



railML[®] conference

Projects Signaling - Infrabel

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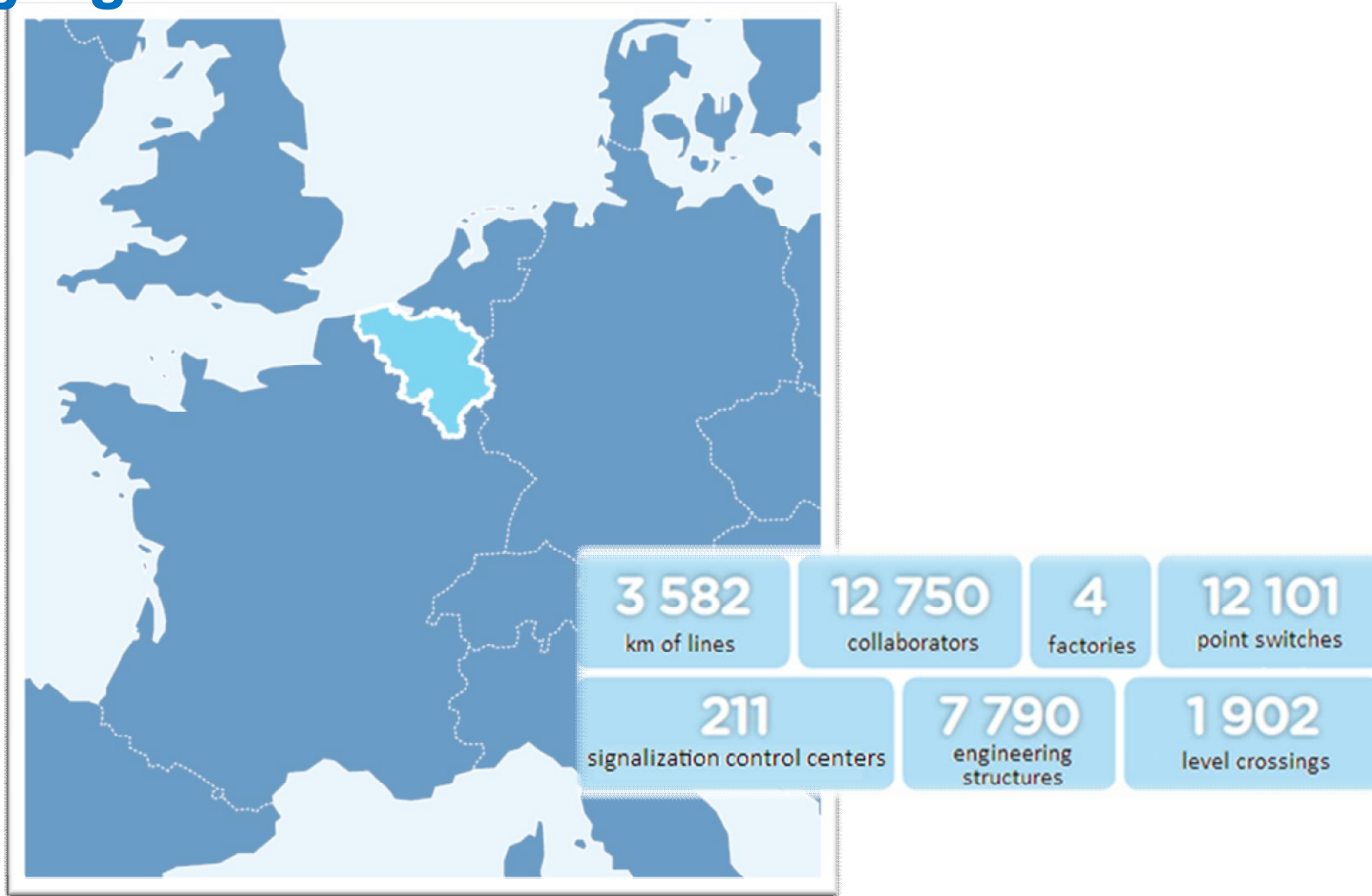
06.03.12



Agenda

- Who is Infrabel ?
- Main upcoming projects
- Interest for railML
- Improvement points in the current format
- Contribution for railML community

Key figures



The priorities



Safety first

⇒ The most important exigence from the clients to the society



Train on time

⇒ The punctuality is one of the most important exigence



A network adapted

⇒ Make available the capacity required to the railway companies



Healthy accounts

⇒ An healthy financial position








Fit with the society

⇒ As a public company, we are at the service of society

How to reach the priorities ?

Accelerate the deployment of ATP TBL1+ for network security
 Install ETCS on the network
 Complete signalling modernisation in 31 cabins

- Strengthening our culture security in a "Learning" organization
- Further protect teams on the field
- Develop an asset professional management
- Develop a plan based on transportation needs of Operators
- Manage rail traffic in a powerful manner
- Build an organization focused on key processes
- At all times have the right person in the right place
- Anchor the project management mechanisms in the business
- Improve supply chain
- Give accurate information to customers under every situation
- Maintain an ongoing dialogue with all stakeholders

	Safety first	Train on time	A network adapted	Healthy accounts	Fit with the society
					
Accelerate the deployment of ATP TBL1+ for network security	xxxxx	x			xx
Install ETCS on the network	xxxxx	x	x		xx
Complete signalling modernisation in 31 cabins	xxx	xx		xx	x
Strengthening our culture security in a "Learning" organization	xxx				x
Further protect teams on the field	xxx				x
Develop an asset professional management	xx	xxx	xx	xxx	
Develop a plan based on transportation needs of Operators	x	xxx	xxx		xx
Manage rail traffic in a powerful manner	x	xxx		x	x
Build an organization focused on key processes	xx	xx	xx	xx	x
At all times have the right person in the right place	xx	xx	xx	xx	
Anchor the project management mechanisms in the business	x	x	xx	xx	x
Improve supply chain	x	x	x	xx	
Give accurate information to customers under every situation		x			xx
Maintain an ongoing dialogue with all stakeholders			x		xx

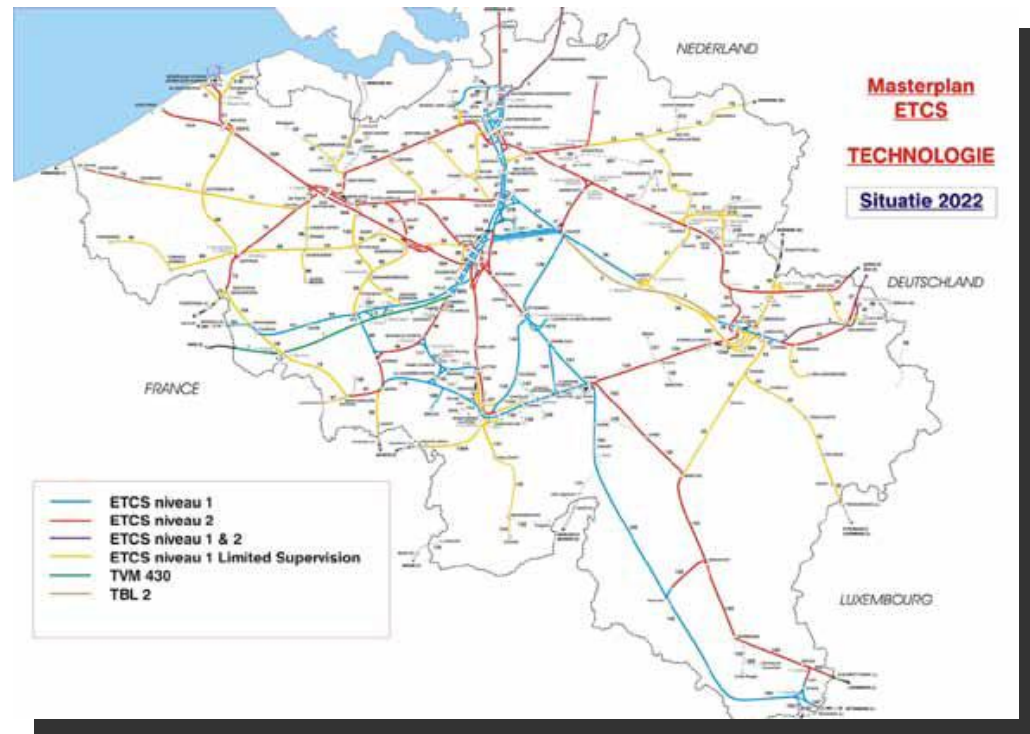
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Master Plan ETCS

Objectives:

- **2022:**
 - Equip the entire Belgian network with ETCS (level 1, 2 et LS).
 - ETCS L2: 2000km
 - New interlocking system: 500 km
- **2025:**
 - No more authorization on the Belgian railway for Trains not equipped with ETCS.

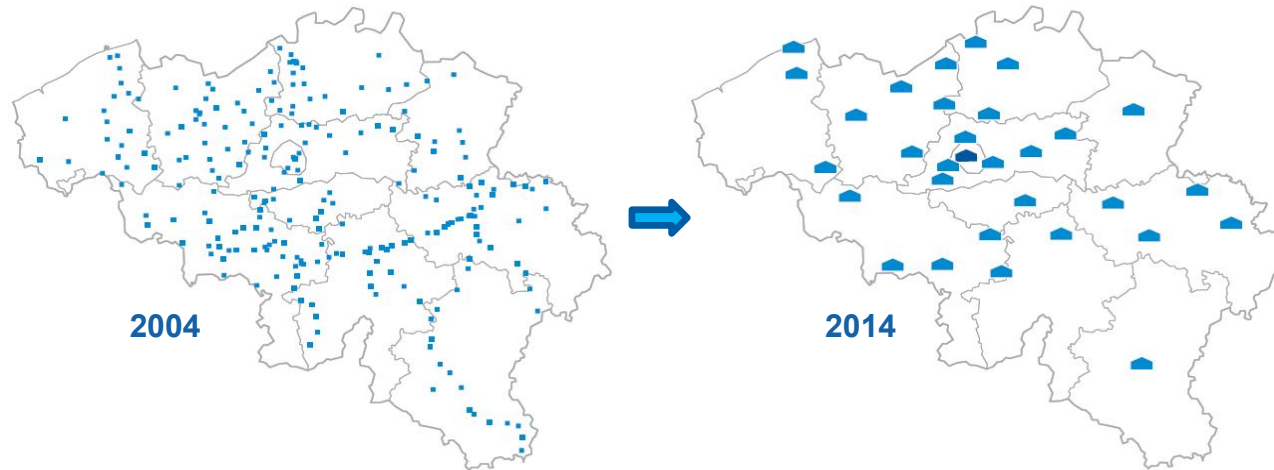


Concentration of control centers

Objectives:

- **2014:**

- Improve the automatic management of the itineraries by bringing up-to-date our older control centers
- Decrease the number of control centers from 300 to 31



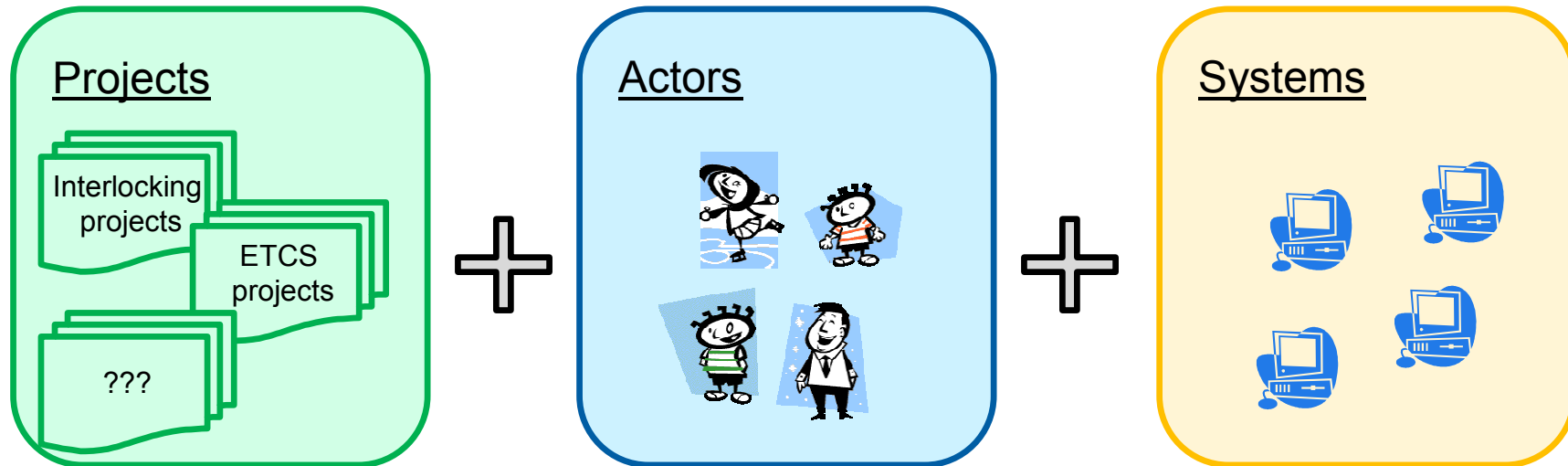
- **Long Term vision**

- Decrease the number of control centers from 31 to 10

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Interests for railML



⇒ Needs of exchange for data communication

- Internal & external communication
- Today, the need is mostly for the infrastructure part



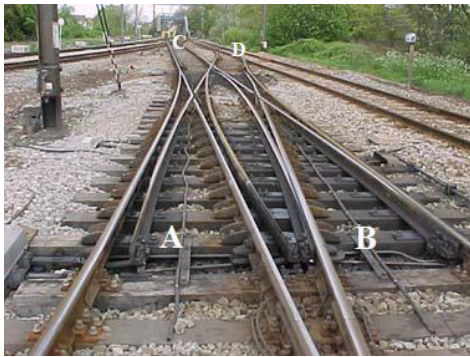
Interests for the standard **railML**[®]

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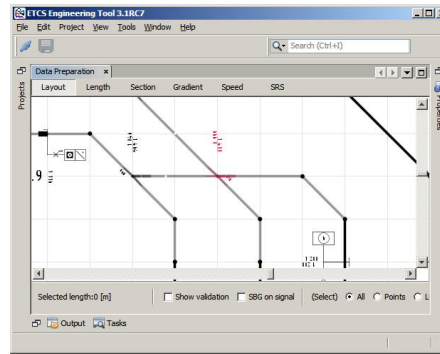
Modeling of complex switches

On the field



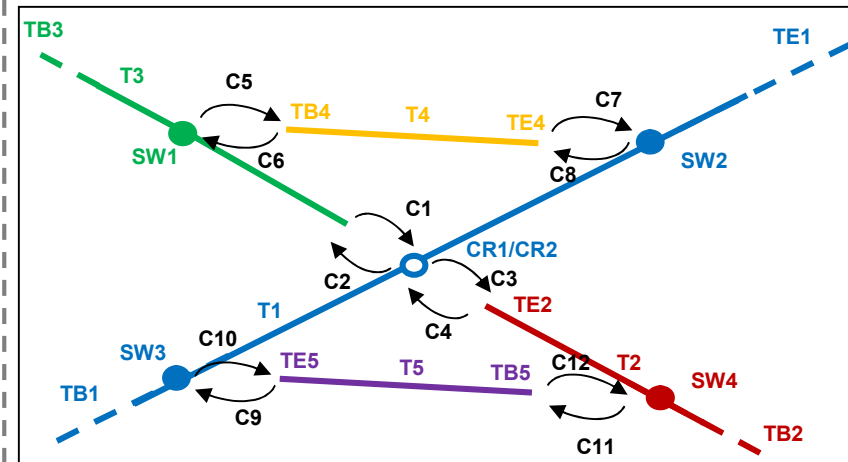
- 1 device installed (double switch crossing)

On the systems



- 1 object representing the device

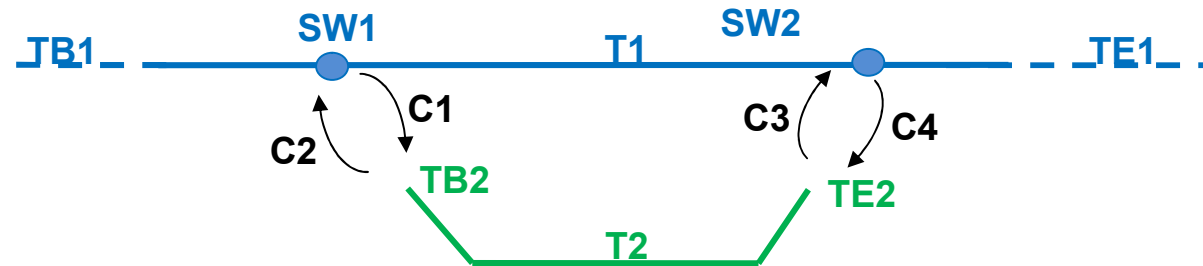
On railML[®]



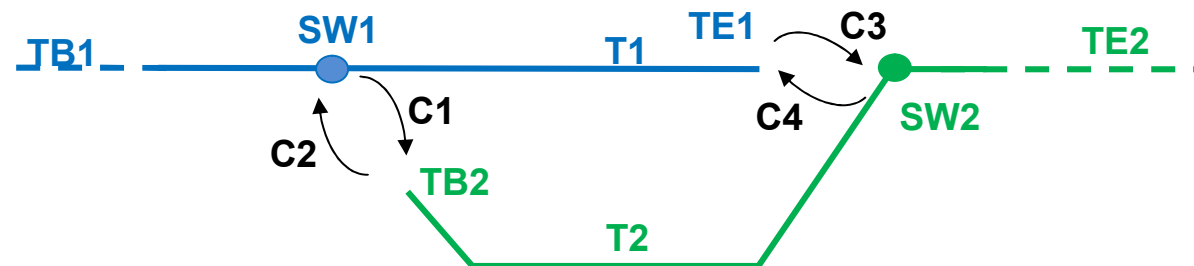
- 1 crossing
- 4 **fictive** switches (SW1, SW2, SW3, SW4)
- 2 **fictive** tracks (T4, T5)

Different ways of representing the same network

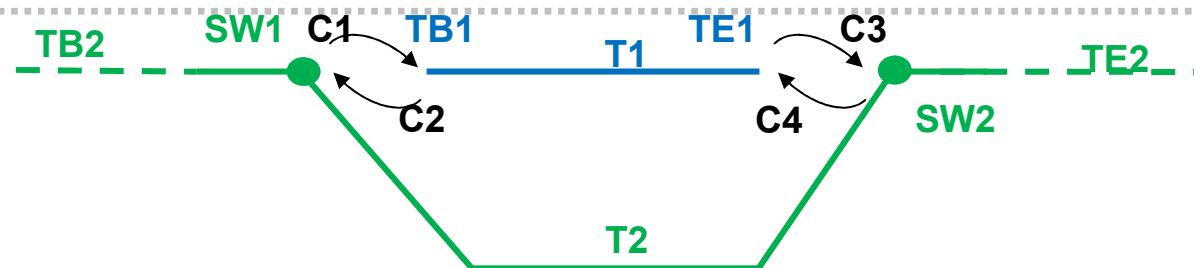
Example 1



Example 1'



Example 1''



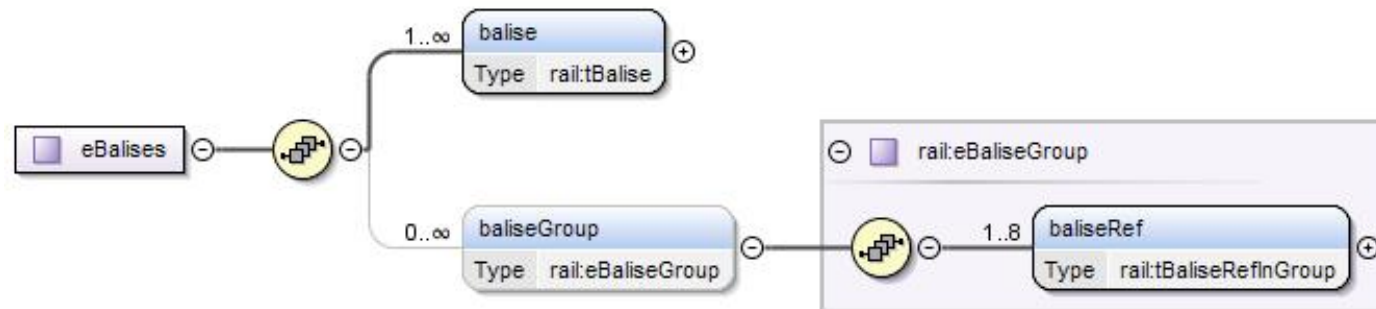
Elements / zones belonging to several tracks

- In the Belgium railway, one device could be installed in the middle of 2 tracks, and is applicable for the trains running on the 2 tracks
 - physically, there is only one device
 - in railML, there are several



- What about the zones which belong to several tracks ? (platforms for instance)

Balise group definition



- From an ETCS point of view, the <balise> should be seen as children of <balisegroup>
 - One balise belongs to one and only one balise group
- Today <baliseGroup> does not have any properties, but it should
 - Nid C, Nid BG are normally properties of the balise group.
- The extension point is only for available for <balise> (so NidC, Nid BG have to be duplicated for instance)

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Contribution for railML® community

- Creation of an internal workgroup
 - Establish an infrastructure common format for data exchange
 - Participate to railML meeting to make evolve the standard
 - Shared all the studies with railML coordinators
- Posts on the railML forum