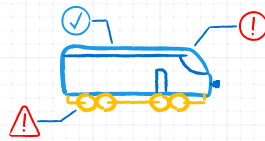# The INFRASTRUCTORS

Achieve Sustainable Logistics with End-To-End Planning
the executive summary

Rail is one of the most efficient modes of transport, producing up to **nine times fewer emissions** than when a similar shipment is sent by road freight.

However, for rail to play its part in a global sustainable transport mix, it needs to **confront a range of regulatory technological and commercial pressures,** while dealing with the ever-present risk of disruptions. Virtual twins can help with this.
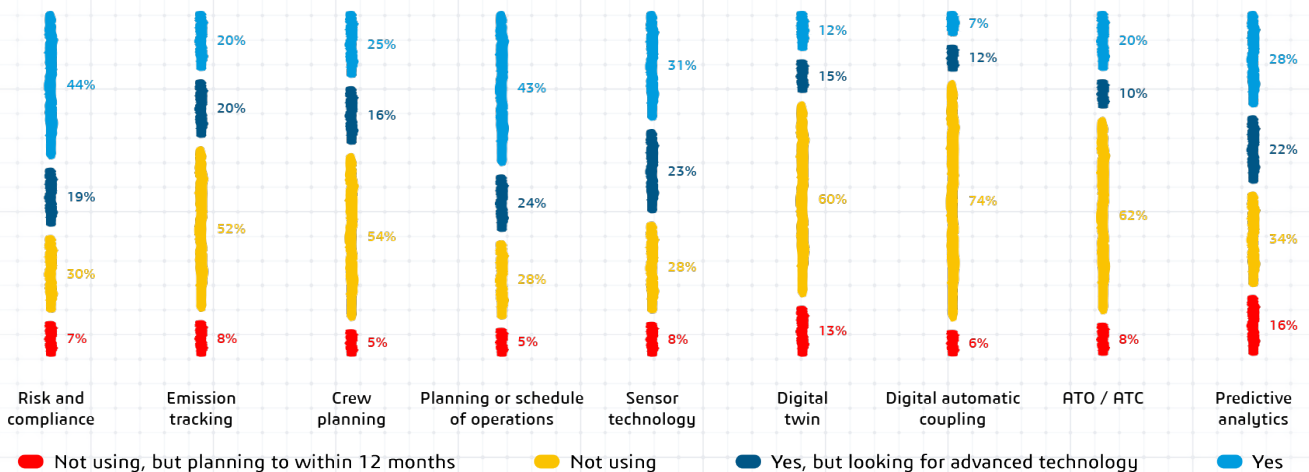
Leveraging virtual twins to manage shifting regulations and guidelines in rail freight will be essential – **44% of rail freight operations already use digital technologies** when it comes to risk and compliance.

Virtual twins can help simulate **end-to-end scenarios,** providing an **integrated view** of rail operations planning, scheduling requirements, yard, crew and fleet management, and rolling stock maintenance. This helps ensure that operations are safe, effective and compliant and can even help deliver greener operations.

Which digital technologies does your organisation use ?

Category	Not using, but planning to within 12 months	Not using	Yes, but looking for advanced technology	Yes
Risk and compliance	7%	30%	19%	44%
Emission tracking	8%	52%	20%	20%
Crew planning	5%	54%	16%	25%
Planning or schedule of operations	5%	28%	24%	43%
Sensor technology	8%	28%	23%	31%
Digital twin	13%	60%	15%	12%
Digital automatic coupling	6%	74%	12%	7%
ATO / ATC	8%	62%	10%	20%
Predictive analytics	16%	34%	22%	28%

Legend:
- Not using, but planning to within 12 months
- Not using
- Yes, but looking for advanced technology
- Yes

Source: Global Railway Review, The digital way in rail freight operations (commissioned by Dassault Systèmes)

With digital technologies, **rail operators can streamline operations and end-to-end maintenance processes,** providing the clarity needed to reduce costs and downtime, and making services safer, more reliable and more economical for operators, workers, and customers.

Want to find out more?

Meet the Infrastructors