

## 2. Summary (English)

### Goal of this study: do alternative ways of contracting lead to added value?

The project Rail Gent Terneuzen (RGT) is focused on improving the rail infrastructure of the harbor area of North Sea Port. RGT expects to further develop, as such that the current infrastructure will become a bottleneck. This project includes the improvement of the rail infrastructure in the harbor area by implementing three new parts of infrastructure:

A1: North connection at Zanddeken (BE) excluding the expansion of Zanddeken train yard

A3: Southeast connection at the Sluiskil bridge (NL)

A4: New track Axel – Zelzate (NL + BE)

The total investment of the construction is approximately 212 million Euro, including VAT at 2018 price level.

No decision has yet been taken on the manner of contracting and realizing the project. This study contributes to answering that question. In order to execute this study we have made use of elements of the so-called Public-Private Comparator (PPC) method. We have investigated whether the tendering and subsequent realization of the project using alternative contract variants can lead to financial added value, compared to the “traditional” way of contracting in which the project would normally be realized. Next to determining the added value, in addition to the preparation and construction of the new infrastructure, we also take into account the maintenance of all existing and new infrastructure. We therefore consider how these activities can be contracted all together in the most advantageous way. In addition to the standard PPC method, this study focuses on the feasibility of the various contract variants.

Four contract variant have been part of this study:

**Tabel 2: contract variants**

	A3	A1	A4 NL deel	A4 BE deel
<b>Design</b>	Design & Build contract	Internal design Infrabel	Design & Build contract	Intern design Infrabel
<b>Construct</b>		Contract for construction		Contract for construction
<b>Maintenance new infra</b>	Add to existing Performance based contract	Add to internal Infrabel maintenance activities	Toevoegen aan bestaand PGO-contract	Add to internal Infrabel maintenance activities
<b>Maintenance existing infra</b>	Existing PGO-contract	Internal Infrabel maintenance activities	Bestaand PGO-contract	Internal Infrabel maintenance activities
<b>Management new infra</b>	ProRail	Infrabel	ProRail	Infrabel
<b>Management existing infra</b>	ProRail	Infrabel	ProRail	Infrabel
<b>Finance</b>	Public	Public	Public	Public

The reference variant, is based on the way in which the various activities would normally be contracted. This means ProRail will make use of D&B contracts and Infrabel works with separate specifications for the realization of infrastructure elements on their territory. The maintenance of the Dutch resp. Belgian infrastructure will be added to the responsibility of ProRail resp. Infrabel. The project is publicly funded.

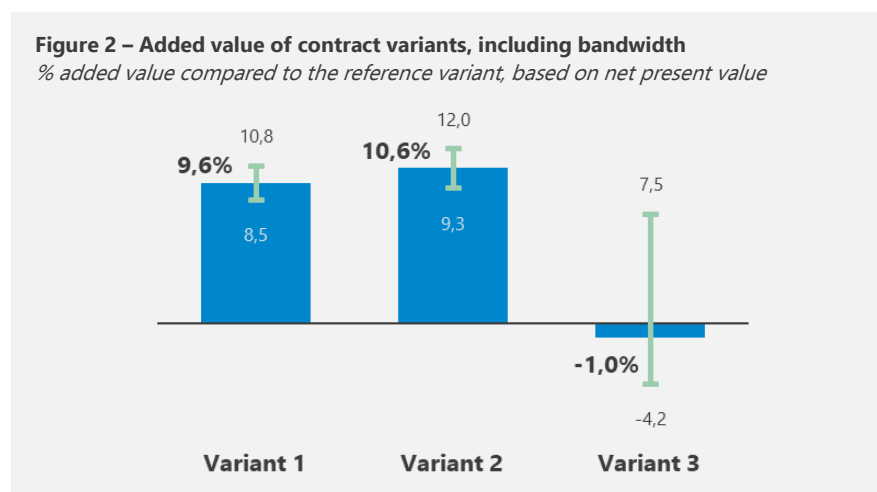
Variant 1: The design and construction of the various infrastructure elements are integrated in 1 D&B contract. Other activities (maintenance) are equal to the reference variant. The project is publicly funded.

Variant 2: The design and construction of the various infrastructure elements are integrated into 1 D&B contract. The maintenance of both the Belgian and Dutch infrastructure in the area is invested by Infrabel. Public funding. The project is publicly funded.

Variant 3: Integration of design, construction and maintenance in 1 DBFM contract. The project is privately funded.

Basically, the integration of activities lead to added value in the form of cost savings. For the RGT project integration can take two forms: combining the three infrastructure elements into one D&B contract. And or integrating the project phases (design, construction, management and maintenance) within the same contract. The three contract variants included in our study are all based on the joint implementation of the three infrastructure elements. In which variant 1 only knows two project phases; design and construction, in variant 2 (design, construction are merged and management entrusted to an existing party). Variant 3 is characterized by the most extensive integration, by fully merging all project phases (including the management and maintenance of existing infrastructure) in a DBFM contract.

### **An integrated D&B contract results in significant added value; DBFM can provide added value, but is not the most advantageous in any of the scenarios**



The research shows that *variant 2* offers the most added value compared to the reference (7%), refer Figure 2. The added value of this variant is mainly driven by economies of scale in the construction phase. *Variant 1*, where the design and construction phase are equal to *variant 2*, but where maintenance in the

Netherlands remains with ProRail, also results in added value compared to the reference (6%). *Variant 3*, in which a DBFM contract is applied, does not lead to added value in the average scenario, driven by considerably higher maintenance and contract costs.

We have performed sensitivity analysis to determine a bandwidth of the results (the bandwidth is indicated with the green bars in Figure 1). The main finding of this sensitivity analysis is that if added value is given to timely delivery of the infrastructure, variant 3 will show a percentage of added value compared to the reference. Variants 1 and 2, however, also remain financially more attractive in this case compared to variant 3.

In addition to the financial gain or loss of a certain variant, the feasibility aspect also plays a role. The PPC methodology, which was largely followed in this study, focuses on determining the financial gain or loss of alternative implementation variants of the RGT project. In summary, the results of the study consist of the NPV of the different variants and the associated assumptions. This does not yet say anything about the actual feasibility or probability of realizing the project in an alternative manner. If a certain variant is attractive from a financial perspective, there may nevertheless be reasons to implement the project in a different way. For example, because it is not legally possible within the available timeframe, or because the political will for a certain approach is lacking.

In summary, it can be stated that joint action is necessary for all variants, also the reference, and that laws and regulations must be amended for this. This is not impossible, but it does require political will and decision-making. This can also take several years.

Per variant we conclude the following:

The reference variant is by definition a feasible variant, after all it is the way in which the project would normally be realized. But also here some sort of coordination needs to take place, in order to achieve functioning cross-border infrastructure.

Variant 1: has no direct blocking issues, but it is possible to investigate which party most logically will act as client, in order to achieve this involved parties also need to achieve some sort of agreement.

Variant 2: Legally handing over management and maintenance tasks from ProRail to Infrabel is an obstacle for this variant. For the solution in which Infrabel as a subcontractor only performs maintenance for ProRail, is practically unfeasible. ProRail can only market maintenance activities by means of a public tender.

Variant 3: Infrabel requires that management and maintenance to be entrusted to 1 party, so if a third party becomes responsible for carrying out the maintenance, the management function must also be transferred to that party. The current Belgium legislation is not unambiguously if it is allowed to appoint any manager other than Infrabel in Belgium. Transferring subsystems (IT, security) to a third party also leads to major complications. This makes DBFM the least promising variant.

Based on the financial analysis, it appears that integrating contract phases also provides added value for RGT. Setting up a DBFM contract does not lead to an advantage, due to, amongst other things, the high contract costs. Transferring maintenance activities to Infrabel has many practical drawbacks, it seems

logical to opt for variant 1 on the basis of this, but at the same time not make variant 2 impossible, given the greater financial advantages that can be achieved in this way.