

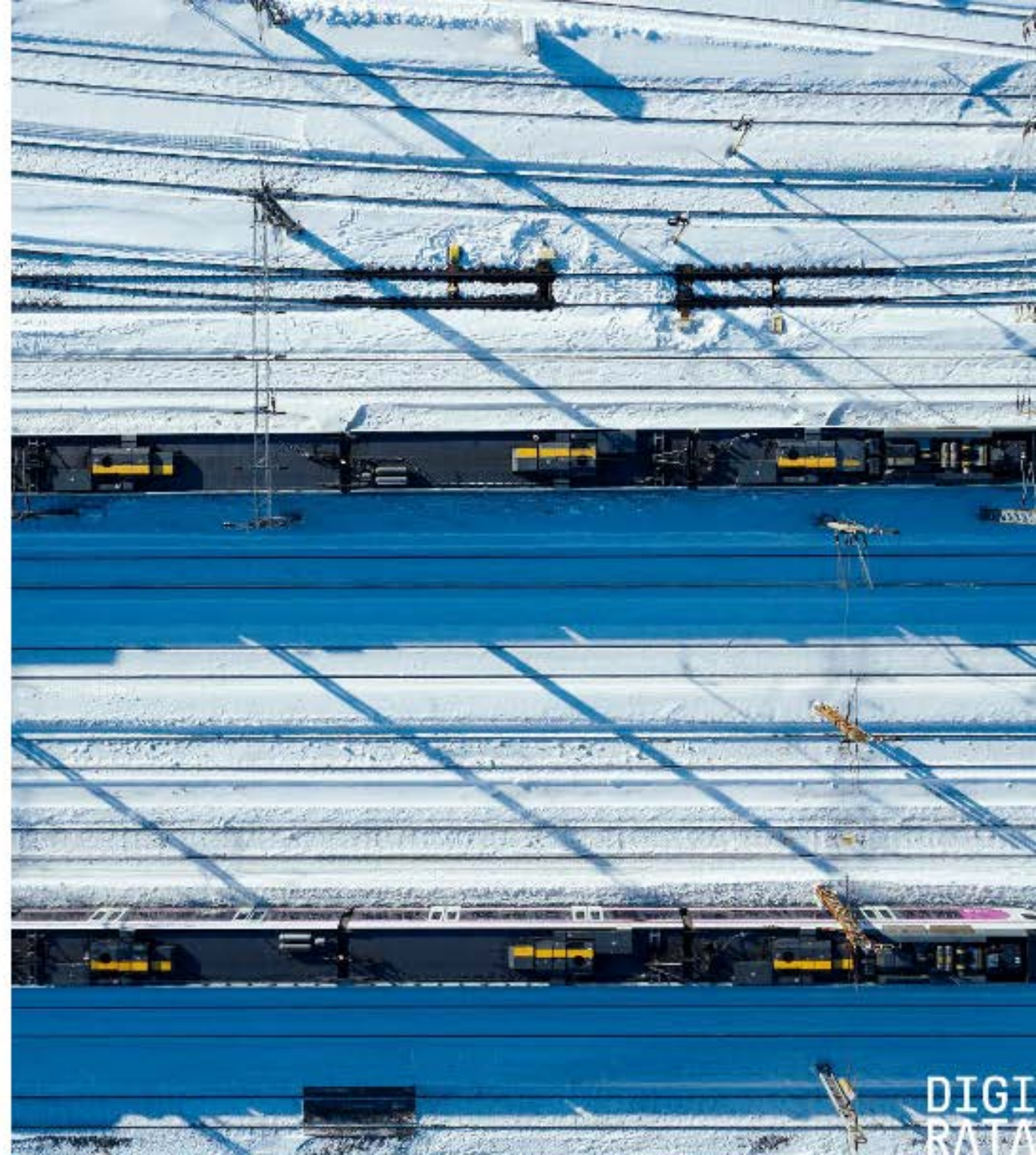


Digirail – Finnish ERTMS program

Raideliikenteen digitalisaatio –ITS Finlandin
syysseminaari

Framework for ERTMS deployment in Finland

- National transport system plan for the next 12 years will be the basis for funding the program called DIGIRAIL.
- The program runs from the beginning with nationwide plan for deployment at once to all track sections.
- Finland is a country of long distances, and the capacity need of rail traffic is predicted to increase significantly.
- Increased railway traffic can support the efforts of Finland and the EU to meet their emission reduction targets.
- The current train operation system will become obsolete in 10–15 years, which requires reducing the capacity of traffic considerably.



Digirail objectives

3 points

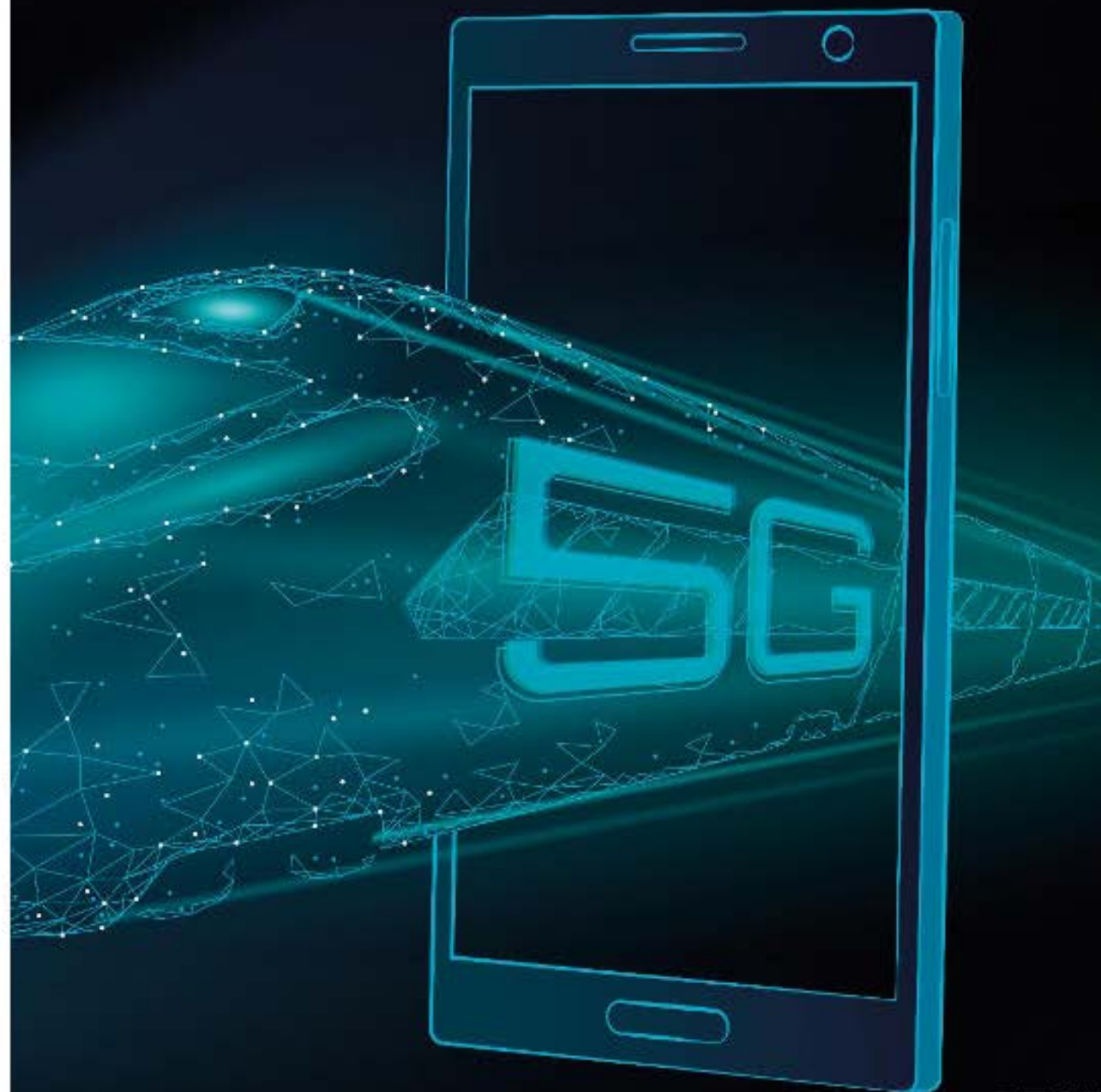
1. Technology (supplier neutrality):

- Hybrid Level 3
- Modularity - EULYNX
- Radio network by MNOs
- ATO GoA2
- Axle counters for TVP
 - L2 functions and L3 backup
- Localisation
 - Odometry + TIMS → L3 functions
- Level crossing system
 - Interface for train speed dependency

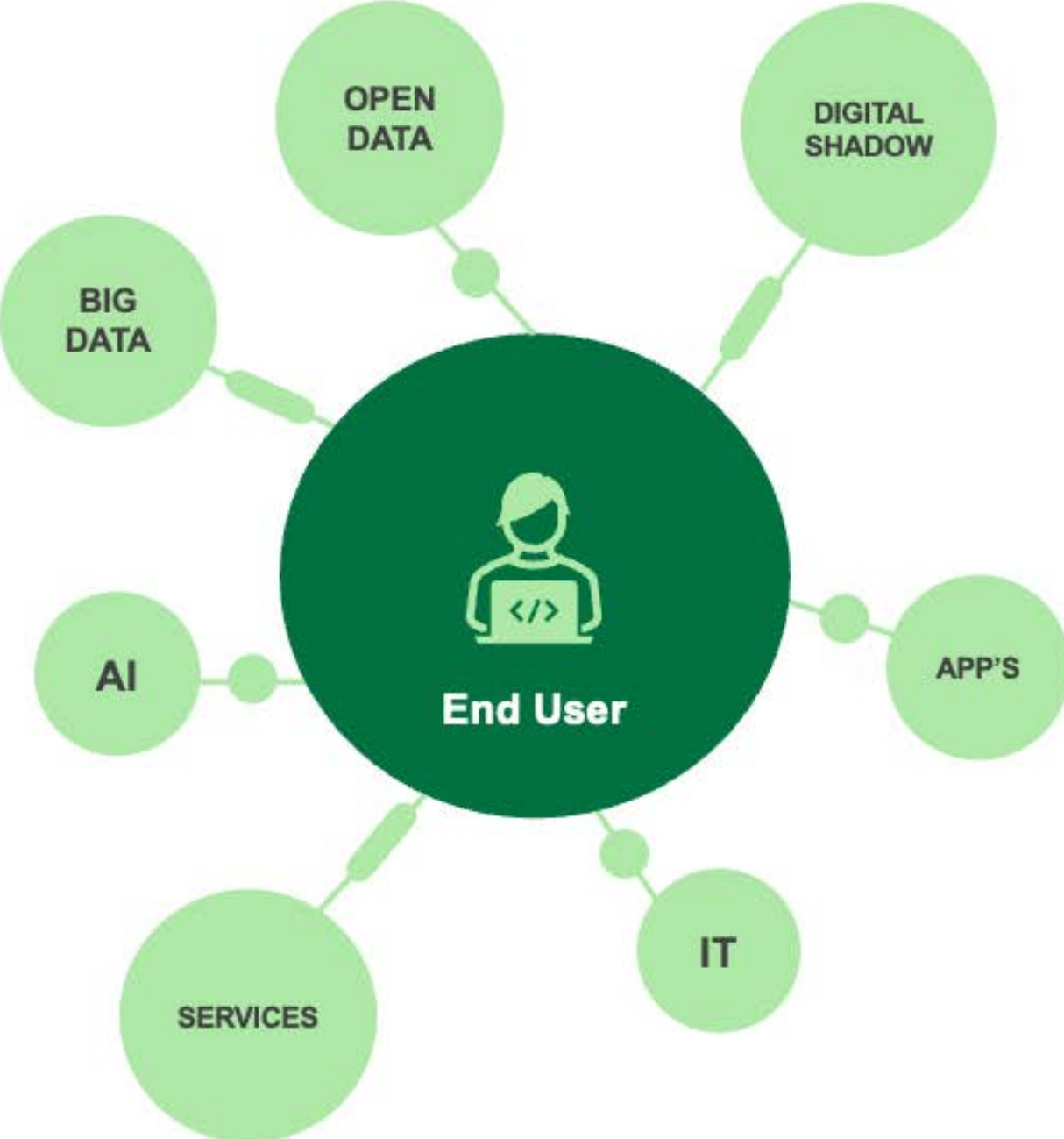
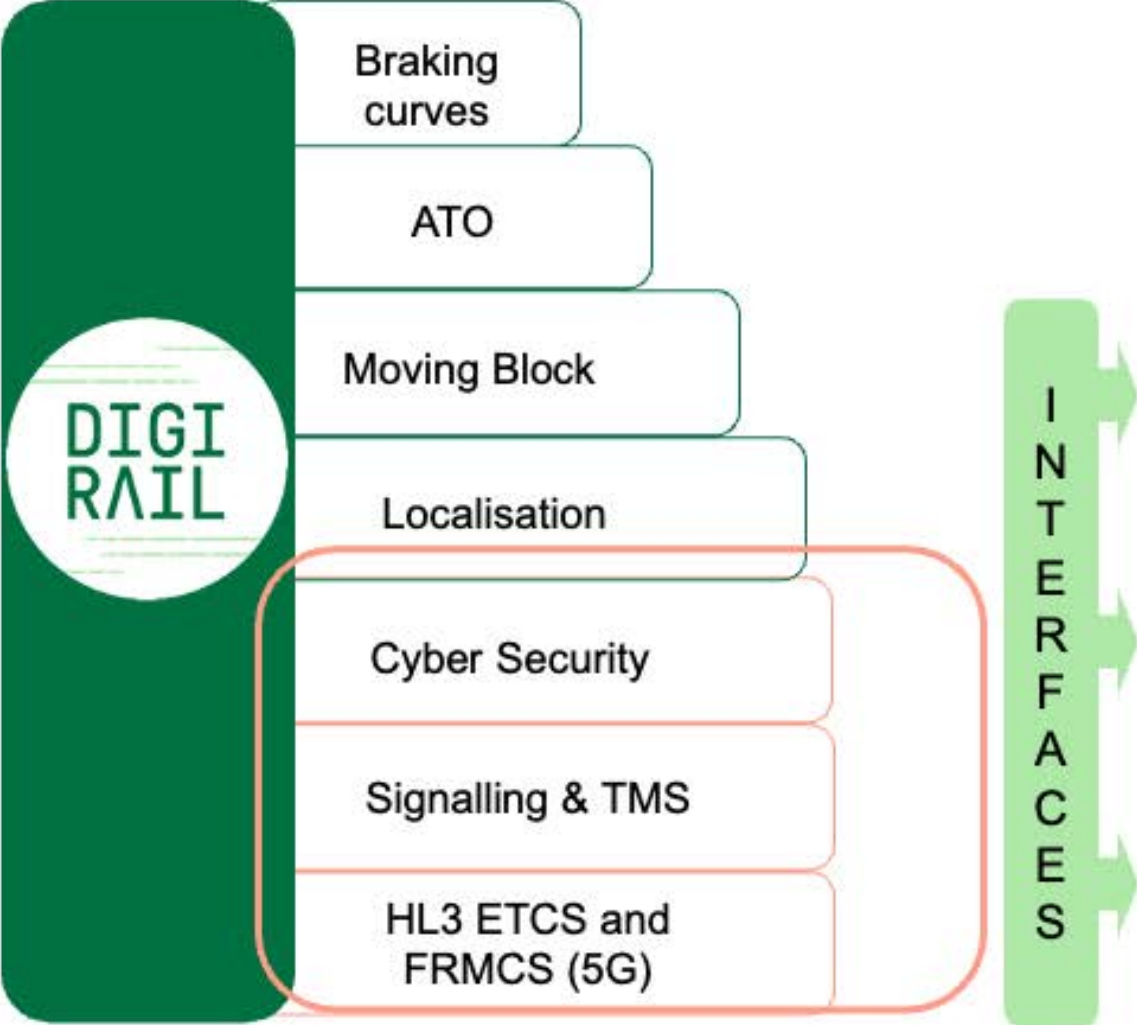
2. Possibility for a technology leap

- Migration vs. no migration

3. TSI compliance



Technological "big picture"

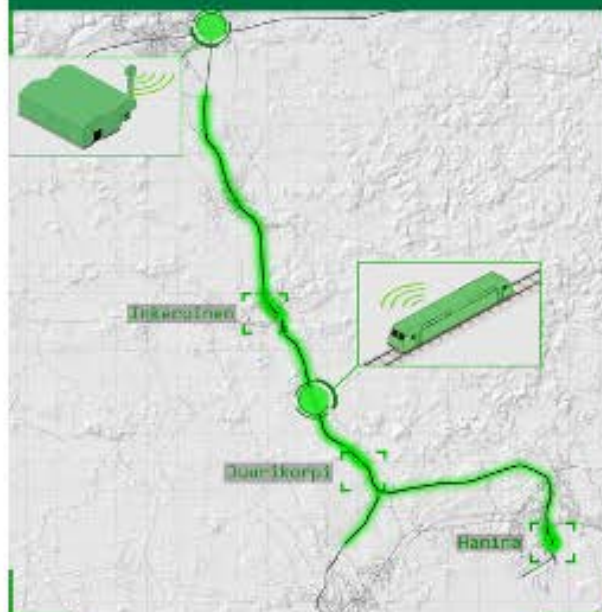


ERTMS program

2022



2021 - 2024



2024-2027



2028-2040



• TestLab

- 1st iteration was launched at the beginning of 2022.

• TestTrack – Real system

- Length: 54 km
- Stations: 3
- ETCS-level: ETCS L2
- Radio Network (testing purposes): LTE based

• 1st track section

- Lielähti-Rauma/Pori
- Approx. 190 kilometers of single track line, 18 stations
- ETCS HL3, ATO GoA2
- Public radio Network (according FRMCS)

• Roll Out

- FRMCS roll out before track infrastructure will be deployed
- Rolling stock upgrades accordingly

Digirail 2019-2040

Foundation for the future railway traffic
is formed now

A SOLUTION THAT STANDS THE TEST OF TIME

- AI-based optimisation of traffic management
- real-time refining of data
- continuously updated capacity and schedule data
- dynamic reactions

FOR FINLAND'S RAILWAY NETWORK

- Maximum utilisation of investments
- Proactive maintenance, also by digital methods
- Safety in e.g. railway maintenance and level crossings
- Simplifying the infrastructure, less trackside equipment

FOR PASSENGERS

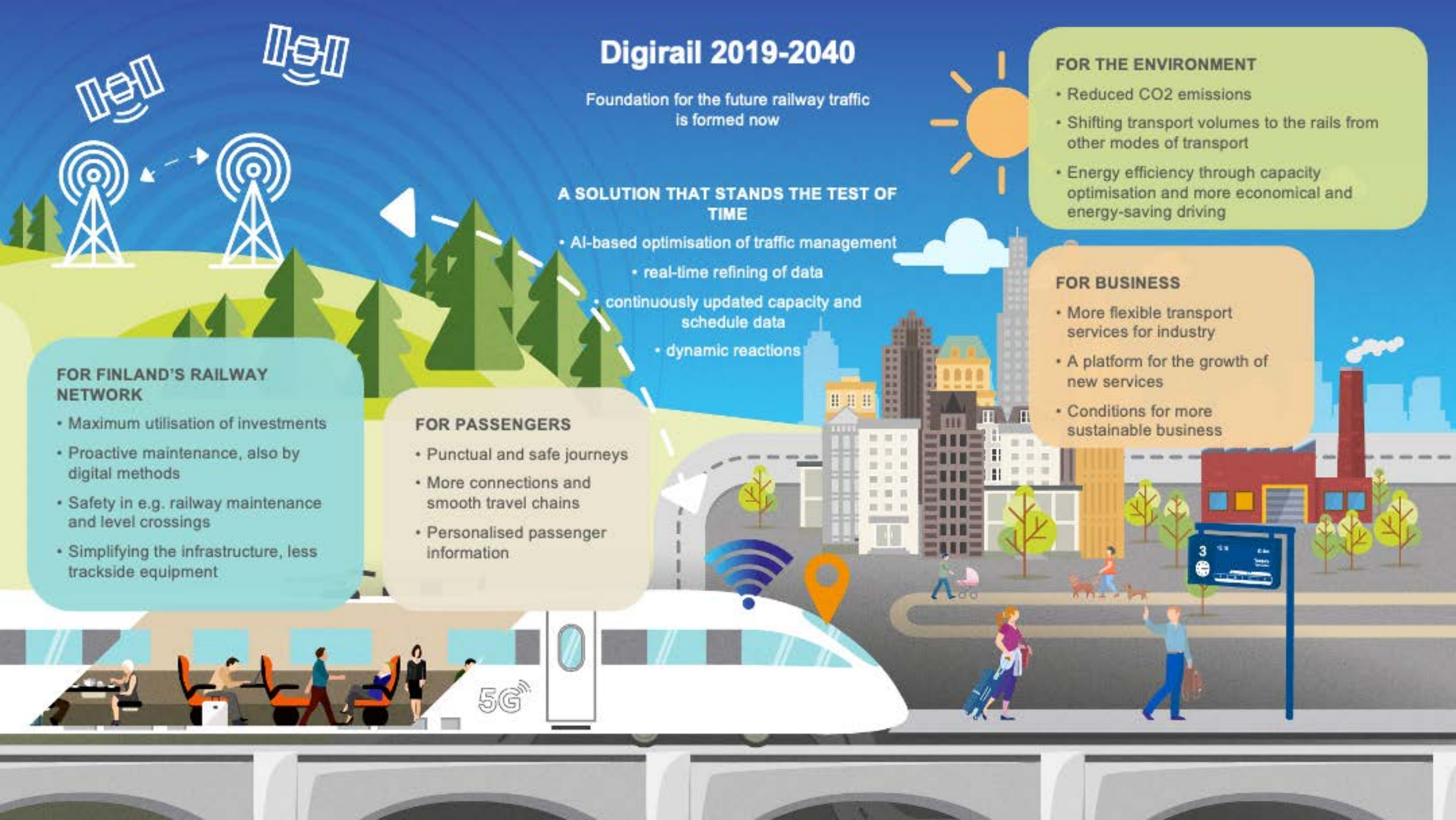
- Punctual and safe journeys
- More connections and smooth travel chains
- Personalised passenger information

FOR THE ENVIRONMENT

- Reduced CO2 emissions
- Shifting transport volumes to the rails from other modes of transport
- Energy efficiency through capacity optimisation and more economical and energy-saving driving

FOR BUSINESS

- More flexible transport services for industry
- A platform for the growth of new services
- Conditions for more sustainable business





Thank you!