Curry, Copy Editor
 Jennifer Dixon, Copy Editor



Design Team

Mark Janssen, Graphic Designer
 Danielle Jones, Graphic Designer
 Nicole Nicolas, Graphic Designer
 Erin Perkins, Graphic Designer
 Marie Sarich, Graphic Designer



Editorial Board

Stephen Cox, Vice President of Public Relations
 robin goldberg, Senior Director of Design, Innovations 2 Solutions Creative
 Lisa Larsen Hill, Senior Vice President, Innovations 2 Solutions Marketing
 Patricia Malone, Director of Marketing, Corporate Services, Innovations 2 Solutions Marketing
 Kevin Rettle, FMP, Vice President, Global Offer Development, On-site Service Solutions, Universities
 Jennie Vinson, Director of Marketing, Innovations 2 Solutions



Public Relations

Enrico Dinges, Senior Manager, Public Relations
 301-987-4393 • Enrico.Dinges@sodexo.com

REFERENCES

POPULATION HEALTH MANAGEMENT: A NEW BUSINESS MODEL FOR A HEALTHIER WORKFORCE

1. Loeppke, R. R. (2011). Making the case for population health management: The business value of better health. In *Population health: creating a culture of wellness*. David B. Nash et al. Jones & Bartlett Learning, LLC. Sudbury, MA.
2. Sears, L. E., Shi, Y., Coberley, C. R., & Pope, J. E. (2013). Overall Well-Being as a Predictor of Health Care, Productivity, and Retention Outcomes in a Large Employer. *Population Health Management*, 16(6), 397-405. Retrieved from http://info.healthways.com/hubfs/Science_and_Research/overall-well-being.pdf?t=1446762682108
3. World Health Organization. (n.d.). Definition of health. Available at <http://who.int/about/definition/en/print.html>
4. Loeppke, R., Taitel, M., Haufle, V., et al. (2009). Health and productivity as a business strategy: a multiemployer study. *Journal of Occupational and Environmental Medicine*, 51(4), 411-428.
5. Sears, op. cit.
6. Mattke, S., Schnyer, C., & Van Busum, K. R. (2012). A Review of the U.S. Workplace Wellness Market. U.S. Department of Labor and the U.S. Department of Health and Human Services. Retrieved from <http://www.dol.gov/ebsa/pdf/workplacewellnessmarketreview2012.pdf>
7. Pantos, G. (2013). Workplace Wellness Done Right – Population Health Management: A Business Model for a Healthier Workforce. Healthcare Performance Management Institute. Retrieved from http://www.hpminstitute.org/wp-content/uploads/2015/04/Workplace_Wellness_Done_Right.pdf
8. Loeppke (2011), op. cit.
9. Guo, X., Coberley, C., Pope, J. E., & Wells, A. (2015). The Value of a Well-Being Improvement Strategy: Longitudinal Success across Subjective and Objective Measures Observed in a Firm Adopting a Consumer-Driven Health Plan. *Journal of Occupational and Environmental Medicine*, 57(10), 1055-1062. Retrieved from http://info.healthways.com/hubfs/Science_and_Research/The_Value_of_a_Well_Being_Improvement_Strategy_4.pdf?t=1445534545692
10. Table adapted from Loeppke, R. (2006). Good Health is Good Business. *Journal of Occupational and Environmental Medicine*, 48(5), 533-537.
11. Communities for Health Launch Event Summary of Proceedings. (2015). Sodexo. Available at <http://viewer.zmags.com/publication/dc43c72e#/dc43c72e/1>
12. Going beyond the Four Walls: Partnership Strategies in Population Health Management. (2015). MUSC & Sodexo. Available at: <http://viewer.zmags.com/publication/c8359abd>

WORKPLACE VIOLENCE AND TERRORISM: BEST PRACTICES FOR A NEW REALITY

1. NPR. (2015). San Bernardino Shooting: Was It Workplace Violence Or Terrorism? Retrieved from <http://www.npr.org/2015/12/03/458276358/was-san-bernardino-shooting-workplace-violence-or-terrorism>
2. Occupational Safety and Health Administration (n.d.). Workplace violence. U.S. Department of Labor: Washington, D.C. Retrieved from <https://www.osha.gov/SLTC/workplaceviolence/>
3. Federal Bureau of Investigation (2004). Workplace violence: Issues in response. E. A. Rugala, & Isaacs, A. R. (Eds.) Critical Incident Response Group, National Center for the Analysis of Violent Crime, FBI Academy: Quantico, Virginia.
4. Holloway, H. C., Norwood, A. E., Fullerton, C. S., Engel, C. C., & Ursano, R. J. (1997). The Threat of Biological Weapons: prophylaxis and mitigation of psychological and social consequences. *Journal of the American Medical Association*, 278, 425-427.
5. Gosselin, K. R. (2015, December 9). Shootings will change response to violence in the workplace, experts say. Retrieved from <http://www.securityinfowatch.com/news/12147424/shootings-will-change-response-to-violence-in-workplace-experts-say>
6. Vineburgh, N., Ursano, R., & Fullerton, C. (2011). Workplace preparedness and resiliency: an integrated response to terrorism. In V. Bowie, B. Fisher & C. Cooper, *Workplace Violence: Issues, Trends, Strategies* (1st ed.). New York: Routledge.
7. Wesbury, B. (2002). The Economic Cost of Terrorism. IIP Digital. Retrieved from <http://iipdigital.usembassy.gov/st/english/article/2002/09/20020910160035cporter@pd.state.gov0.751034.html#ixzz3xnBFwLXY>
8. Newton-Small, J. (2015). How the Paris Attacks Have Hurt the French Economy. *Time*. Retrieved from <http://time.com/4123827/paris-attacks-tourism/>
9. Morris, D. (2015). In a World Used to Terror, Travel Industry Still Faces Risks After Paris Attacks. *Fortune*. Retrieved from <http://fortune.com/2015/11/16/paris-travel-attacks-terror/>
10. Kubarych, R. (2001). Aftermath of the Terrorist Attack: Economic, Financial and Policy Consequences. Council on Foreign Relations. Retrieved from <http://www.cfr.org/terrorism-and-the-economy/aftermath-terrorist-attack-economic-financial-policy-consequences/p4041>
11. Bureau of Labor Statistics. (2015). Nonfatal occupational injuries and illnesses requiring days away from work 2014. Retrieved from <http://www.bls.gov/news.release/pdf/osh2.pdf>
12. First estimations calculated by multiplying median days missed per incident (<http://www.bls.gov/news.release/pdf/osh2.pdf>) by total incidents in 2014 (6 X 31,380 = 188,280 days). Second estimation calculated by first determining work hours missed per incident by multiplying average hours worked per day in 2014 (<http://www.bls.gov/cps/cpsaat23.htm>) by median days missed ((38.6/5 = 7.72 hours/day) X 6 = 46.32). The number of hours lost was then multiplied by the 2014 median hourly wage to ascertain the average cost per incident (http://www.bls.gov/oes/current/oes_nat.htm#00-0000) (46.32 X 17.09 = 791.61). Incident cost was then multiplied by total incidents in 2014 to calculate total cost (791.61 = 24,840,721.8).
13. Renzetti, C. M., & Edleson, J. L. (2008). *Encyclopedia of interpersonal violence*. Thousand Oaks, California: Sage Publications.
14. Gerberich, S. G., Church, T. R., McGovern, P. M., Hansen, H. E., Nachreiner, N. M., & Geisser, M. S. (2004). An epidemiological study of the magnitude and consequences of work related violence: The Minnesota Nurses' Study. *Occupational and Environmental Medicine*, 61(6), 495-503.
15. Gardner, R. A. (1993). Preventing workplace violence: Management considerations. Retrieved from <http://www.crimewise.com/library/wpv.html>
16. Ready.gov. (n.d.). Program Management. Retrieved from <http://www.ready.gov/program-management>

17. Ursano, R. (n.d.). Workplace Preparedness for Terrorism. Center for the Study of Traumatic Stress. Retrieved from http://www.cstsonline.org/assets/media/documents/CSTS_report_sloan_workplace_prepare_terrorism_preparedness.pdf
18. Pew Research Center,. (2010). Millennials: Confident. Connected. Open to Change. Retrieved from <http://www.pewsocialtrends.org/2010/02/24/millennials-confident-connected-open-to-change/>
19. Center for Disease Control. (2014). Workplace violence prevention for nurses. Retrieved from http://www.cdc.gov/niosh/topics/violence/training_nurses.html
20. Occupational Safety and Health Administration. (2004). Guidelines for preventing workplace violence for healthcare and social service workers. Report OSHA 3148 – 04R 2015. U.S. Department of Labor: Washington, D.C.
21. Dillon, B. (2012). Workplace violence: impact, causes, and prevention. *Work*, 42(1), 15-20.
22. Nixon, W. (2004). The financial impact of workplace violence. The National Institute for the Prevention of Workplace Violence, Inc. Available from <http://www.workplaceviolence911.com/node/997>
23. Whitehead, S. (2004, November 12). Killings at job sites soaring. *The Cincinnati Post*, p. A10.
24. Strohm, C., & Frier, S. (2016). Obama Seeks Silicon Valley Help in Fight Against Terrorism. *Bloomberg*. Retrieved from <http://www.bloomberg.com/politics/articles/2016-01-08/u-s-seeking-tech-cooperation-to-counter-extremist-recruitment>
25. Notaroberta, A. (2012). Workplace violence prevention: team collaboration is the key. *Journal of Healthcare Protection Management*, 28(2), 44-46.

STORIES OF URBAN TRANSFORMATION: THE RISE OF 18-HOUR WORK/LIVE COMMUNITIES

1. American Planning Association. (2014). Investing in Place for Economic Growth and Competitiveness. Available from www.planning.org
2. Miles, P. (2015). The unbuilt residential towers with a view to the future. *Financial Times*. Retrieved from <http://www.ft.com/cms/s/0/147a9b36-732c-11e5-bdb1-e6e4767162cc.html>

REACHING EVERY EMPLOYEE IN AN ORGANIZATION: ENGAGEMENT THROUGH RECOGNITION

1. Bersin, J. (2015). Becoming irresistible: A new model for employee engagement. Retrieved from <http://dupress.com/articles/employee-engagement-strategies/>
2. Deloitte. (2015). Global Human Capital Trends 2015. Retrieved from <http://www2.deloitte.com/global/en/pages/human-capital/articles/introduction-human-capital-trends.html>
3. Towers Watson. (2014). 2014 Global Workforce Study: At a glance. Retrieved from https://www.towerswatson.com/assets/jls/2014_global_workforce_study_at_a_glance_emea.pdf
4. Aon Hewitt. (2015). 2015 Trends in Global Employee Engagement: Making engagement happen. Retrieved from <http://www.aon.com/attachments/human-capital-consulting/2015-Trends-in-Global-Employee-Engagement-Report.pdf>
5. Gallup. (2013). How to Tackle U.S. Employees' Stagnating Engagement. *Gallup Business Journal*. Retrieved from <http://www.gallup.com/businessjournal/162953/tackle-employees-stagnating-engagement.aspx>
6. Ernst & Young. (2015). Study: Work-life challenges across generations, Millennials and parents hit hardest. Retrieved from <http://www.ey.com/US/en/About-us/Our-people-and-culture/EY-work-life-challenges-across-generations-global-study>

7. Benz, J. (2015). How You Can Use Your Company Health Benefits To Strengthen Employee Engagement. Retrieved from <http://www.forbes.com/sites/theyec/2015/06/30/3-ways-you-can-use-your-company-health-benefits-to-strengthen-employee-engagement/>
8. Tugend, A. (2014). It's Unclearly Defined, but Telecommuting Is Fast on the Rise. The New York Times. Retrieved from <http://www.nytimes.com/2014/03/08/your-money/when-working-in-your-pajamas-is-more-productive.html>
9. Hassan, F. (2011). The Frontline Advantage. Harvard Business Review. Retrieved from <https://hbr.org/2011/05/the-frontline-advantage>
10. Cogswell Baskin, E. (2015). What frontline employees know that corporate doesn't. Retrieved from <http://blog.tribeinc.com/2015/07/20/what-frontline-employees-know-that-corporate-doesnt/>
11. Harvard Business Review. (2013). The Impact of Employee Engagement on Performance. Retrieved from https://hbr.org/resources/pdfs/comm/achievers/hbr_achievers_report_sep13.pdf

SMART ENERGY MANAGEMENT: A WIN FOR THE ENVIRONMENT, PEOPLE AND BUSINESS

1. European Parliament Research Service. (2015). Negotiating a new UN climate agreement: The road to Paris. Retrieved from [http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/551347/EPRS_IDA\(2015\)551347_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/551347/EPRS_IDA(2015)551347_EN.pdf)
2. Bodansky, D. (2010). The Durban Platform Negotiations: Goals and Options. Harvard Project on Climate Agreements, Belfer Center for Science and International Affairs, Harvard Kennedy School. Retrieved from http://belfercenter.ksg.harvard.edu/publication/22196/durban_platform_negotiations.html
3. Institute for Building Efficiency. (2013). 2013 Energy Efficiency Indicator Survey. Retrieved from http://www.institutebe.com/InstituteBE/media/Library/Resources/Energy%20Efficiency%20Indicator/061213-IBE-Global-Forum-Booklet_I-FINAL.pdf
4. Intergovernmental Panel on Climate Change (IPCC). (2014). Climate Change 2014: Impacts, Adaptation, and Vulnerability. Retrieved from <http://www.ipcc.ch/report/ar5/wg2/>
5. The National Academy of Sciences. (2008). What You Need to Know About Energy: Sources and Uses. Retrieved from <http://www.nap.edu/reports/energy/sources.html>
6. U.S. Energy Information Administration. (2015). 2012 Commercial Buildings Energy Consumption Survey (CBECS). Available from <http://www.eia.gov/consumption/commercial/>
7. U.S. Department of Energy: Energy Efficiency and Renewable Energy. (2007). Creating an Energy Awareness Program: A Handbook for Federal Energy Managers. Retrieved from http://energy.gov/sites/prod/files/2013/10/f3/yhttp_ceap_hndbk.pdf
8. United States Green Building Council. (2015). Leed Dynamic Plaque: Getting Started. Retrieved from <https://www.leedon.io/gettingstarted.html>
9. Nielson. (2014). Global Consumers are Willing to Put Their Money Where Their Heart is When it Comes to Goods and Services from Companies Committed to Social Responsibility. Retrieved from <http://www.nielsen.com/us/en/press-room/2014/global-consumers-are-willing-to-put-their-money-where-their-heart-is.html>
10. Deloitte Center for Energy Solutions. (2015). Deloitte Resources 2015 Study: Energy management passes the point of no return. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/energy-resources/us-er-deloitte-resources-study-series.pdf>

HUMANIZING THE WORKPLACE: USING DESIGN PRINCIPLES TO INSPIRE WORKPLACE THINKING

1. Mathe, H., Pavie, X., & O’Keeffe, Marwyn. (2011). Valuing People to Create Value: An Innovative Approach to Leveraging Motivation at Work. Available from <http://www.worldscientific.com/worldscibooks/10.1142/8220>
2. BrightHR. (2015). It Pays to Play. Available from <https://www.brighthr.com/>
3. Gensler. (2006). The Gensler Design + Performance Index: The U.S. Workplace Survey. Retrieved from http://www.gensler.com/uploads/document/61/file/2006_US_Workplace_Survey_04_29_2013.pdf

GENDER-BALANCED TEAMS LINKED TO BETTER BUSINESS PERFORMANCE: A SODEXO STUDY

1. Egan, M. (2015). Still missing: Female business leaders. Retrieved from <http://money.cnn.com/2015/03/24/investing/female-ceo-pipeline-leadership/>
2. Catalyst. (2015). Pyramid: Women in S&P 500 Companies. New York: Catalyst. Retrieved from <http://www.catalyst.org/knowledge/women-sp-500-companies>
3. Institute for Women’s Policy Research. (2014). Pay Equity & Discrimination: About Pay Equity & Discrimination. Retrieved from <http://www.iwpr.org/initiatives/pay-equity-and-discrimination>
4. McKinsey & Company. (2012). Women as a Valuable Asset. Retrieved from http://www.mckinsey.com/~media/mckinsey%20offices/russia/pdfs/women_as_a_valuable%20asset_eng.ashx
5. Dobbs, R., Remes, J., Smit, S., Manyika, J., Woetzel, J., & Agyenim-Boateng, Y. (2013). Urban world: The shifting global business landscape. Retrieved from http://www.mckinsey.com/insights/urbanization/urban_world_the_shifting_global_business_landscape
6. Aon Hewitt. (2015). 2015 Trends in Global Employee Engagement: Making engagement happen. Retrieved from <http://www.aon.com/attachments/human-capital-consulting/2015-Trends-in-Global-Employee-Engagement-Report.pdf>

CREATING THE LAB OF THE FUTURE: A SHIFT TOWARD GREATER AGILITY, FLEXIBILITY AND EFFICIENCY

1. Deloitte. (2015). 2015 Global Life Sciences Outlook: Adapting in an era of transformation. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Life-Sciences-Health-Care/gx-lshc-2015-life-sciences-report.pdf>
2. Source: Internal review of Analytical Scientist role profiles and observations during due diligence.
3. Gassmann, G., & Zedtwitz, M. (2013). Leading Pharmaceutical Innovation: Trends and Drivers for Growth in the Pharmaceutical Industry. (2nd ed.). Germany: Springer Verlag.
4. Gwynne, P., & Heebner, G. (2014). Laboratory Technology Trends: Advances in Lab Instrumentation. Retrieved from <http://www.sciencemag.org/site/products/lab1.xhtml>
5. Op. cit., Deloitte.
6. Stevens, W. C., & Lim-Wilby, M. (2011). Pharmaceutical Outsourcing: Discovery and Preclinical Services. (2nd ed.). San Diego CA: Pharmamedia Inc.
7. Kishan, R., & Cieslak, A. (2012). Strategies in Outsourcing Facilities Management. Pharmaceutical Technology, 36(8). Retrieved from <http://www.pharmtech.com/>



Committed to:

End-User Insight, Innovation &
Solution Development, and
Driving Real Change in the Market

Keep Up With the Current Trends
With Our Mobile App



Search **Sodexo Workplace**
(<http://bit.ly/Sodexoinsight>)

Search **Knowledge Library**
(<http://bit.ly/SDXKnowledgeLibrary>)



INNOVATIONS 2 SOLUTIONS

sodexo
QUALITY OF LIFE SERVICES

Sodexo
9801 Washingtonian Blvd.
Gaithersburg, MD 20878
888 SODEXO 7
www.sodexo.com

