

## Experimental and Survey Studies on the Effectiveness of Dynamic Signage Systems

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### ABSTRACT

Signage systems are widely used in the built environment to aid occupant wayfinding during both circulation and evacuation. Recent research conducted by the authors shows that only 38% of people 'see' conventional static emergency signage in presumed emergency situations in an unfamiliar built environment, even if the sign is located directly in front of them and their vision is unobstructed. However, most people who see the sign follow the sign. These results suggest that current emergency guidance signs are less effective as an aid to wayfinding than they potentially can be and that signs are likely to become more effective if their detectability can be improved while upholding the comprehensibility of the guidance information they provide. A novel dynamic signage design is proposed to address this issue. The effectiveness of the new sign is tested under almost identical experimental settings and conditions as in the previous experiments examining conventional, static signs. The results show that 77% of people 'see' the dynamic sign and 100% of them go on to follow the sign. In addition, a dynamic method to identify that an exit route is no longer viable is tested using an international survey to gauge understanding of the new signage concept. Survey results suggest that the purpose of the new sign can be clearly understood by over 90% of the sample.

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Note by LightSaver:

A dynamic system as mentioned by Galea is referred to as active in several other researches (like De Jong).  
In both cases a system is meant that is reacting to an alarm generated by a fire alarm system or smoke detector.