

FINTRAFFIC RAIL THROUGH RAMBØLL FINLAND OY

DIGIRAIL FINLAND – LIFE-CYCLE COST ANALYSIS



Client	Fintraffic Rail through Rambøll
Processing period	July 2019 - April 2021
Project costs	1.7 billion CHF

The Finnish railways are investigating scenarios for the digitalisation of their train control technology, for the connection to the European Railway Traffic Management System ERTMS, and for the replacement of the current ATP system. R+R estimated the life cycle costs for various scenarios and supported the risk analysis.

Almost the entire railway network in Finland is equipped with trackside train control equipment. The service life of the system will end in the late 2020s, which is why preparations for the introduction of

the new technology must start immediately. In addition, EU regulations oblige Finland to transition towards the Single European Railway Area at least with regard to the TEN-T Core Network, and to equip the railway network with ERTMS. A modern radio-based system will enable the deployment of future technologies for several decades to come. A system that is easy to update and the development of interlocking devices to a new level will make dynamic data-based traffic management possible in both passenger and freight transport. Thanks to the database, it will be possible to anticipate the maintenance requirements of the rolling stock and the network, which will bring savings both to the operators and to the owner of the railway infrastructure. A radio-based solution is also the key to the digitalisation of logistics and automated railway traffic. R+R has been commissioned to estimate the life-cycle costs of various scenarios. A preferred alternative and a fallback solution were then singled out and analysed in-depth. R+R also supported a risk assessment, based on our experience with other ERTMS programmes.