

Requirements for a systems-based research and development management process in transport infrastructure engineering

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Abstract

The management of research and development (R&D) in the transport infrastructure field is complex due to the multidisciplinary nature of the work. The literature shows that linear R&D models that progress from idea through to consumer product are not suitable for the management of such multi-disciplinary projects. This study focuses on determining the key characteristics required for a systems-based approach to the management of R&D projects. The information and data was compiled from literature reviews, interviews, and an e-mail survey with responses from 42 significant international R&D programmes. The findings confirmed the need for a systems-based approach to R&D management. The study formulated twelve principles or tenets for a new, systems-based approach