The FM Road Ahead:
Preparing for Change & Disruptive Technology

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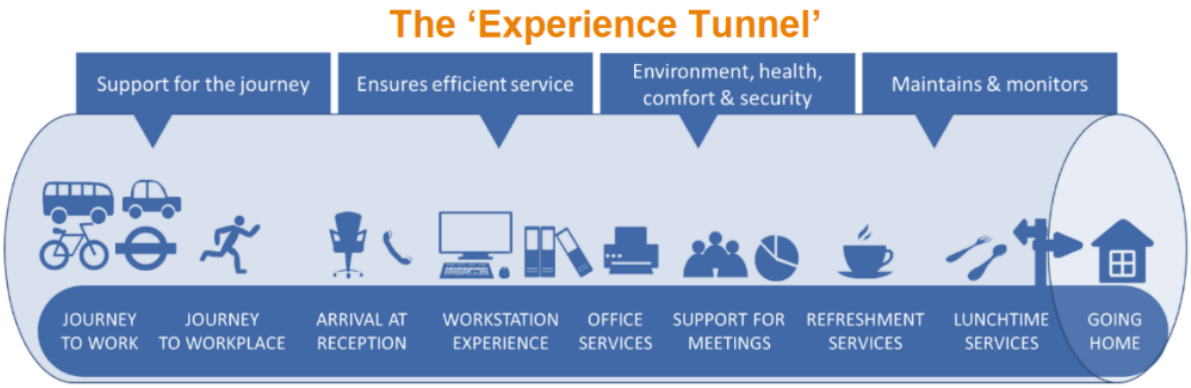
June 12, 2020 By Wayne T. Collins CFM, RPA, FMA

This article will cover one of the four key elements of FM; People, and how there is an urgent need to prepare for the technology innovation and implementation that is unfolding. The other three elements; Place, Process, and Technology will be covered in subsequent articles. The FM world has been undergoing a lot of change over the last few years, however, due to the recent COVID-19 pandemic and other drivers, the FMs of tomorrow have to be prepared to deal with a mandate that is more strategic and effectively responds to new demands of organizations. FM is much more than managing the hard and soft services with some asset management for the longer term. The primary focus needs to be how people, financial, and technology resources can be deployed for the best "experience" and results that align with the corporate objectives of the organization. This will require the adoption of relevant technologies that will have a positive impact on how FM staff serve their internal clients, make decisions, and operate buildings with high client satisfaction and the preservation of asset values.

FM Role in the Workplace Experience



(Mawson)

The above image represents a part of the scope covered in the Workplace Management Framework[1] (WMF). This framework was developed by Dr. Graham Jervis and Andrew Mawson. The WMF was designed to be applied to all types of workplaces and embraces 'high tech' workplaces, (including Power Stations, Data Centres and Industrial Premises), through to 'high touch' workplaces in which the support for the working activities of people is the primary purpose (these include offices, serviced offices, homes and people working on the move). In between these two extremes are workplaces such as hospitals, schools, universities, and prisons, which also embrace within the WMF. There are links to this resource on the last page of this article.

<u>The purpose of the WMF is to:</u>

- Define the management disciplines needed to deliver the effective workplace.
- Maximize the strategic and economic benefit of the workplace to organizations as a business tool.
- Enable the development of best practice organizational and people capabilities for the management of the workplace.
- Communicate the management requirements needed to deliver the effective workplace to supply partners in a clear and unambiguous fashion.
- Measure the effectiveness of the organization (internal and service partners) responsible for delivering the workplace.

- Communicate clearly the nature, purpose and structures associated with management of the workplace as a professional discipline to senior business leaders.

Come gather 'round, people
Wherever you roam
And admit that the waters
Around you have grown
And accept it that soon
You'll be drenched to the bone
If your time to you is worth savin'
And you better start swimmin'
Or you'll sink like a stone
For the times they are a-changin'
Bob Dylan, The Times They Are A Changing[2]

FM Roles in Workplace Change

Change is already happening, and Facilities Management professionals will need to address the following:

- **Rapidly changing workplaces and demands of building occupants**
  Post COVID-19 requirements in the workplace for social distancing, different schedules for staff, reduced or limited use of common areas such as kitchens, and the reconfiguration of the workspace to support different occupancy patterns and usage

- **Proactive measures to prevent viruses spreading**
  Increased scope of work for cleaning contractors to disinfect spaces and perform periodic common area special cleaning in accordance with a CDC approved disinfectant process using EPA registered and approved chemicals

- **Maximize building system operational efficiencies with new technologies (IoT)**
  Utilizing the Internet of Things (IoT) technology and devices, update existing legacy BAS to deliver new capabilities regarding constant occupancy space, indoor air quality monitoring for Carbon Dioxide (CO_2), Volatile Organic Components (VOCs), Ozone (O_3), Particulate Matter ($PM0_{0.3, 0.5, 1, 2.5, 10}$), and

other components (as per NIOSH, EPA, OSHA,…)

- **Increased collaboration with other company/department stakeholders**

People: The most valuable FM resource

When you strategically invest in employees, you attract and keep all the best candidates, and you also build a strong work culture unafraid of innovation, change, failure and success. Engaged employees create significantly more value for organizations than those who are not. Internal promotion provides a natural trajectory for mentoring and leadership, and existing employees typically can accept responsibility. Hiring from within presents a positive feedback loop for all staff to observe. Employees see that you reward loyalty and dedication, and the team feels more engaged and likely to put in extra effort to stand out and succeed. Many companies do not take employee training seriously. Many times, companies see employee training as an expense rather than an investment and end up paying dearly in terms of low productivity and high turnover. A company is only as good as its employees, and those employees are only as good as the resources put into them.

Learning in the flow of work

Finding data, facts, information, and insights, and then sharing it with others, is a daily activity for most of us. In fact, 38% of content that is shared online is either educational or informational[3]. Learning in the flow of work is a new idea: it recognizes that for learning to really happen, it must fit itself around and align itself to working days and working lives. With Bottom-Up learning, the individual takes the initiative to observe, ask questions, maintain a *to learn-list* of important topics related to the job, participates in online discussions where possible, and calendarizes dedicated learning time into their work schedule. With Top-Down learning, the corporation/department provide a structured program utilizing technology to harness organic learning that can be shared and scaled accordingly. There needs to be a balance of the two approaches (Bottom-Up and Top-Down) to maximize the learning opportunities in the workplace.

People – Five Key Initiatives

1. Know the skill sets of your team

Skills are the most important assets your employees possess. Well-honed skill sets give them the opportunity to master tasks and improve their work performance. It's vital to test for both technical and soft skills when you are conducting skills assessments. This is due to the fact that both types are required in the workplace. Rather than testing generic skills that every employee should know, try to focus on job-specific skills assessments that are based on work responsibilities and everyday tasks.

2. Train your Team

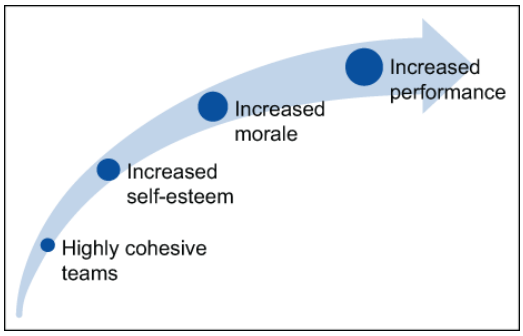
Training can be a powerful medium when there is proof that the root cause of the learning need is an undeveloped skill or a knowledge deficit. A well-designed program with customized content, relevant case material, skill building practice, and a final measurement of skill acquisition works great. With our technology-driven world and on-demand culture the best and most cost-effective way to offer training is with online courses that can be taken at an employee's own pace and schedule. There are many online industry-specific and technical training programs and applications available, especially since the COVID-19 crisis. IFMA offers online programs, based on *knowledge* and *experience*, for the SFP, FMP, and CFM credentials. For various other topics and shorter learning *knowledge* paths, LinkedIn Learning (premium plan but worth it) offers excellent value for the content quality.

3. Support your Team

One important consideration is the existence of a team of FM professionals that have a vested interest in the future of the organization. Working together is essential due to the multi-functional nature of the mandate. Cohesiveness is a characteristic that is common in high-performance teams, a measure of the attraction of the group to its members (and the resistance to leaving it). Those in highly cohesive teams will be more cooperative and effective in achieving the goals that are set. Lack of cohesion within a team working environment is certain to affect team performance due to unnecessary stress and tension among coworkers.

A Cohesive Team

Cohesiveness is the extent to which team members stick together and remain united in the pursuit of a common goal. A team is said to be in a state of cohesion when its members possess bonds linking them to one another and to the team as a whole. Members of a highly cohesive team focus on the process, not the person; they respect everyone on the team, assuming good motives; and they fully commit to team decisions and strategies, creating accountability among the team. Morale is also higher in cohesive teams because of increased team member communication, friendly team environment, loyalty and team member contribution in the decision-making process. Teamwork is essential to Facilities Management (FM) organizations due to the presence of various parties and multi-functional nature.



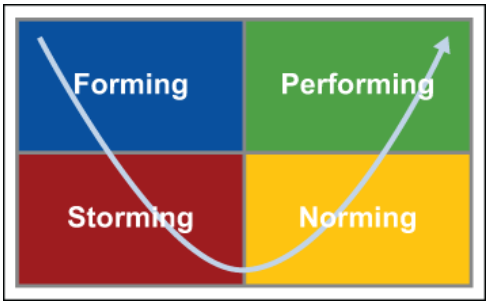
Team Dynamics

Based on the bestselling book "The Five Dysfunctions of a Team" by Patrick Lencioni, The Five Behaviors of a Cohesive Team[4] is a model and development program that guides intact teams through a journey to improve in five areas that are key to productive team dynamics.

The Five Behaviors of a Cohesive Team™ Model

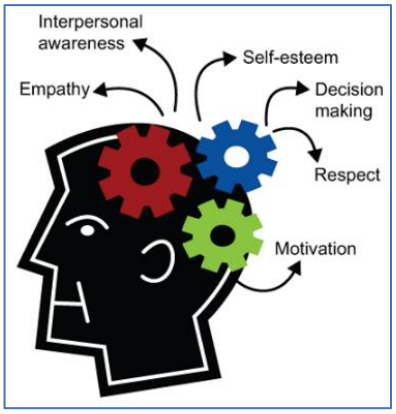
Team Development

According to researcher Bruce Tuckman[5], in both group dynamics and the four stages of team development he popularized (forming, storming, norming, performing), leaders must retain the motivation of team members in order to successfully overcome the challenges of the storming and norming stages.



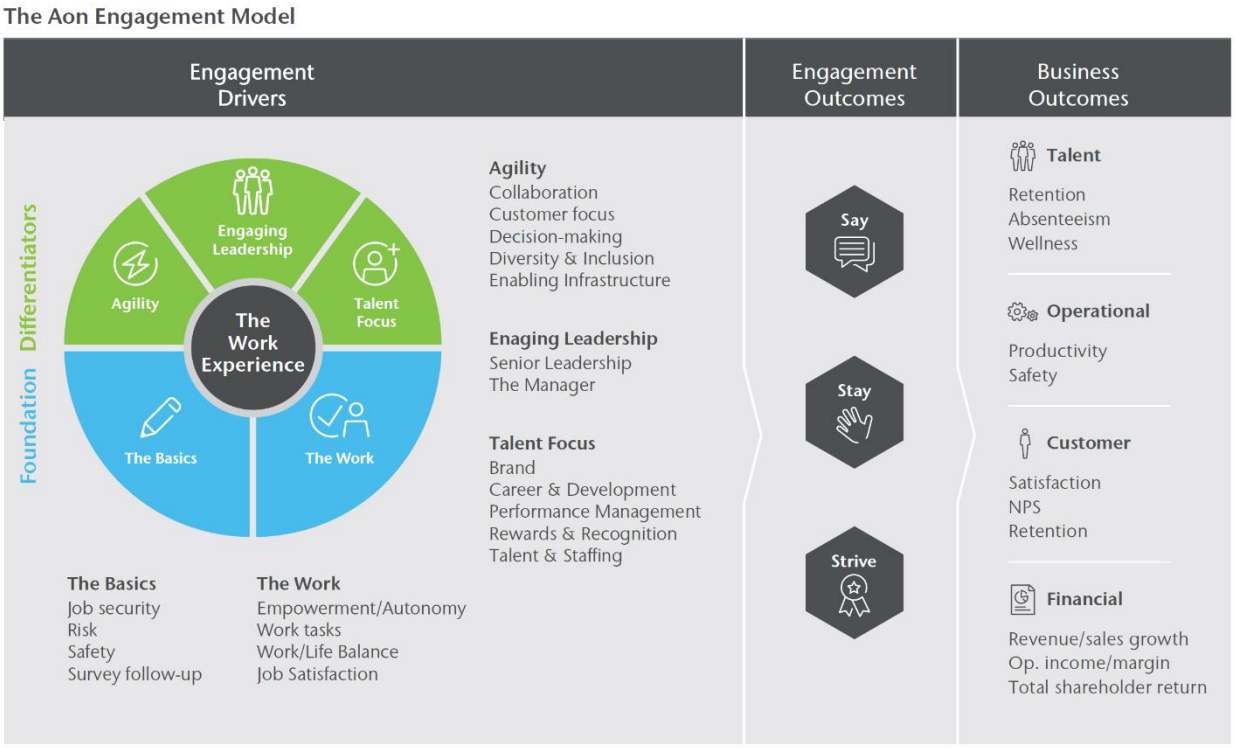
The *forming* stage represents the beginning, the honeymoon period; great expectations are shared from all team members. Relationships are developed, purpose is clear and ground rules are established.
The *storming* stage is triggered once team members start jostling for position, stumbling from confusion, having arguments about leadership, strategy and goals. This is when team leadership becomes imperative. The leader must succeed at keeping the team motivated, addressing all concerns and clarifying purpose and goals.

High-functioning teams are not the result of coincidence. They achieve greater levels of participation and collaboration because their members trust one another, share a strong sense of team identity, and have confidence in their abilities and effectiveness. Such teams possess high levels of team emotional intelligence (EI) as illustrated below.



4. Employee Engagement

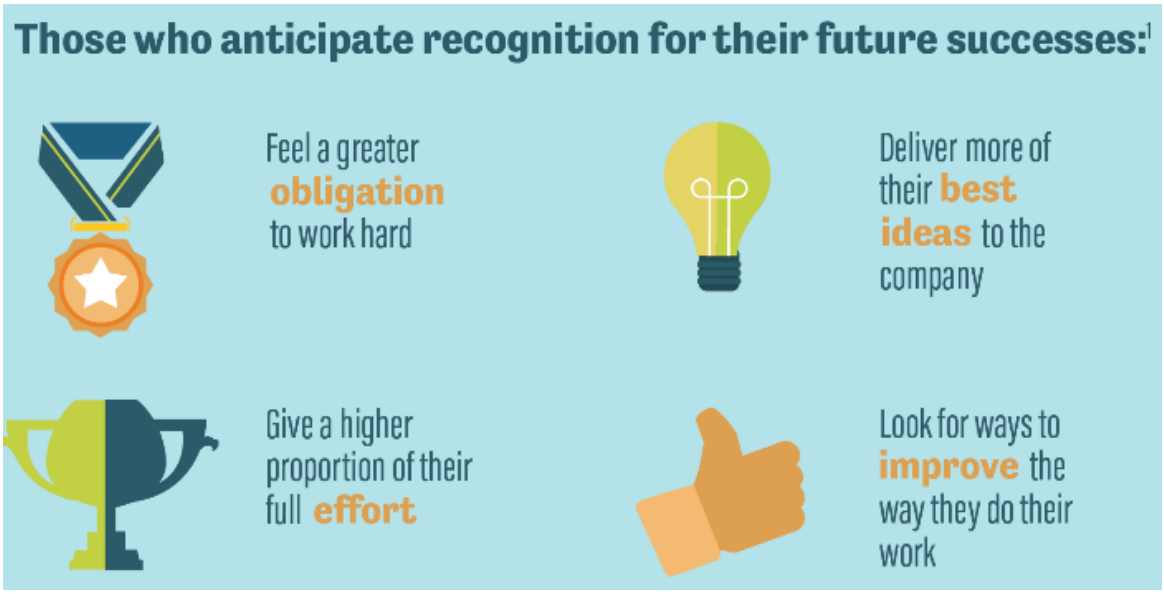
Employee engagement is serious business. While overall engagement in Canada remains above the global average, workplace disruption – driven by new technologies and new ways of doing business – is a driver of uncertainty and stress for Canadian employees, adversely impacting engagement, according to a recent survey by professional services firm Aon. The concept of employee engagement is often confused with satisfaction or happiness, but the true definition is deeper in meaning. Employee engagement is defined as "the level of an employee's psychological investment in their organization."



The Aon Employee Engagement model[6] above provides a complete picture of the business impact of engagement, employee engagement itself and the factors of the work experience that lead to higher engagement.

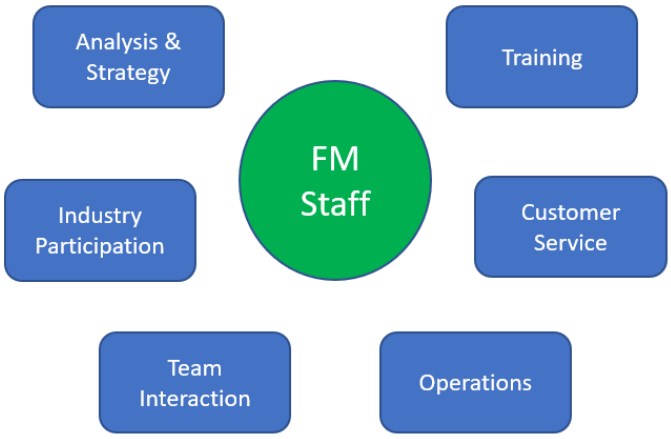
5. Peer-to-Peer (P2P) Recognition

The 2015 Canadian Incentive and Rewards Trends Study indicated that 43% of workers cite a lack of recognition as one of their biggest sources of unhappiness at work. Smart companies have started to adopt P2P (peer-to-peer) recognition to boost employee engagement. Creating a culture of recognition is a great initiative that creates a whole new attitude and outlook on the company and on working life.



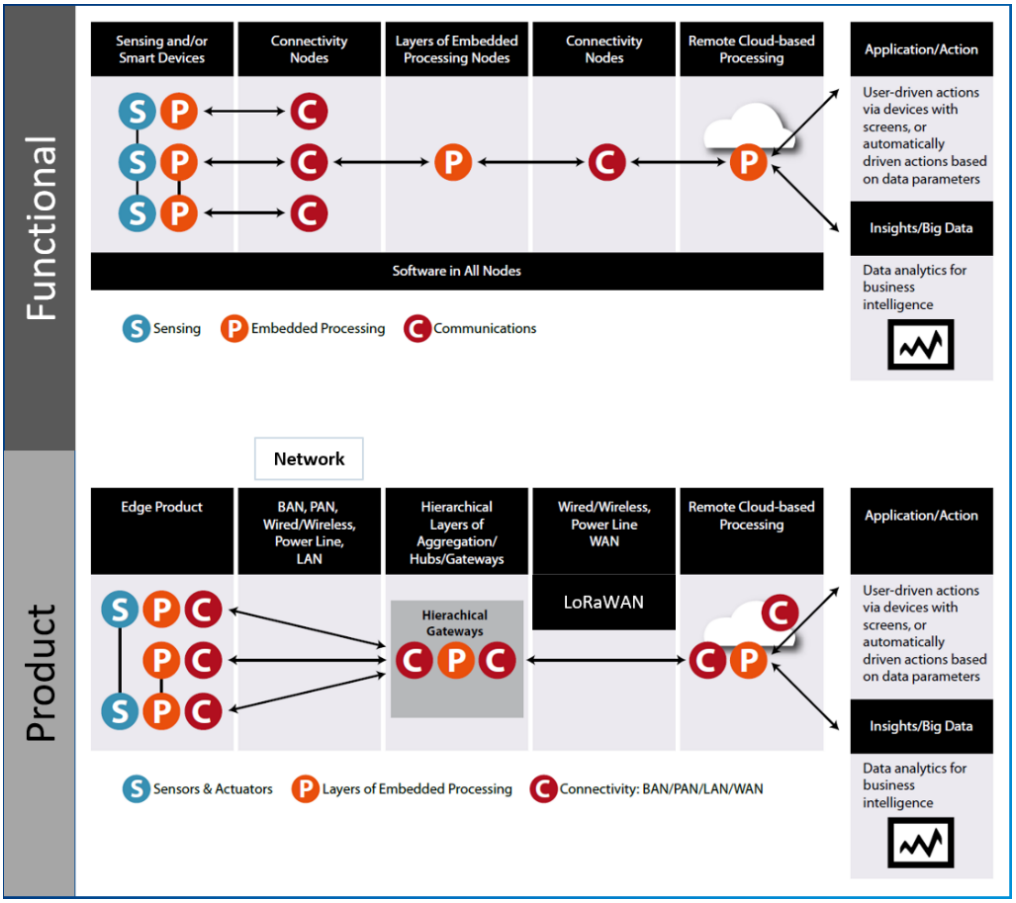
[1]Aberdeen Group, The Power of Employee Recognition, 2013

There are many facets of the FM mandate as shown below. With the right leadership, guidance and engagement, the FM team can tackle the many challenges that are presented.



Technology

There are many areas of technology that have a considerable impact on facility managers and people in the workplace. A consistent effort is required to stay current with technology offerings for personal productivity, team communication, team collaboration, business intelligence & analytics, and building operations technology that includes the Internet of Things (IoT). While even a high-level overview of the various technologies is beyond the scope of this article, there are a few key areas that are beginning to have a significant impact on the FM world.



Technology Backbone of the IoT

Facilities Management Benefits of Technology

- ❑ Leveraging data into actionable items allows operators to focus on solving the problems instead of searching for them
- ❑ Reduced time spent on corrective maintenance
- ❑ Advanced analytics for high performance building standards (LEED, WELL)
- ❑ Compliance with RESET – the world's first sensor-based and performance-driven building standard

Artificial Intelligence Impact on Facilities Management

- ❑ Buildings consume about 40% of globally-produced energy
- ❑ Conventional control methods for indoor spaces, such as on/off, proportional-integral (PI), and proportional-integral-derivative (PID) controllers, display significant instabilities and frequently overshoot thermostats, resulting in unnecessary energy use
- ❑ Advanced artificial intelligence (AI) methods optimize building energy usage while maintaining occupant thermal comfort
- ❑ Software will sort through the data to manage the information and deliver actionable intelligence
- ❑ Reduced response time with actionable insights that provide good details to help repair an issue
- ❑ With predictive analysis and a large amount of data, it is possible to run many scenarios and predict potential outcomes

Machine Language and What it Means for Maintenance

- ❑ Machine learning is an AI subset that deals in data
- ❑ The system relies on algorithms and analysis
- ❑ Pattern recognition is a key part of machine learning
- ❑ Leveraging data into actionable items allows operators to focus on solving the problems instead of searching for them

FDD – Fault Detection & Diagnostics

- ❑ FDD is an analytic tool that identifies faults in HVAC systems and provides advice about how to address those problems
- ❑ Based on research into faults in HVAC systems and the development of hierarchical relationships and rules between the different equipment and processes that make up the HVAC system
- ❑ Monitor the data points in the HVAC control system in real-time (temperatures, flows, pressures, actuator control signals, etc.) and then apply a set of rules

Conclusion

The FM world will embrace technology to reap the rewards and benefits. Such aspirations are easily understood, but it can be overwhelming even for the tech savvy FMs, especially at the pace that technology is evolving at, even compared to a few years ago. There are many choices and avenues of pursuit. Many drivers are forcing the implementation of relevant new technologies as they relate to changes in the workplace. In the next issue, we will cover Biometrics, Building Automation System upgrades with IoT, the LoRaWAN Specification[7], Building Information Modelling, and Drones. And that is just the beginning. More to follow…

References

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