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# Holistic Strategy Concept Generation Framework for the Saudi Railway Sector -An Enterprise System Architecting Approach-

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### SUMMARY OF MASTER'S DISSERTATION

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Title

Holistic Strategy Concept Generation Framework for the Saudi Railway Sector
-An Enterprise System Architecting Approach-

### Abstract

The turn of the 21st century witnessed heavy investment packages led by the Saudi government into renovating and expanding several of its infrastructure sectors. Among the recipients, The Saudi inter-city railway sector has received massive support in the form of multi mega-projects of railway infrastructure construction and renewals that are either completed, ongoing or in the plans. The downside was that such growth was taking place in a structurally fragile industry which lacked a clear direction, structure, and governance. This, in addition to macro-level challenges, led the new government of Saudi Arabia to exert major reform pressures on the sector since 2015 to realize its full potential. Sincere efforts are currently being made to reform and transform, but unfortunately are met with a stakeholder mindset that does not necessarily view the sector holistically and systemically. This research tries to build on an existing body of knowledge and practice within Engineering Systems and Enterprise Systems literatures in order to enhance stakeholders' holistic, systemic and multi-viewpoint mindsets when considering their respective sector, and especially within strategy conceptualization. Specifically, a systematic architecting framework and a sample output strategy architecture are developed visually and presented to stakeholders to measure the enhancement degree of their systemic and holistic mindsets, as well as if the framework has the potential to be used as an assisting tool while making strategic decisions. Initial output evaluations seem promising for the Saudi railway sector and beyond, however more future work remains to simplify concepts and language to stakeholders, better link strategic attributes together, draw more from the business language, and execute multiple and more detailed strategy concept iterations in railways and possibly other similar engineering sectors with active participation from relevant stakeholders to enhance the framework's overall effectiveness and value delivery.

Key Words (5 words)

Strategy, Enterprise Systems, Railway, Sector, Framework