

Chapter 2

From POE to BPE: The Next Era

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2.1 The Future of POE

This second chapter in the second edition of *Building Performance Evaluation* provides an overview of how Post-Occupancy Evaluation (POE) evolved into building performance evaluation (BPE) and how it may evolve even further in the near future. The main focus of this chapter is on how to improve the recognition and uptake of BPE across the design and construction industry and, in particular, how to reposition POE and overcome the barriers to application. Whilst, (1) the benefits to conducting a POE are regularly demonstrated, (2) POE is required by some public institutions and (3) technology offers ease of collating feedback, there is nevertheless reticence in carrying out such evaluations post-project. POE now appears to be more likely carried out pre-project as a part of the briefing process, rather than used throughout the project, for building life cycle analysis or for understanding lessons learned. This represents a fundamental shift from POE to BPE. This chapter explores the development that BPE will need to make to encourage wider uptake, whether client portals and social media platforms make a difference, and are standards or best practice guidance driving POE uptake. In essence, it covers the future prospects for POE and BPE.

2.2 Barriers to Uptake of POE

In the workplace arena, it is not uncommon for conferences to include case studies of new office fit-outs. As a consequence, there are many presentations showcasing new office designs and the story behind how they were created. The case studies are

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usually presented as success stories; and thus, any lessons learned are usually not shared, and typically there is little systematic data to substantiate their success.

For example, in a two-day conference on smart working in mainland Europe, some 12 case studies of new workplaces were presented but only two of them included occupant feedback or any robust post-project data. Whilst this evidence may be considered anecdotal, this level of reporting is fairly representative of the current understanding and uptake of POE across Europe.

Bearing in mind the importance of POE addressed in the following chapters, a key question is why there is still minimal uptake of POE by the workplace community, and what are the barriers to uptake? In the POE training courses regularly delivered by this chapter's author, the three barriers most often identified are:

1. *Payment*—Quite often it is perceived, particularly with a one-off project, that the designer rather than the occupier benefits from carrying out a POE. Hence, the occupier is not inclined to pay for such analysis. In reality, the occupier benefits by knowing whether they met the project objectives, fulfilled the needs of their workforce, and delivered value. In most organisations today, there is an expectation that the project lead and design team deliver value and prove it, sometimes referred to as benefits realisation. The many benefits of conducting a POE need to be clearly explained to the occupier but the designer does, of course, benefit hugely from the POE. The chapter author worked for an architectural practice many years ago and offered POE as a value-add service. The architects found that their clients not only appreciated their interest but then also commissioned them to carry out more design work. Furthermore, the post-project evaluation was a small expense, as usually an occupant survey was carried as part of the briefing process and a similar survey was used post-project.
2. *Reputation*—Designers and architects may be concerned that the POE will raise issues with the design that may in turn affect their reputation. If the project genuinely fails, then it needs to be flagged as the occupants' lives will be affected indefinitely, not just the reputation of the designer. However, the POE is usually carried out six–twelve months after project completion and after the defect liability period and the commissioning phase. The POE relates more to how the building supports the occupying business and depends on the brief, how the business uses the building and other factors outside the control of the designer. As mentioned above, the authors own experience is that a POE is usually greatly appreciated by the occupier and seen as a joint learning, rather than blaming, opportunity.
3. *Expectation*—It is often voiced that POE may lead to an expectation that further changes will be made after the project budget is spent. Again, the author's own experience is that POE can identify behavioural changes with no additional capital costs or identify other quick wins with minimal costs. It is more important to share the findings of the POE and if any issues are uncovered then explain how they may be resolved in the future. Also, it is important to provide a balanced POE reporting the successes and positive benefits of the project and phrasing criticism as recommendations.

The main point is that regardless of the barriers to uptake there is always a means of overcoming them. The lack of uptake is more likely to be a lack of understanding and awareness of the benefits and importance of POE. As ambassadors of POE that action lies with the workplace strategy and design community.

2.3 POE Influencers

In contrast to the above lack of reporting of POEs, there appears to be a good uptake on training in it. Back in 2007, the author of this chapter was the lead author of the *British Council for Offices Guide to Post-Occupancy Evaluation* (Oseland 2007), and since then, he has run one-day courses on how to conduct POEs. If anything, the course is more popular now than ever and attended by designers, engineers, facilities managers, and representatives from educational institutions. Quite often the participants attend the course to verify that they are doing their own POEs properly rather than to learn how to conduct a POE *per se*.

In the UK, the uptake of “underground” (in-house) POE is partly due to a number of influencing bodies that are raising awareness and making POE more accessible:

- *RIBA*—The Royal Institute of British Architects (RIBA) original *Plan of Work*, dating back to 1963, included *Stage M Feedback* but it was later dropped. However, the new *Plan of Work 2013* includes *Stage 7 In Use*, which suggests “Conduct activities listed in Handover Strategy including Post-occupancy Evaluation, review of Project Performance, Project Outcomes and Research and Development aspects” (RIBA 2013).
- *Government*—The Office of Government Commerce (OGC), part of HM Treasury, introduced annual evaluations of all central government buildings along with Post-Implementation Reviews of all new building projects as part of the *OGC Gateway Process Review 5*. More recently, the Cabinet Office introduced the *Government Soft Landings* (GSL) policy alongside *Building Information Modelling* (BIM) for all central government departments. GSL includes annual POEs for 3 years to ensure the facility meets performance targets.
- *Education*—The Higher Education Funding Council for England (HEFCE) and Association of University Directors of Estates (AUDE) introduced their best practice *Guide to Post Occupancy Evaluation* in 2006. Since then the Skills Funding Agency (SFA) requires a post-occupancy evaluation as a condition of consent following a capital development.
- *World Green Building Council (WGBC)*—A campaign for health, wellbeing, and productivity in offices. The WGBC are promoting a framework for collating evidence and data on productivity gained through POE.
- *Leesman Index*—There are many standardised POE methodologies in the marketplace, but since its launch in 2010, the Leesman Index is the one growing

most rapidly. The Leesman team have now collated over 262,000 responses from more than 2,000 workplaces in 67 different countries. Not only is the database growing but the founder Tim Oldman is a regular and passionate speaker on the importance of occupant feedback in creating better workplaces.

So based on the author's experience of POE training and based on the awareness raised by the above bodies, it appears that POE is still very much on the agenda of many organisations in the UK. The conclusion is therefore that POEs are being carried out, but just for "personal consumption" and not shared amongst the workplace community. It is possible that POE offers some form of competitive advantage and perhaps the instigators simply do not want to dilute that advantage? Whilst it is good that POEs are being carried out, the workplace industry nevertheless needs to share results, and they need to know the lessons learned and not just hear a design sales pitch.

2.4 POE Throughout the Project and Building Life-Cycle

The focus of the government, education, and RIBA guidance highlighted above is on post-project reviews. However, the Leesman team explain that "many of our clients use the survey findings to establish the business case for a major strategic project" (Leesman 2015), i.e., conduct pre-project and post-project evaluations. As mentioned under the barriers to uptake, the chapter author and his architectural colleagues used feedback surveys to readily gather information to inform the design brief, but then repeated the same survey post-project. Pre-project evaluation often includes space analysis and utilisation surveys as well as occupant feedback. The key is to offer the pre- and post-project reviews as a package with the expectation that there will be a follow up survey to conclude the design process.

So whilst many organisations will associate "post-occupancy evaluation" as a post-project assessment of a newly occupied workplace, it is the systematic evaluation of an existing workplace followed by the new workplace that is becoming more prevalent, and offers most value. This is a significant change in the primary use of POE and supports the reported shift from POE to BPE where the building is assessed throughout its life cycle. This approach also offers a more robust analysis and more meaningful comparison to an isolated one-off post-project review.

The Leesman team also reported that "once a project has started, the data finds new value, evaluating readiness for change, engaging employees in the change management process" (Leesman 2015). In the workplace arena, change management is quite often seen as a bolt-on service, starting once the design has been agreed, meaning it is then considered the time to convince staff of the benefits of their new workplace. But of course, the change process actually commences with the initial engagement and briefing stage of the project. Back in the 2007, in the *BCO Guide to Post Occupancy Evaluation*, it was advised that POE is used not

only for (1) measuring project success, and (2) setting a baseline for measurement, but also for (3) informing the design process, and (4) inputting to change management and communications. Standard POE methodologies, e.g., on-line surveys, interviews, and workshops, are all great tools for gathering occupant insight and initiating the change process.

There is less evidence to support that POE is used for ongoing, such as annual, assessments. Nevertheless, there are occasional reports of a few key questions on the workplace being added to the annual staff satisfaction and culture surveys. This may change as the nature of how the design industry collects feedback and evaluates the ever-changing workplace.

2.5 New Means of Data Collation

Ongoing and real-time feedback is becoming more prevalent in, for example, coffee shops, doctor's waiting rooms, hotels, and even public toilets. The feedback may be gathered through cards/forms, electronically through kiosks, or push-button systems. In 2005, the *Bop!* Project (Wilson 2006) took the idea of instant feedback one step further. *Bop!* was a Department of Trade and Industry (DTI) funded project in which Central Saint Martins, Imperial College, Arup, and others studied how ubiquitous wireless sensors could be deployed to monitor the use of and satisfaction with buildings. The project developed an array of sensors and quirky interactive devices to collect movement around and feedback on the workplace. The author's favourite notable technique was two pressure sensitive mats, one with "yes" and one with "no" printed on them. A different question was posed above the mats each day and people voted as they entered or left the building. Whilst *Bop!* itself may not have progressed, this initiative did lay the foundation for using technology to collect instant feedback. Whilst such data is less detailed, it is quick, accessible, in real-time, and likely to improve response rates. It does mean collating lots of small bits of feedback rather than one-off surveys with detailed feedback, so a slightly different approach to analysis is required.

More progress has been developed in the use of sensors to monitor the utilisation of the workspace. Utilisation studies use observers to provide a one or two week in-depth study of how space is utilised over time. Embedded passive infrared (PIR) sensors allow the occupancy levels of the various spaces to be continuously monitored over time. There are now several cost-effective systems in the market place. Some of the larger corporate occupiers have even adopted them to monitor their space in real-time to help ensure maximum utilisation. Sensors to monitor the environmental conditions, e.g., temperature, humidity, and sound levels, are also becoming more common place. Notably *The Edge*, the new Deloitte Amsterdam headquarters, is seamlessly fitted throughout with sensors to monitor and adjust the environmental conditions and occupancy for both comfort and sustainability (Randall 2015). In due course, as technology progresses, real-time monitoring may

replace pre- and post-project measurements for those organisations who wish to proactively manage their workplaces.

Users of on-line and app based companies such as Uber and Airbnb are expected to make reviews after using the service; and the data is then used to build cross-platform customer profiles. When purchasing on-line or downloading apps or documents it is not uncommon to answer questions to unlock the download. *CAPTCHA* (Completely Automated Public Turing test to tell Computers and Humans Apart) is an on-line device for checking human interaction and deterring automated inputs (robots). However, *CAPTCHA* is also collating data on behalf of Google and, for example, is serving as a benchmark task for artificial intelligence technologies. This all indicates that there has been a shift towards requesting real-time feedback in return for securing or using a service.

Embedded sensors and on-line feedback indicate that the next step is incorporating embedded monitoring connected to real-time feedback of workplaces. Of course there will still be need for independent expert opinion and critiques, and the set-piece pre- and post-project evaluations will be carried out when more detail is required. However, it is feasible that occupiers looking for more proactive and ongoing feedback will replace lengthy on-line questionnaire surveys with quick automated real-time reviews made by the occupants, those customers experiencing the workplace on a daily basis.

2.6 Conclusion

In the meantime, the workplace design community has a responsibility to promote POE, obtain occupant feedback, and regularly share our results and lessons learned. Back to the Leesman Index, and their survey of over 262,000 occupants, they report that “only 54% of those we’ve surveyed agree that their workplace design allows them to be productive” (Leesman 2015). Cooper’s (2001) comments that without a feedback loop every building, to some extent is a prototype – spaces and systems put together in new ways, with potentially unpredictable outcomes. So whilst architectural creativity should not be stifled, the workplace community also needs to ensure that they do not build workplaces that are reported to not benefit the occupants. The first step to this is, and always has been, honest feedback and considered evaluation integrated into the design process.

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Nigel authored the British Council for Offices (2007) *Guide to Post-Occupancy Evaluation*. He continues to write articles and guidance, present regularly at international conferences, and he organises the biannual *Workplace Trends* conference and annual *Learning Environments* conference.

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