



## Procurement of Railway Infrastructure Projects – A European Benchmarking Study

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### Abstract

This benchmarking study compares how railway investments are procured in five European countries: Sweden, Norway, Germany, the Netherlands, and the UK. In total, 19 procurement managers and project managers were interviewed. This study compares the national rail clients' procurement strategies regarding: delivery system, reward system, contractor selection, and collaboration model. Historically, these clients have used in-house production. The first step towards a gradually increased usage of the market was to outsource the construction activities while keeping the design and development competence in-house. All five countries have mainly used Design-Bid-Build contracts in their initial outsourcing. However, the last few years there is a discernible trend in Sweden, Norway, the Netherlands and the UK towards allocating more design and development responsibilities to contractors (i.e. Design-Build contracts) and increasing the strategic focus on cooperation. The UK and the Netherlands are forerunners in this trend that can be viewed as a third step in the transition towards a market oriented railway sector. Norway and Sweden is in the middle of this transition, whereas Germany has not initiated this change. The transition towards a gradually increased usage of the market has two main dimensions; degree of cooperation and degree of contractor freedom, which differs among the countries. The UK and Sweden focus on increasing both these dimensions, while The Netherlands and Norway mostly focus on increasing the degree of contractor freedom. Germany still limits both dimensions by performing design and development in-house and letting contractors compete for construction work in Design-Bid-Build contracts. Due to historical and cultural reasons, Deutsche Bahn in Germany is very hesitant to engage in collaboration with external suppliers; focusing on competition is considered more appropriate and less controversial.

**Keywords:** Competition; Cooperation; Infrastructure Projects; Railway Investments; Public Procurement.

### 1. Introduction

The European railway systems are critical for both long-distance and commuter traffic, as well as freight transportation [1]. Until the early 1990s, most European railway systems were organized in the form of state-owned and vertically integrated monopolies [2]. The EU directives from 1991 (Dir.91/440/EEG) stipulates the separation of the national railways into different organizations for owning and developing the infrastructure and for operation and transport activities. Following this trend, all or parts of the design, construction and maintenance of railway infrastructure have been deregulated and opened for competition in many countries.

In deregulated railway sectors, clients' procurement strategies heavily influence both efficiency and innovation in construction projects [3]. Despite this, innovation needs and opportunities are seldom considered when choosing procurement strategy [4]. Instead it is often more short-term efficiency related objectives, such as cost, time and quality, which are considered [5]. This focus on short-term efficiency may hinder innovation and thereby sustainable

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