



## **Benefits of standardising interlocking interfaces, initiative "euLyNX"**

### **Introduction:**

EULYNX is the initiative of a number of European Infrastructure Managers (IM's). The project aspires to a mutually shared vision toward harmonisation of rail signalling systems, their technical architecture, its functions and interfaces. The work breakdown structure of the EULYNX project includes items like system architecture, modelling & testing, data preparation, interfaces between interlockings, interfaces to track vacancy detection and adjacent interlocking or signalling subsystems.

### **Objectives:**

The project has clear standardisation objectives, clear lifecycle cost targets and a shared market approach that also fits the aim of the individual IM's. The rail infrastructure managers invest in the project and harvest benefits being able to change, maintain, renew and update the systems in a competitive way.

This places the IM's as the system integrators into a position which provides them with a choice of various suppliers for different subsystems during the systems life cycle. The goal is reduced costs for new projects, or when modifying existing system functionality or infrastructure layouts. Also maintenance related activities will benefit from this.

With a collaborative project objectives can be achieved that are difficult to reach by the efforts of an individual IM alone. By committing to the EULYNX project, IM's join their market force in order to improve competition between suppliers and accelerate innovations for signalling systems, with the purpose of reducing life cycle costs.

The EULYNX community provides the framework for close cooperation between IM's. Results of previous European initiatives concerning interlocking system standardisation (e.g. Euro Interlocking, INESS and ERTMS) will provide the basis for the project. This also provides an opportunity for the supply industry, as results of the development achieved through the project can be reused in several markets. This creates a win-win situation for all involved.

### **Cooperation:**

The EULYNX initiative acts as a cooperation based on a mutually accepted agreement (as stated in the MoU), following democratic principles and membership fees. The project community will have different kinds of partners: rail infrastructure managers as core members, other active members like signalling or industrial partners, engineering bureaus and universities. Also observers like associations, regulators etc. may be joining in.

### **The road to a standard:**

For historic reasons differences in signalling systems occur. As a consequence, harmonisation of the differences seems impossible without directly affecting operational use and technical equipment. Based on experience of earlier standardisation projects two stages are applicable on the road to standard equipment.

- First stage; based on the experiences from earlier standardisation initiatives, input from the participants will be collected, structure and classified in a database or other dedicated environment.
- Second stage; specialists in the relevant domains provides a system architecture and system requirements so that the objectives can be achieved and in a way that complies with the individual contributions. This is achieved by review and verification actions by the involved specialists of each individual IM.

The outcome should lead to a 'de facto' standard, which will not conflict with the needs of each participating IM's. For each project stage, a higher grade of standardisation will emerge, enabling a reduction in life cycle costs of signalling systems.

Website: [www.eulynx.eu](http://www.eulynx.eu)

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