2 Listen to me. Acoustic performance of offices from design to post-occupancy

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Abstract

Acoustics is one of the most important factors affecting the productivity and comfort of employees (Al Horr, et al, 2016). Yet, it has become particularly hard to control acoustic conditions in today's offices given the broad application of open-plan layouts. Furniture producers and companies specialized in acoustic equipment execute countless tests to certify high acoustic quality of their products. Nevertheless, the way they are installed and utilized once they exit the company laboratories can make a huge difference in their performance. According to Leesman, in real-life, about 70% of employees are not satisfied with the acoustic environment they find in the workplace. This disturbance, in the long run, risks to affect badly the well-being and health of individuals, with effects on stress, heart rate, and blood pressure (Oseland & Hodsman, 2015).

This thesis will compare the performance of acoustic devices in the lab and once they are installed in a real office setting, by testing alternative applications in an open-plan layout in order to verify under what conditions they assure the best acoustic comfort. Quantitative and qualitative methods will be combined to detect not only technical parameters of office acoustics but also perceptive measures.

Eventually, this work aims at encouraging a culture shift in companies. It will demonstrate how implementing more often "living lab" type of experiments after project completion helps keep acoustic performances under control when the workplace is in its standard operation.

Bibliography

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