

ABSTRACT

The technology advancement of the latter half of the twentieth century and into this century has been the most significant driver of the emergence of Systems Engineering as a critical skill in the development of complex systems. Not only did the advancement of technology affected the products, but, also the manner in which these products are being developed, manufactured, operated, supported and maintained. The challenges confronting many organisations seeking to implement Systems Engineering in their projects are far from trivial. The current practices and culture in most of these organisations often constrain the adoption of Systems Engineering.

A survey research was conducted to investigate the status of Systems Engineering at a South African Council for Scientific and Industrial Research (CSIR) using one of its business unit, namely Defence, Peace, Safety and Security (DPSS) as a unit of measure. The research instrument for the study was developed based on the international standards and capability maturity models of Systems Engineering, to assess the status of Systems Engineering and to investigate whether an association exist between the status of Systems Engineering and a Competency Area or Job Category at DPSS.

The results showed that the majority in the Competency Areas within DPSS utilises the specific practices associated with the technical processes of Systems Engineering in their projects and that there is no association between the status of Systems Engineering and Competency Area or Job Category. However, the study also shows that there is still room for improvement.