

Department of Applied Social Sciences (DCSA)

High-speed train technology assessment

IET/CESNOVA



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Objectives

Railway competitive advantage in today's fast-changing markets and societal conditions requires novel approaches to technology development. The new generation of high-speed train-vehicles to succeed can no longer rely on conventional practices of trial-and-error with lengthy and costly development cycles.

The research work aims therefore the analysis on how railways to market technology foster collaborative and societal-embedding activities contrasting with their secretive culture reluctant to information sharing. Specifically, author addresses the high-speed train technology development process in hands of manufacturers.

Methodology

Theoretical references are found in technology assessment literature. Rip et al. 2007 refers to Constructive Technology Assessment, conferring to it a share in firms' strategic-intelligence strategies addressing complex innovation systems.

The research work contributes further by adjusting the application of the above-referred theoretical model to the specificity of the railway manufacturing industry; in particular, to the complex technology development process of the high-speed train.

Expected Results

Constructive technology assessment is found as an emergent management instrument to approach simultaneously collaborative development and societal embedding activities.

Implemented from the very early stage of product development. Part of corporate strategic intelligence strategy overlooking to the vehicle technological and commercial trajectories.

However yet a marginal practice, addressing attractiveness and compliance of non-core technologies developments.

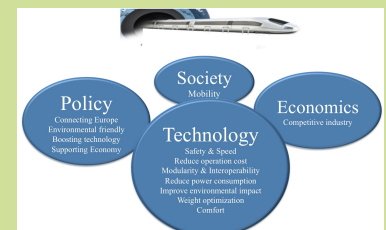


Figure 1. High-speed train impact

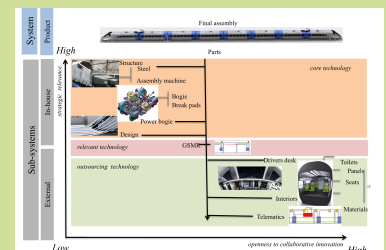


Figure 2. Technology System
Source Moretto et al. (forthcoming)

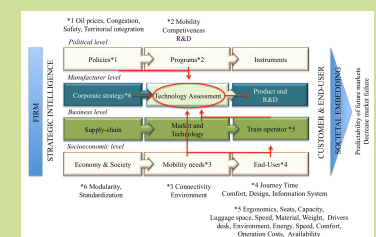


Figure 3. Constructive Technology Assessment strategic function
Source Moretto et al. (forthcoming)

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