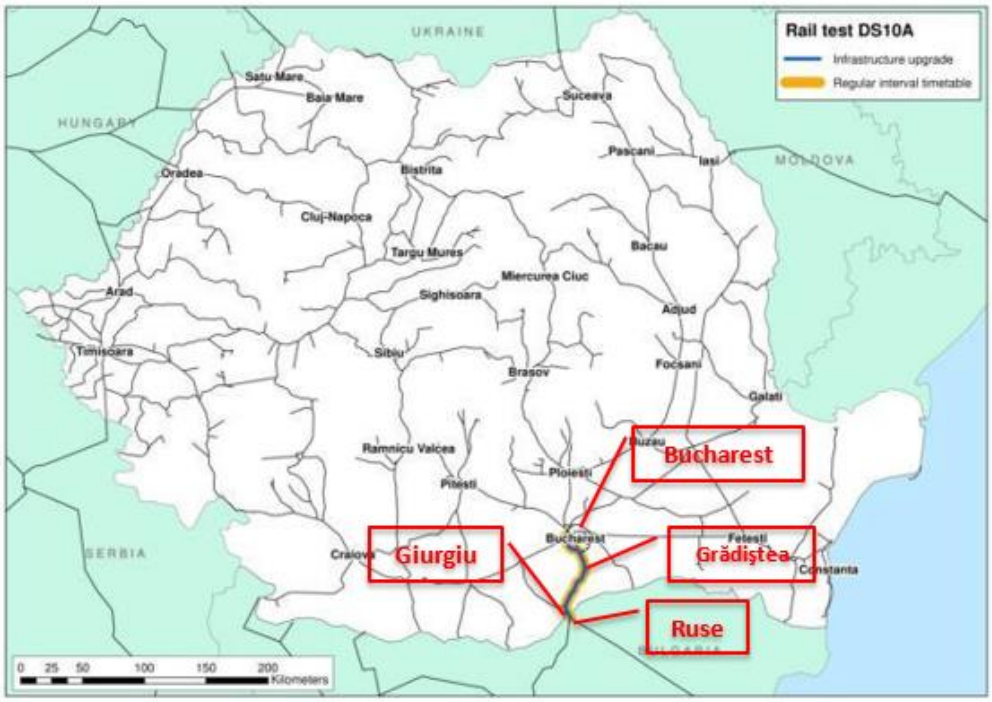
Rehabilitation of the railway line Bucharest North–Giurgiu

General information

The project regards the **rehabilitation of the cross-border railway section Bucharest-Giurgiu**, which connects the capital city of Romania with Bulgaria via Grădiştea. The Bucharest-Giurgiu rail line is part of the Pan-European Corridor IX, **on the TEN-T comprehensive network**. It is a very important link, being the unique connection with the Bulgarian cross-border river port of Ruse, on the Danube River. This project is in continuation with the railway line Ruse-Varna, identified in the FR of Bulgaria.

Figure 8-1 provides with the geographical localisation of the section.

Figure 8-1: Localisation of Bucharest North-Giurgiu via Grădiştea



Source: AECOM (2014)

In 2005, the Grădiştea Bridge collapsed due to the severe damages caused by a flood. Since then, the Bucharest-Giurgiu line **closed to traffic**. At the moment, trains are allowed to transit through the much longer route Videle-Giurgiu to pass the border between Romania and Bulgaria. The urgency of the rehabilitation of the section is necessary because the traffic diversion from the Bucharest-Giurgiu to the Videle-Giurgiu is overstressing the line, designed for lighter traffic.

The project for the modernisation of Bucharest North-Jilava-North Giurgiu-state border with Bulgaria aims to:

- reopen the section to train traffic;
- improve safety of rail traffic;
- reduce travel time by increasing speed across the section;
- improve the ride comfort;
- increase transit cargo traffic;
- reduce greenhouse gas emissions and negative environmental impacts.

According to the Romania General Transport Master Plan, the rail rehabilitation projects includes different operations:

- rehabilitation to design speed of corridor 902 between Bucharest and Giurgiu;
- steady state maintenance of the network;
- improvement of signalling and communication systems to enhance running speed and increase the corridor's capacity;
- reconstruction of the Arges River bridge (between the railway station Vidra-Grădiştea).

Technical description

The estimated investment costs and additional operating costs are illustrated in Table 8-1 (AECOM, 2014). There is no information regarding the costs breakdown by category.

Table 8-1: Estimated investment and operating costs of the railway line Bucharest North-Giurgiu

Item	Description	Estimated value [€ million, 2014]
Investment	Rehabilitation of track to provide current design speeds Rehabilitation of power supply, including regenerative braking Rehabilitation of signalling equipment	113
Operating	Additional operating costs for trains	122

Source: Elaboration from AECOM (2014)

It is worth noting that the costs will be updated in the Feasibility study for Bucharest **North-Jilava-Giurgiu North-Giurgiu Nord Frontieră that will be completed in 2018.**

Project implementation

The project is part of the EC programme **"Large Infrastructure Operational Programme 2014-2020"**, which aims to invest in removing the main transport bottlenecks and developing sustainable, efficient and green transport modes in the member countries.

On September 2016, the state-owned rail infrastructure manager CFR SA launched a € 4,3 million open tender for the preparation of the Feasibility Study for the modernisation of the rail section. The feasibility study will identify the best option route and propose a schedule of activities by developing a structure of works with two lots. Lot 1 will include the works on the bridge over the river Arges between stations Vidra and Grădiştea. Lot 2 comprises works on the railway infrastructure and on the Giurgiu and Bucharest North railway stations. Applicants should submit their proposals within 4 months from the publication of the call for tender for Lot 1 and 18 months for Lot 2.

Transport demand

According to AECOM (2014), once the project will be completed, it is forecasted an increase in rail passenger and freight traffic by +3% and +1%, respectively.

On the consulted documents, there is no information available with respect to the assumed values of key drivers of traffic growth and indications are not provided on the evolution of level of service or capacity according to project implementation.

Financial analysis

Information of the financial analysis is not available.

Economic analysis

The parameters of the economic analysis carried out in AECOM (2014) are reported in Table 8-2.

Table 8-2: Economic performance indicators of the railway line Bucharest North-Giurgiu

Performance indicator	Value
ENPV [€ million, 2014]	263
Benefit/Cost	4.20
EIRR [%]	14,67

Source: Elaboration from AECOM (2014)

The information available does not provide with details regarding the methodology used to carry out the economic analysis and the appraisal period assumed. There are no indications neither regarding conversion factors from financial to economic inputs, nor for assumptions on the residual value of the investment.

It is worth noting that in 2011, a CBA was carried out focusing only on the new rail bridge construction. Though the results were positive, the study is not available.

Environmental analysis

The reduction of greenhouse gas emissions and, generally, of the negative environmental impacts are part of the project's scope. Nonetheless, the EIA is not yet available; it will be ready once the Feasibility Study will be completed.

Safety levels

There is no specific information on safety issues and black spots before and after the project implementation but the increase in safety is included in the launched tender for the Feasibility Study as a major objective of the project.