

# HOW TO BE UPDATED WITH THE PROGRESS OR COLLABORATE WITH HERMES RAILWAY DEVELOPMENT?

- ▶ If you want just to be informed- It is possible to be part of the HERMES RAILWAY Interest Group.
- ▶ If you want to be involved in the development as a possible demonstration case It is possible to be part of the HERMES RAILWAY Demonstration Group.
- ▶ If you want to collaborate in the development – It is possible to be part of the HERMES RAILWAY Core Group.

## FOR MORE INFORMATION CONTACT:

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**Hermes**  
**Railway**  
Maintenance  
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## WHO IS SUPPORTING HERMES RAILWAY?

Three complementary organizations are supporting the development of HERMES RAILWAY:

**VIAS**

### VIAS group

A Company within the ACS Group, is one of the leading construction companies in Spain by turnover and profitability, it develops its activity as a general construction company mainly focused on railway. VIAS is currently maintaining more than 3000 km of railway lines (high speed, conventional and metro lines).

[www.vias.es](http://www.vias.es)

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### INYCOM

Inycom is a spanish company providing ICT solutions, services and products to meet the specific needs of their customers, including advanced maintenance management solutions, implemented based on the specific requirements of each industrial sector.

[www.inycom.es](http://www.inycom.es)

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### CEIT-IK4

Ceit-IK4 is research center with more than 30 years of experience in the railway industry. It is one of the most relevant organizations in the European Research Area, and associated member of Shift2Rail Joint Undertaking.

[www.ceit.es](http://www.ceit.es)

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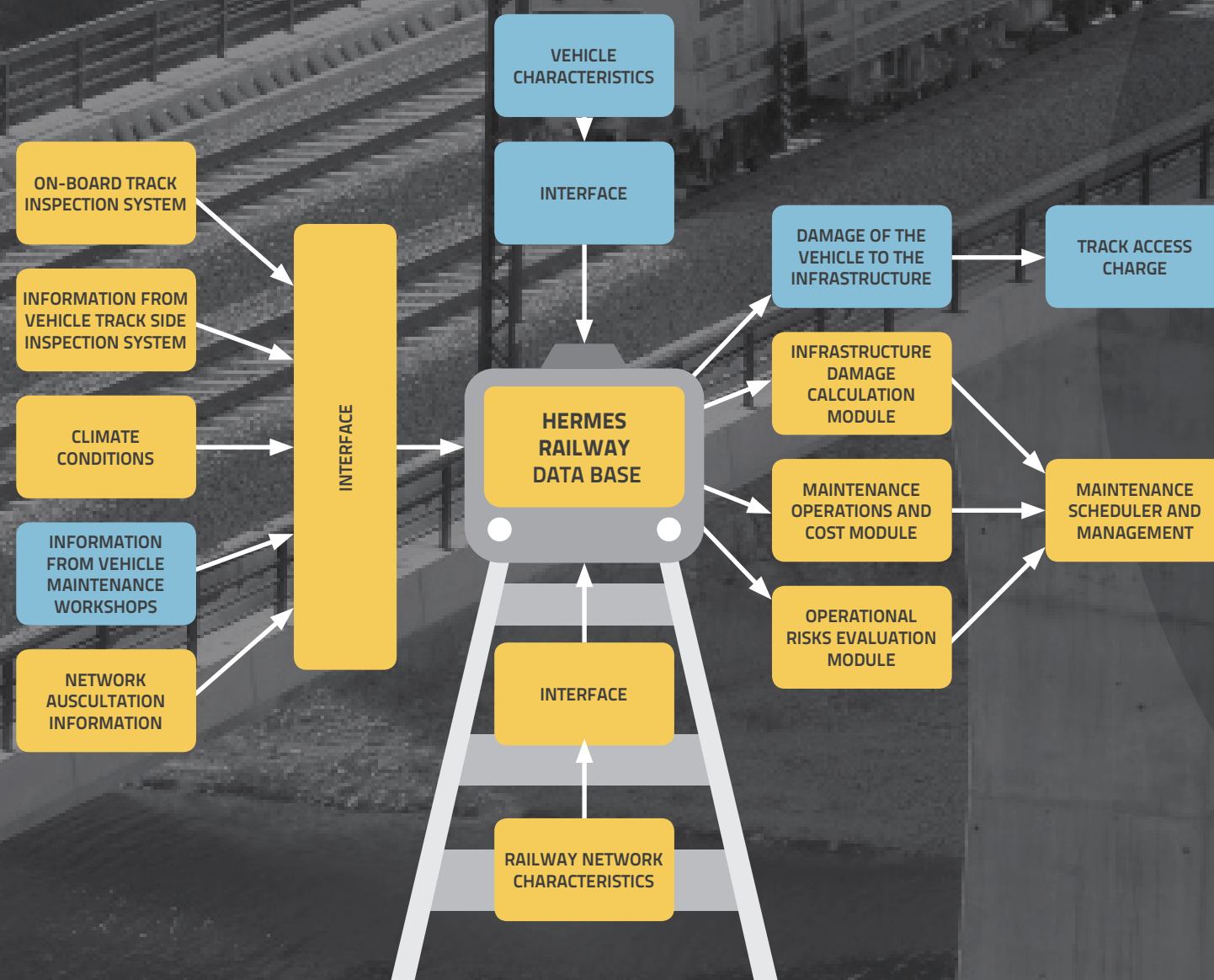
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# WHAT IS HERMES RAILWAY?

HERMES RAILWAY is a tool aimed for the holistic railway infrastructure maintenance with the following characteristics:

- Prediction of infrastructure damage (short term and medium term).
- Maintenance strategy and trade-offs analysis based on RAMS.
- Real time monitoring of infrastructure status.
- Risk analysis of scenarios (service availability, potential hazards, LCC).
- Integration of information from construction, maintenance and operation of the infrastructure.
- Real time management of maintenance works (ticketing service and application for mobile devices).

## OVERALL MODULAR ARCHITECTURE



# WHY HERMES RAILWAY IS DIFFERENT?

- It is not just a SW suite, but a comprehensive IT based maintenance service specifically aimed at advising infrastructure managers.
- It is a modular and scalable solution suitable for small networks and large ones.
- It provides accurate predictions not only based on statistical data but also on physical models of the vehicles running in the network.
- Accurate modelling of maintenance processes.
- Computational models to evaluate risks of maintenance strategies.
- Integration of real time monitoring of infrastructure status based on on-board wheel to rail interaction registration units.
- Integration of IT services (cloud services, cybersecurity, mobile applications).
- Calculation of individual damage of vehicles for Track Access Charge definition.

## HERMES PREMIUM

HERMES PREMIUM is a flexible and interoperable solution oriented to optimize maintenance and support the management of railway infrastructure assets

### HERMES ASSETS



- Infrastructure's assets inventory.
- Management of every component, including their specifications and location in the infrastructure.

### HERMES STATUS



- Status of the infrastructure's assets.
- The module displays in a graphic way the status of each asset. To this end, different KPIs linked to each sub-section are used.

### HERMES MAINTENANCE



- Integral management of maintenance, inspections, operations and resources.
- Visualization, creation and planning of maintenance, inspections and operations in the infrastructure with the available resources.

### HERMES PREDICT



- Predictive analysis of status of components for configurable timeframes.
- Complement for status of components and maintenance.
- Incorporation of vehicle models, services tables, etc.
- Based on not only historical data analysis but also simulations based on physical models.

### HERMES DASHBOARD



- Visual representation of the status of the infrastructure, composed of different global indicators:
- Probability analysis of potential hazards.
  - Probability of service failures.
  - Cost of maintenance actions.
  - Remaining lifetime of the infrastructure.