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## Towards A New Framework for Post Occupancy Evaluation

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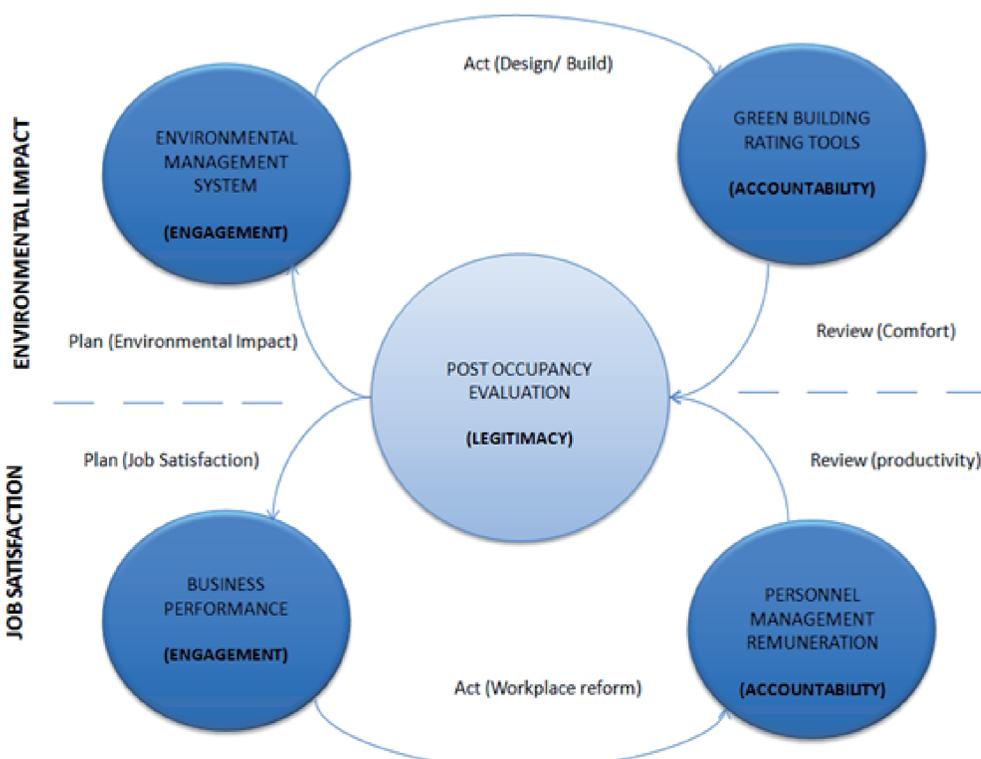
# PhD Research Topic: Towards A New Framework for Post Occupancy Evaluation

## OVERVIEW

Over the last three decades there has been growing interest and attention placed on sustainability and the contribution made by the built environment. Furthermore, environmental auditing applied to buildings has largely been concerned with energy/water usage and waste (Bailey et al., 1992; Robinson and Whitfield, 2010). On the other hand, environmental auditing is often thought of as an environmental management instrument employed by businesses to progress better management of their environmental performance (Hillary, 2010).

This research argues that post occupancy evaluation (POE) can be a useful tool in validating the performance of commercial office buildings in terms of key design objectives of human comfort and productivity, from the perspective of building inhabitants. A new assessment framework is developed based on a double loop (learning) cycle for continuous process improvement founded on three principles of environmental engagement, accountability, and legitimacy (Alrazi, 2009). This framework enables the influence of both human comfort and productivity to be integrated in assessing the real environmental and organisational performance of commercial office buildings.

However, growing interest in sustainable development has led to a focus on attaining more of an ecological balance to ensure continuous long-term development and maintenance of living standards. Furthermore, climate change is one of the greatest environmental challenges facing the world today (e.g. Stern, 2006; Bouwer and Aerts, 2006) with carbon emissions to the atmosphere expected to contribute significantly to the rise of average global temperatures in the years ahead. As is well known, buildings and development provide countless benefits to society, but they also have clear environmental and health impacts. Less obvious perhaps is how built environments impact on occupants, their satisfaction and performance. There is no viable assessment framework for evaluation and control that enables integrated continuous improvement in both built environment and business performance.



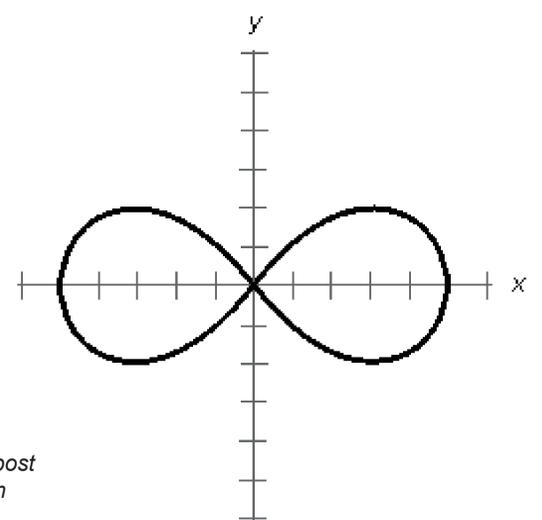
This research aims to outline an assessment framework that will help explain the relationship between organizations and the productivity of those people working in these organizations relative to the built form. This is achieved by building a framework for environmental auditing with new criteria and learning cycles that will assist in integrating business and environmental performance. Opportunities for ongoing research based on this framework are then discussed.

Therefore the main objective of this study is to create a framework that explains the relationship between organizations and those who are working with these firms relative to the built form. Specifically, this research has the following objectives: (1) to use post-occupancy evaluation techniques to understand human performance differences between green and traditional building forms, (2) build a framework model for environmental auditing with new criteria and learning cycles that will assist in enhancing business and environmental performances in buildings, (3) to investigate whether the workplace in sustainable buildings assists employees to be more productive and to what extent there is an effect on business and environmental performance.

Furthermore, this research will test the assessment framework via detailed case studies involving existing buildings that are either traditional modern office space (common practice), heritage-listed traditional office space (past practice), or high-performance green office space (future practice). The focus of the work will centre on the development and testing of a POE tool capable of collecting reliable data about occupant comfort (functional, psychological, physical, personal satisfaction) and productivity (effectiveness, efficiency, innovation, integration) so that the relationship between these key variables can be explored in different contexts.

## KEY REFERENCES

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Proposed framework for integrated post occupancy evaluation (left) based on double loop learning model (right)