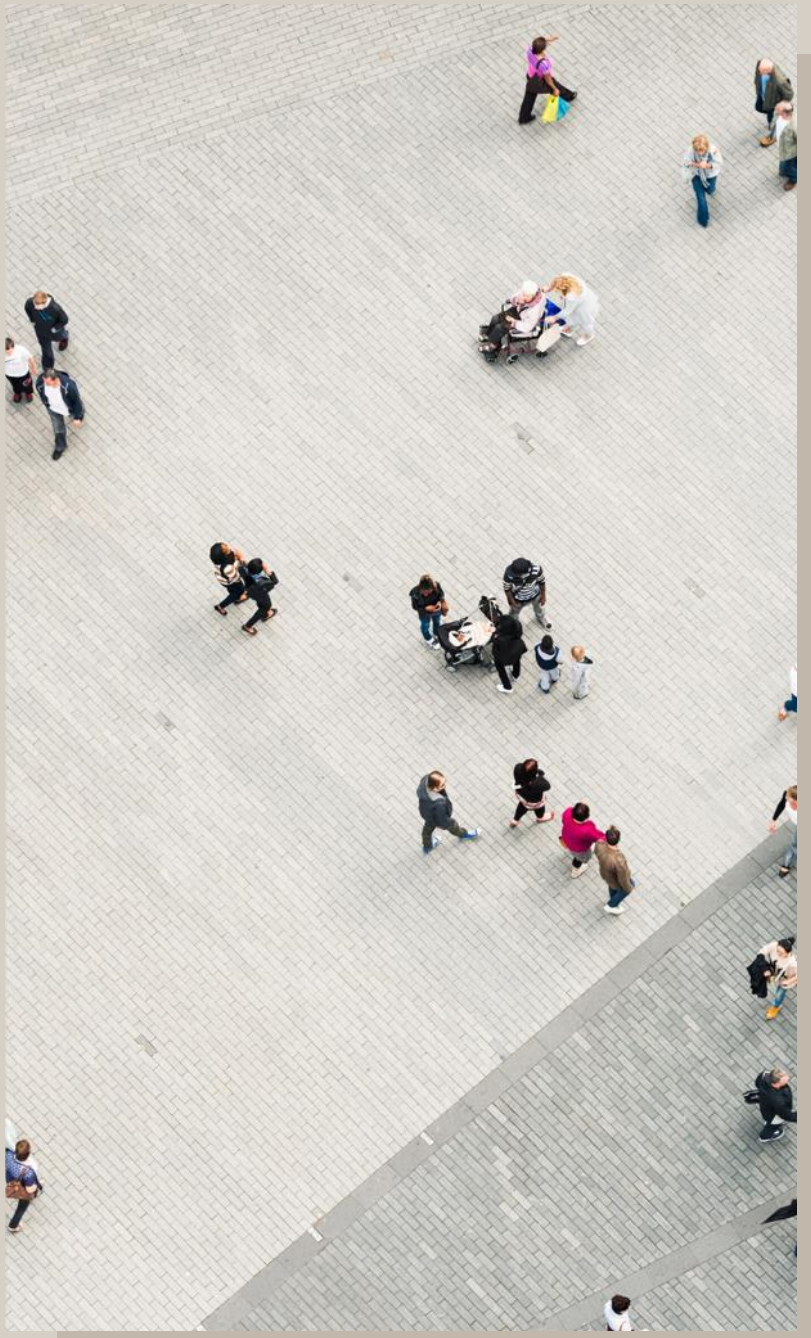
Jernbane-
direktoratet

railML

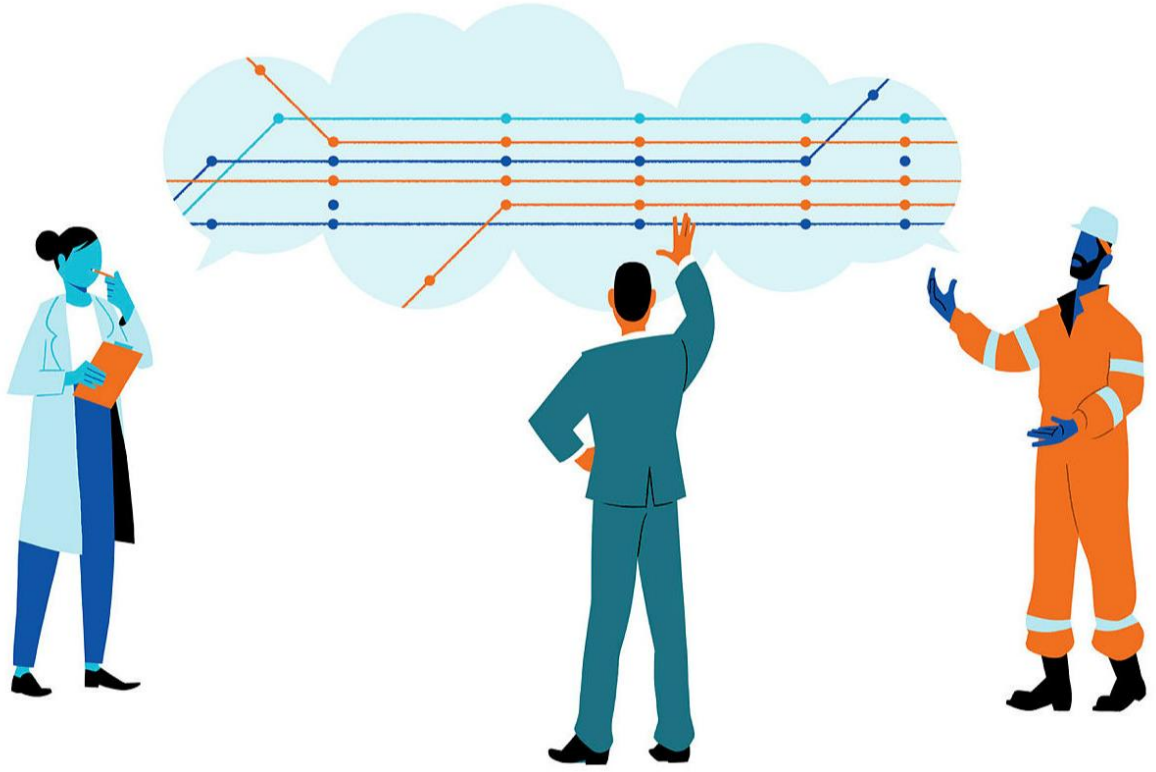
die Erfahrungen mit railML im norwegischen Eisenbahnsektor

26.4.2022 Torben Brand



Topics

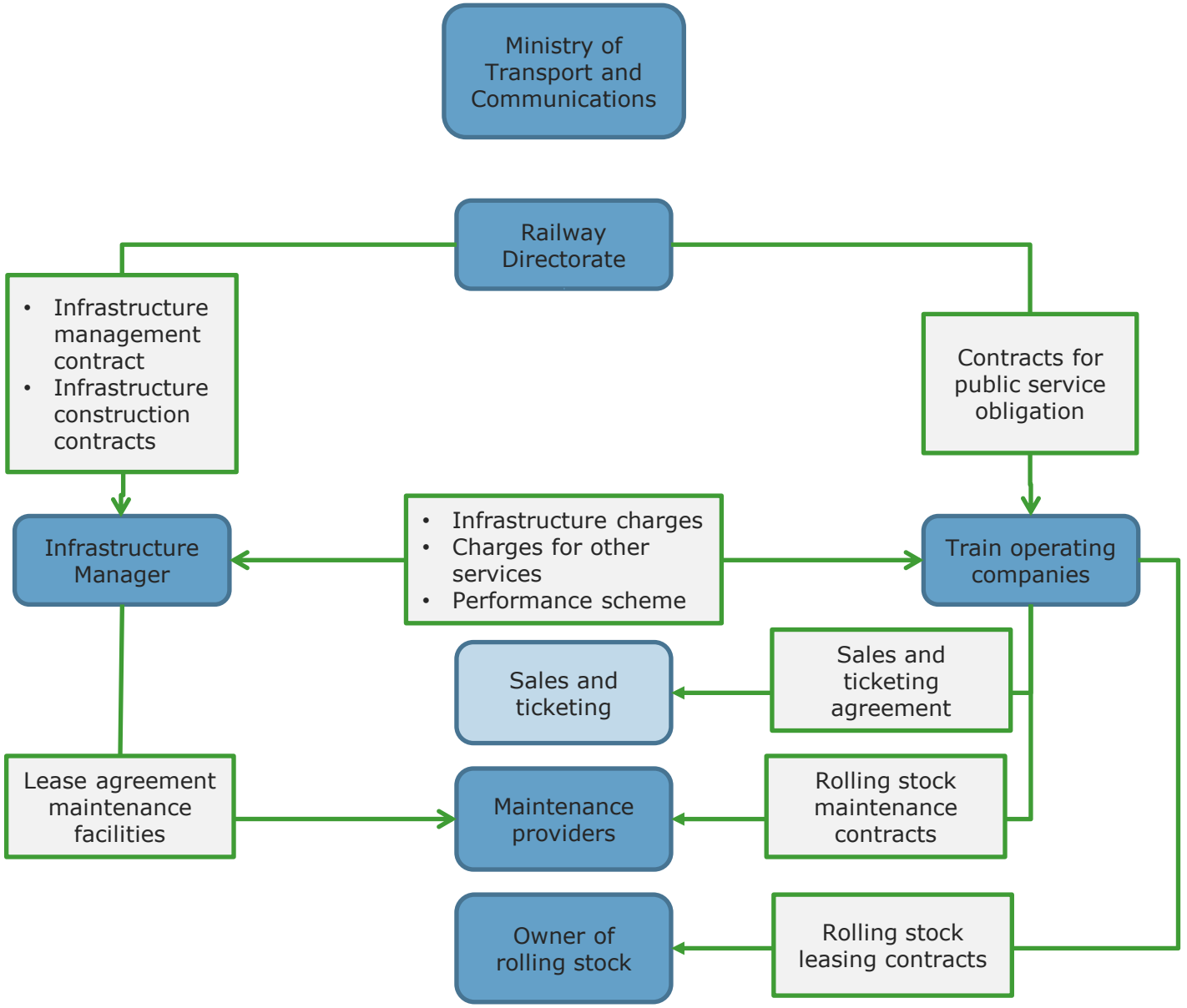
- Why railML?
- Experiences with railML



The Norwegian railway sector from 2017

The railway sectors needs a common exchange language!

This is promoted by Jernbanedirektoratet as a national unifier.



Where is Jernbanedirektoratet in the planning phase? early and conceptual

railML

BIM-IFC, Eulynx, Inspire...

«railML TAP»/ SIRI

NeTex

SIRI... etc.

railML

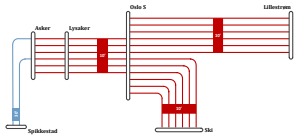
Planning train services

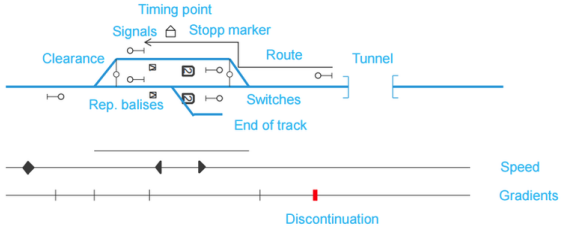
Designing infrastrucutre

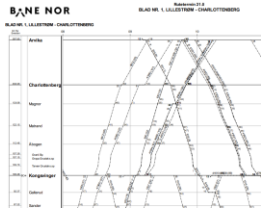
Ordering train service

Publishing train service

Operating train serivce



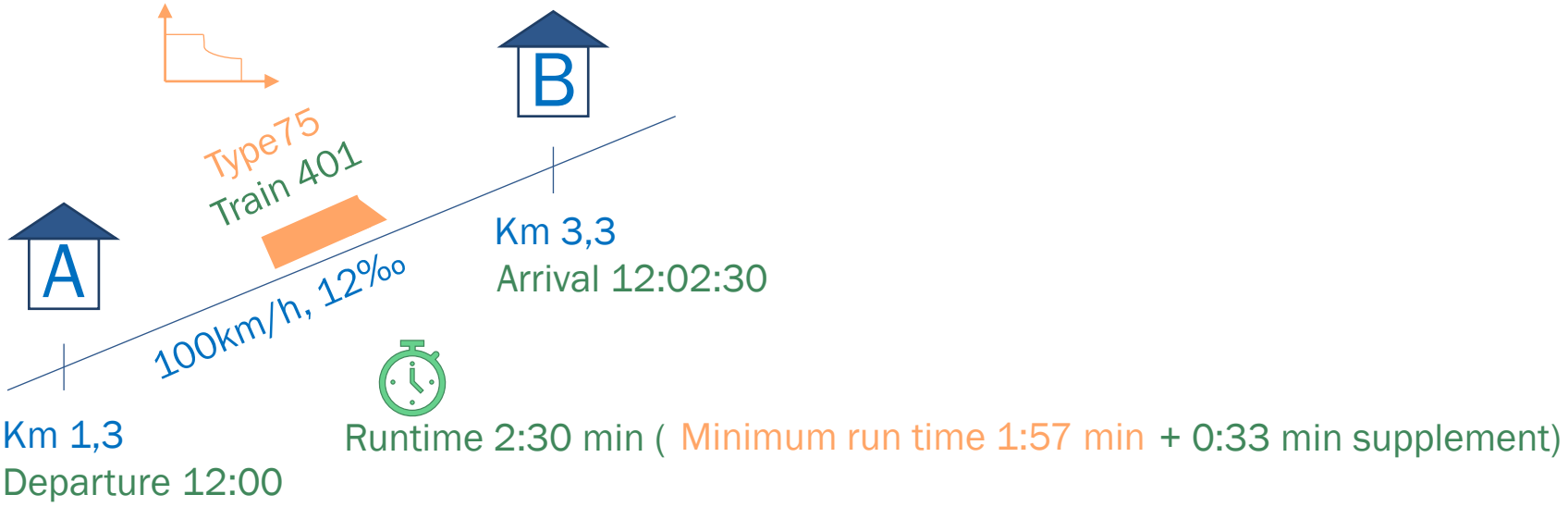




Why railml is the only right choice for data exchange language for our UC

Use cases for «service planning»The railway sectors need for an exchange of functional/operational description of:

Infrastructure | Timetable | Rolling stock



RailDax Use cases for «service planning»

List of Use Cases in RailML and ISO Raildax:

1. Schematic track plans for infrastructure planning
2. Runtime calculations (builds on 1)
3. Network statement of an infrastructure manager annex asset descriptions
4. Passenger assets of rolling stock for operational planning
5. Operational timetable planning (builds on 2,3&4)
6. Operational timetable simulation (builds on 5,2&1)

Infrastructure

Rolling stock

Timetable

Signalling

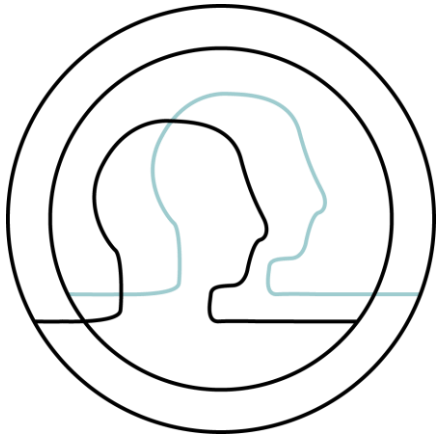
railML.org is a professional organisation

- Non-profit registrered organisation with open source community
- Since 2002, well estabilshed and tested
- Free to use (open wiki and forum)
- Modest membership fee for development support
- Supports ISO Raildax (www.raildax.org) and is ISO TC204 ITS liaison organisation
- Cooperation with ERA and ERJU
- Extensions are allowed (see railML2.4nor).

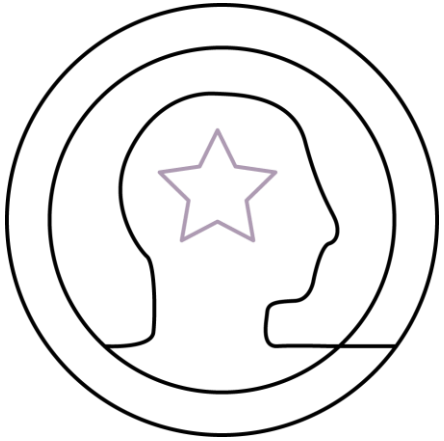
Experiences with railML

1. Roles
2. Extension process
3. Versions timeline
4. Partnership
5. Proofing tool
6. Listening and proffesional organisation

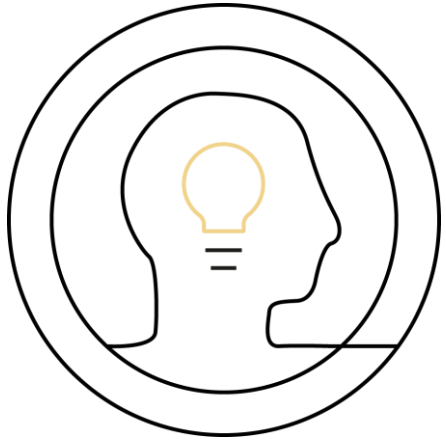
Roles



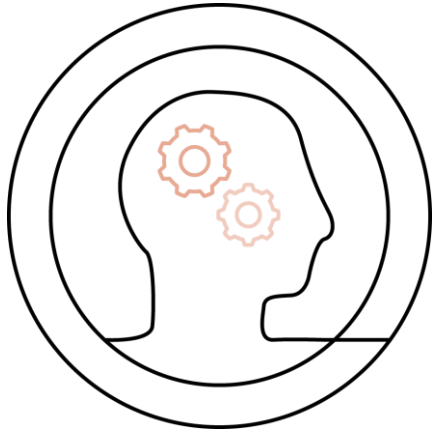
National unifier



Stakeholder



UC owner

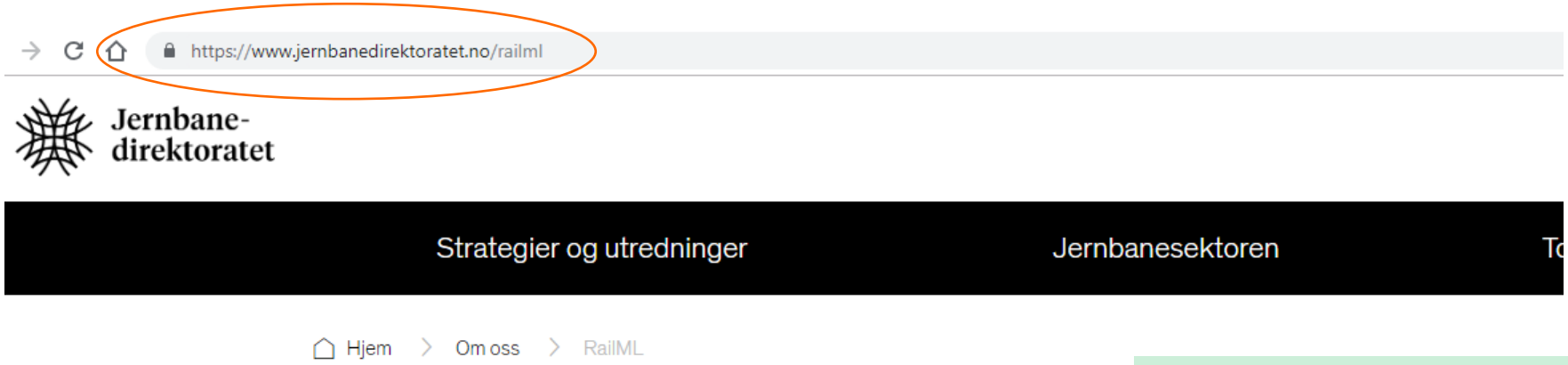


Developer/ user

Extension process

- Work in local/national community (not alone)
- Map use case and find roles! (But also start with example data)
- Do we have clear definitions and adequate documentation?
- Need for extensions?
- make draft
- Publish draft in forum (requirement?)
- Revise draft and make final documentation and publish online
- Use the railML.org wiki active
- Follow up with coordinator for ticket item implemented in next version

Norwegian sector standard extension - Documented and published with example data



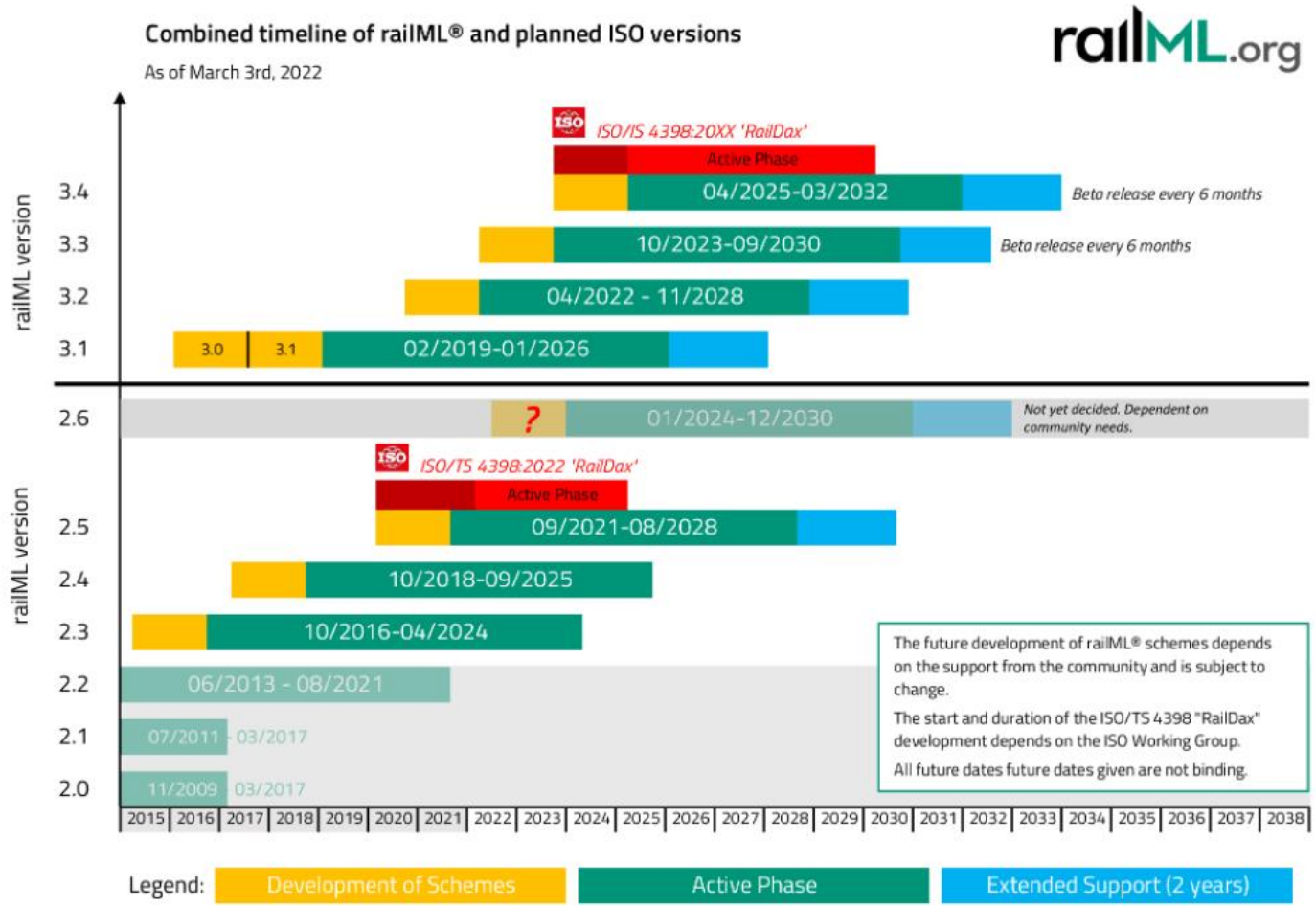
New version 1.5 of railML2.4Nor IS documentation in early May 2022!

railML2.4nor – Norway's Railway Data Exchange Format

railML® – Railway Markup Language – is an open-source XML based data exchange format, which shall enable an easy communication of heterogenous railway applications.

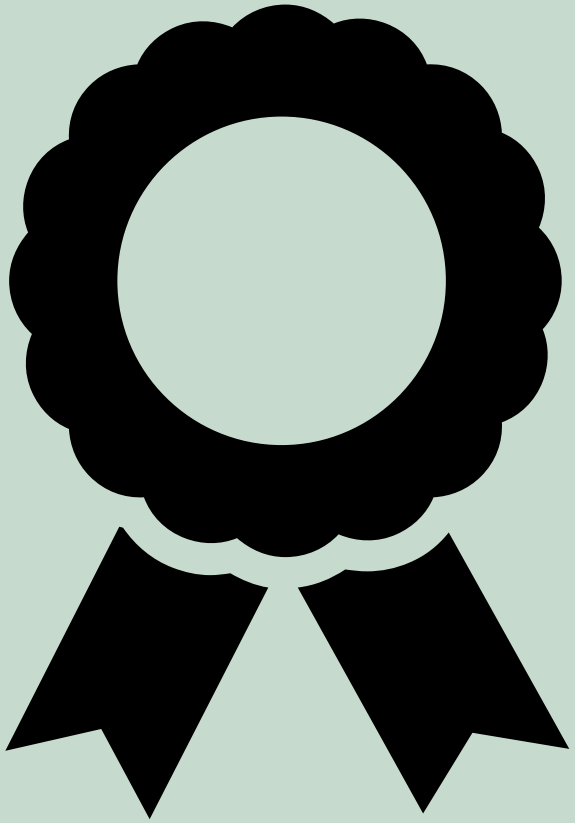
railML version timeline

- National coordination
- use customer strength in contract requirement.
- Will move from Railml2.4nor to 3.2 as is now with TT, RS and mature IS
- ISO rev?



railML partnership

- Modest fee for good support
- Important for stakeholdes with suppliers (contract requirement)
- Good experience with support even proactive (workshop to bridge partner and their suppliers)
- participants



Proofing tool/Example data
railViViD/in Norway temporary Railoscope

- Certification contractual requirement.
- Visualisation and semantic valdation rules to check data
- end of support argument (2.2 and 2.3)
- Improved certification manual with default testing data
- Strategic partners use of certification body on behalf of railml.org

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          </trackBegin>
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            <openEnd id="oe2"/>
          </trackEnd>
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                          ocpRef="id4" pos="300.0"/>
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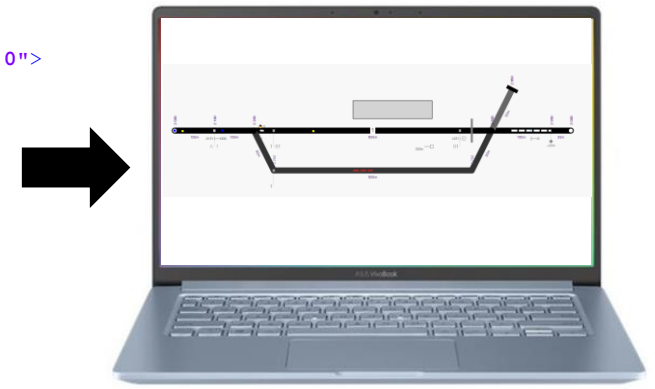
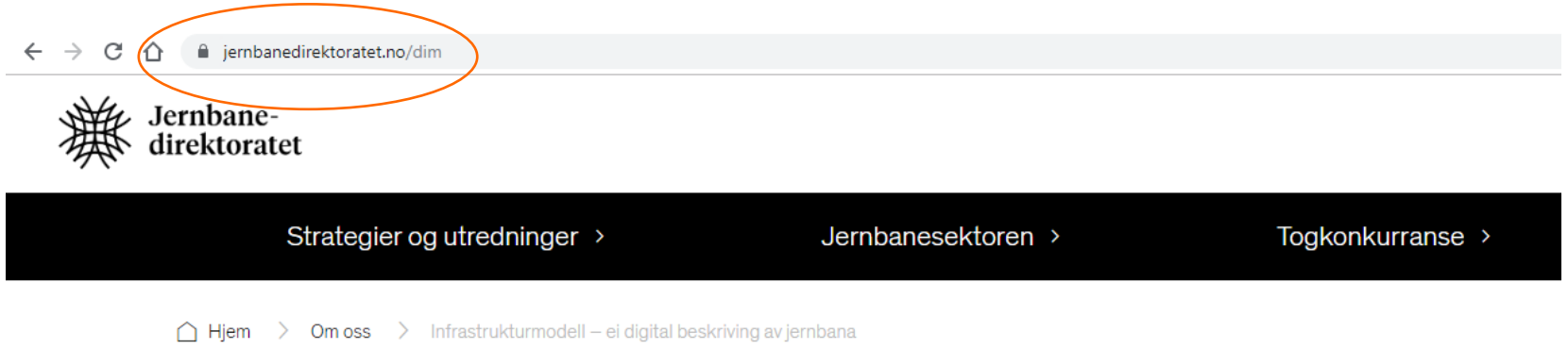


The complete norwegian digital infrastrucutre model is published in [NorRailView]



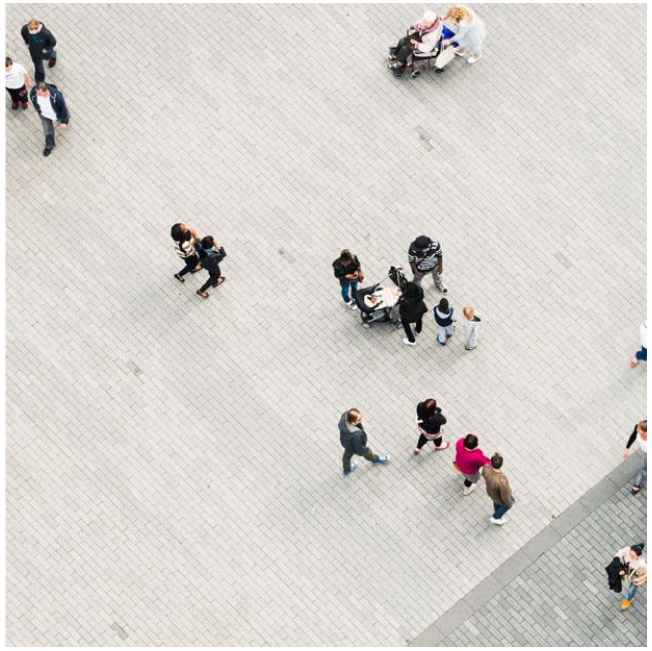
Infrastrukturmodell – ei digital beskriving av jernbana

Ein infrastrukturmodell gir ei detaljert digital beskriving av jernbana sin funksjonalitet på sporplannivå. Det er laga fleire slike modellar for å gje att både infrastrukturen i dag og i framtida. Modellane er tilgjengelege for alle i webapplikasjonen NorRailView.

railML.org is a professional and listening organisation

- Experience with national definition enhancements and extensions are valued and adopted!
- Terms and conditions
- More user friendly UC documentation
- improved web & admin systems
- Introduced partnership
- railml.org has a great team of coordinators and organisators

Questions



Important resources

- Jernbanedirektoratets public digital infrastrucutre model:

https://www.jernbanedirektoratet.no/dim

- Documentation of railML2.4nor:

https://www.jernbanedirektoratet.no/railml

- Jernbanedirektoratet railDax site:

https://www.raildax.org