

The impact of cultural change: a transdisciplinary engineering case study.

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Abstract. Engineering Change Management (ECM) is a complex process requiring transdisciplinary working across the entire business and product lifecycle. Core to achieving successful transdisciplinary working are collaborative teams focusing on a common goal. However, much of the research and studies presented tend to be academic in nature and often focused on education and health, with a small number of papers providing industrial engineering examples. In this paper, we present an Engineering Change Management case study of a small UK-based automotive business and reflect on the importance of a transdisciplinary engineering approach. We place focus on the importance of social sciences, people and culture, in gaining success i.e. a people-focused approach to ECM. We hypothesized that by using a transdisciplinary approach where people and culture were key, we could accelerate the Engineering Change Management process. Within this paper, we introduce ECM and Quick Release's role in assisting companies with their engineering change management processes. This is followed by a summary of the case study context and the two-phased approach to the analysis; Diagnostic (Phase 1) and Acceleration sprint (Phase 2). The results of the case study estimated a process throughput increase of a factor of three and a reduction in ECM process time from a 64-day average to approximately 22 days. This eliminated a potential 8-week program delay, valued at over £5 million in engineering costs alone for the case study company.

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