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RAIL BALTICA

Creating a Digital Cross-Border Railway

One digital backbone for signalling, traffic management
and the services of tomorrow

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The missing link, built from scratch

Part of the North Sea – Baltic TEN-T core corridor: a new European-standard railway reconnecting Estonia, Latvia and Lithuania with the rest of Europe.

870 km

mainline through three
countries

1435 mm

European gauge, fully
electrified

**249
km/h**

passenger design speed,
120 km/h freight

2034

target for the mainline

THE IDEA

Greenfield means no legacy to migrate.

We design the digital backbone once – for 870 km and three countries – and let services grow on it.

One backbone, five layers

Services & applications

Passenger information, ticketing, maintenance data, third-party services

Traffic management & operations

One traffic management system and control logic for the whole line

Signalling

ERTMS Level 2 with interlocking built on EULYNX interfaces

Radio

FRMCS – railway communications for the 5G era

Physical layer

Fibre, cableways and technical buildings along the entire line

THE DIFFERENCE

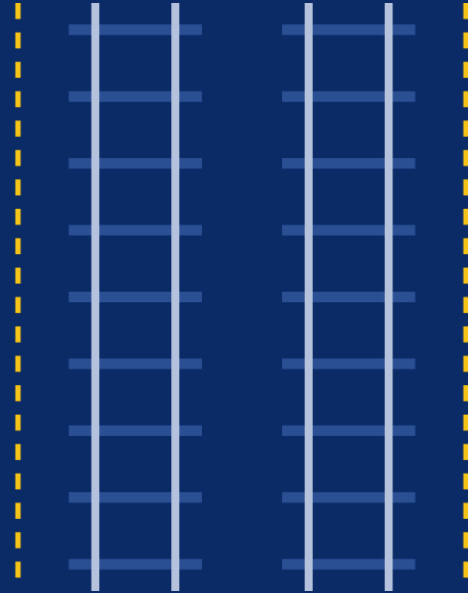
Unified across 870 km

One control-command and signalling solution for Estonia, Latvia and Lithuania – not three national systems stitched together at the borders.

Built in from day one: the cableway

A-side

- 1 Railway systems backbone
- 2 Local railway systems connections
- 3 Cross-border digital infrastructure



B-side

- 1 Railway systems backbone
- 2 Local railway systems connections
- 3 Cross-border digital infrastructure

Two independent routes, three duct groups per side: railway systems and cross-border digital capacity share one protected corridor.

One railway to operate – not three

Estonia, Latvia and Lithuania are preparing the operating rules and systems together, before the first train runs.

Synchronised traffic control

One traffic picture and dispatching logic across the borders

Capacity allocation

A common framework and one network statement

Charging scheme

Harmonised track access charges for all railway undertakings

Safety management

Shared rules and processes from day one

Open, equal access

Non-discriminatory access for operators, customers and third parties

Seamless link to Poland

Cross-border traffic continuing to Warsaw and beyond

What the backbone makes possible

Once the cable, radio and data layers are in place, new services are an upgrade – not a new construction project.

Predictive maintenance

Sensor and diagnostic data feeding a digital twin of the line

Path to automation

ERTMS and FRMCS as the base for ATO and future train control

Passenger experience

Real-time information, connectivity, ticketing and platform services

Freight visibility

End-to-end tracking across borders and into the Muuga multimodal hub

Corridor connectivity

Duct, fibre and mast capacity for mobile and data operators

Shared data

Standard data exchange with operators and logistics partners

What we take from our Nordic neighbours

Digirata, Finland

Open interfaces pay off only if the infrastructure manager controls the specifications and the test environment.

Bane NOR, Norway

One traffic management system and common infrastructure data unlock the full benefit of ERTMS.

Arctic Test Arena

Test in real conditions: cold climate and heavy freight are Baltic realities too.

Cross-border rail ITS

Information borders matter as much as physical ones – data has to cross the border with the train.

THE TAKEAWAY

BUILD THE BACKBONE ONCE. LET SERVICES GROW ON IT.

Let's connect the Nordic and Baltic digital rail ecosystems – standards, testing and data.

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