RAIL & METRO SIGNALING

Open signaling. Built to evolve.

Ageing signaling leaves infrastructure managers with two hard choices. Keep the legacy system, and live with scarcer spares, thinning expertise and rising maintenance costs. Or replace it with another closed system, and start a new 25–40 year cycle of dependency on one supplier.
Open signaling is the third path.

Three key principles

Open interfaces

Standards such as OPC UA, MQTT and EULYNX/RaSTA, and formats such as railML, let components from different suppliers work together.

Loosely coupled components

Hardware platform and signaling logic are kept separate, so each part can be replaced or upgraded step by step.

COTS hardware

Commercial off-the-shelf safety platforms lower costs and remove dependency on any single vendor.

Improve, don’t replace.

Evolution rather than revolution: a future-proof architecture where obsolete parts are swapped in a controlled way, reducing traffic disruption.

The /open
signaling initiative

opensignaling.org

Reduce lock-in. Strengthen control.

What open signaling changes for system owners.

01

The owner stays in control

Supplier dependency becomes limited and manageable, and your procurement position gets stronger. Support and maintenance can be bought on the open market.

02

Simpler safety assessment

Changes stay inside modules, so re-assessment can focus on the changed component and its interfaces, while the system as a whole is still shown to be safe.

03

Lower project risk

Modernize step by step, without big-bang projects or service interruptions.

04

Built to last

With proper obsolescence management, the system's life can be extended well beyond today's 25–40 year cycles.

An open ecosystem

Every role can be chosen independently, so suppliers compete across the whole life cycle.

Hardware platform supplier
Certified safety PLCs and safety computers

Application software supplier
The safety logic, verified and validated

System integrator
System design and integration, often prime contractor

Independent safety assessor
An independent judgment of the safety case

PARTNERS IN THE INITIATIVE

Amey · Cactus Rail · JMD Railtech · NEAT · Pilz · Prover · Schneider Electric · Sibek · Universal Signalling

Join the open signaling ecosystem.

Share experience with other infrastructure managers, signal demand for open interfaces and help shape where the industry goes.
Become a partner, or bring your next project.