



| RailXplore ARCS



The data analytics tool to enhance the performance monitoring and error analysis of communication-based-signaling systems of operations.

RailXplore ARCS (Analytical reporting for communication-based signaling)

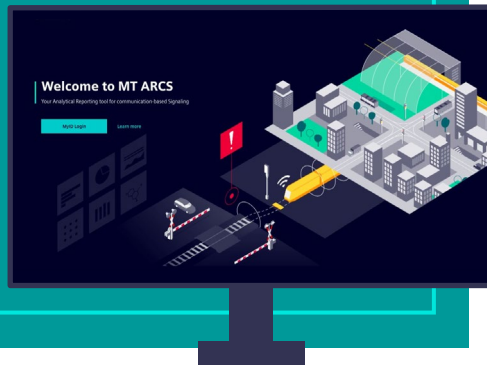
Product Description

Public transportation and railway operators face system errors and maintenance disruptions that hinder their efforts to achieve optimized operations. **RailXplore ARCS** enables the detection of errors at

runtime while giving information about the performance of all related subsystems. This accelerates the error analysis needed to realize to reduce the disruption of operations and required man-time.

RailXplore ARCS application

- ✓ Performance monitoring
- ✓ Efficient error analysis
- ✓ Prevention of errors
- ✓ Accessible statistics for management tasks

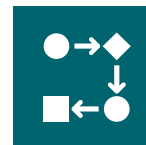


RailXplore ARCS compiles and analyzes reliable PDI data or logfiles from Siemens subsystems to provide insights into the general system performance and error occurrences:



TGMT R 1, 2, 3

- PDI & Onboard logs



Interlocking
(Sicas & Westrace)

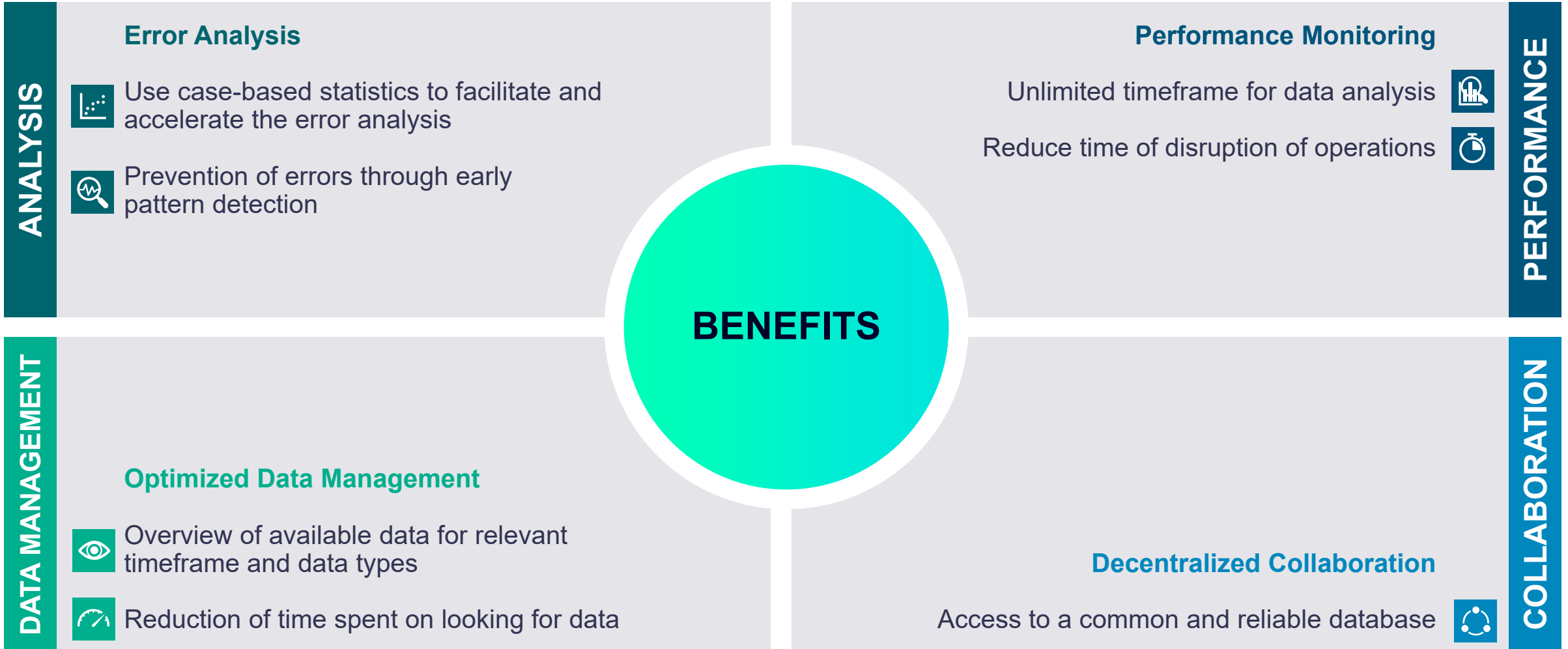
- PDI & OSA traces



Train schedule

- PDI & ATR logs

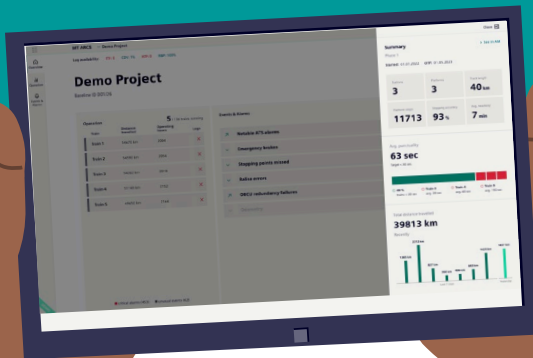
Benefits of RailXplore ARCS



Key Functionalities

Dashboard Overview

- General view about operations and events & alarms
- Exportable statistical visualizations
- Support for presentations and decision making
- Improve of collaboration with decentralized teams due to easy access to reliable database



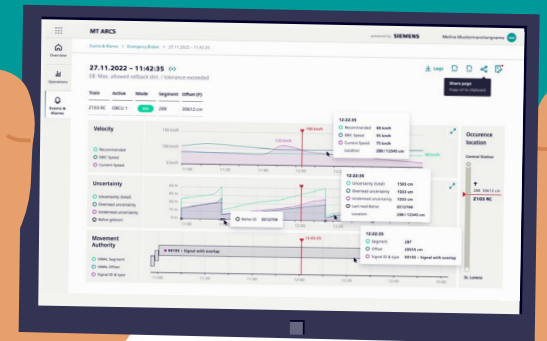
Operations

- Information about the mode of distribution per train
- Charts about critical and high-priority alarms
- Information about train events and alarms based on event position



Events & Alarms

- Early prevention of errors
- Detection of missed stopping points
- Provide data for feasibility studies by evaluating change requests and beneficial changes



Key Functionalities

Performance Analysis

Monitoring and analysis of:

- Energy consumption
- Train speed profiles
- Operation modes
- Operator alarms
- Headway
- Punctuality

Error Analysis

- Balise errors
- Train alarms
- OBCU-errors
- Emergency brakes
- Stopping points missed
- Platform screen doors error



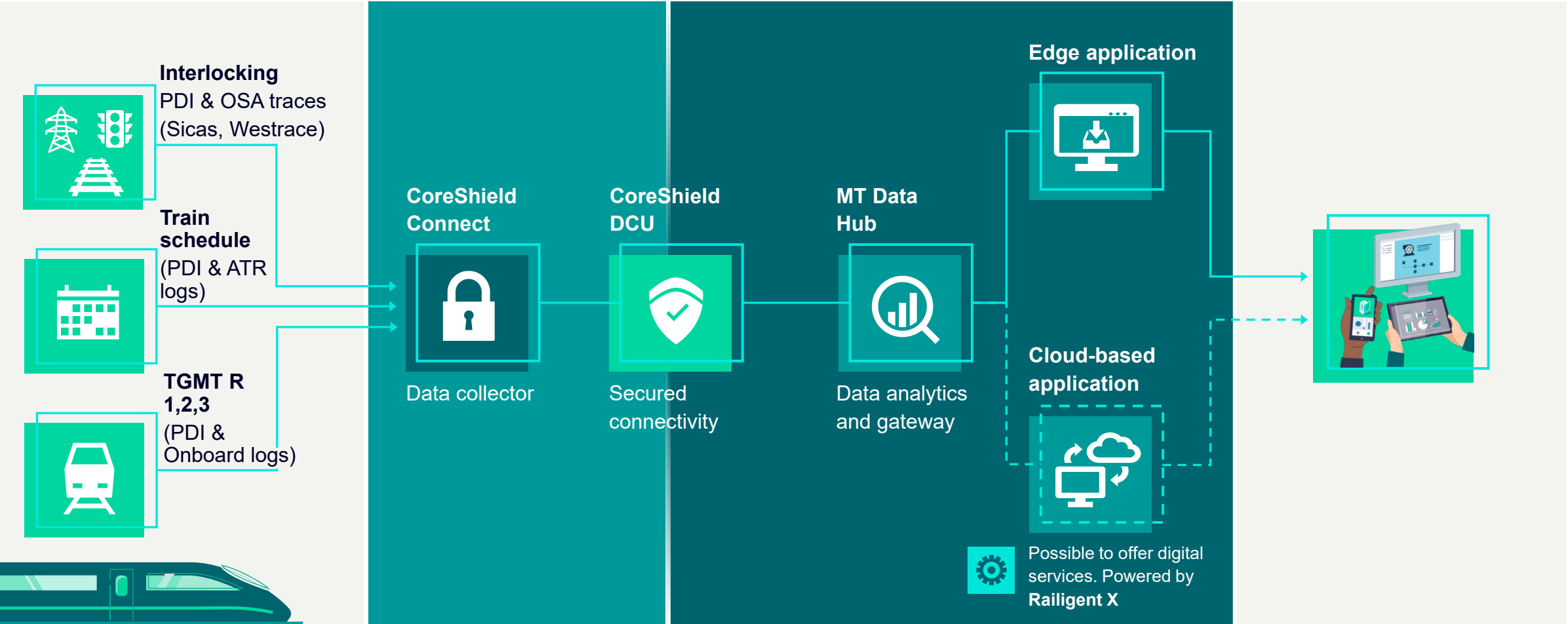
System Architecture

➤ Data sources

➤ System connectivity

➤ Data processing

➤ Output front end



References

Salvador

Brazil

During project execution many alarms were triggered per day due to two wrong cable connections. This would have not been discovered that fast without using **RailXplore ARCS**.



References

Copenhagen

Denmark

RailXplore ARCS revised the occurrence of emergency brakes and checked all the missed stopping points, to produce quick and accurate analysis and statistic reports that otherwise would have taken hours. With this, the customer saved time and gained valuable data.

RailXplore ARCS also analyzed the behaviour regarding speed and acceleration to calculate all the necessary parameters and provided the customer with easy visualization of the data so that an optimization of the trips could be performed.



References

Istanbul

Turkey

During project execution, the customer noticed some balise failures, but could not identify accurately which were affected. **RailXplore ARCS** helped to identify quickly which balise was causing the problem. After solving the problem for this balise, new data has been analyzed, in order to make sure that the failures were fixed.



| Contact

Theresa Pancini Fitzek

Product Lifecycle Manager

Siemens Mobility GmbH

SMO RI MT PDI DSI

Ackerstr. 22

38126 Braunschweig

Germany

Mobile: +49 173 6841395

E-mail: theresa.pancini_fitzek@siemens.com

Disclaimer

© Siemens 2022

Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.

All product designations may be trademarks or other rights of Siemens AG, its affiliated companies or other companies whose use by third parties for their own purposes could violate the rights of the respective owner.