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FM Innovation in Science and Practice

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ABSTRACT

Purpose: To report in FM Innovation.

Theory: Innovation theory, service management, space design.

Design/methodology/approach: Case studies, workshop.

Findings: Barriers, areas of interest, and best practices in FM Innovation.

Originality/value: Presents a first exploration of European case practices in FM Innovation.

KEYWORDS

Facility Management, Innovation, Integration, Interdisciplinarity, Service, Space

1. INTRODUCTION

As a management discipline facility management (FM) serves the primary process of organisations and is being associated with a broad spectrum of supportive activities varying from the design and management of buildings and technical systems to services such as cleaning, security, and catering. With the European Facility Management Network (EuroFM), it is generally accepted that the core value of FM is the “integration of people, process and place” (Armstrong 1982). In 2002, this triptych of FM has been refined into space, infrastructure, people and organisation. Infrastructure refers to the physical environment of organisations, such as buildings, interior and technological devices. Infrastructure encapsulates space, which comprises emptiness as well as air, light, scent, and sound. As such, space emerges from within that infrastructure; space as an inversion of the physical world of organisations. In addition, people also organise themselves, mostly to attain specific objectives. In these organisations, strategies emerge as well as financial and hierarchical structures, HR and marketing policies, and cultures. Moreover, people are subservient to natural laws because they are part of a natural system. For instance, people need food, daylight, fresh air, and hygiene to stay healthy. Based on this, in 2000 EuroFM developed a shared definition, arguing that FM must be seen as “integration of processes within an organisation to maintain and develop the agreed services, which support and improve the effectiveness of its primary activities” (EN15221 2006).

The FM sector is currently characterised by a diverse and highly competitive market of FM contractors and providers, in-house FM units, FM consultants and professional FM institutions (Cardellino & Finch 2006) that form heterogeneous FM supply chains (Nutt 2000) and value networks (Coenen et al. 2013). Moreover, FM services are combined in specific and *ad hoc* bundles of tasks, activities and processes that depend on the features, market and context in which the client organisation operates (Jensen 2008). Against this background, FM innovation can represent a critical role to support survival and growth of FM organisations, and affirm the increasingly important role the FM plays within its client organisations (Goyal & Pitt 2007; Lindkvist & Elmualim 2010; Mudrak et al. 2005). Nevertheless, the literature on FM Innovation is still developing, and EuroFM lacks a clear and shared understanding of it, which is important to support the further development of EuroFM research, but also to concretely sustain practitioners in their strive to initiate, manage and benefit from innovation practices, approaches and activities. This White Paper aims at setting the foundations of EuroFM research, stimulating discussion and encouraging further collaborative work on FM Innovation. To do so, we have divided the remaining of this White Paper in three sections. First, we review existing definitions and propose a shared understanding of FM innovation, based on a review of the state-of-the-art on FM Innovation.

Secondly, we depict the outcome of the workshop on FM Innovation at the European FM Conference 2014, in which we presented and discussed our approach to FM innovation with a broad range of researchers and practitioners. Finally, we introduce some evidence-based cases that we carried out in the European FM context, and present different aspects of managing FM innovation as well as a set of practical recommendations for FM innovators.

2. DEFINITIONS AND STATE-OF-THE-ART

2.1 Integration is key

In practice, FM innovation seems to be stuck somehow between FM demand side and FM supply side. FM demand stakeholders often complain that FM service providers are not innovative enough. At the same time, the service suppliers, and in some cases the in-house FM managers, argue that FM service margins are too low to be innovative and/or that the monetary reward for innovation are too unclear to make it worthwhile investing time and resources in FM innovation activities. These arguments make FM Innovation look like a bi-dimensional business-to-business relationship between client and service provider. Nevertheless, FM should always include the end users and the organisational context in which they perform. The individual level of end users, moreover, is not the only level involved in FM Innovation, but is rather interrelated with the departmental level of the FM unit and the organisational and environmental level of the organisation as a whole and surrounding environment. This implies that FM Innovation is a multi-dimensional relationship between (A) demand stakeholders at different layers of the organisation, and (B) a supply side, composed the in-house FM units and external service providers, which lies both within and across the boundaries of the organisation itself. For innovation to be developed and implement, therefore, needs and expectations of all parties should be taken into consideration, including those of the end users, to ensure the best possible functioning of the primary processes (Coenen et al. 2013; Nardelli 2014; Mobach et al. 2014).

The 2006 definition of the EN 15221-1 neglects people and spaces; in our view this is a fallacy. Contemporary efforts and challenges to innovate FM should focus on integration. Hence, in our view:

FM Innovation is the integration of space, infrastructure, people and organization, which, by doing so, creates new coherent services and spaces that prove to contribute to the organization as a whole as well as to the end user.

Essential to this definition is that this innovation generates proven synergetic effects for the performance of an organisation. There is a need for improved strategy, decision-making, and processes at the interface amongst organisation, service, and space. In the definition of services we follow Thompson's (1967) and Bitner's 1992 argument that services are generally purchased and consumed simultaneously, and typically require direct human contact, as customers and employees interact with each other within the organisation's physical facility. We also emphasise the importance of the role of the user and the influence of the organisational context. Ideally, therefore, the organisational environment and the physical environment should support the needs and preferences of both FM service employees and customers simultaneously (Bitner 1992). FM should recognise the organisational context in which end users interact on the demand side and service providers interact in partnership to offer and deliver services to meet changing demands on the supply side (Coenen et al. 2013).

2.2 Innovation

During the last two decades, the term innovation has emerged as one of the key concepts of the knowledge society. Innovation is increasingly recognised as a key driver for organisational effectiveness, at all levels and in all sectors of the economy (Teece 2010). The

definition of innovation, which is adopted here, follows the three Schumpeterian criteria of innovation as applied to services: (1) innovation is an idea, which is developed and carried into practice; (2) innovation brings benefits to its developer(s); (3) innovation is reproduced, i.e. applied more than once (Toivonen & Tuominen 2009). Transferred to the context of FM, innovation relates to the unlocking of synergies by mobilizing knowledge and technological skills and experience to create novelty in the offerings (services and spaces) and the ways to create and deliver those offerings (organisation). Innovation is not about invention - coming up with good ideas but – but making those inventions work both technically and ‘commercially’ (Fagerberg 2006). For instance, well-designed R&D spaces can stimulate creativity and innovation; well-considered services and spatial conditions can stimulate patient recovery in hospitals; and radical workplace innovations can support leadership in changing the culture of the organisation. In other words, in the FM context innovation is the integration of different and yet coherent parts of an organisation. The integration of these supportive particles is essential to FM, and allows FM to create synergy in benefits for organisation (Bertalanffy 1974).

2.3 A call from the community

During EFMC 2014, the steering committee organized a workshop to introduce the track of the Research Symposium on FM Innovation. The steering committee presented the Green Paper as a basis for discussion with the community of interest, and stimulated the exchange of knowledge and ideas through a dedicated exercise. The discussion was centred on: (1) the approach towards FM Innovation proposed by the steering group through a Green Paper (published in the EFMC 2014 proceedings); and (2) the role and potential of the Working Group for the FM community. Thanks to the workshop participants, it was possible to collect interesting data on the attitude of the FM community towards both FM innovation and the activities and goals of the working group.

The participants were asked to rate to which extent they would agree or disagree to the three statements about the effect and current status of integrated FM services as well as the practical relevance of the Green Paper. A distinction between responses from practitioners and researchers was made. Figure 1 shows that most of the practitioners consider an integration of space, infrastructure, people and organisation as beneficial. Researchers are a bit less positive about the effect of integration. Most practitioners think that FM services are not integrating the four elements (space, infrastructure, people and organisation) today. Researchers are also critical but tend to be a bit more positive. While researchers think that the FM Innovation Green Paper addresses aspects that are relevant in practice, practitioners are quite ambivalent.

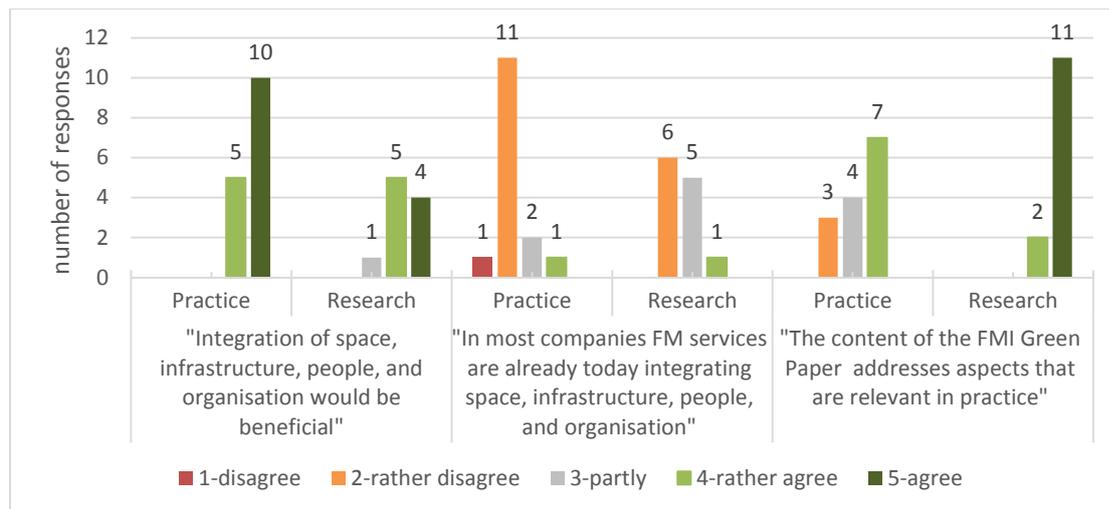


Figure 1: Responses from workshop participants divided into research and practice

Being asked about barriers to FM Innovation the workshop participants mentioned the following aspects:

- Lack of time, space, funding as well as competences, motivation and courage;
- Understanding of the antecedents and consequences of innovation;
- Missing transparency about what is required by end users and organisations;
- Contract, bonus and SLA models that encourage innovation;
- Silo-mentality as well as lack of connectivity and interdisciplinarity;
- Prevailing identity crisis of FM.

To summarize, the workshop highlighted a widespread interest on FM innovation in general, and, more specifically, on theoretically-grounded and evidence-based research that would enlighten:

1. The role of, and potential solutions for, dedicated competences for innovation in the FM context;
2. The management of innovation processes;
3. The management of relationships between stakeholders and the potential role of value co-creation;
4. The measurement of FM innovation outcomes and productivity, and the use of such measures to further innovate and contribute to the organization.

While wrapping up the track on FM Innovation at the end of the day, the steering committee briefly introduced the preliminary results from the workshop, and encouraged further dialogue on FM innovation across the FM community to support the activities of the Working Group.

2.4 Domains and best practices

Having outlined a definition of FM Innovation, we here distinguish between three domains of innovation studies, focusing respectively on: (1) object; (2) process; and (3) outcome of innovation. This differentiation is important because it allows simplifying the complexity of innovation: by breaking down such a broad topic into these three domains, research on FM Innovation can go deeper into specific aspects of the phenomenon, and outline best practices to concretely guide FM innovators.

Firstly, the object of innovation in FM lies in the integration of space & infrastructure (Bennett 1977; Broadbent 1973), people & organisation (Dale & Burrell 2008; Clegg & Kornberger 2006). For instance, new or improved building designs, furniture, organisational processes, and related human behaviours (Becker 1981; Steele 1973) are objects of FM

Innovation, which would be studied as interconnected set of objects, including a variety of products, services and processes (Bitner 1992). In other words, the study of FM Innovation within the object domain is concerned with where and how connections between different objects yield better results for end users and with which of these connections are the most fruitful.

Secondly, the process of innovation enables something new or novel to be created (Sundbo 1997), taking ideas forward towards design features of service- and space-elements. Many of the techniques to implement such processes engage customers and personnel in ways that build on their capacities, but also involve outsourced FM providers, who rely on a co-creation approach. Moreover, the process domain of FM Innovation studies touches upon drivers and barriers, which are often experienced by developers, i.e., the outsourced providers and the internal FM functions (e.g., Goyal & Pitt 2007; Nardelli & Scupola 2014; Nardelli & Scupola 2013).

Finally, the innovation outcome is an act that positively impacts on the environment, e.g., the application of a new material, organisational forms, or (combinations of) service and space elements. Furthermore, increase in the innovativeness of an organisation is a potential, and desired, outcome of FM Innovation, which can be achieved through improvements and innovations in the FM services, activities and processes. The outcome of FM Innovation should illuminate the contribution of the innovation to the operations of an organisation, such as efficiency, efficacy and effectiveness (Katz et al. 1991), quality of life (Dijkstra et al. 2006; Ulrich et al. 2008), sustainability, and competitiveness (Kwallek et al. 2007; Oldham & Brass 1979). Alignment of task structure with the layout of an operating room may, for instance, improve the efficiency and efficacy of the surgical work. A better fit between the existing working culture and a new building design may be an effective intervention to reduce sick leave. Mutual adjustments between cleaning staff and end user behaviour may result in cleaner rooms and more efficient work processes. Smart combinations of home automation, interior designs, and healing gardens may improve the quality of life of psychiatric patients, whereas a combination of deliberately design inefficient walking lines and healthy food in catering offerings have the potential to stimulate healthy behaviour in end users. Programmes to raise cost awareness and awareness of the marketing potential of zero-energy building design improve environmental sustainability. In other words, the right novel combinations of space, infrastructure, people and organisation may improve the performance of an organisation (Mobach 2009), which potentially increases its competitiveness in the market and/or the added value for society.

Next we will give three case examples of best practices in relation to (1) object; (2) process; and (3) outcome in different European countries.

3. FM INNOVATION IN PRACTICE



Figure 2 and 3: The people & organisation perspective on FM

3.1 Case study 1; Integrating Dutch spaces and services (object)

Together with 11 students the integration of spaces and services in the Dutch FM market was mapped in 2014. Five respondents, three facility managers, one service provider, and one agent were interviewed. The results were mapped into a rich picture and related systems models. The most important outcome was that FM on one side seeks to integrate tasks, offering people a better job by job rotation and multi skilling, and by doing so, creating a happier workforce. For instance, cleaning the facilities in the morning, doing other jobs at other times during the day (figure 2) or a combination of administrative work and cooking (figure 3). Basically, these developments exemplified a mere focus on how the work is being organized.

The integration of these organizational issues with spaces is in the object at which the managerial tasks are focused: the managing of the facilities. On one hand, spatial redesign may be a complex task in itself (figure 4). On the other hand, the complexity of the facility manager's task becomes clearer when both perspectives are confronted (figure 5).

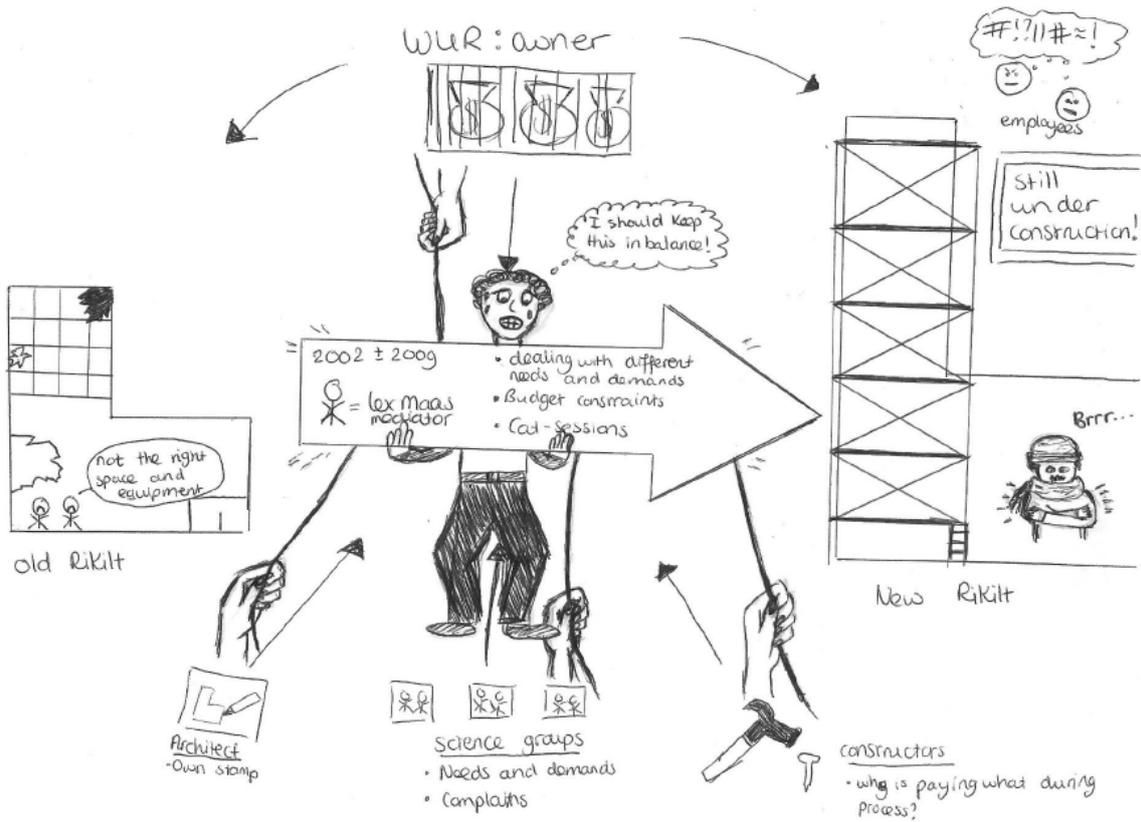


Figure 4: The space & infrastructure perspective on FM

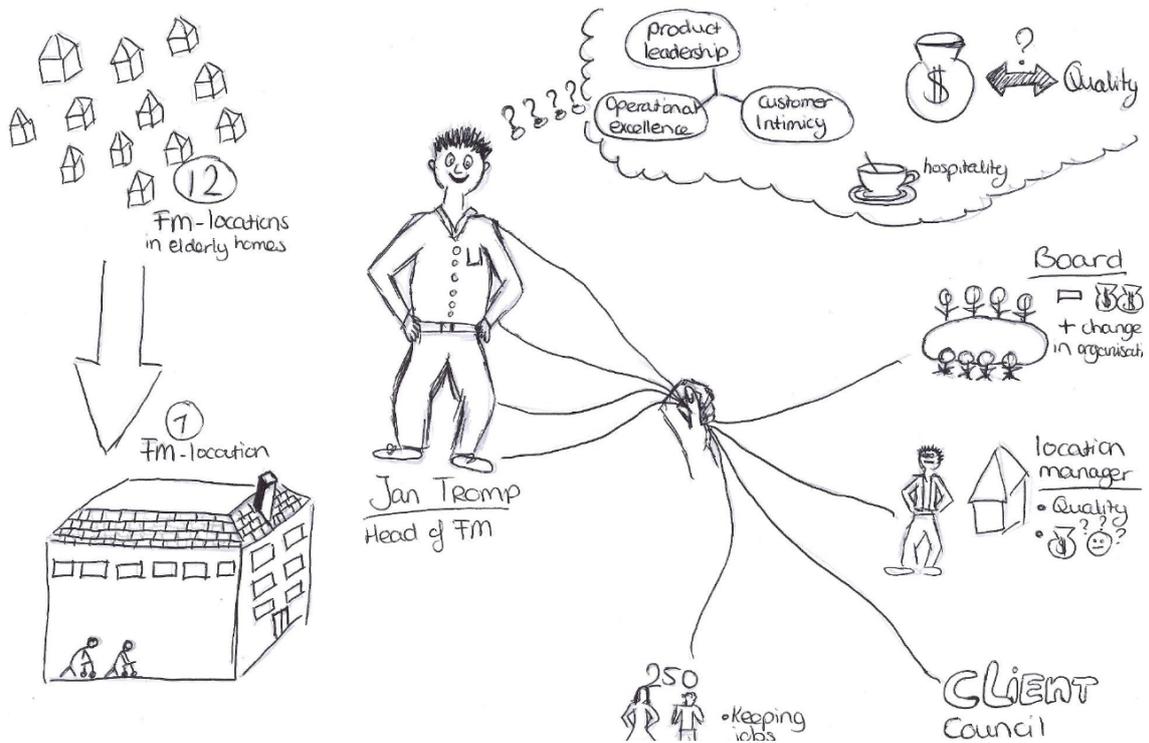


Figure 5: An integrated perspective on FM

Exactly there is the challenge of FM, or as one of the students put her finger on the sore spot: *“FM is too trapped within its own discipline and also limited by its lack of clear definitions in the emerging trends of the industry. FM is traditionally explained in the context of buildings/organizations, infrastructure, space, and people. While I would argue its primarily focused on the buildings, infrastructure and space, and greatly neglecting the people component as well as the interrelationships between all these components. Therefore, I don’t think it’s about making decisions to insource, outsource, manage or deliver services, but more about how an organization comes to their decisions, the meaning behind the action or strategy and positioning of FM within the organization or circumstance.”* (Gregath 2014, p.24). Hence, there seems still a lot of work to do integrating FM. To improve integration we may as well follow her advice and decide to apply new perspectives, such as applying post-disciplinary ones (Esbjörn-Hargens & Zimmerman 2009).

3.1 Case study 2; Danish stakeholder involvement (process)

One of the practices that a Danish FM service provider uses to support the management and success of its innovation processes is the involvement of demand stakeholders. Stages of the new service development, which require strategic decision making, are those in which the most direct involvement tends to be required, especially from the internal FM unit and the top management. These represent the interests of the organization as a whole and are involved especially when significant investments and efforts are related to the service innovation. Moreover, regularly scheduled meetings are organized between the internal FM unit and top management to discuss the strategic development of the organization as a whole and the consequent adaptation needs of FM service providing. The internal FM unit is then in charge of integrating all strategic considerations in the innovation processes developed by the outsourced providers. In case of sudden instance, e.g., a crisis, meetings between the internal FM unit and top management can also be called ad hoc, to discuss potential consequences and responsive counter-actions. On the contrary, operational stages such as idea generation and screening, among others, are left to the providers, unless the innovation process has a peculiar relevance for the client organization. Innovation is, in fact, usually one of the activities, which the outsourced provider is expected by contract to carry out. The internal FM unit is thus not always keen on being directly involved in the operational phases. The internal FM unit can either be directly involved, by sharing ideas with the outsourced providers; or by sending out idea competitions to their end-users to collect ideas, whose outcomes will then be shared with the outsourced providers. End-users, finally, tend not to be involved in the strategic decisions, as their heterogeneous needs are believed to (a) not correspond to those of the organization and (b) often be too operational. Their involvement would thus be too complex and resource consuming. Nevertheless, end-users seem to be involved through the intermediate action of the internal FM unit and/or the outsourced provider, which may decide to use ICT-based tools, e.g., email or Intranet, to distribute idea competitions and user surveys. In alternative, this may take place with face-to-face interviews, workshops and workgroups; and shared training and team building (adapted from Nardelli & Scupola, 2013, pp. 10-12).

3.2 Case study 3; Swiss smarter working (outcome)

A Swiss company in the financial sector decided to implement a new workplace concept with the objective of improving collaboration and communication as well as enhancing motivation and performance. To ensure a scientific foundation, the workplace change project was supported by Zurich University of Applied Sciences and Lucerne University of Applied

Sciences and Arts from 2010 to 2012. Based on an analysis of employee mobility, communication processes and work style (via employee survey and occupancy study) an activity based workplace concept called "Smart Working" was designed by the company's architect. "Activity based working" is a workplace concept which is about providing a variety of different work setting which are designed to support certain tasks. Instead of a personally dedicated workplace, the employees can chose a work setting that suits best to the recurrent task. The Activity based workplace concept includes spaces for concentrated individual work (standard workplaces, Quiet Areas, Think Tanks and Reading Areas) as well as spaces for collaboration (project areas, meeting rooms, informal meeting areas, business garden) and restoration (break-out lounges, coffee bars).

215 employees moved into the new concept applying a sharing ratio of 75%. After a six month trial period an employee survey was carried out to measure the effects.

The evaluation is showing the following results in regards to the before-after comparison in the Smart Working population:

- 34% respondents say that they could achieve more goals in the same time since the move in (11% said they achieve less goals in the same time);
- 37% participants state that they deliver better quality of work (5% stated to deliver worse quality of work);
- 69% rate themselves to be more motivated (5% rate themselves to be less motivated) than before the move in;
- 62% of the respondents think that it is now easier to find the right colleagues spontaneously;
- The Smart Working users think that they can better coordinate with colleagues (53%) and superiors (28%);
- 40% feel that they are now better integrated into the team.

4. CONCLUSION

The aim of this paper was to set the foundations of EuroFM research on FM Innovation, exemplifying with results from the workshop and practical instances from different European countries. Moreover, we would like to use it to stimulate discussion and encourage further collaborative work on FM Innovation. From above it is also derived that a shared understanding of FM Innovation may be the *integration of space, infrastructure, people and organization, which, by doing so, creates new coherent services and spaces that prove to contribute to the organization as a whole as well as to the end user.*

Consequently, it is assumed here that FM has a responsibility in creating a holistic organisational-spatial micro-world in which people in and around organisations can function well. An important toolkit for innovation in FM is the holistic orchestration of organisation, architecture, technology and nature; the outcome for organisations is in behaviour, mood, and health of users.

Hence, the FM community needs to develop new knowledge to advance an integral approach of infrastructure, space, people, and organisation by taking a post-disciplinary design perspective. This integration must remain action focused and problem oriented, as it is directed at improved actions of the facility manager and the organization he or she works for. Given the specific practical and/or societal problems, the improved actions to be developed by a consortium of practitioners and scientists should, in turn, lead to a proven better organisation performance and benefit for the end-user. Such collaborations will definitely be the step forward, yielding new knowledge and creating interesting business opportunities for practice.

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