Unravelling the variables to calculate an organisations return on workplace investment: a scoping review process

Matthew Tucker
Liverpool John Moores University
m.p.tucker@ljmu.ac.uk

Hannah Wilson
Liverpool John Moores University
h.k.wilson@ljmu.ac.uk

Nigel Oseland
Workplace Unlimited
oseland@workplaceunlimited.com

Peter Brogan
Institute of Workplace and Facilities Management
peter.brogan@iwfm.org.uk

Annie Horsley
Institute of Workplace and Facilities Management
annie.horsely@iwfm.org.uk

ABSTRACT

Purpose: to present the initial findings of the first phase of a research project being conducted in partnership with the Institute of Workplace and Facilities Management (IWFM) to eventually develop a user-friendly 'tool' to calculate the return on workplace investment. The first phase of the project explores the variables that should be measured to eventually incorporate in to the 'tool' in order to calculate the return on workplace investment.

Theory: the paper looks through the theoretical lens of 'workplace' by view the interaction and interconnection between the 'physical space', 'digital space' and 'people' for the overarching purpose of work activity.

Design/methodology/approach: a scoping review was conducted by adapting the framework used by Arksey and O'Malley (2005). A total of 70 sources were eventually found, consisting of peer-reviewed journal papers, industry reports and other research documents.

Findings: the sources were thematically analysed using an inductive thematic analysis approach. A total of six 'high level' themes were uncovered, to which a total of 37 'lower level' themes were established.

Originality/value: Currently there is no holistic tool to assist workplace professionals in making major decisions regarding changes to their workplace environment. This project aims to bridge

this gap by developing a user-friendly tool to calculate the potential return on workplace investment.

Keywords

Workplace; return on investment; performance; productivity

1   INTRODUCTION

It can be argued that 'workplace' is an emerging professional discipline, engrained in business and management theory and represented by professional standards and ethics.

Pinder and Ellison (2018) highlight that the key components of the workplace are a triangulation of the physical workplace, its culture, and the ability to enable technology. For the purposes of this study, workplace is the bridge between facilities management (FM) and business performance. It can be defined as the interconnection between the physical workspace (FM), the virtual workplace (ICT), and the organisations culture and business performance, including its people (HR).

The workplace has undergone many changes physically, technologically, socially and environmentally (Clements-Croome, 2017) which has coincided with the changing expectations of occupants who desire more from their workplace. Clements-Croome (2017) expresses that occupants desire flexible and expressive places to work which are conductive to creative thought, identifying that expectations of the workplace are changing and workplace professionals need to do more than simply provide a workspace for each building user.

This is exacerbated by the fact that 90 percent of an organisations operating costs are from staffing costs in salaries and benefits, whilst only 10 percent of costs are from energy and rental costs of its premises (Alker, Malanca, Pottage, & O'Brien, 2014). Moreover, there is overwhelming evidence which demonstrates that the design of an office impacts the health, wellbeing and productivity of its occupants (Alker et al., 2014). Yet, Alker et al. (2014) contend that this evidence has not yet had a major influence on the mainstream real estate sector, and is not yet translating at scale into design, finance and leasing decisions. Although some previous research has attempted to quantify workplace performance (Oseland & Burton, 2012), there is no holistic and tangible 'tool' or 'calculator' to assist workplace professionals in making major decisions regarding changes to their workplace environment.

This raises critical questions about the level of return organisations get from making major decisions to change their workplace environment, such as:

- What are the variables that should be measured to calculate the return on investment to their workplace?
- What are the parameters workplace professionals should work within when calculating the return on investment to their workplace?
- How can they quantifiably calculate a return on workplace investment value, in order to justify and rationalise major decisions to change their workplace?
- What return on investment do organisations actually get from changing their workplace?
- How can a holistic tool, a spreadsheet with a cost-benefit analysis and some defaults values, be developed?

Based on these research questions, a research project has been devised in partnership with the Institute of Workplace and Facilities Management (IWFM) with the overall aim to develop a user-friendly tool to calculate the potential return on workplace investment, due to performance gains, for several workplace design options.

This paper presents the findings from the first research question, with the objective to systematically review the variables that should be measured to calculate an organisations return on workplace investment. To achieve this, a scoping review methodology was adopted in order to present an overview of a potentially large and diverse body of literature pertaining to a broad topic (Pham et al., 2014). The main themes that were discovered from the scoping review are presented, concluding with an indication of the next steps of the project.

2   METHODOLOGY

A scoping review differs from a systematic literature review approach, which typically considers peer-reviewed academic articles only (Easterby-Smith, Thorpe, & Jackson, 2018). Traditionally, academics tend to favour systematic reviews, but they are not necessarily an ideal method if you are covering a wider field (Easterby-Smith et al., 2018).

The scoping review framework proposed by Arksey and O'Malley (2005) is adopted, which involves six phases: (a) identifying the research question, (b) identifying relevant studies, (c) study selection, (d) charting the data, (e) collating, summarizing and reporting the results, and (f) an optional consultation exercise. For the purposes of this paper, the first five phases will be discussed.

    a) Identifying the research question

This review was guided by the question, 'What are the variables that should be measured to calculate the return on investment to their workplace?'. This is a relatively broad research question, which is recommended for a scoping review, as maintaining a wide approach can generate breadth of coverage (Arksey & O'Malley, 2005).

    b) Identifying relevant studies

The goal of a scoping review is to be as comprehensive as possible. According to Easterby-Smith et al. (2018), systematic reviews rely heavily on journal articles over other sources such as reports, which can lead to misconceptions and oversights. Due to the homonymic nature of workplace, it is crucial to use a comprehensive range of sources that are not restricted to journal articles. For that reason, the following sources were used and adapted from Arksey and O'Malley (2005):

- *Electronic databases* – using a systematic search strategy
- *Hand-searching of key journals* – for specific priority journal titles
- *Existing networks and organisations* – to identify industry reports and artefacts

2.1 Electronic databases

Four electronic databases were deemed appropriate to utilise, given their breadth and diversity: ProQuest, Web of Science, Business Source Complete and Science Direct.

A search strategy was adopted in order to systematically review each database, using appropriate Boolean functions to gain maximum coverage:

Workplace OR building OR office AND performance OR productivity OR strategy AND measure*

In the first instance, a total of 9,356 references were identified. It is good practice when conducting search strategies to define exclusion criteria in order to narrow down the results to the most applicable sources. The following exclusion criteria was applied:

AND NOT engineering OR energy OR Microsoft OR software OR officer OR lifecycle

This produced a total of 2,548 final references to be considered, following the adoption of the exclusion criteria (figure 1).

Figure 1: systematic electronic database search
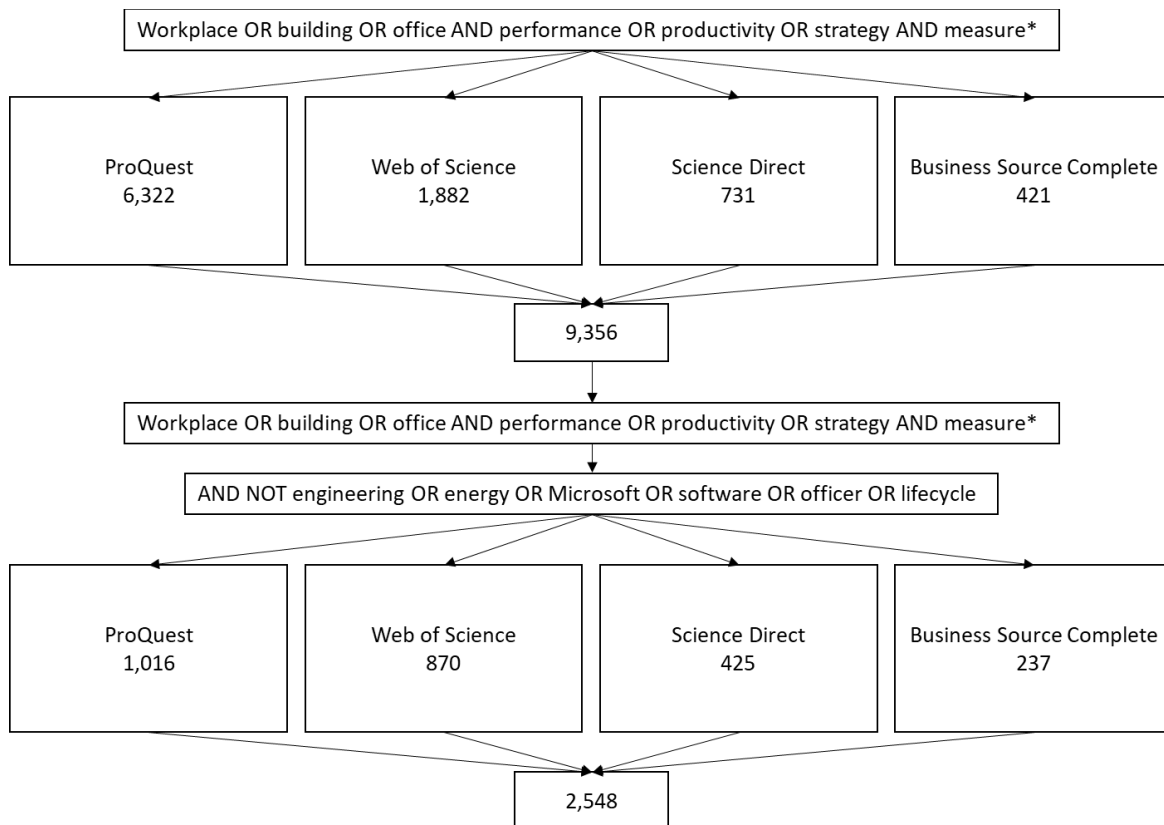
In order to adopt a rigorous review of these references, the system used by Pittaway, Robertson, Munir, Denyer, and Neely (2004) was adopted, where the references were separated into A, B and C lists (table i).

The criteria for determining A, B and C lists were adapted to those used by Pittaway et al. (2004) in order to align with this study:

- A-list - represents articles of particular relevance with clear alignment to the return on workplace concept
- B-list - represents articles of some relevance where there may have been some question over the alignment to the return on workplace concept

- C-list - represents articles that were either of little relevance

Table i: A, B and C list by database

Database	Overall	C-list	B-list	A-list
ProQuest	1,016	956	46	**14**
Web of Science	870	795	58	**17**
Science Direct	425	407	14	**4**
Business Source Complete	237	219	11	**7**
	2,548	2,377	129	**42**

The A-list articles (42) were selected, and their full papers imported in to a reference management software package. For this study, EndNote was used.

2.2 Hand-searching of key journals

In addition to systematically reviewing electronic databases, it is good practice for scoping reviews to hand-search specific journals.

This is because it can identify articles that may have been missed in the databases, as electronic databases may be incomplete, not up to date or because abstracting services can vary in coverage, indexing and depth of information (Arksey & O'Malley, 2005).

Upon an initial review the 42 A-list papers identified in the systematic electronic database search, papers from the following journals appear to offer very strong alignment to the topic, or by being deemed credible high-ranking journals in accordance to the Chartered Associated of Business Schools (CABS) Journal Guide 2018:

- International Journal of Strategic Property Management
- California Management Review
- Scandinavian Journal of Work, Environment and Health
- Applied Ergonomics
- Facilities
- Journal of Corporate Real Estate
- Journal of Facilities Management

Through hand-searching these journals a total of 28 papers were identified, imported and combined with the 42 A-list papers from the systematic electronic database search in EndNote.

2.3 Existing networks and relevant organizations

One of the benefits of undertaking a scoping review, is it allows for additional searches through existing networks and relevant organizations, which can generate further information about

primary research (Arksey and O'Malley, 2005) and provide commercially, industry-driven sources complimentary to topic area.

A combination of methods were used in this stage, including contacting individual workplace consultants for known sources and references, searching Professional Body[1] knowledge databases and websites, and searching known consultancy firms for company-generated insight reports.

From this, a total of 17 additional references were identified. These references were predominantly industry reports, but also included other research papers not identified previously. The 17 references were downloaded, imported and combined with the electronic database references and hand-searched journal references within EndNote.

    c)   Study selection

Once all three sources were fully exhausted (electronic databases, hand-searched journals, and existing networks and organisations), the papers were reviewed and audited within EndNote adding comments and descriptions to each reference. During the stage, a number of duplications were detected, to which 17 references were removed. Figure 2 shows a summary of the final selection process:

Figure 2: study selection
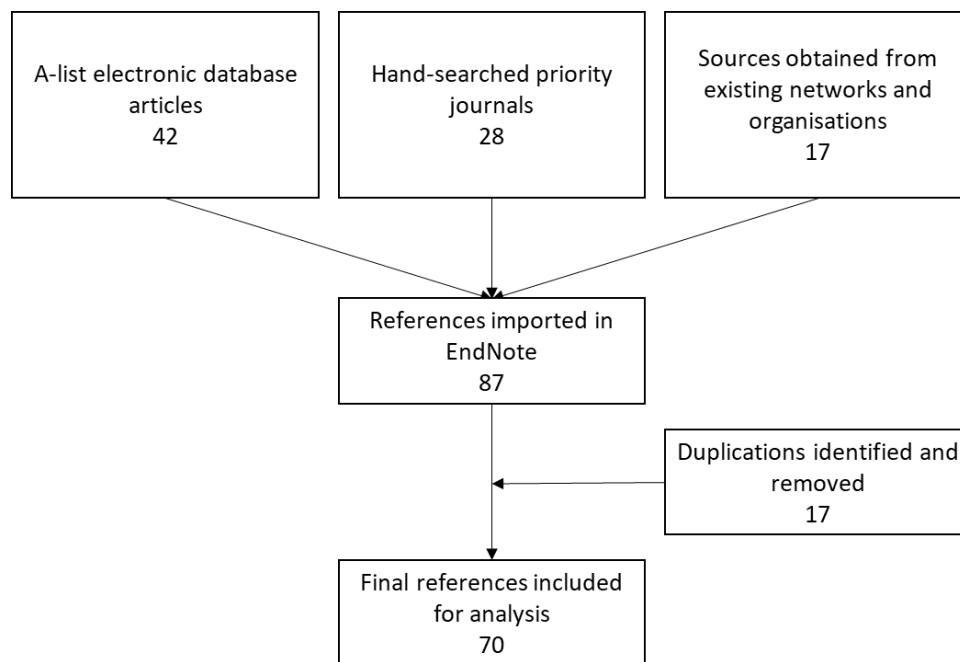
    d) Charting the Data

According to Arksey and O'Malley (2005), the next stage of the scoping review process is 'charting', by a process of synthesizing and interpreting qualitative data. For this study, a thematic analysis (TA) technique was adopted Braun and Clarke (2013) using a qualitative data analysis software package, *QSR NVivo 12*.

---

[1] Including World Green Buiding Council, Royal Institution of Chartered Surveyors, British Council for Offices, Chartered Institute of Building Services Engineers

Inductive TA is deemed appropriate for this study as it identifies themes and patterns of meaning across a dataset in relation to a research question, but also adopts an inductive approach, working from the bottom-up (Braun & Clarke, 2013) by analysing the data initially in to individual associated themes, which evolve in to a connected thematic structure.

   e) Collating, summarizing and reporting the results

For the purposes of this paper, the next section will provide an overview of the key findings of the inductive TA process.

3   FINDINGS

Following the scoping review process, the literature was thematically analysed into six key themes, as presented in figure 3:

Figure 3: overall themes

External performance refers to specific variables that impact the organisation externally, such as the customer, brand and image. *Human resources* refers to conventional metrics and performance metrics that are associated with human resources, such as absenteeism and retention. *Individual performance* refers to variables that specifically impact the individual employee, in particular the theme of health and wellbeing. *Organisation performance* refers to variables that have an overarching impact on the organisation, for example organisational culture. *Task performance* is similar to individual performance, but relates specifically to job functions, processes and attributes. *Workgroup performance* refers to variables that extend beyond the individual but are confined within the organisation, for example at a team or inter-departmental level.

Each of the six 'higher-level' themes were broken down in to 'lower-level' themes, creating 37 in total (figure ii).

Table ii: inductive analysis themes

Theme	Sub-theme
External performance	Customer attraction
	Customer loyalty
	Customer satisfaction
	Promoting sales
	Supporting brand and image
Human resources	Absenteeism
	Employee turnover
	Organisational socialisation
	Presenteeism
	Recruitment
	Staff retention
Individual performance	Employee engagement
	Health and wellbeing
	Motivation
	Satisfaction
Organisational performance	Changing culture
	Environmental impact
	Flexibility
	Managerial process
	Organisational commitment
	Organisational productivity
	Safety behaviours
Task performance	Abilities
	Basic skills
	Concentration
	Cross-functional skills
	Human error
	Performance
	Process skills
	Productivity
	Time management
Workgroup performance	Collaboration
	Communication
	Information sharing
	Sense of community
	Trust
	Workgroup productivity

4   CONCLUSION

Despite the substantial investment in people in the workplace and the overwhelming evidence that demonstrates that the design of the workplace environment impacts the health, wellbeing and productivity of its occupants, this does not necessarily translate into quantifying workplace performance. Currently there is no holistic tool to assist workplace professionals in making major

decisions regarding changes to their workplace environment. This project, in partnership with IWFM, aims to bridge this gap by developing a user-friendly tool to calculate the potential return on workplace investment.

This short paper has provided an overview of the first objective of the project, which is to systematically review the variables that should be measured to calculate an organisations return on investment when making changes to their workplace environment.

The next phase of the project is to take the variables uncovered in table 2 and critically investigate the parameters workplace professionals should work within when calculating the return on investment to their organisations workplace. Once this is achieved, it is hope that the project team will be able to develop a methodology to quantifiably calculate a return on workplace investment value, in order to justify and rationalise major decisions to change an organisations workplace environment.

In turn, this will hopefully establish, through the creation of a holistic and tangible 'tool', the return on investment organisations actually achieve from changes to their workplace environment.

REFERENCES

Alker, J., Malanca, M., Pottage, C., & O'Brien, R. (2014). Health, wellbeing & productivity in offices: The next chapter for green building. *World Green Building Council*.

Arksey, H., & O'Malley, L. (2005). Scoping studies: towards a methodological framework. *International journal of social research methodology, 8*(1), 19-32.

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*: Sage.

Clements-Croome, D. (2017). *Creating the productive workplace: places to work creatively*: Taylor & Francis.

Easterby-Smith, M., Thorpe, R., & Jackson, P. R. (2018). *Management and business research* (6th Edition ed.): Sage.

Oseland, N., & Burton, A. (2012). Quantifying the impact of environmental conditions on worker performance for inputting to a business case to justify enhanced workplace design features. *Journal of Building Survey, Appraisal & Valuation, 1*(2), 151-165.

Pham, M. T., Rajić, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., & McEwen, S. A. (2014). A scoping review of scoping reviews: advancing the approach and enhancing the consistency. *Research synthesis methods, 5*(4), 371-385.

Pinder, J., & Ellison, I. (2018). *Embracing Workplace to Move FM Forward, Institute of Workplace and Facilities Management*. Retrieved from https://www.iwfm.org.uk/insight/research/embracing-workplace

Pittaway, L., Robertson, M., Munir, K., Denyer, D., & Neely, A. (2004). Networking and innovation: a systematic review of the evidence. *International journal of management reviews, 5*(3-4), 137-168.