Objective

IN2SMART represents the 1st proposal of the Shift2Rail members referred, according to MAAP, to the following Technology Demonstrators (TDs): TD3.7 Railway Information Measuring and Monitoring System (RIMMS), TD3.6 Dynamic Railway Information Management System (DRIMS) and TD3.8 Intelligent Asset Management Strategies (IAMS). These TDs will deploy an overall concept for Intelligent Asset Management based on the following three main interlinked layers:

• Measuring and Monitoring systems to collect data from the field related to the railway assets status: IN2SMART will develop unmanned systems for “remote” monitoring; track geometry, switches & crossings and signalling monitoring systems; innovative measurement of train parameters and wheel defects combined with rolling stock identifications systems.

• Data management, data mining and data analytics procedures to process data from the field and from other sources: IN2SMART will develop standard open interfaces to
access heterogeneous maintenance-related data; analytic tools to automatic detect anomalies, discover and describe maintenance workflow processes and predict railway assets decay towards prescriptive maintenance.

- Degradation models and decision making tools to support maintenance strategies and execution: IN2SMART will lay the foundation of a generic framework for asset management and decision support process. This framework will specify the scope, objectives, workflow and outcomes of the decision-making process for maintenance interventions planning, and will be the enabler for the development of future decision support tools and systems. IN2SMART will also develop an optimised tamping tool and a robot platform for maintenance works.

IN2SMART will complement the work of the IN2RAIL lighthouse project to reach a homogeneous TRL4/5 demonstrator. The following Grant will start from IN2SMART to reach the final Integrated Technology Demonstrators that will deploy the overall concept of Intelligent Asset Management.

**Fields of science**

> > > >

*Programme(s)*

**Topic(s)**

**Call for proposal**

H2020-S2RJU-CFM-2016-01-1

**Funding Scheme**

Shift2Rail-RIA - Research and Innovation action

**Coordinator**

HITACHI RAIL STS SPA

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### Participants (22)

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<td>€ 733 260</td>
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<td>Other</td>
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SIEMENS AKTIENGESELLSCHAFT
Germany
EU contribution
€ 184 650

Address
Werner-von-siemens-str. 1
80333 Munchen

Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Website
Contact the organisation

THALES GROUND TRANSPORTATION SYSTEMS UK LTD
United Kingdom
EU contribution
€ 288 881,25

Address
350 Longwater Avenue, Green Park
RG2 6GF Reading

Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

Contact the organisation

TRAFIKVERKET - TRV
Sweden
EU contribution
€ 773 256,25

Address
Roda Vagen 1
781 89 Borlange

Activity type
Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Website
Contact the organisation

DEUTSCHE BAHN AG
Germany
EU contribution
€ 466 937,50

Address
Potsdamer Platz 2
10785 Berlin

Activity type
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(excluding Higher or Secondary Education Establishments)
INFRAESTRUTURAS DE PORTUGAL SA

Portugal
EU contribution
€ 37 870,61
Address
Praca Da Portagem
2809 013 Lisboa
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Website
Contact the organisation

STRUKTON RAIL BV

Netherlands
EU contribution
€ 766 590
Address
Westkanaaldijk 2
3542 DA Utrecht
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Website
Contact the organisation

CENTRO DE ESTUDIOS DE MATERIALES Y CONTROL DE OBRA SA

Spain
EU contribution
€ 184 426,25
Address
Calle Benaque 9
29004 Malaga
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Website
Contact the organisation

DEUTSCHES ZENTRUM FUR LUFT - UND RAUMFAHRT EV

Germany
EU contribution
FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.
Germany
EU contribution
€ 239 976,25
Address
Hansastrasse 27C
80686 Munchen
Activity type
Research Organisations
Website
Contact the organisation

ACCIONA CONSTRUCCION SA
Spain
EU contribution
€ 53 327,50
Address
Avenida De Europa 18 Parque Empresarial
28108 Alcobendas
Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)
Website
Contact the organisation

SNCF RESEAU
France
EU contribution
€ 653 186,25
Address
15-17 Rue Jean-philippe Rameau
93418 La Plaine Saint-denis
Activity type
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