

ASSESSING THE IMPACT OF NEW TECHNOLOGY ON COMPLEX SOCIOTECHNICAL SYSTEMS

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ABSTRACT

In complex sociotechnical systems, cognitive and social humans use technology to make sense of situations for decisions. These elements make sociotechnical systems difficult to develop. A modelling and assessment methodology for systems engineering is required to understand the sociotechnical system's behaviour and underlying structure. Modelling captures the dynamic interaction as well as the effect of humans in a complex environment. Cognitive Work Analysis and System Dynamics are two complementary approaches applied in mutual support within this context. The objective of this paper is to demonstrate a modelling methodology for complex socio-technical systems to support the systems engineering process.