

BIM in Europe

Why is BIM so important for us

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buildingSMART Chapter Slovenia Chair

CGS Labs CEO



Content

- About CGS Labs
- About BIM
- BIM in Europe and Slovenia today

Slovenia main attractions

Bled, Piran, Planica, Triglav...



About me:



- In 1987 Graduated in Ljubljana Civil Engineering Faculty
- Co-founder of CGS, CGS plus, CGS Labs, Power Path
- Since 2015 member of siBIM Executive board
- Since 2020 Chair of buildingSMART Chapter Slovenia





CGS Labs software – Made in Slovenia



BIM ready solution for roadway design & reconstruction.



Swept path analysis and vehicle turning simulation software.



Traffic sign and road marking design software.



BIM ready solution for railway design & rail track analysis.

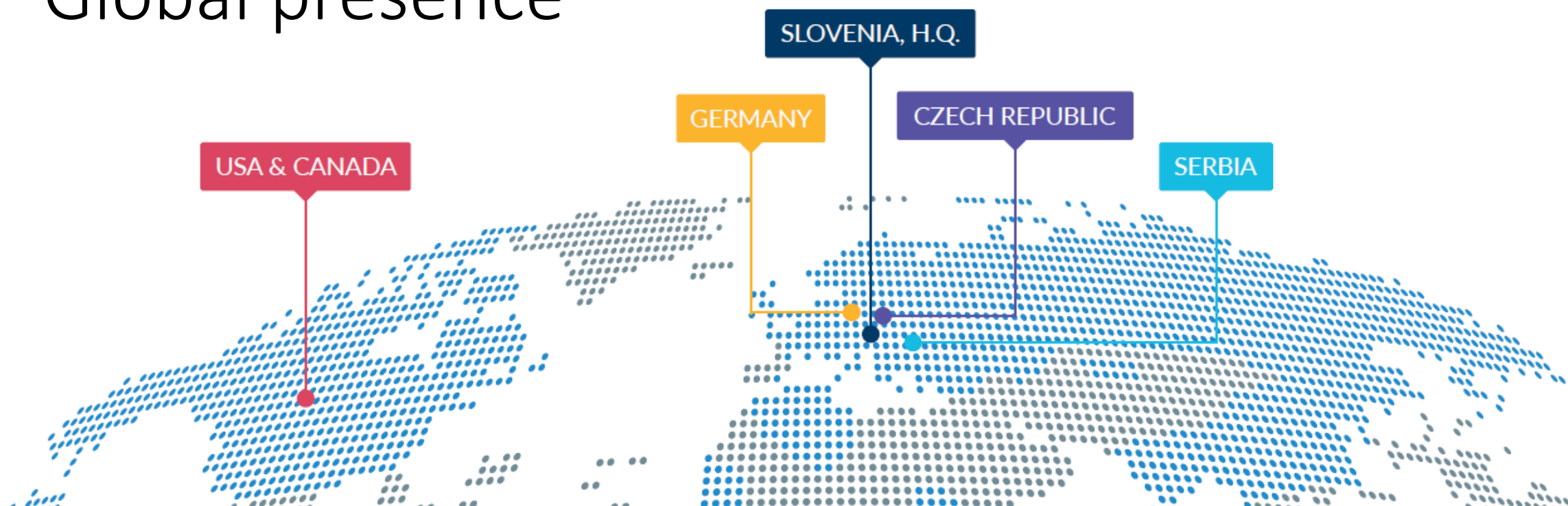


BIM ready Channel / River engineering design software.



Advanced road weather information system (RWIS) for optimizing winter maintenance operations.

Global presence



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About BIM

Global challenges

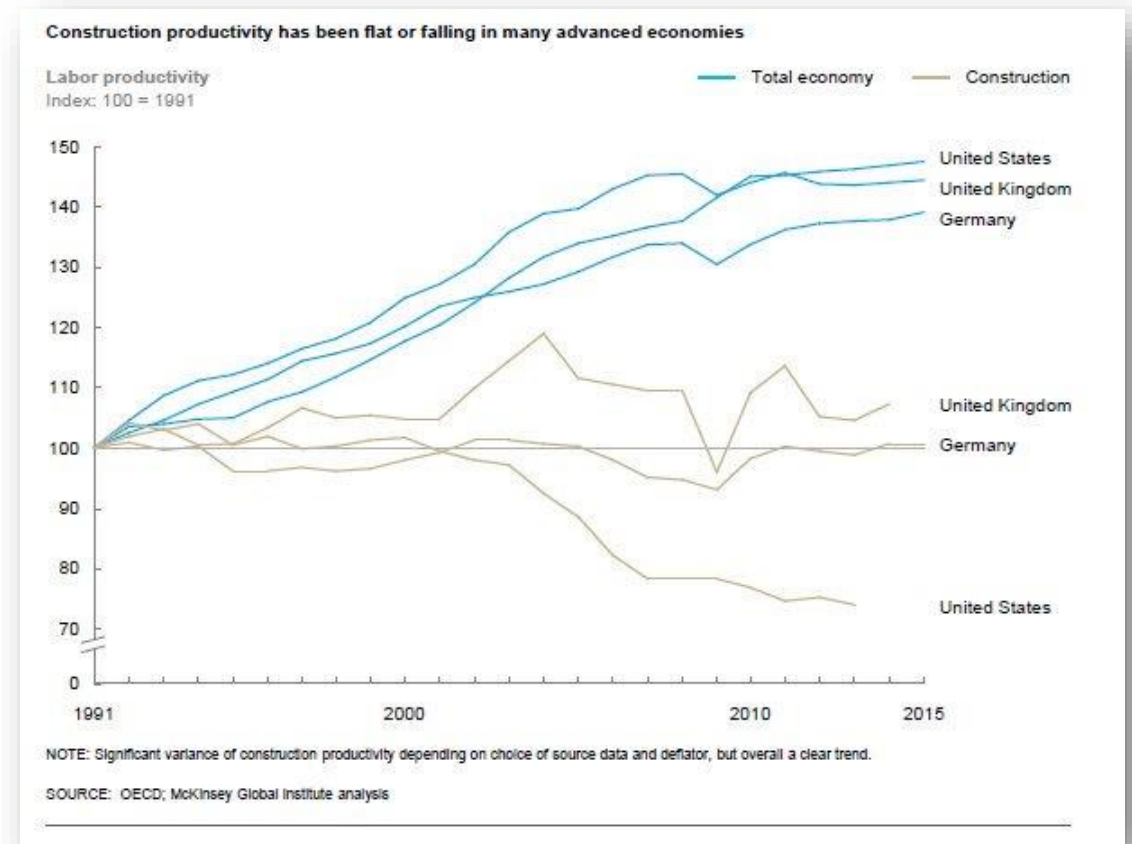
- Urbanization, megacities
- Lack of qualified workers
- Climate changes
- Circular economy
- Globalization
- Infrastructure aging



Construction sector in EU

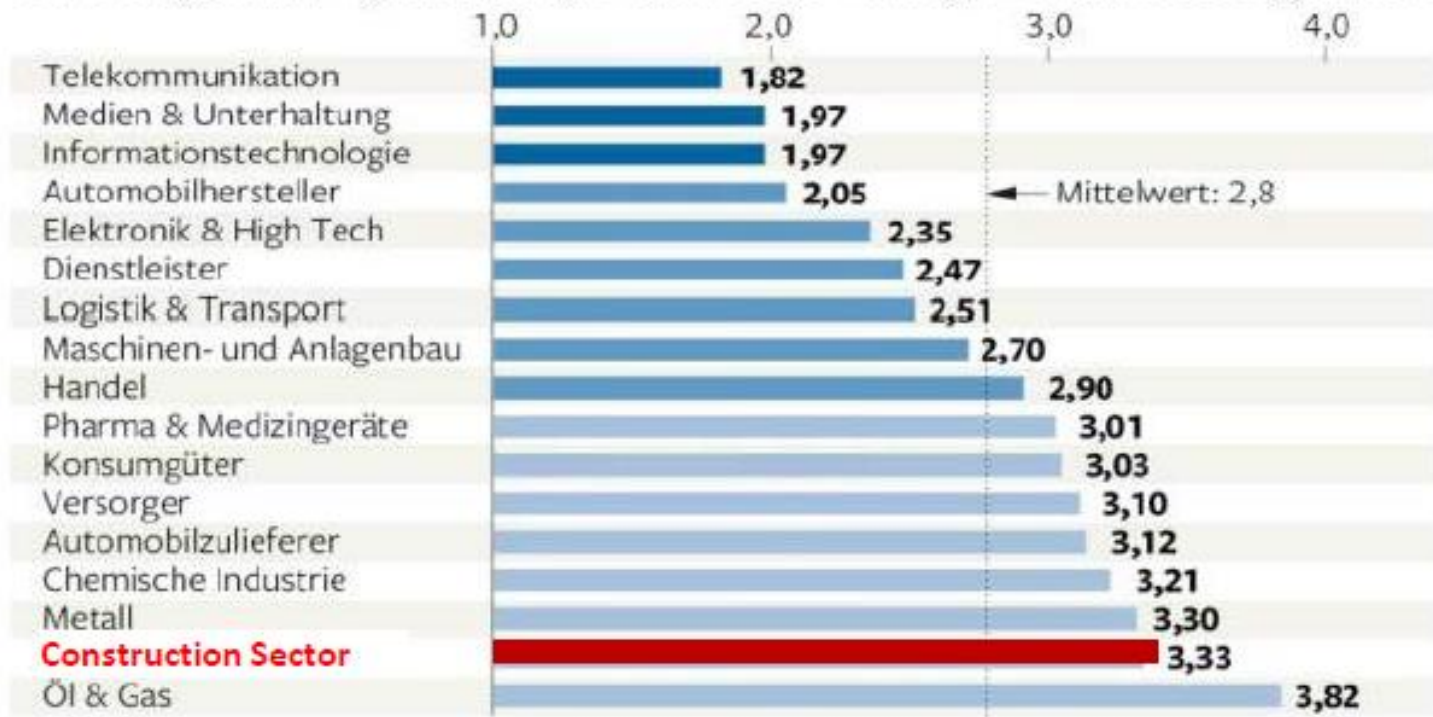
- 9% GDP EU
- Employs 18 mil people
- 3 mil companies
- 1300 billion Eur / year
- 10% savings = 130 billion Eur
- Fragmented sector

- McKinsey BIM reports



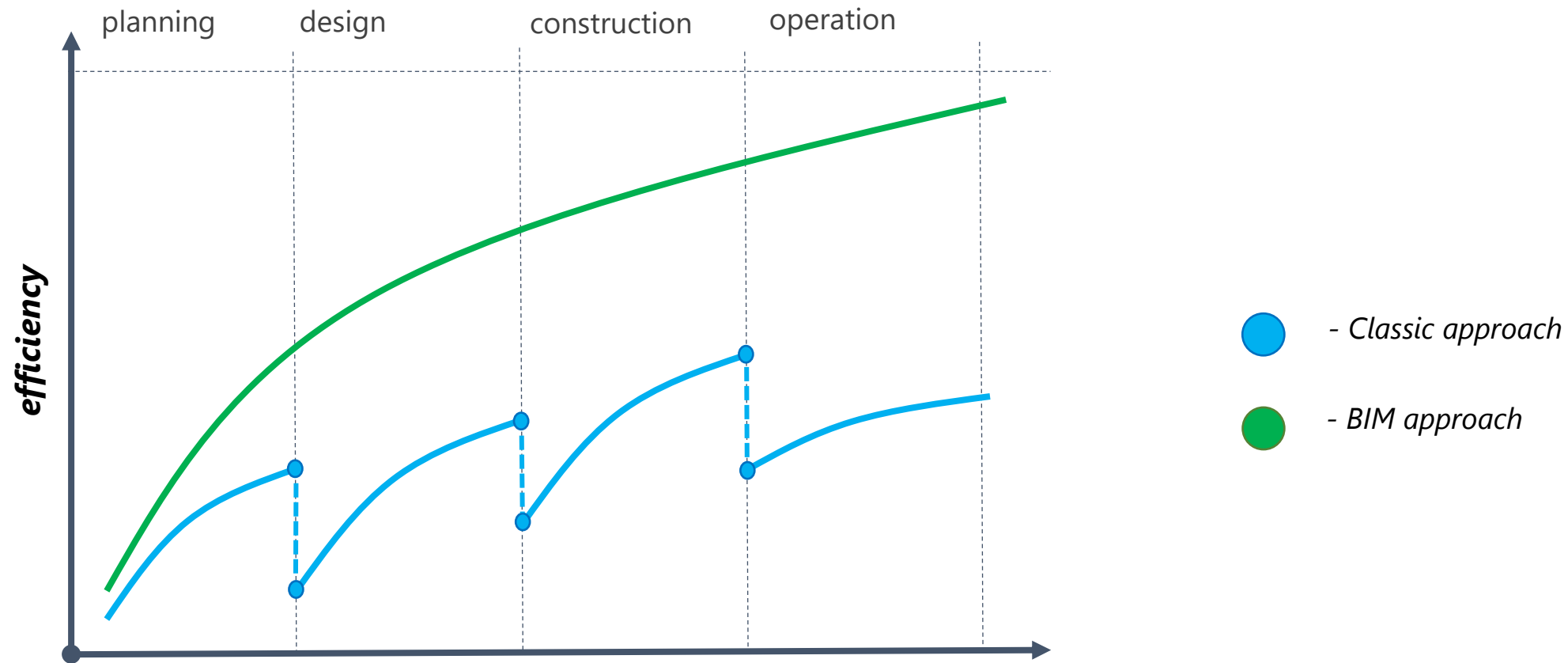
Level of digitalization

Bewertungsskala 1 = größtenteils, 2 = teilweise, 3 = wenig, 4 = ansatzweise digitalisiert

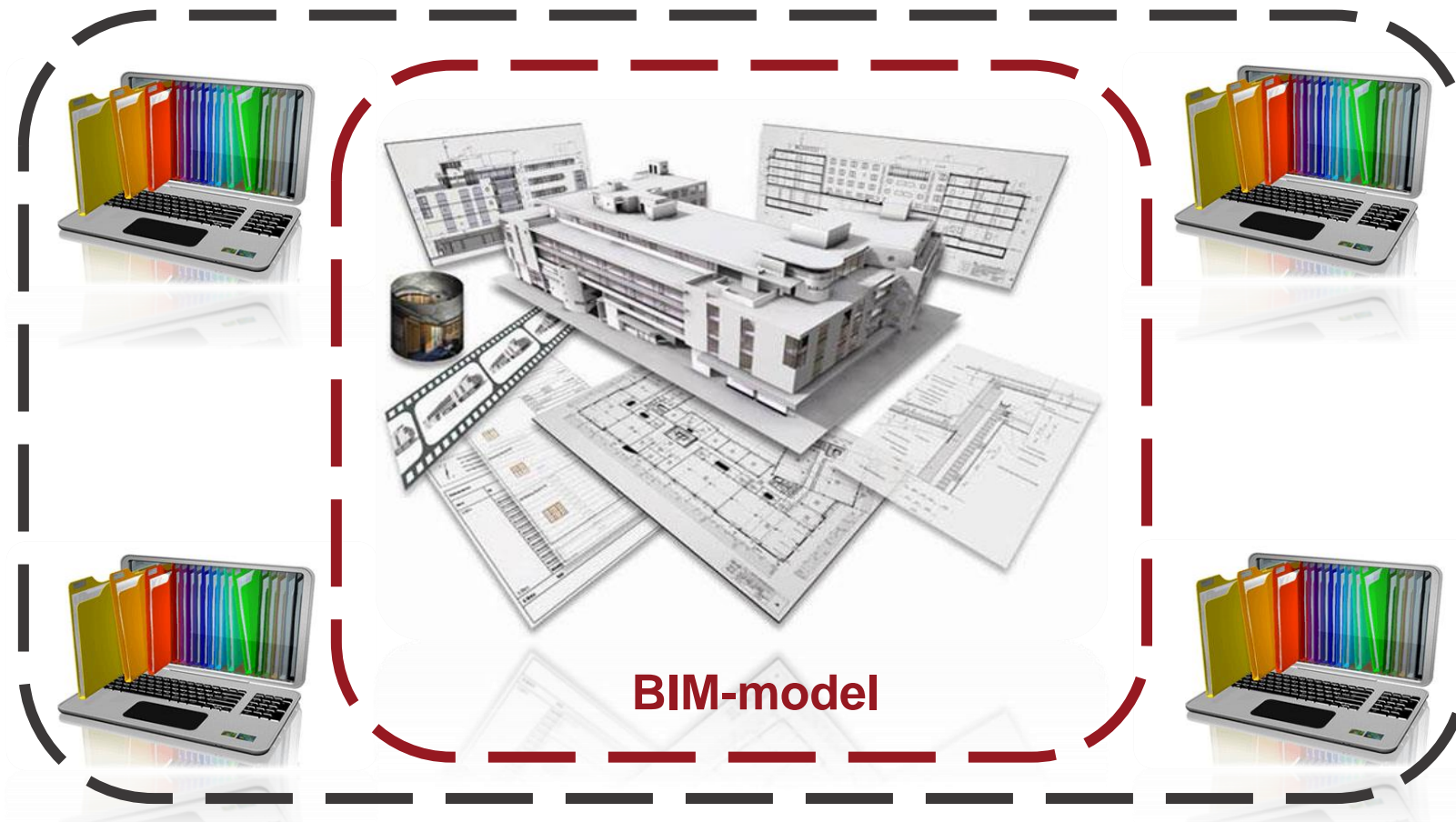


QUELLE: TOP 500 STUDIE 2014/ **accenture**

Data is new gold



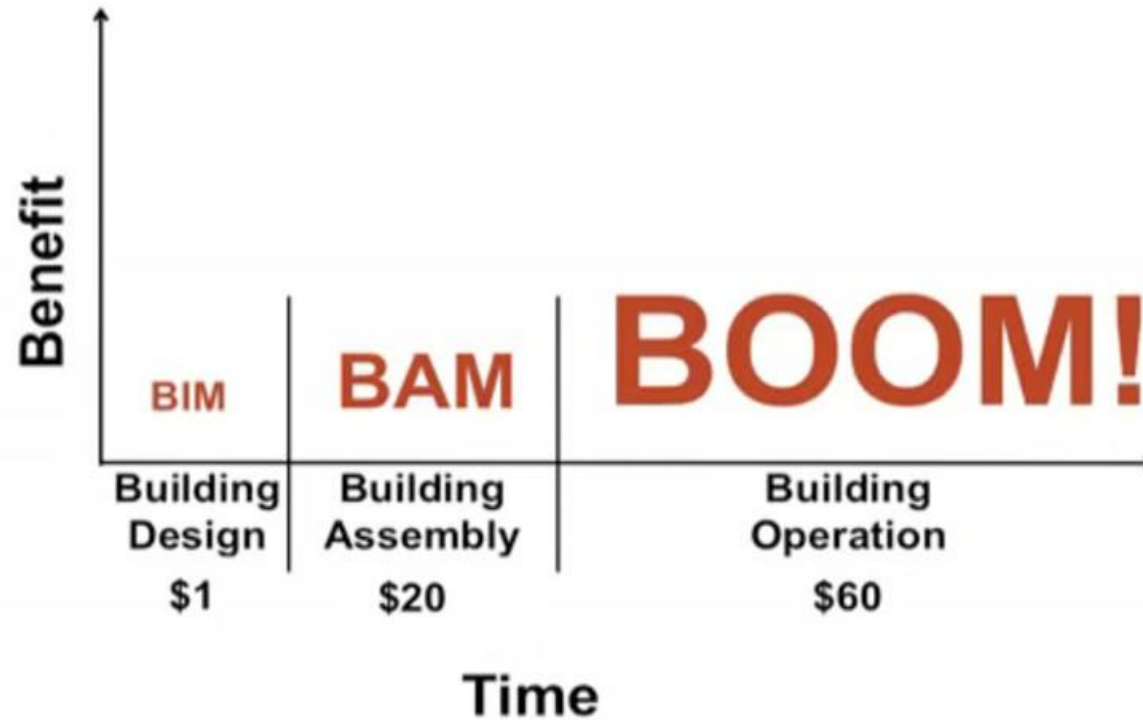
From Information model to Digital Twin



BIM Benefits for the construction projects

- Lower risks for overriding time schedules and financial budgets,
- Better quality of the buildings and infrastructure,
- Higher productivity and profitability,
- Better projects transparency,
- New opportunities for the construction sector growth through export and additional services,
- Stronger sector, which attracts young, talented people and new investments.

Benefits during lifecycle



BIM = Super Supervision

BIM in Europe and Slovenia today

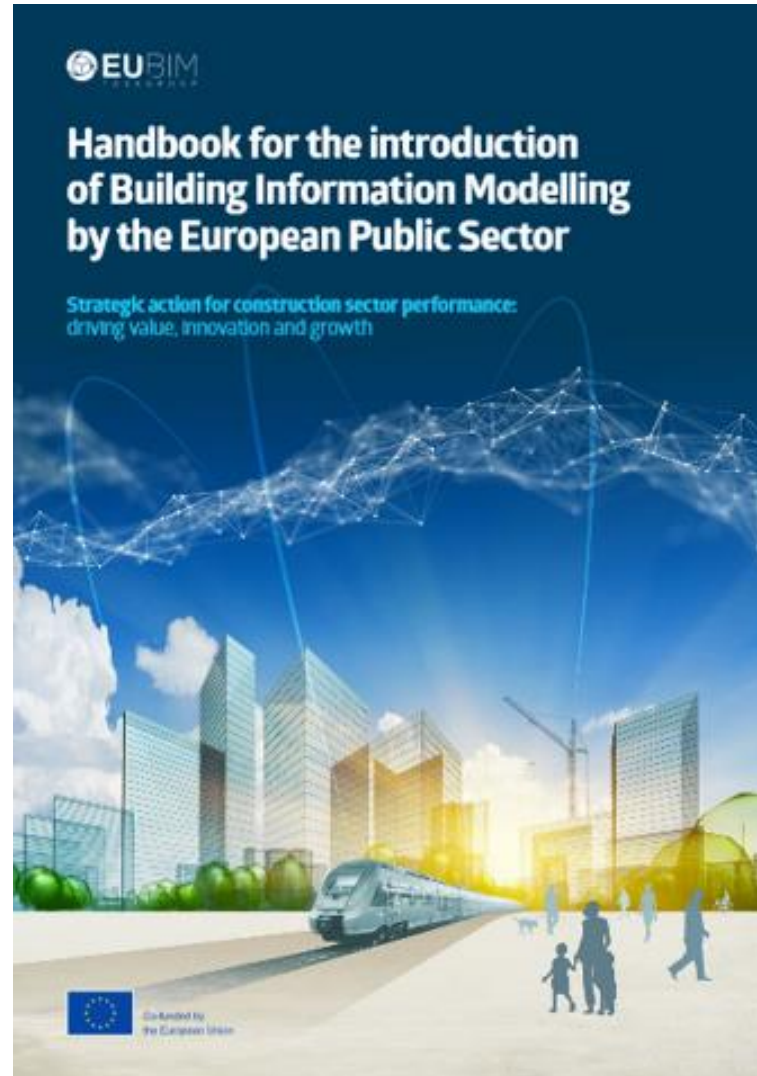
buildingSMART International (bSI)

- The HOME of open BIM
- bSI develops BIM standards: IFC, BCF...
- Working groups (roads, railways, buildings, products...)
- bSI Professional certification

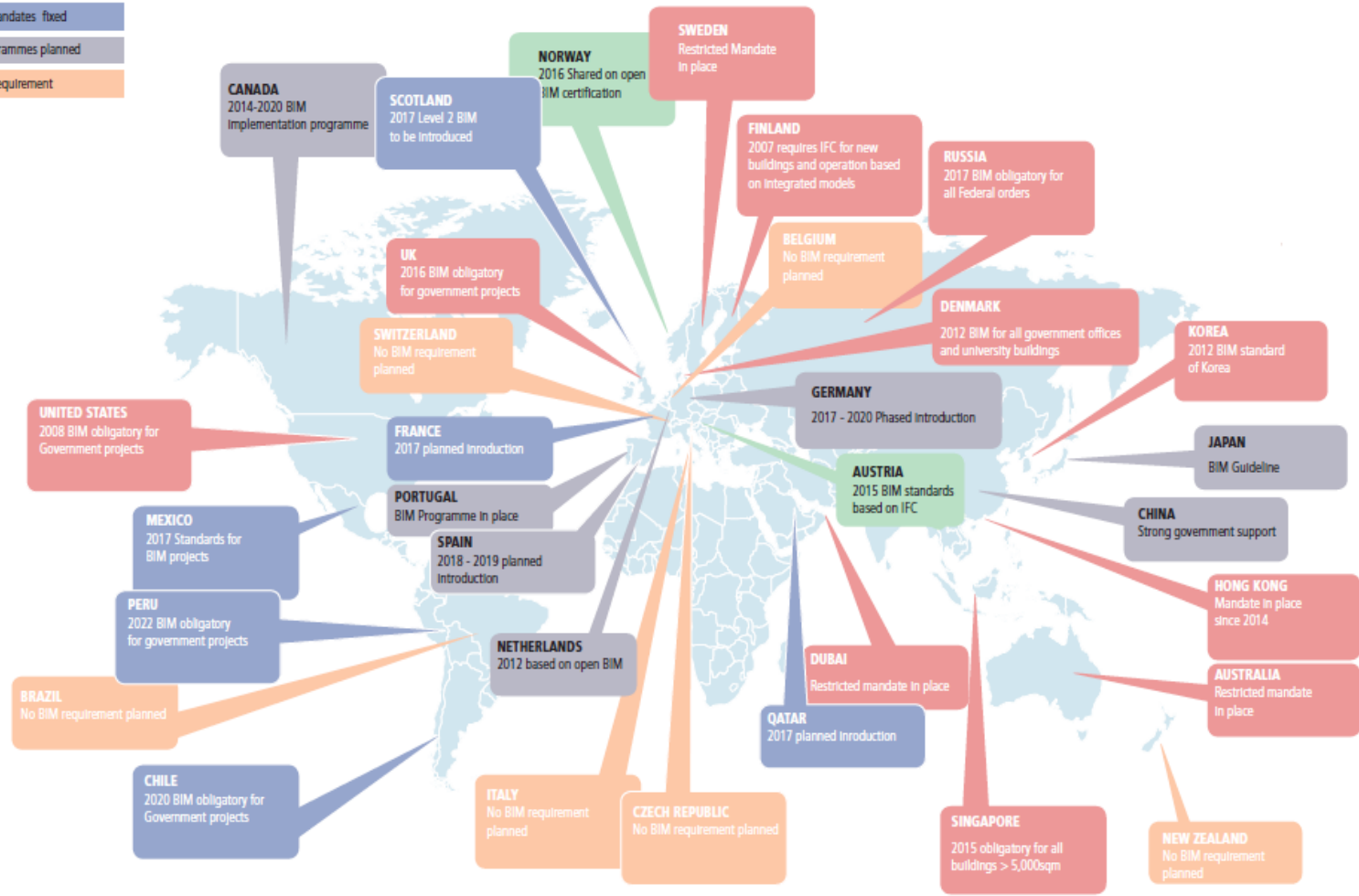


BIM in EU

- EU BIM Task Group
- EU BIM Forum (bSI Chapters)



- Open BIM Standards & Mandate
- Mandates In place
- Future Mandates fixed
- BIM Programmes planned
- No BIM requirement



Great Britain



Digital Built Britain

 Cabinet Office

Government Construction Strategy

May 2011

CONTEXT

The UK's BIM Strategy was issued as part of the UK Government's Construction Strategy 2011. The strategy set a mandate for the use of "collaborative BIM" on all centrally procured built assets across all government departments by 2016. The UK defined "collaborative BIM" as BIM Level 2. The levels indicate the progressive digital maturity of the market.

This mandate was later supported across parliamentary terms by the Construction 2025 policy and the Construction Strategy 2016–2020.

WHY WAS IT DONE AS DESCRIBED?

Strategic fit with existing economic and environmental drivers

With increasing demands on Government investment in a period of reduced tax receipts, the UK Government BIM Level 2 programme supports the achievement of the following targets set in the Construction 2025 policy:

- 33% cost reduction in the initial costs of construction and whole life cost of built assets
- 50% reduction in the overall time from inception to completion for new build and refurbished assets
- 50% reduction in greenhouse emissions in the built environment
- 50% reduction in the trade gap for construction products and materials

Germany



Bundesministerium
für Verkehr und
digitale Infrastruktur



CONTEXT

Awareness is growing across the industry that a step change is required in both pace and behaviour, if Germany wants to avoid falling even further behind other nations in Europe and international markets. Recent spectacular major project failures, such as Berlin Airport or Stuttgart's central train station, have fuelled that debate and triggered strategic action.

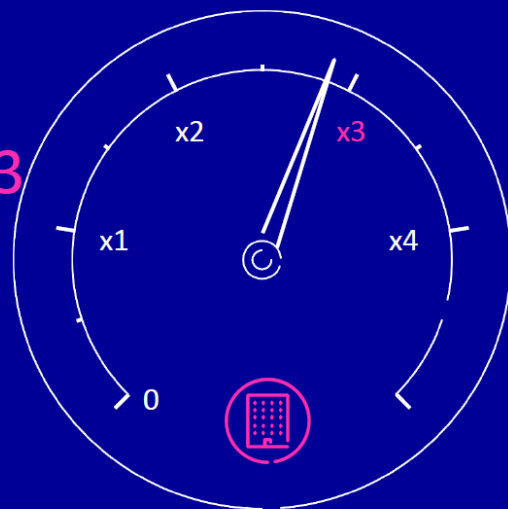
Strategy

In December 2015, the Federal Ministry of Transport and Digital Infrastructure (BMVI) launched its strategic Road Map for BIM for the transport infrastructure sector in Germany. This internationally aligned plan, a joint project of government and industry was largely developed by an industry-led initiative "planen-bauen 4.0" in 2015. It has been designed to facilitate the target that BIM is to be applied on all new public projects procured in Germany from the end of 2020 onwards. A phased mobilization period prior to 2020 is intended to provide a progressive roadmap for the development of capability and capacity in the market.

Estonia

objective for
construction:

increase productivity x3



- + Government aims to increase construction sector productivity x3 by 2030
- + Current productivity is below EU average

government
initiative

Development of BIM and digital construction infrastructure is a **high level priority for Estonian government**

Projects started by Ministry of Economic Affairs and Communications in 2018:

- + E-construction platform vision and *roadmap*
- + Construction classification system
- + Analysis and re-design of Building Registry
- + 3D visualisation module for the digital twin
- + E-construction portal/website
- + ...



Slovenia

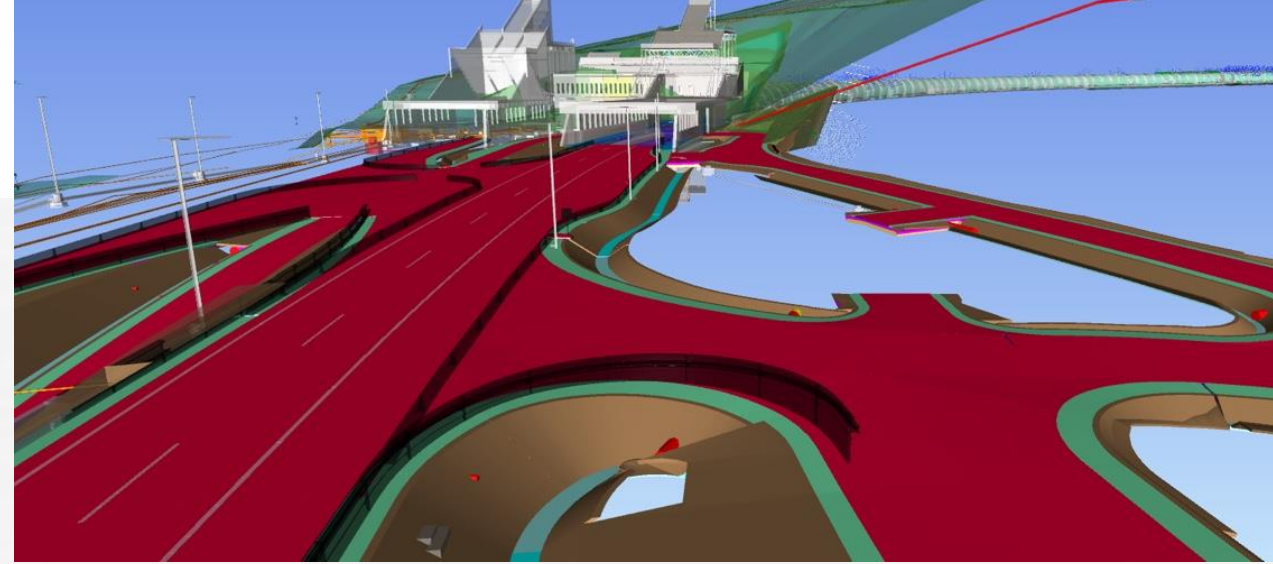
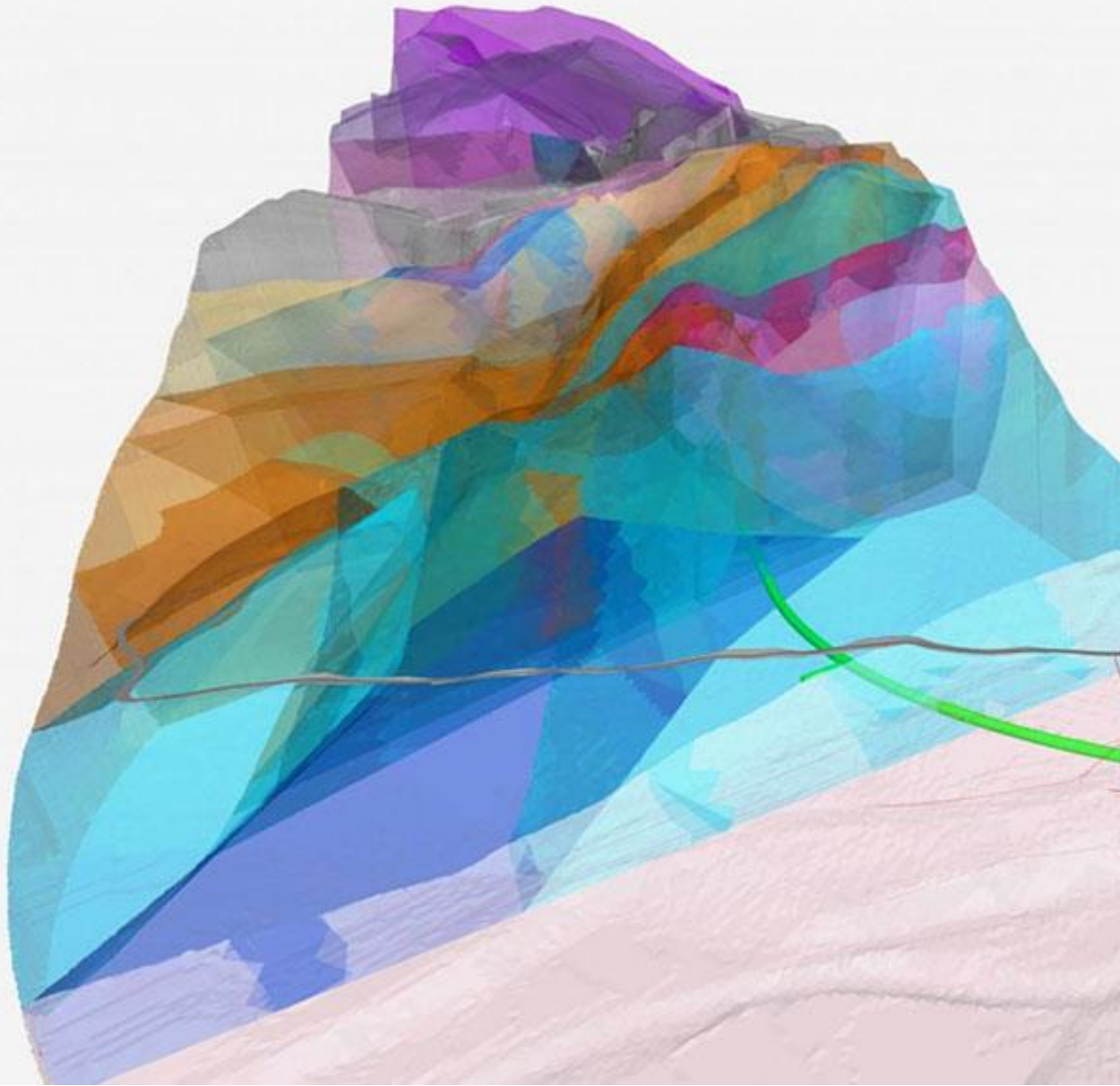
- Member of EU BIM Task Group
- siBIM association
- buildingSMART Chapter Slovenia
- Slovene BIM Forum
- New building act with BIM mandate (from 1.1.2025)



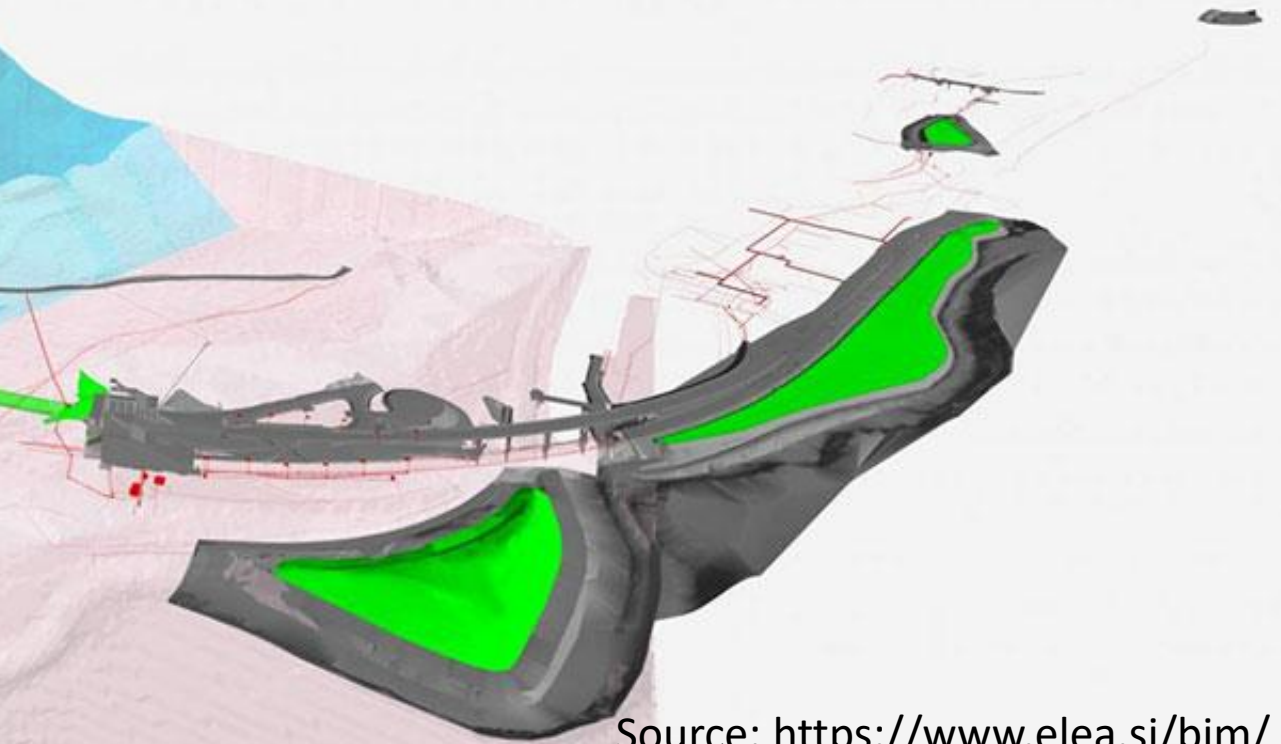
Slovenia - local market framework



Karavanke tunnel, 2nd tube

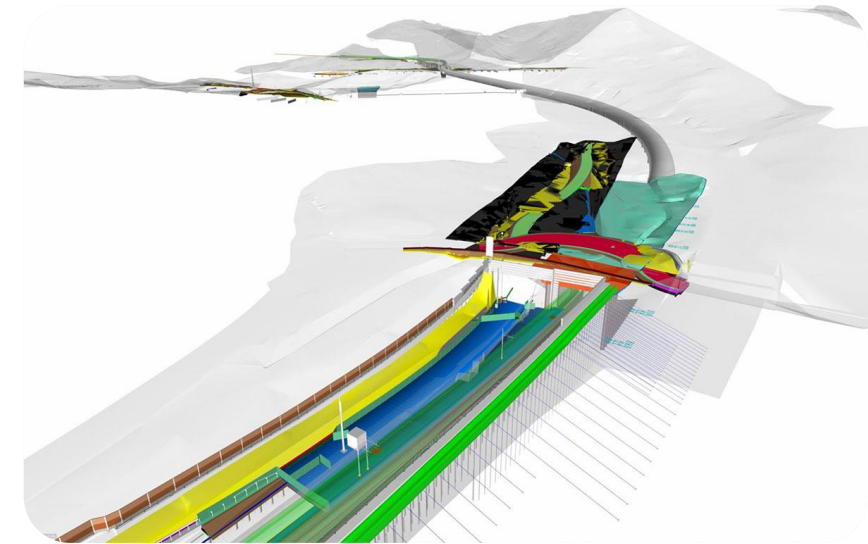


Source: <https://www.lineal.si>



Source: <https://www.elea.si/bim/>

Rail track Maribor - Šentilj

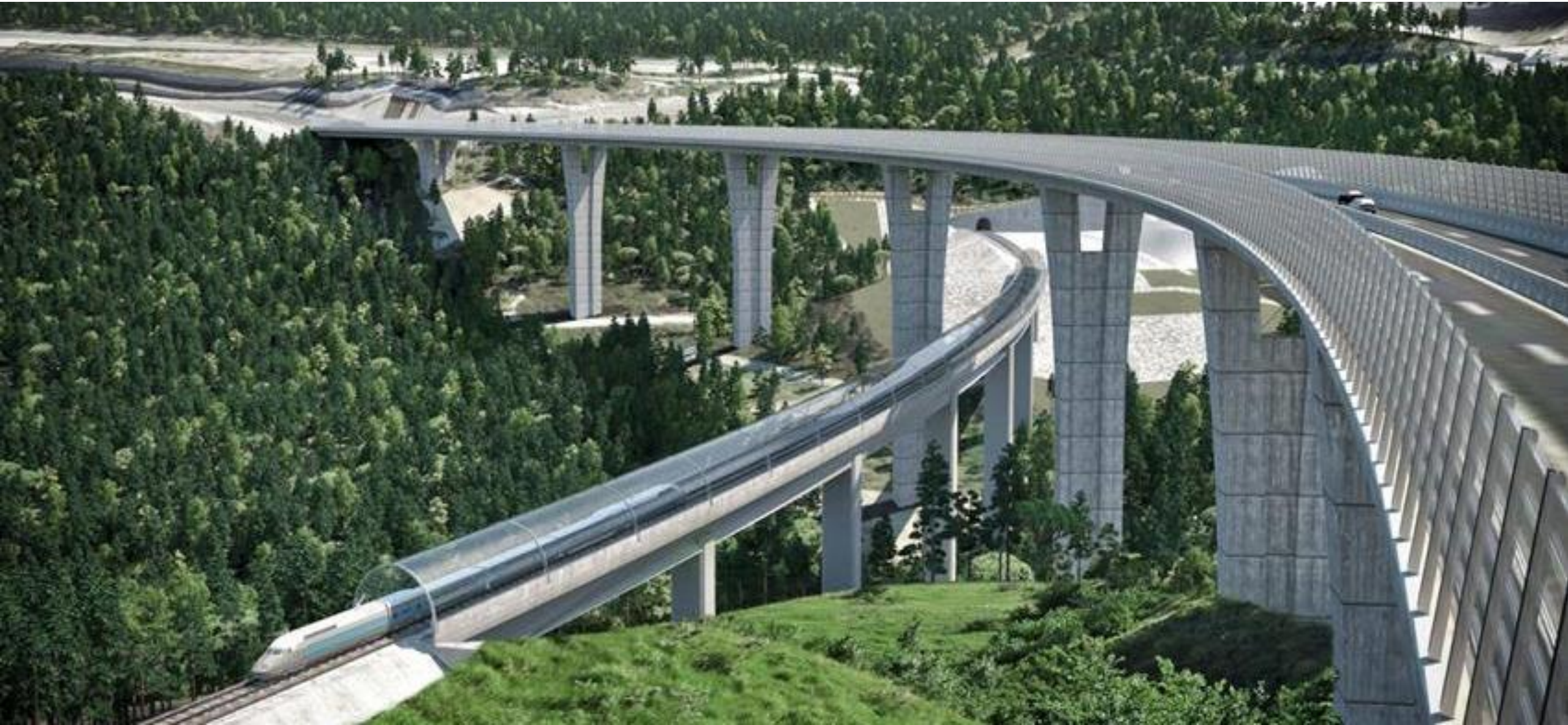


Source: <https://www.lineal.si/>

Crossing Zidani most – Celje (Marija Gradec)



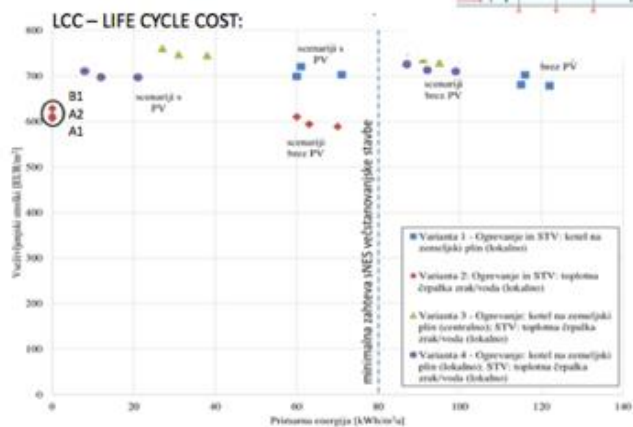
New rail section Divača – Koper (27 km)



Ljubljana, Dolgi most – Interchange Reconstruction



Housing Fund of Republic of Slovenia



ZERO ENERGY USE _ PASSIVE HOUSE CONCEPT _ E-MOBILITY _ BIM MODELNG

Projects required in IFC format

- Swiss railways - SBB
- French Railways - SNCF
- Deutsche Bahn - DB
- Swedish road authorities
- AASHTO
- ...



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Thank you for your attention!

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