

BIM for Railways: Enhancing Design Efficiency, Sustainability and Decision Quality at Rail Baltica Project

idom



RAILTECH
EUROPE '24



Infrastructure BIM Manager
BIM Manager at Estonian sections
Sustainability Lead in Railway Systems

Working at IDOM for 5 years.
Civil engineer looking to bring BIM and sustainability goals together. Always in the look for implementing new technologies in infrastructures.



Infrastructure BIM Manager
BIM Manager at Lithuanian sections

Working at IDOM for 3 years.
Civil engineer passionate about finding the right tools and defining optimized workflows to simplify design processes

ABOUT IDOM

We are an **association of independent professionals** working in the fields of Consulting, Engineering and Architecture, sharing common objectives and work practices, at the service of our clients.

65
years

125
countries

4,000
professionals

850
partners

#47 
INTERNATIONAL
DESIGN FIRMS

#1 
SPANISH
DESIGN FIRM

#94 
GLOBAL
DESIGN FIRMS

Our Soul



THE CLIENT

The centre of our activity. Assuming the needs and difficulties of our clients as our own.



PEOPLE

We believe in the power of human relationships as a motivating force to overcome difficulties

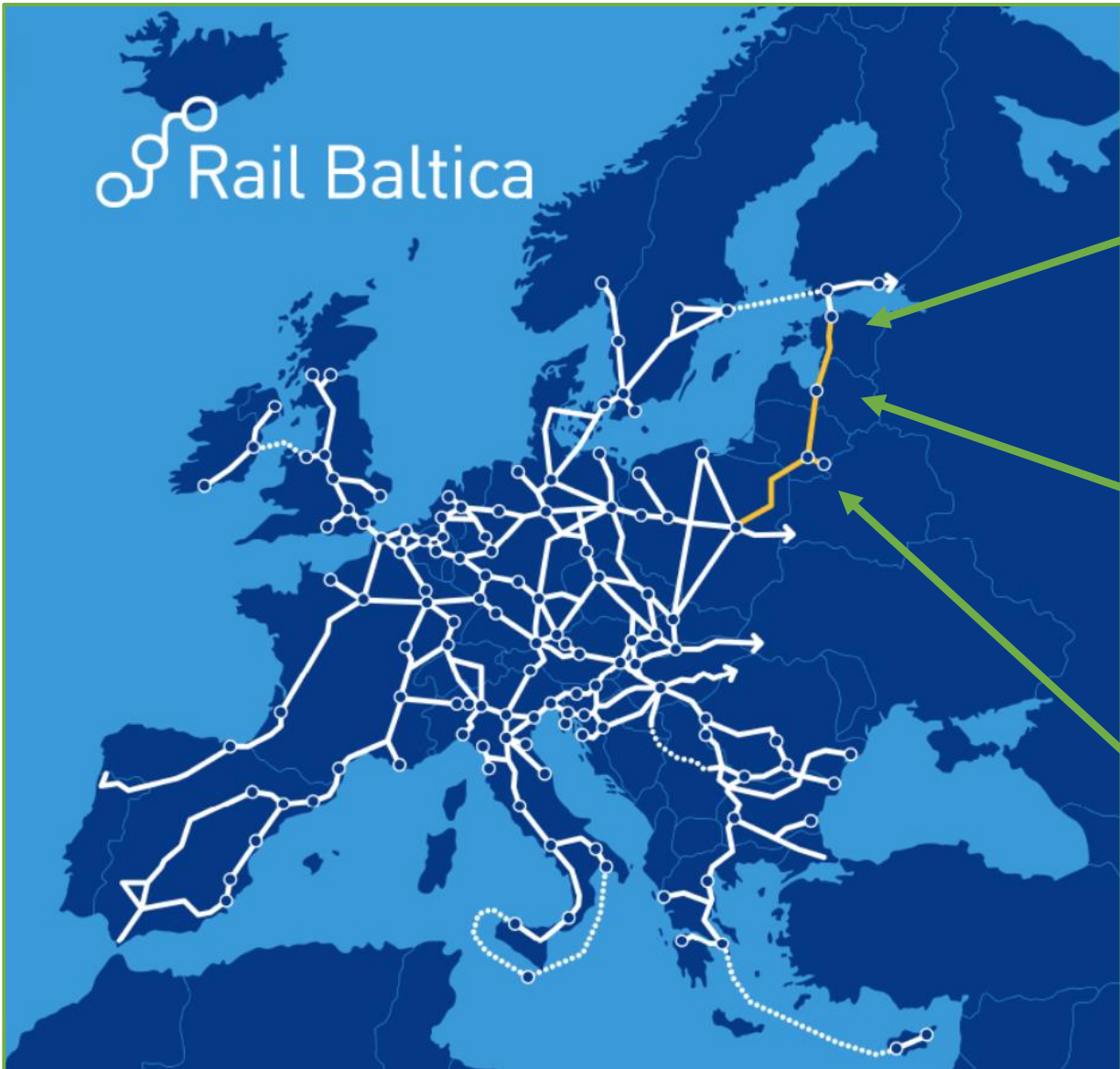


PROFESSIONAL DEVELOPMENT

Our team seeks excellence, taking on challenges with enthusiasm

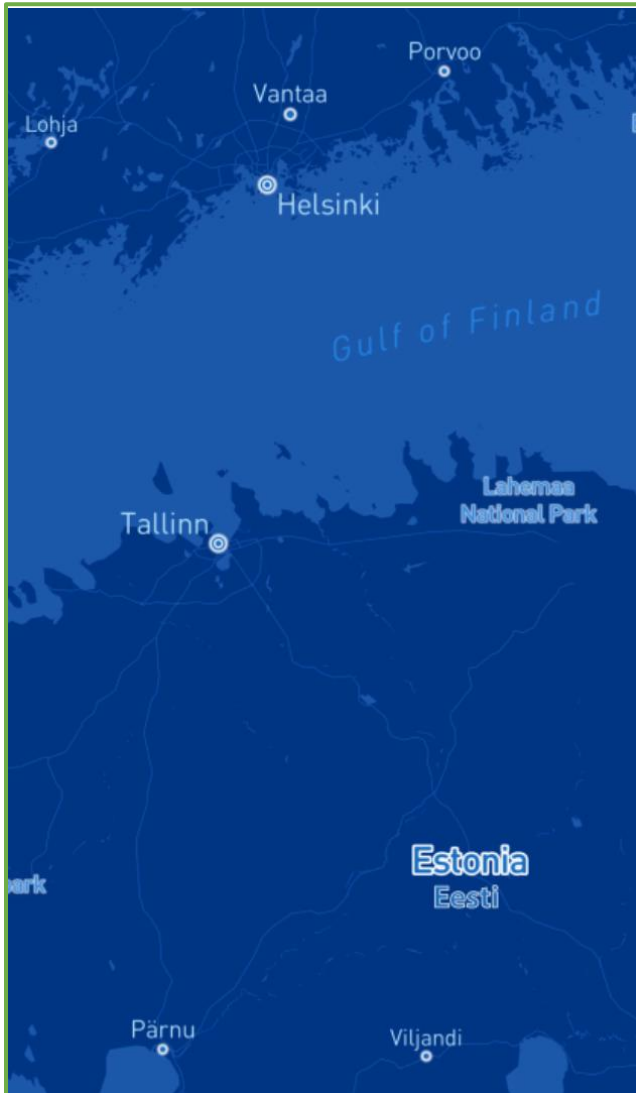


CLICK OR SCAN THE QR CODE
TO SEE THE CORPORATE VIDEO



**Same BIM
INFRASTRUCTURES
REQUIREMENTS in
contracts**





870 km
Greenfield
Railway Line

389 km designed by IDOM

44 Railway Viaducts

50 Road Bridges

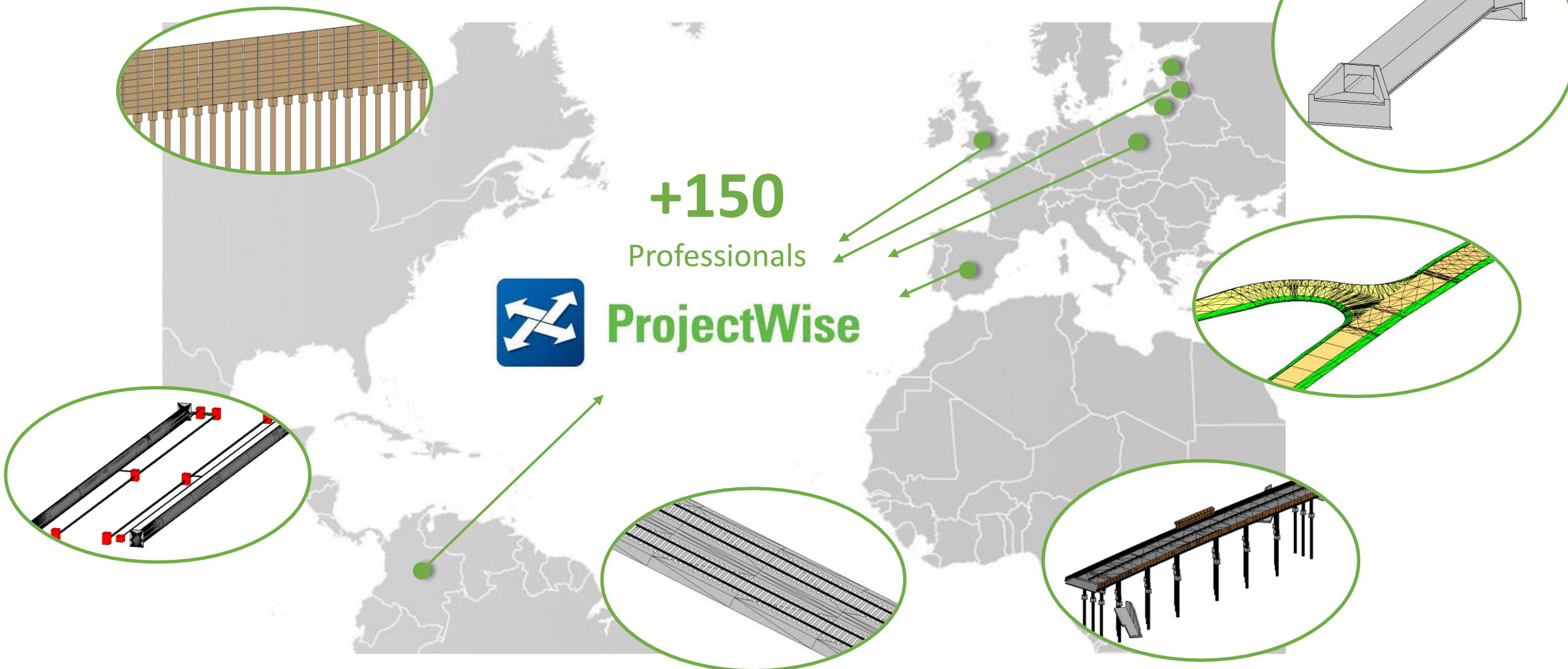
17 Ecoducts

**Energy Subsystem
for entire line**



1.7 km
Longest railway
bridge in the
Baltic States

IDOM - Rail Baltica Team



+150

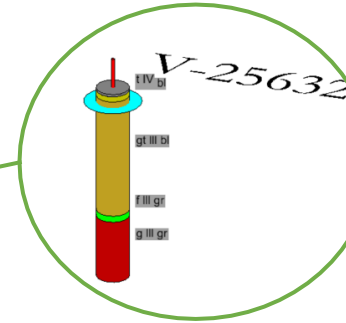
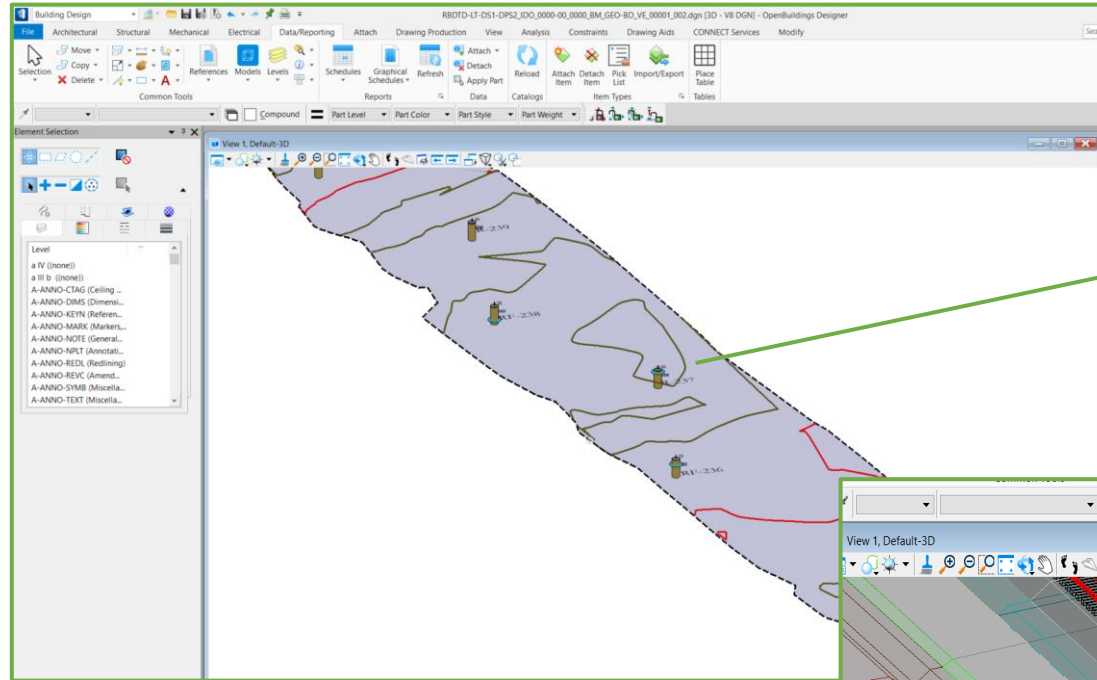
Professionals



ProjectWise

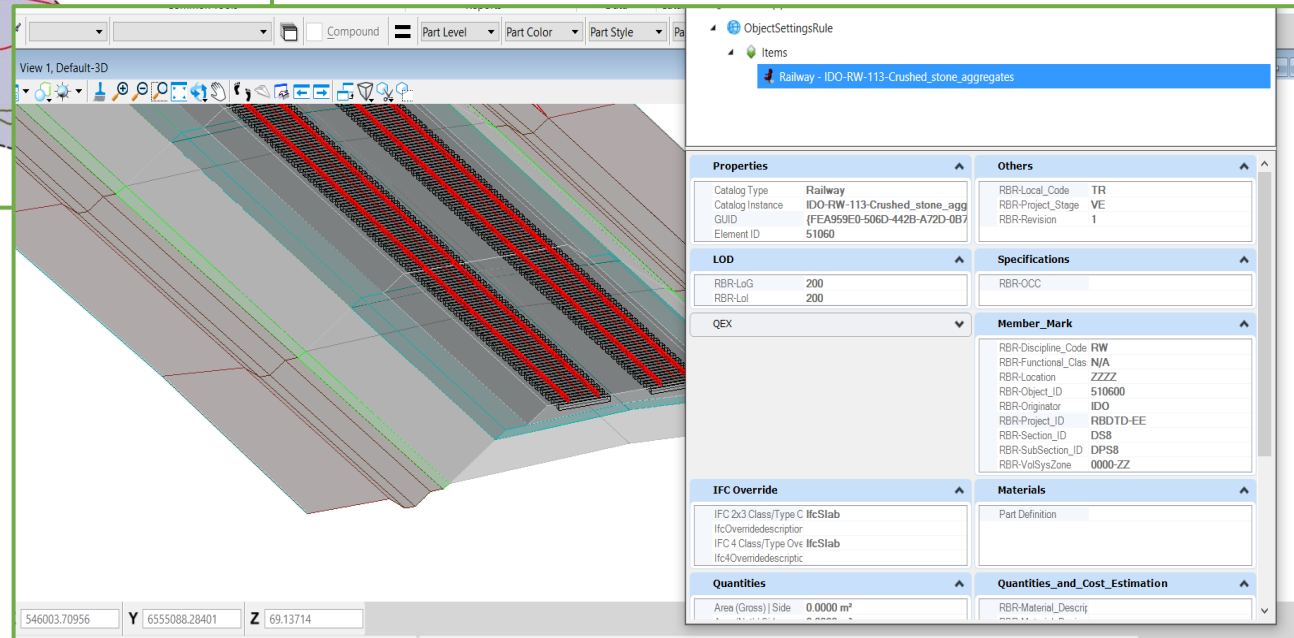


OpenBuildings™
CONNECT Edition



Specifications	
RBR-OCC	100
Others	
RBR-Local_Co	BD
RBR-Project_S	VE
RBR-Revision	002
Member_Mark	
RBR-Discipline	GEO
RBR-Functions	N/A
RBR-Location	0000
RBR-Object_ID	7932500
RBR-Originator	IDO
RBR-Project_I	RBDDT-LT
RBR-Section_I	DS1
RBR-SubSecti	DPS2
RBR-VolSysZo	0000-00

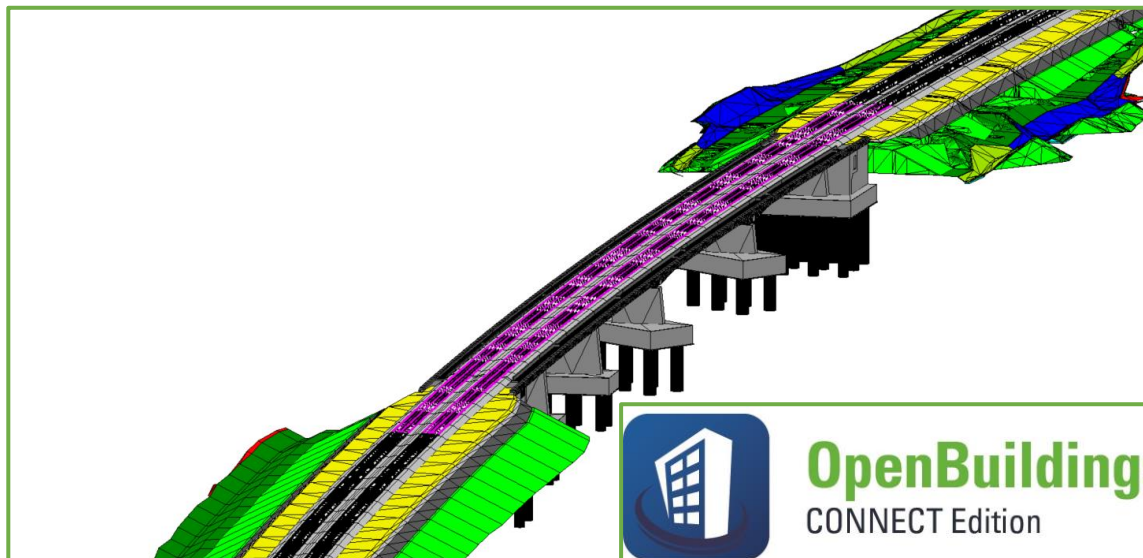
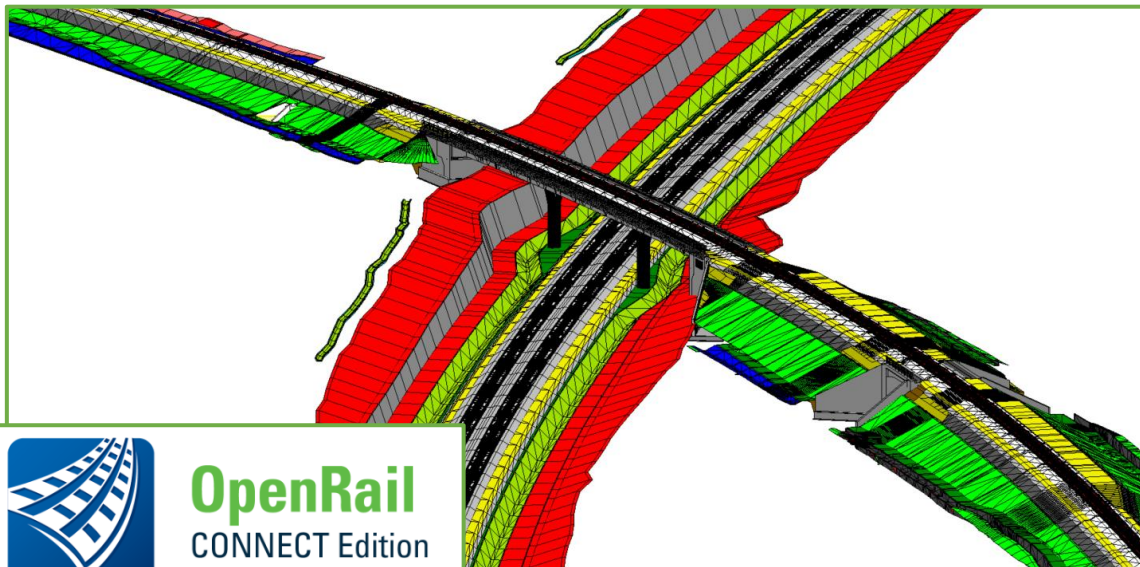
Lithology	
Borehole_name	V-25632
Bottom	25
Date_type	Depth-Bottom
Depth	17.0000
Description	Sandy Silty CLAY stiff
Identifier	g III gr
Point_ID	V-25632
Stratigraphy	Tilt of plain



Properties	
Catalog Type	Railway
Catalog Instance	IDO-RW-113-Crushed_stone_agg
GLUID	(FEA959E0-506D-442B-A72D-0B7)
Element ID	51060
LOD	
RBR-LoG	200
RBR-Lol	200
Specifications	
RBR-OCC	
Member_Mark	
RBR-Discipline_Code	RW
RBR-Functionl_Clas	N/A
RBR-Location	ZZZZ
RBR-Object_ID	510600
RBR-Originator	IDO
RBR-Project_ID	RBDDT-EE
RBR-Section_ID	DS8
RBR-SubSection_ID	DPS8
RBR-VolSysZone	0000-ZZ
Materials	
Part Definition	
Quantities	
Area (Gross) Side	0.0000 m²
Quantities_and_Cost_Estimation	
RBR-Material_Descr	



OpenRail
CONNECT Edition

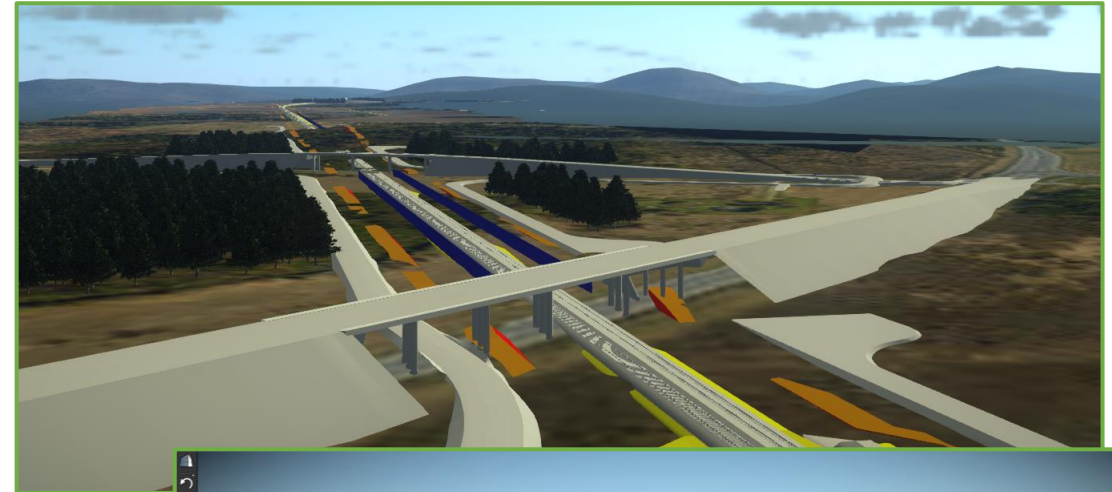
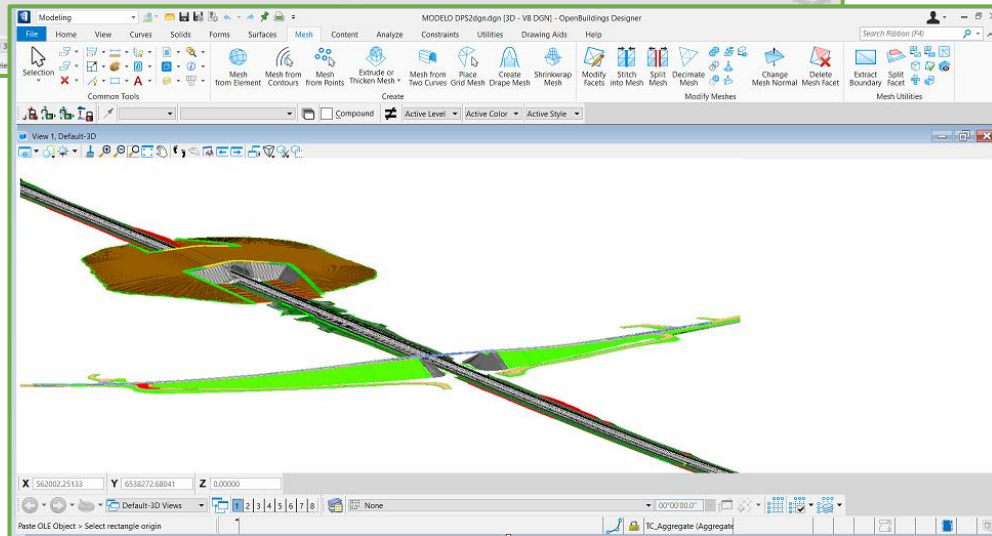
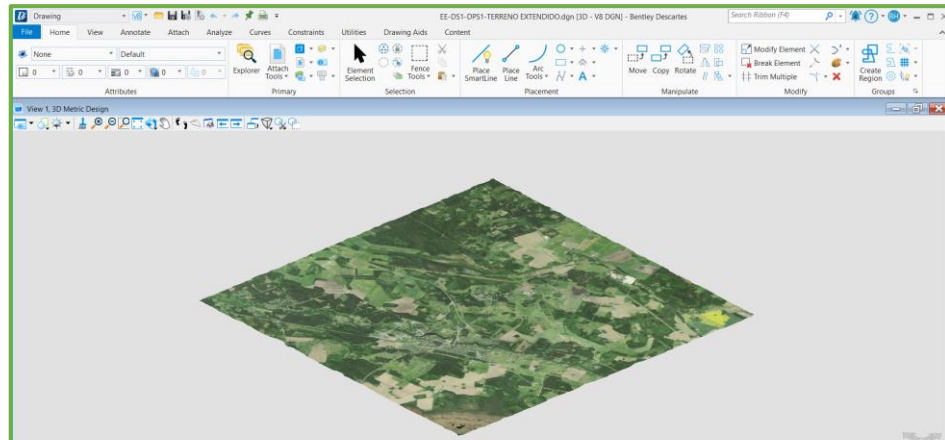


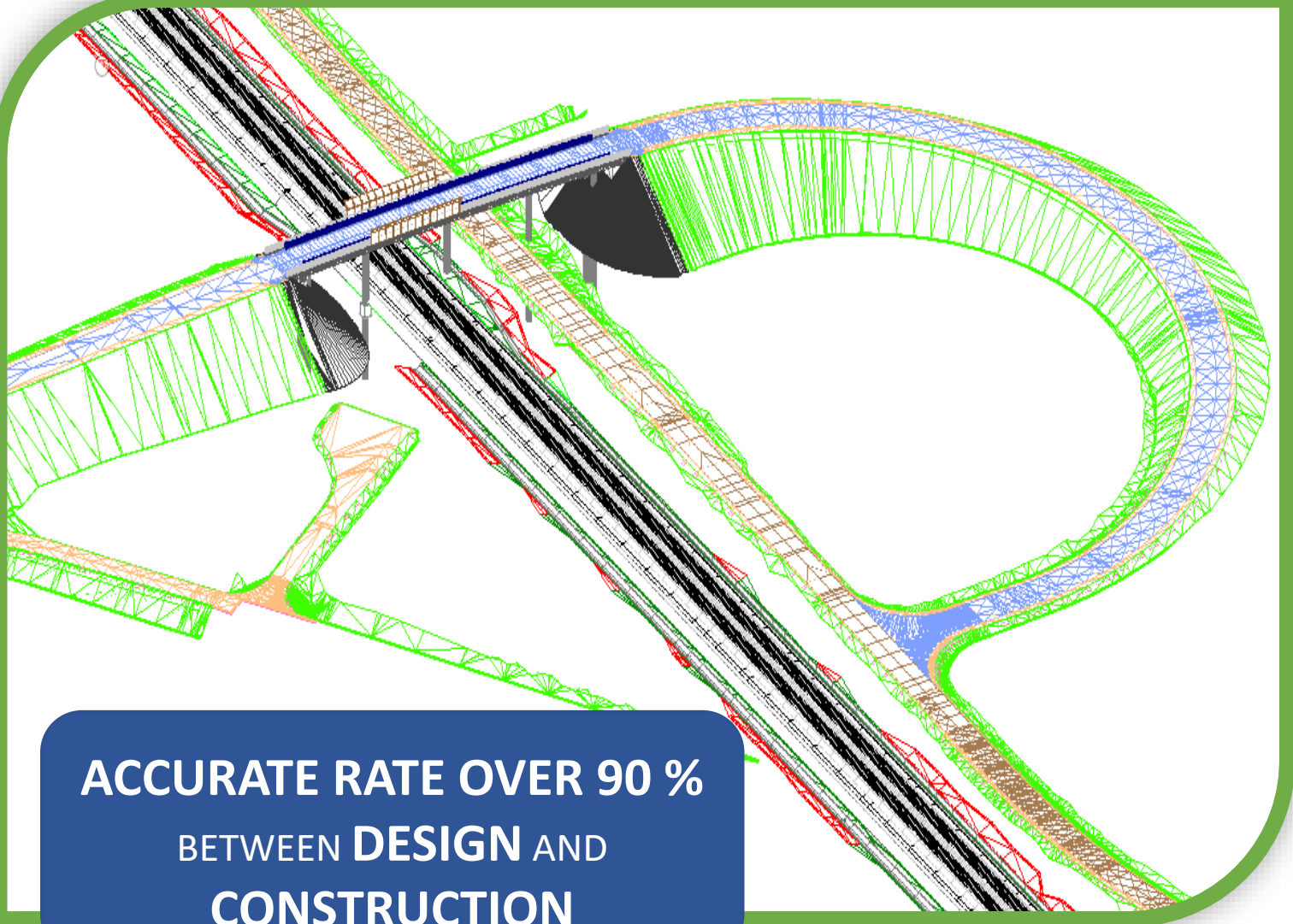


Bentley Descartes
CONNECT Edition

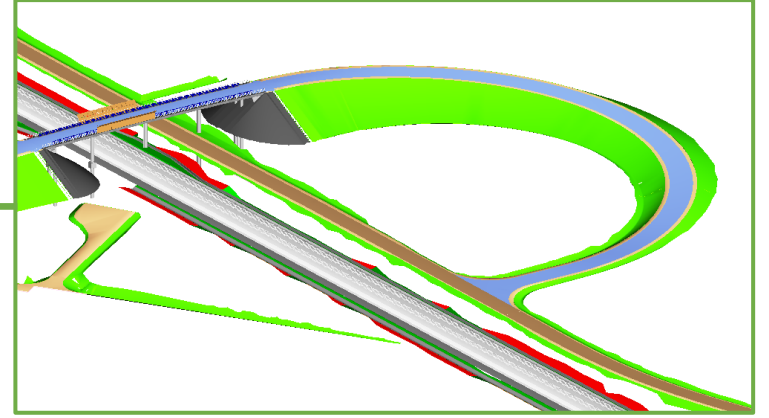


LumenRT
CONNECT Edition





**ACCURATE RATE OVER 90 %
BETWEEN DESIGN AND
CONSTRUCTION**





CLIMATE CHANGE MITIGATION

- Reduction in 18.3% in air pollution
- Reduction in 4.5% noise reduction

Special passages for wildlife will be built to **MINIMISE THE IMPACT ON THE NATURAL HABITATS** and migratory routes

New participants with **DIFFERENT VALUE PERPESTIVES** among affected communities are.



SUSTAINABLE JOB OPPORTUNITIES

European Commission to include Baltic Countries within **NEXT GENERATION EU FUNDS**



REDUCING TIME lapses between project stages

and making **TIGHTER COST ESTIMATIONS**

Rail Baltica's measurable **SOCIOECONOMIC BENEFITS** will tally up to **16.2 BILLION EUROS** compared to 5.8 billion euros for its cost.

HIGH TRAIN SPEED

- Tallin-Riga in **1 hour and 40 minutes** (4 hours by car)
- Tallin-Vilnius in **3 hours and 38 minutes** (7 hours and 40 minutes by car)

HIGH TRAIN FREQUENCY

- Tallin-Wasaw **4 times a day**
- Vilnius- Warsaw **10 times a day**
- Night trains to Berlin

HIGH EFFICIENCY

- Saving **5,3 million passenger hours** every year
- Saving **2.9 billion €** in transport freights transport
- Saving **7.1 billion €** in climate change costs

HIGH CAPABILITY

- **5 million passengers and 16 tons of cargo** a year

*Based on Rail Baltica 2017 Cost-Benefit Analysis (CBA)

