# BIM IN THE RAIL BALTICA PROJECT: PROMOTED PROGRESS IN THE MARKET AND THE CHALLENGES

*Jovita Starynina*

*RB RAIL AS*

# BIM in the Rail Baltica project: promoted progress in the market and the challenges



**Dr. Jovita Starynina**
BIM Team Leader

- RB Rail AS since 2018 July
- Work experience in design companies
  - BIM + Geodesy team

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SCAN ME

# Rail Baltica project of strategic importance



- Part of the North Sea - Baltic Sea
- Rail Baltica is also part of the European transport corridor Baltic Sea - Black Sea - Aegean Sea



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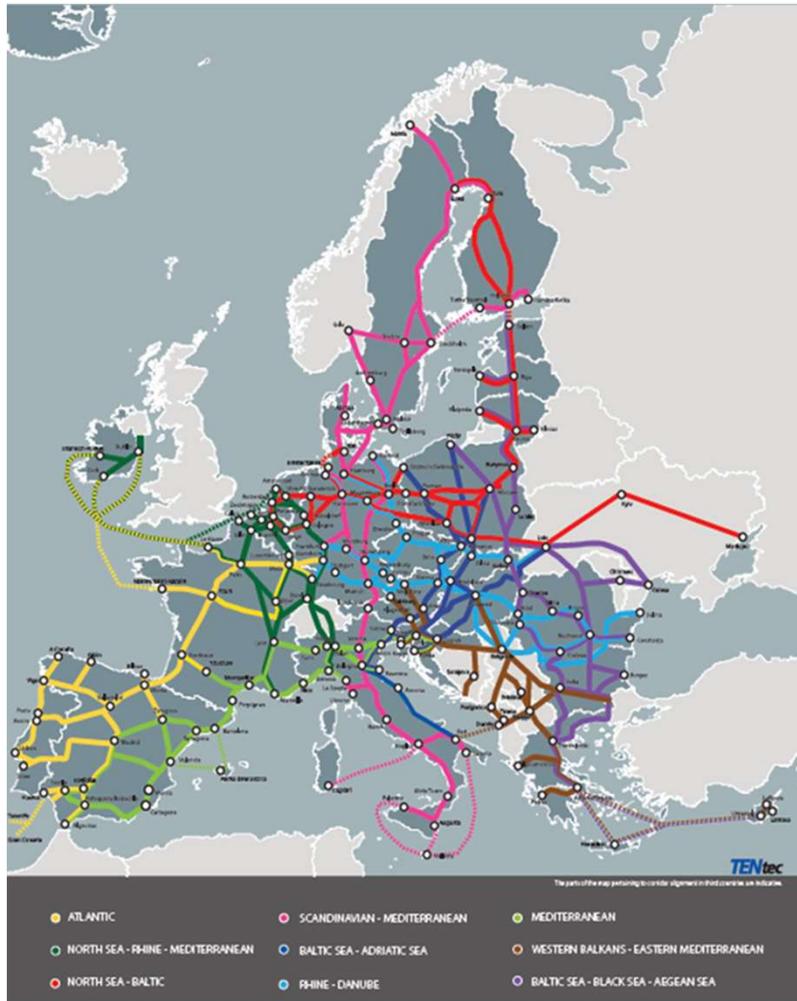
# Rail Baltica is creating the future of transportation
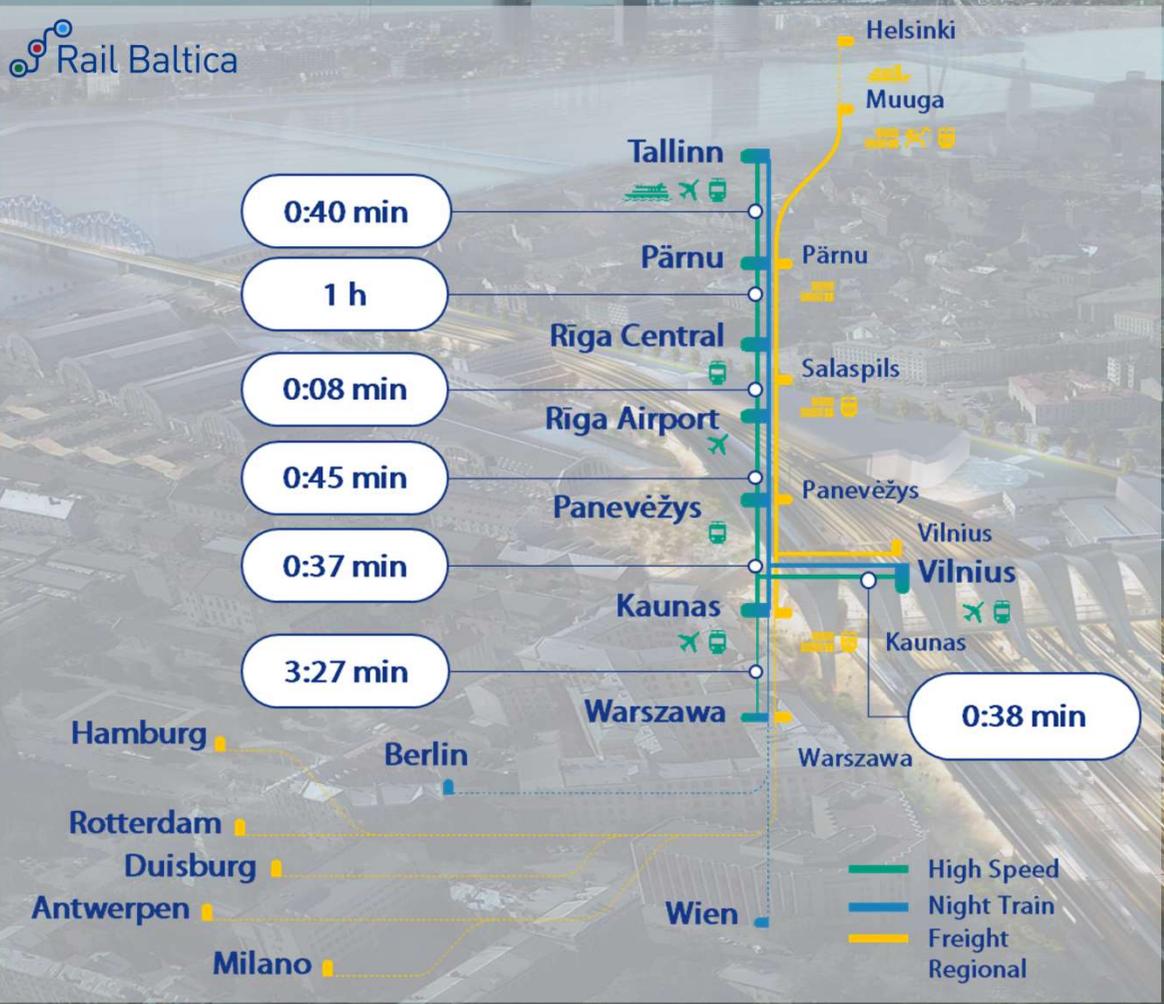


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# BIM and Digital world



**BIM – Building Information Management
or
Better Information (DATA) Management?**

What is common between digital world and BIM:

- Data

- Technologies

- Internet

- Digital security

- Digital transformation

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# Digital Twin



- Scheduling
- 4D
- Tracking the progress

- Classification standards
- Requirements
- Estimates accounting

SPECIFICATIONS

- Maintenance
- Guaranties
- Operations
- Safety

FACILITY MANAGEMENT

-
-
-
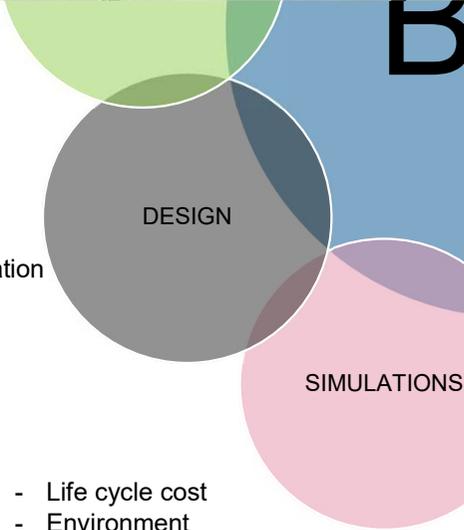
- Drawings, calculations
- Architect, engineer
- BIM models and visualization

DESIGN

SIMULATIONS

- Life cycle cost
- Environment
- Life time predictions

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# Challenges - Requirements



Standards



Experience



Digital solutions



To answer
Questions

- Why we need BIM?
- How to manage and transfer BIM data?
- Who will use it?

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# Challenges - People

## Management

- You do YOUR BIM ... we need to
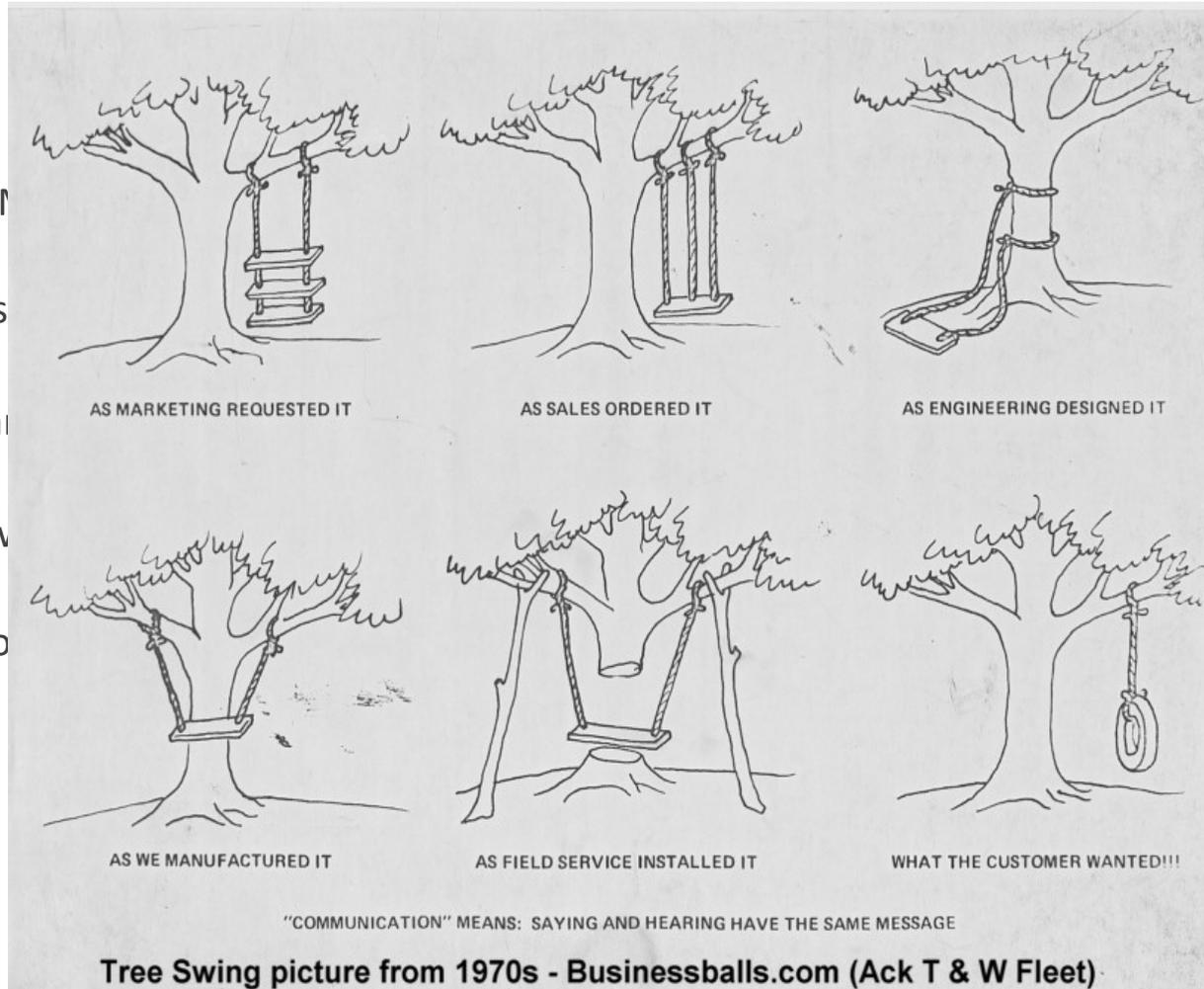
- Your BIM is caus ... design,

- I don't understa ...

- All worked fine ... 't see any

- So what can I do ... erently



AS MARKETING REQUESTED IT   AS SALES ORDERED IT   AS ENGINEERING DESIGNED IT

AS WE MANUFACTURED IT   AS FIELD SERVICE INSTALLED IT   WHAT THE CUSTOMER WANTED!!!

"COMMUNICATION" MEANS: SAYING AND HEARING HAVE THE SAME MESSAGE

**Tree Swing picture from 1970s - Businessballs.com (Ack T & W Fleet)**

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# Challenges – how to make it work in long term?


Procurement


Teaching


Software solutions


Commitment


Changes


Collaboration

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# BIM in Rail Baltica – Preparation stage



**BIM Framework**

Developed BIM Strategy framework

Sent a "BIM message" to the market

**BIM Strategy**

Detailed set of rules, including BIM Manual

Developing training material

Communication with industry's professionals

**Software's**

CDE and supporting technology implementation

GIS integration

AIM and scheduling solution integration

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# BIM in Rail Baltica – Implementation stage

**Design**

**Construction**

**Operation and Maintenance**

Developing and defining workflows

BEP, MIDP, TIDP

Work with designers to check and verify their work – software's, scripts

Collecting and updating asset data

Using BIM models and data in construction

Educating construction sector

Handover of Project BIM data

Utilizing Project BIM data to manage assets

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# BIM implementation



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# BIM implementation - stages

**Value Engineering**
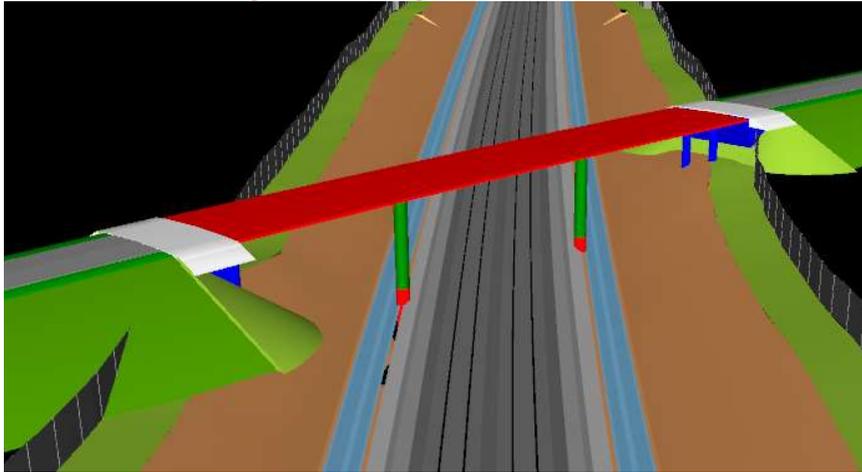


**Master design**



**Value Engineering -data**
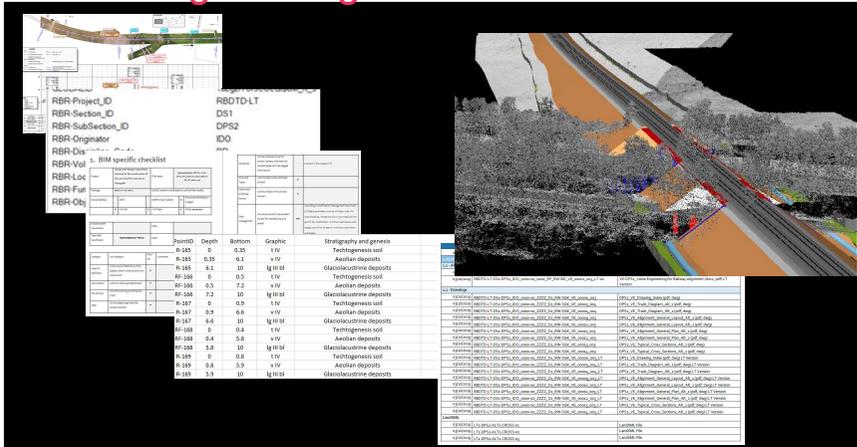


**Master design - data**
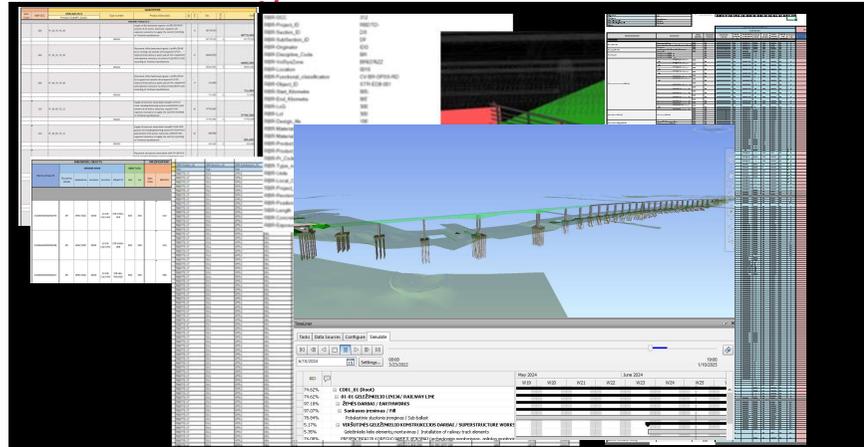


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# BIM implementation - stages

## Detail Technical Design
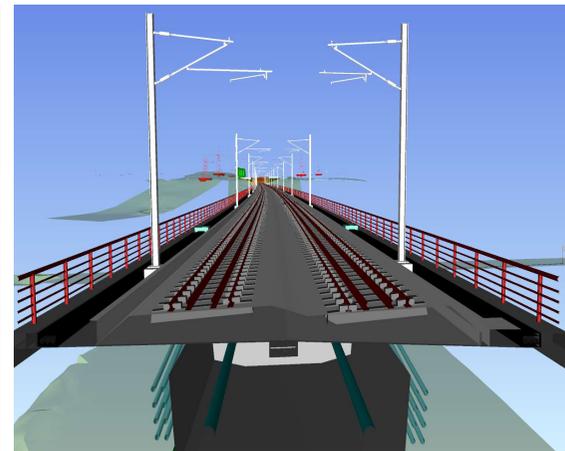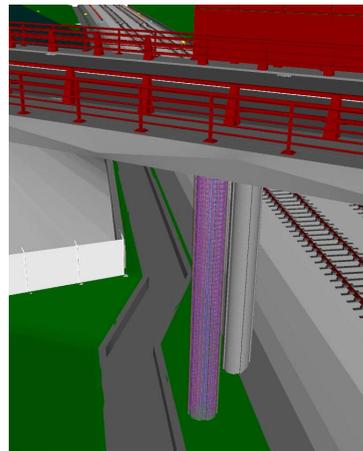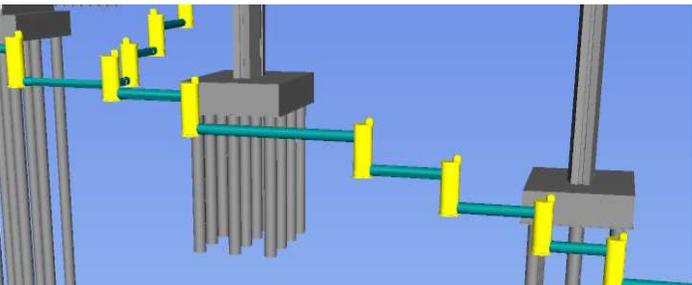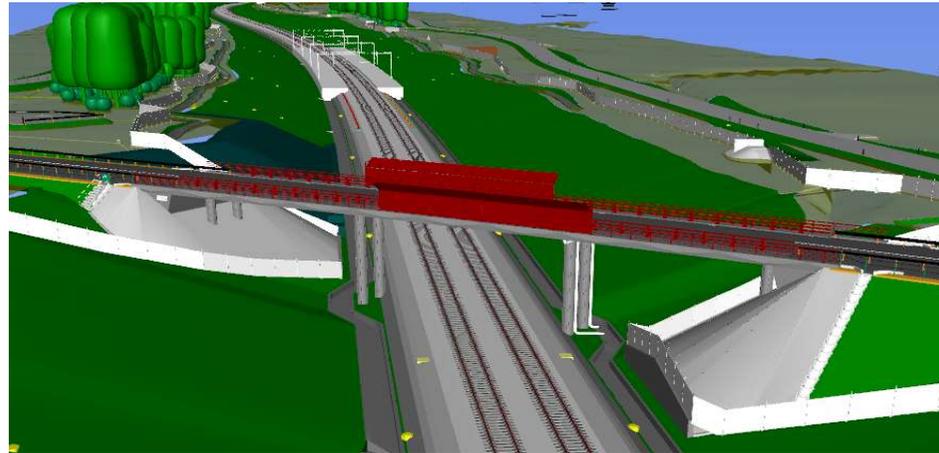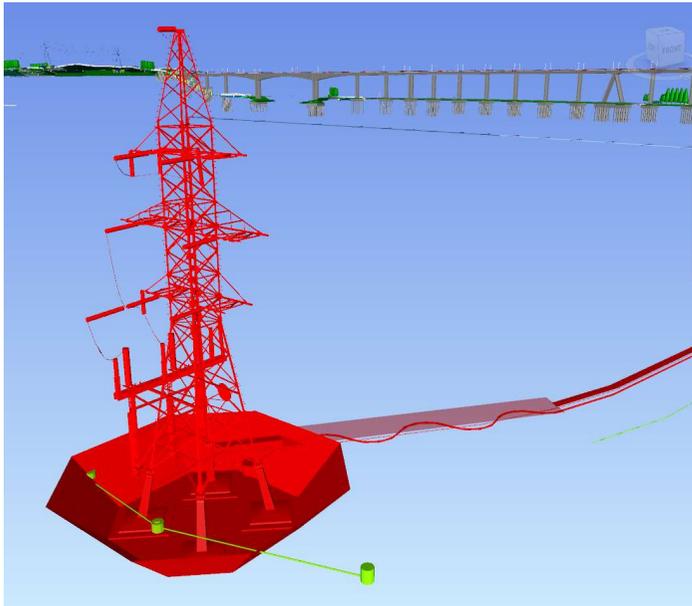


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# BIM implementation - stages

## Construction
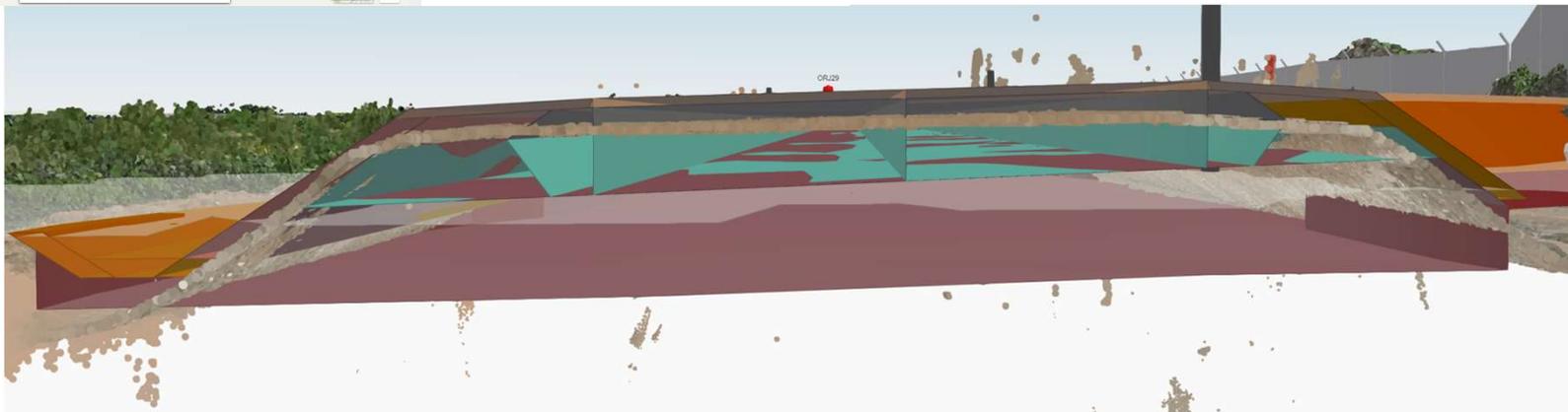


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# BIM data analysis

## Asset management
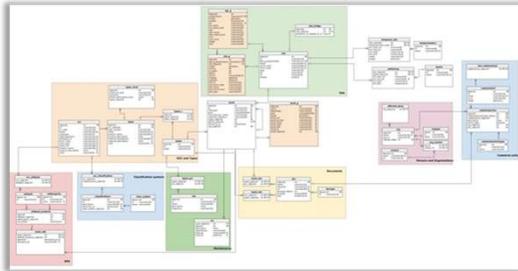


## Apps for phones



## BIM models



## Digital Planning
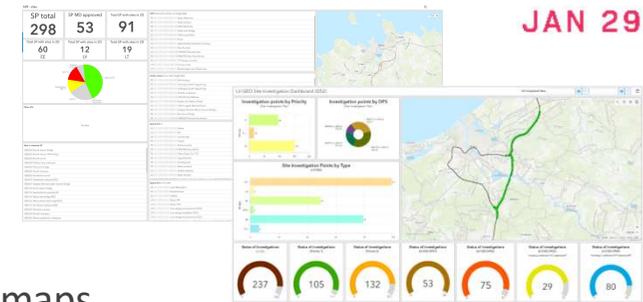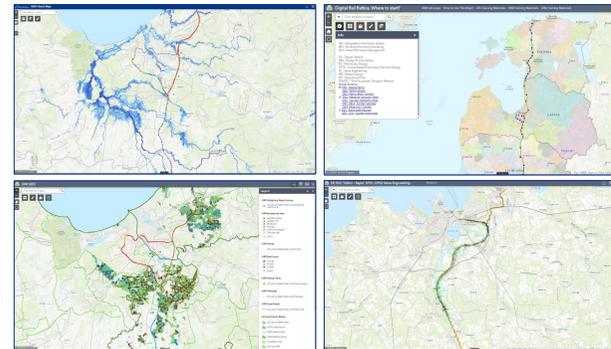


## Public information



## Special maps



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# Conclusions

**Changes**
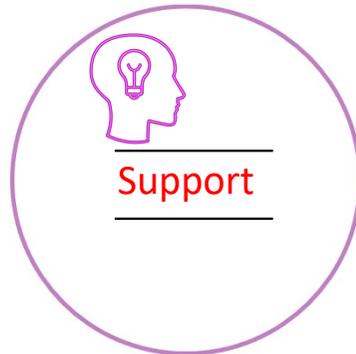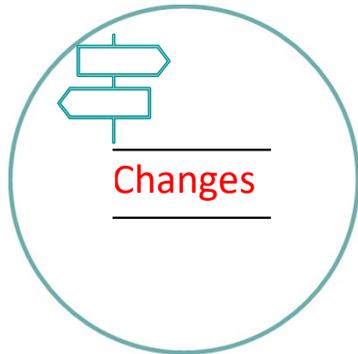
- BIM strategy
- Clear workflow to manage data
- Promote new technologies
- Clear requirements

**Support**

- State legal requirements
- Team and management support
- Commitment from all stakeholders
- Growing together

**Digital Data**

- Long term digital vision
- Classification of data is important
- Digital data security
- Possibilities of digital data is unlimited

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# Thank you



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