IntegRail

INTElligent inteGration of RAILway systems

Sustainable Surface Transport

Project Number FP6 012526

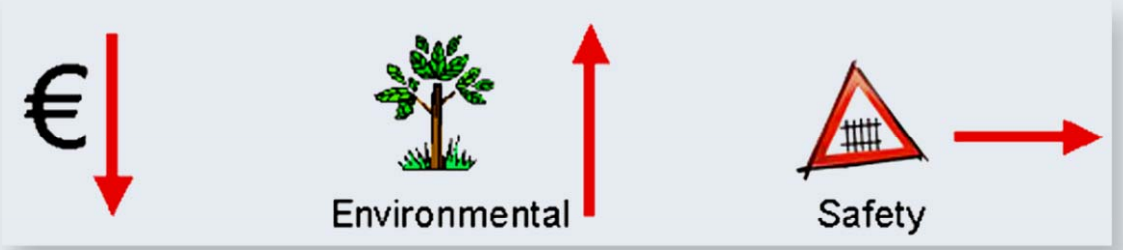
Project Presentation

IGR-I-IQM-024-09

ERRAC Vision at 2020

- ***To cope with the increased transport demand in Europe, railways must:***
  - *Triple rail market volumes**
  - *Double rail market share*: 15% for freight and 12% for passengers*

*compared to the year 2000



Facts and Figures

- *Duration: 48 Months*
- *Commencement Date: January 1st, 2005*
- *Partners: 39 from 10 EU Countries + Chile*
- *Budget: about € 20 million*
- *EC Contribution: about € 11 million*
- *Labour Effort: more than 1500 Person Months*

InteGRail consortium

OFFIS
ALSTOM
RÉSEAU FERRÉ DE FRANCE
NORTEL NETWORKS
BUSINESS WITHOUT BOUNDARIES
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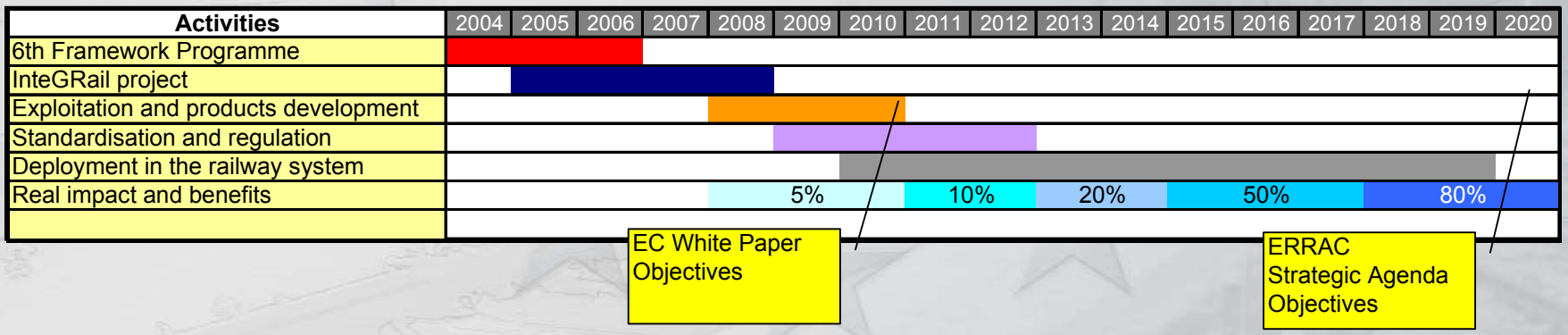
... always a Jump ahea
AnsaldoBreda
Strukton Rail
SNCF
CAF
FAR SYSTEMS
INRETS
TSB FAV
FORSCHUNGS- UND ANWENDUNGSVERBUND VERKEHRSSYSTEMTECHNIK BERLIN
THE UNIVERSITY OF BIRMINGHAM
seebyte
wireless future
telecommunications & software
MÁV
Network Rail
adif
ADMINISTRADOR DE INFRAESTRUCTURAS FERROVIARIAS
ProRail
KORRIDOR XL
large quality line
connecting a new europe
UniControls
industrial and Transport Control Systems
DeltaRail
LABORATORI FONDAZIONE GUGLIELMO MARCONI
D'APPOLONIA
engineering consulting company
BOMBARDIER
HERIOT WATT UNIVERSITY
AnsaldoSTS
imec
SIEMENS
uic
INTERNATIONAL UNION OF RAILWAYS
televic
TRENITALIA
DEUTA-WERKE
MER MEC
ATOC
ASSOCIATION of TRAIN OPERATING COMPANIES
RFI
CMM
CENTRO DE MODELAMIENTO MATEMATICO

InteGRail Mission Statement

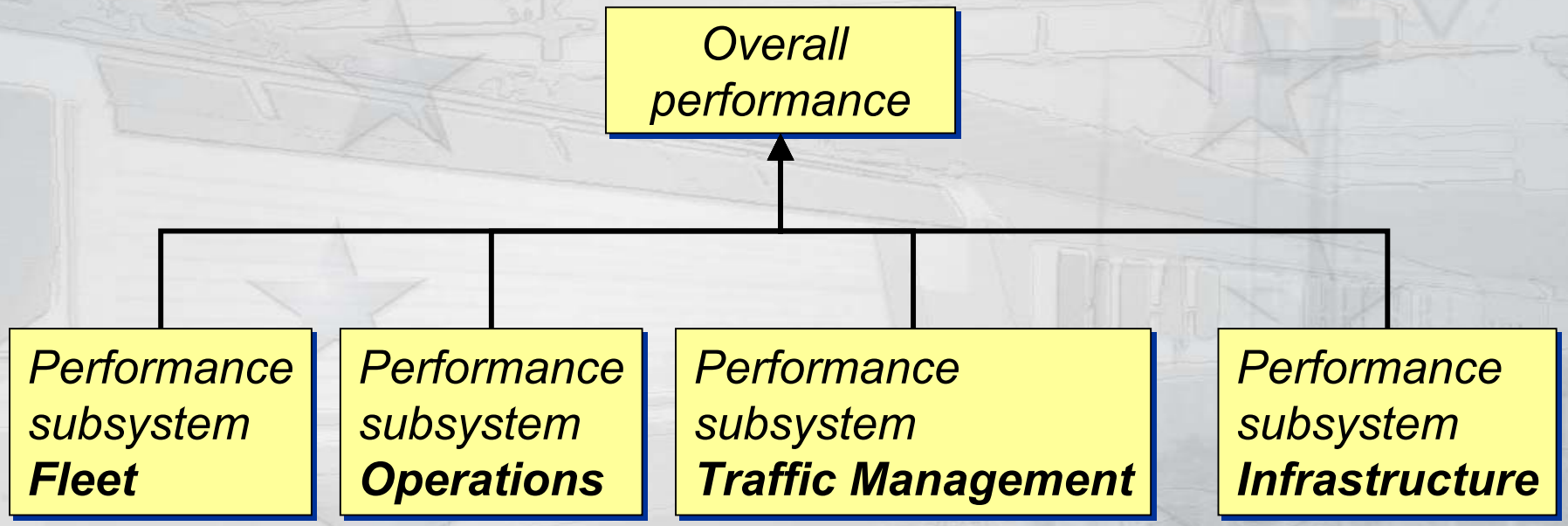
InteGRail aims at creating a holistic, coherent information system, integrating the major railway sub-systems, in order to achieve higher levels of performance of the railway system in terms of capacity, average speed and punctuality, safety and the optimised usage of resources.
Building on results achieved by previous projects, InteGRail will propose new intelligent procedures and will contribute to the definition of new standards, in compliance with EC directives and TSI's.

InteGRail expected impact

- *Improve reliability by up to 50% for targeted systems by optimised maintenance*
- *30% availability improvement and irregularities reductions*
- *Reducing maintenance costs by 10%*
- *InteGRail could bring up to 5% increase in punctuality*
- *Contribute to increased capacity in line with ERRAC objectives.*



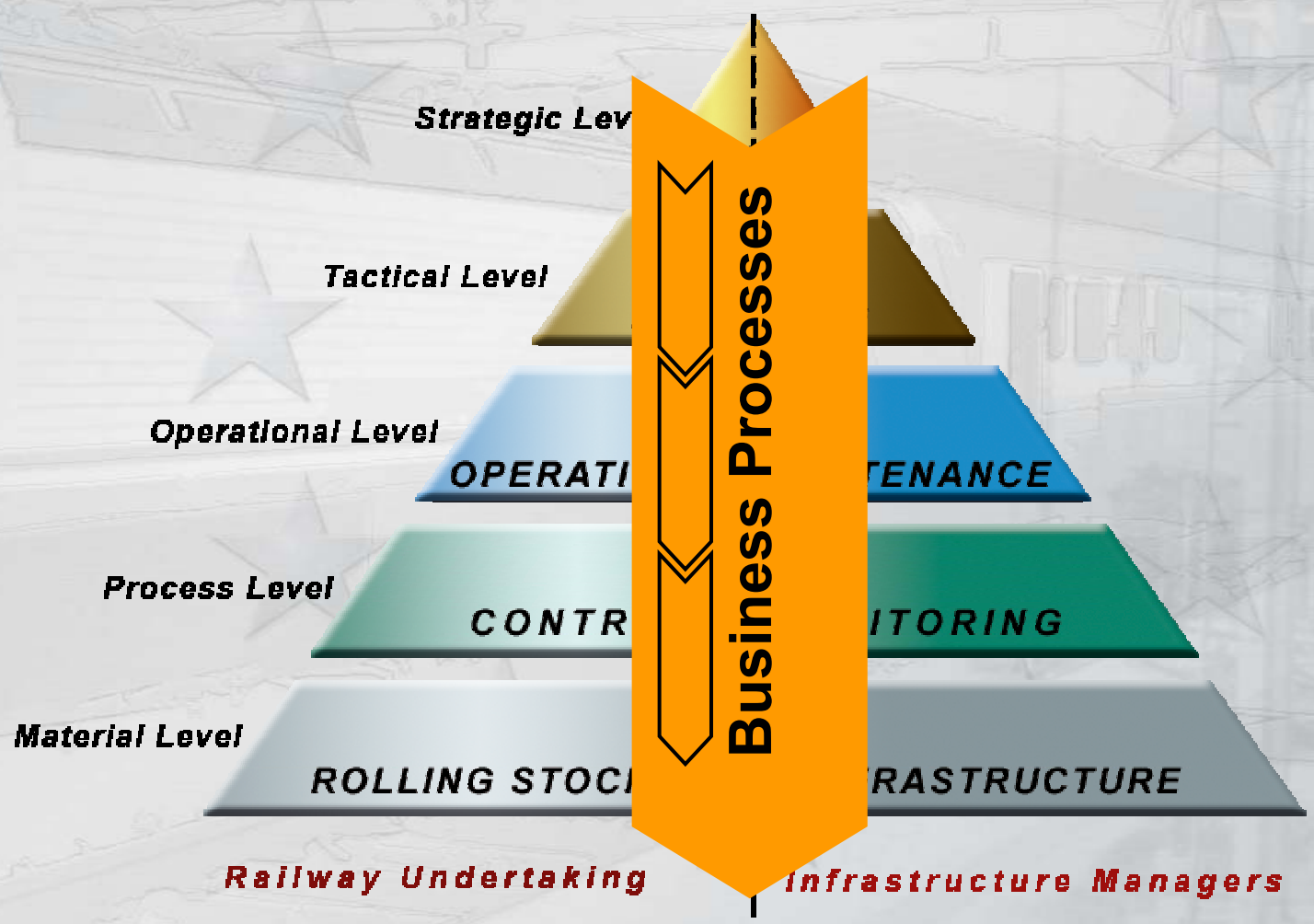
InteGRail approach



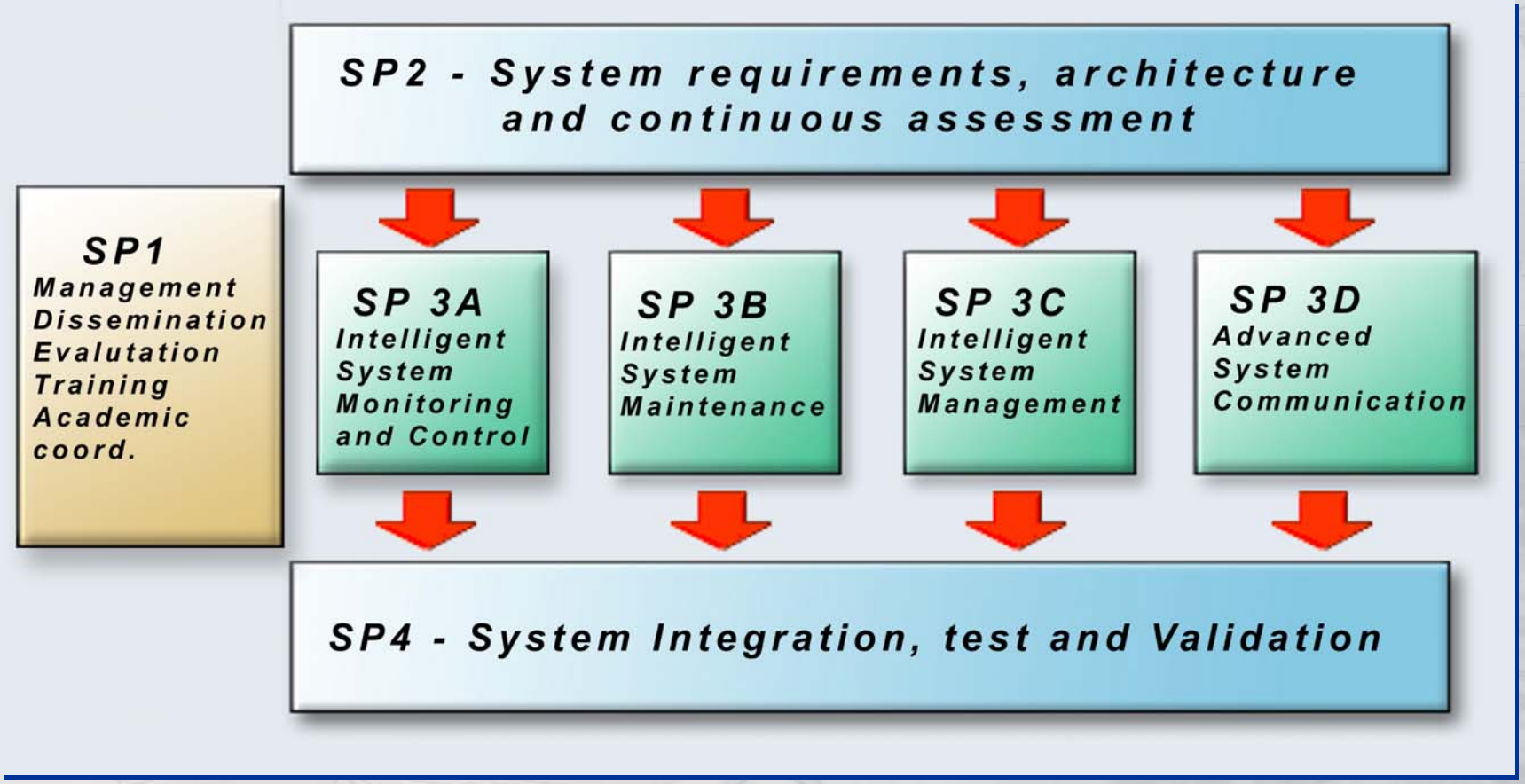
Key Performance Indicator examples:

Fleet	Operations	Traffic Management	Infrastructure
Reliability	Punctuality	Punctuality	Reliability
Availability	Timetable Realisation	Timetable Realisation	Availability
Maintainability	Safety	....	Maintainability
Safety	....		Safety
....			....

Business model



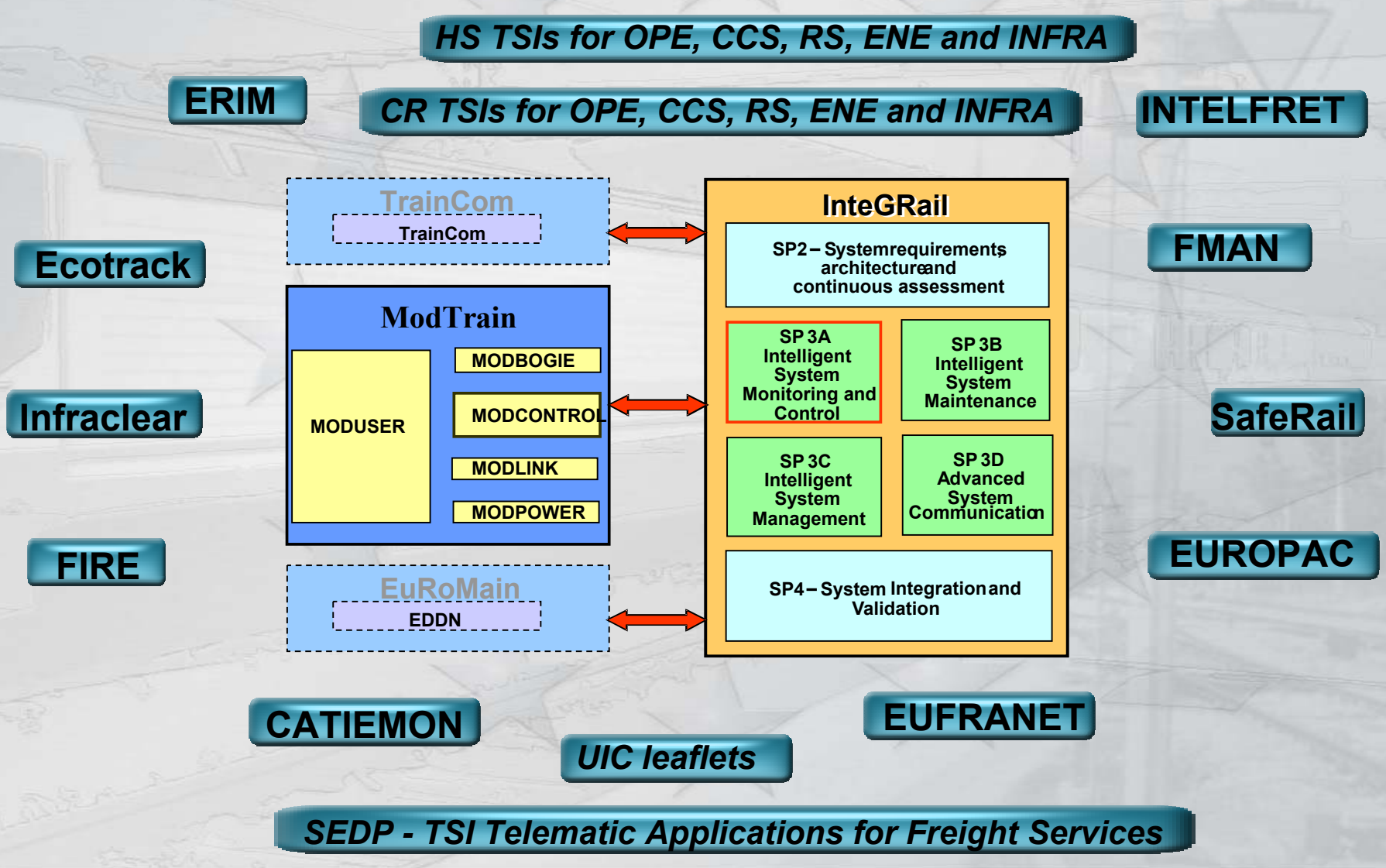
Project Structure



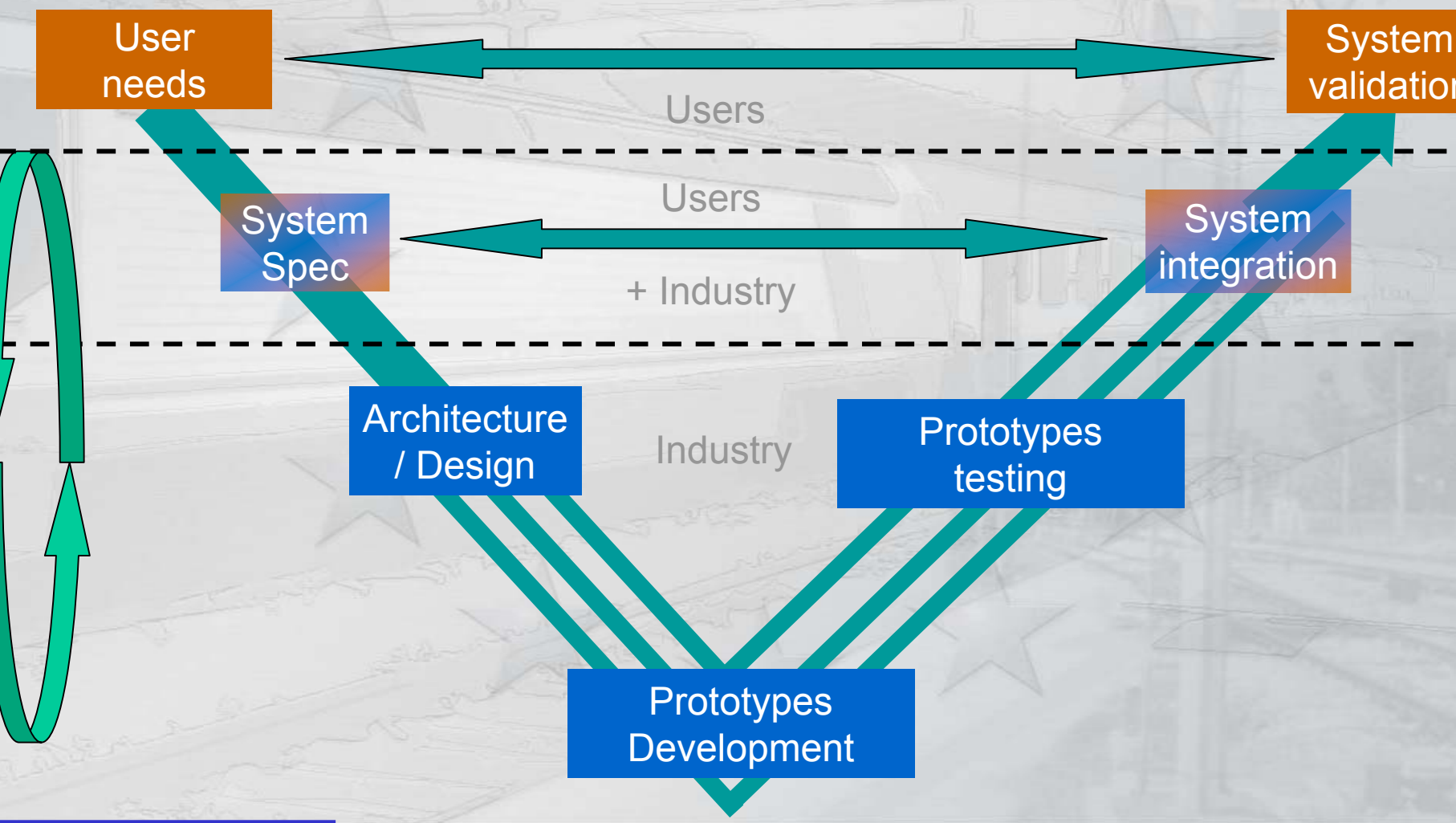
InteGRail remit

- *InteGRail will enable information to be shared within the Railway World to enable optimisation of decision making for improved performance.*
- *It will identify the information that is needed to be shared (SP2)*
- *It will ensure that the right information can be obtained (SP3A)*
- *It will identify ways of using the information more effectively for maintenance optimisation (SP3B)*
- *It will identify ways of combining and using information effectively for management requirements (SP3C)*
- *It will ensure that the information can be transmitted effectively to the decision makers. (SP3D)*
- *It will demonstrate that creating the right information and sharing it will enable performance improvement (SP4)*
- *InteGRail will NOT replace existing systems. It will be used in conjunction with existing systems.*

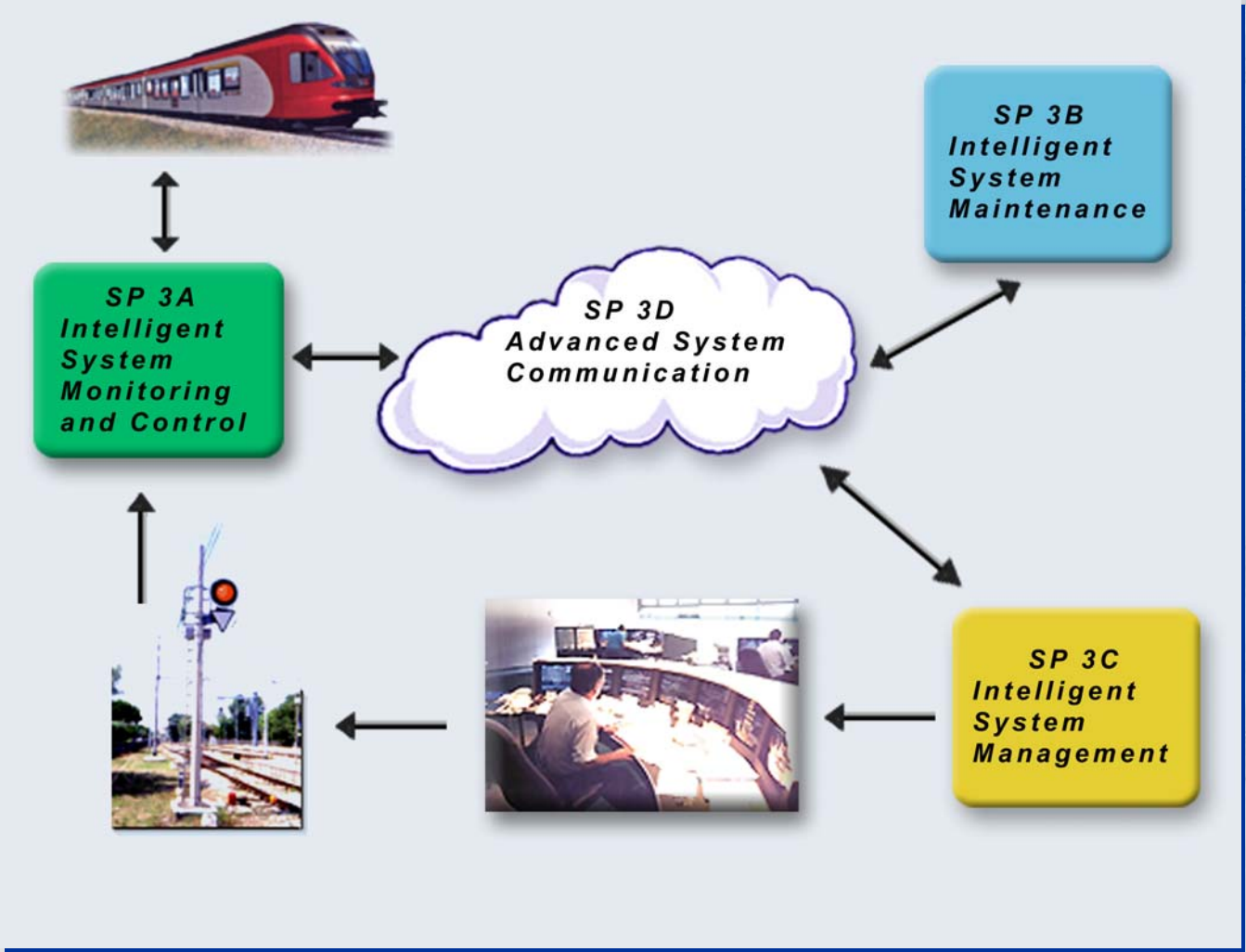
InteGRail Scope: The System Context



Project Process



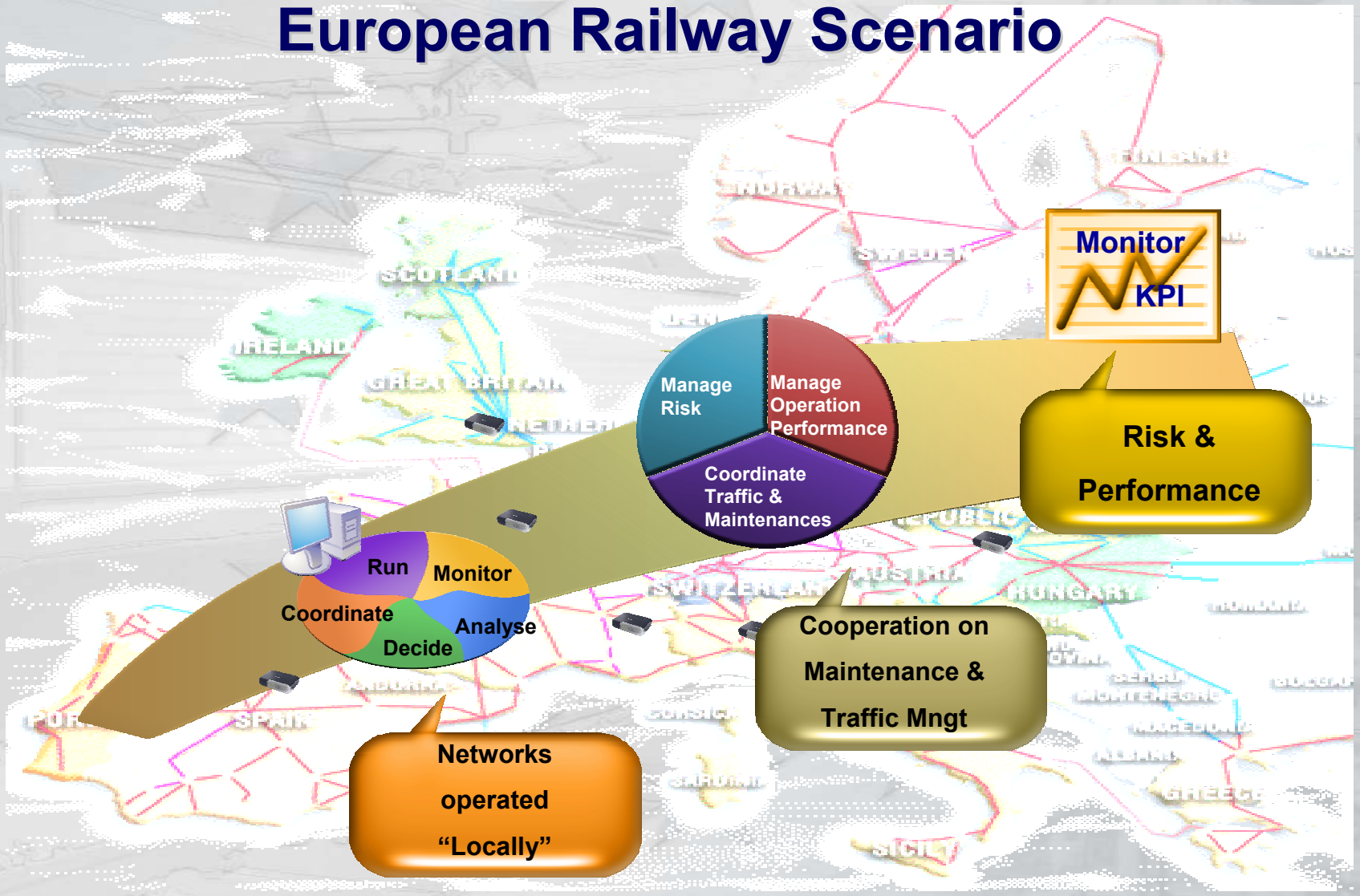
Cooperation between subprojects



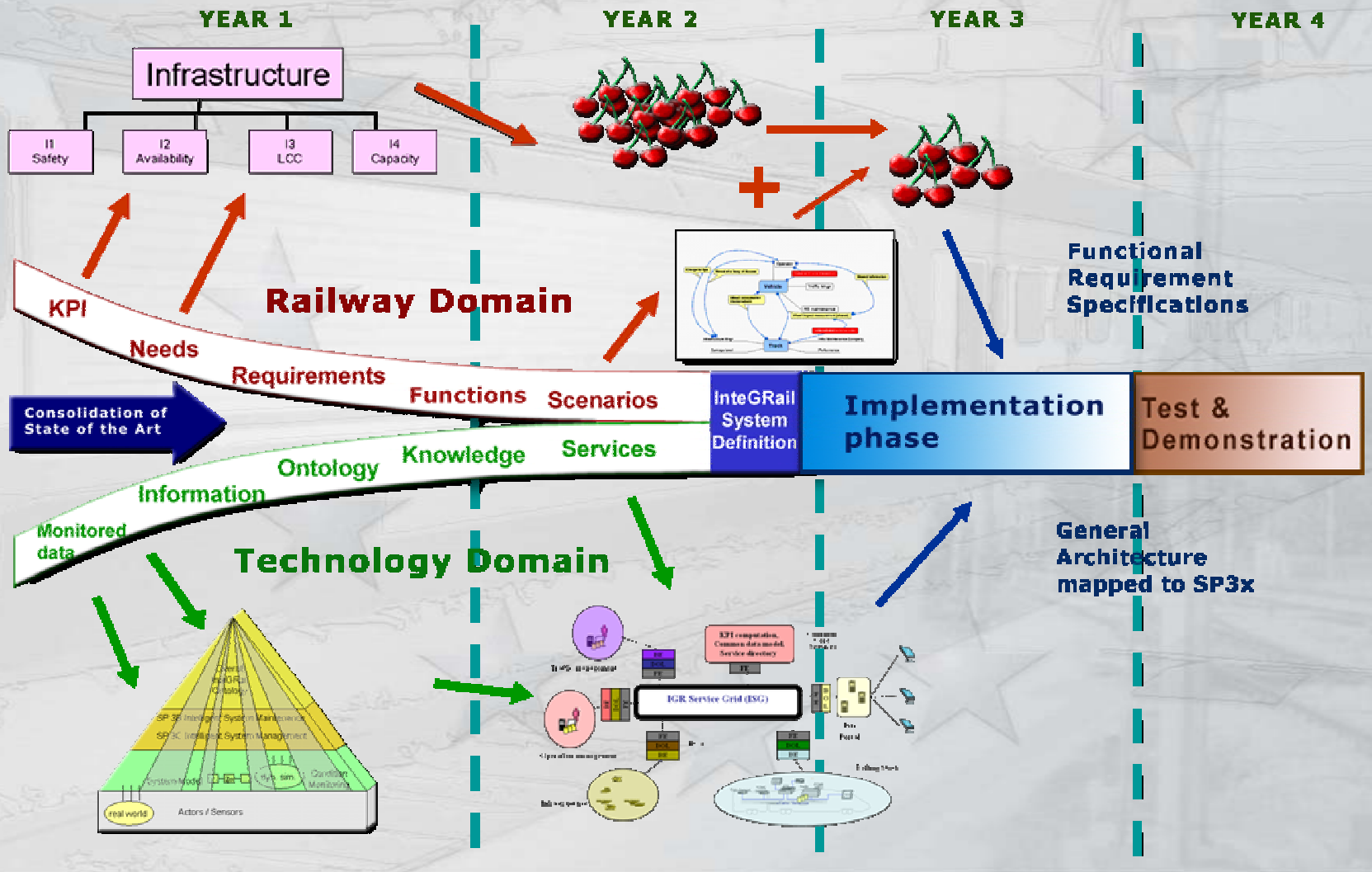
InteGRail general deliverables

- *InteGRail will deliver the specification of a standard platform and protocol in order to interface existing or new information systems, so as to enable exchanging key information between subsystems, which are needed to improve the performance of the railway system.*
- *To have the RIGHT information in the RIGHT place at the RIGHT time.*
  - *1 – Specification of information sharing*
  - *2 – Development of a protocol language as standard using Ontology and QoS oriented Telecom resources*

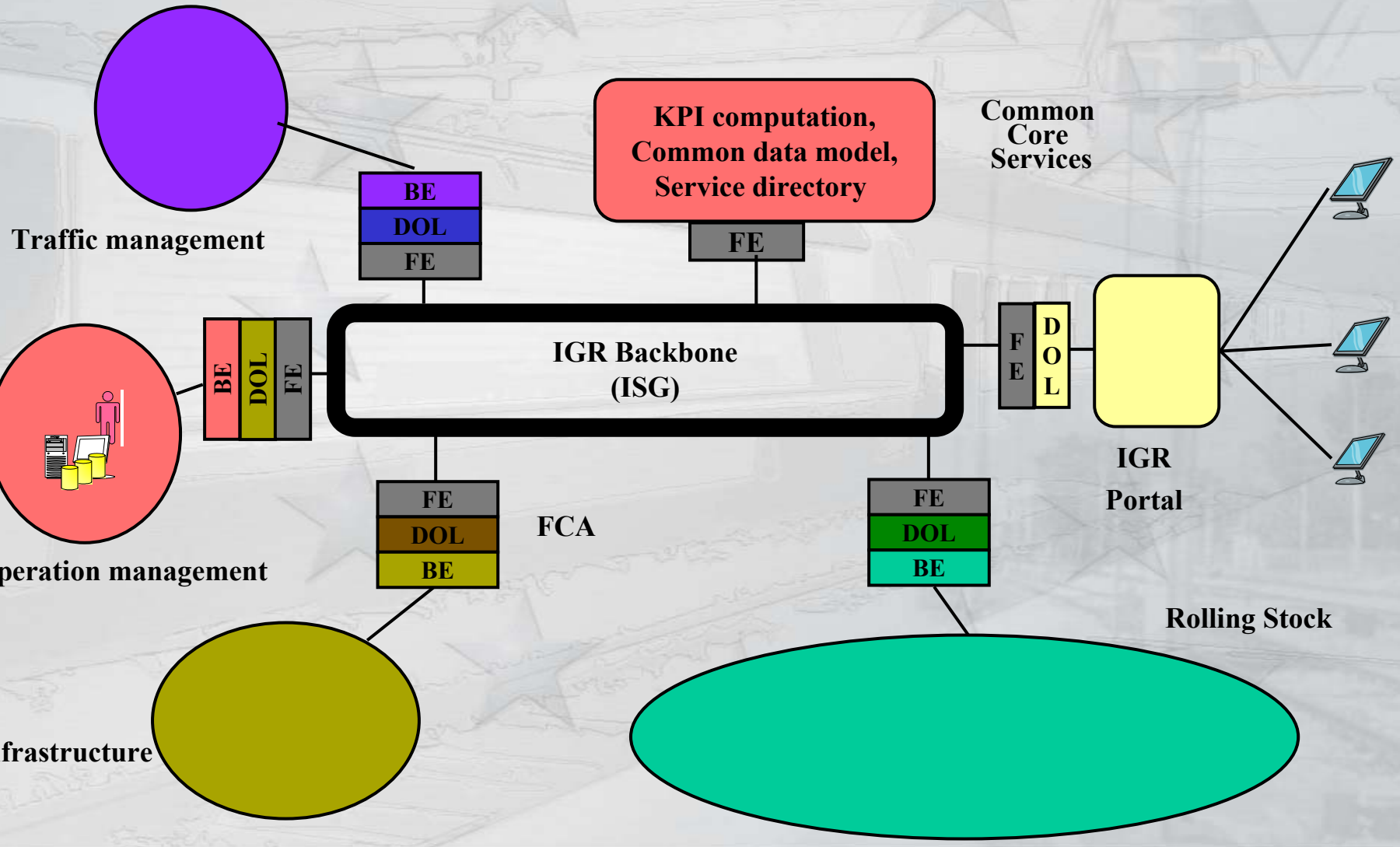
InteGRail Scope: European Railway Scenario



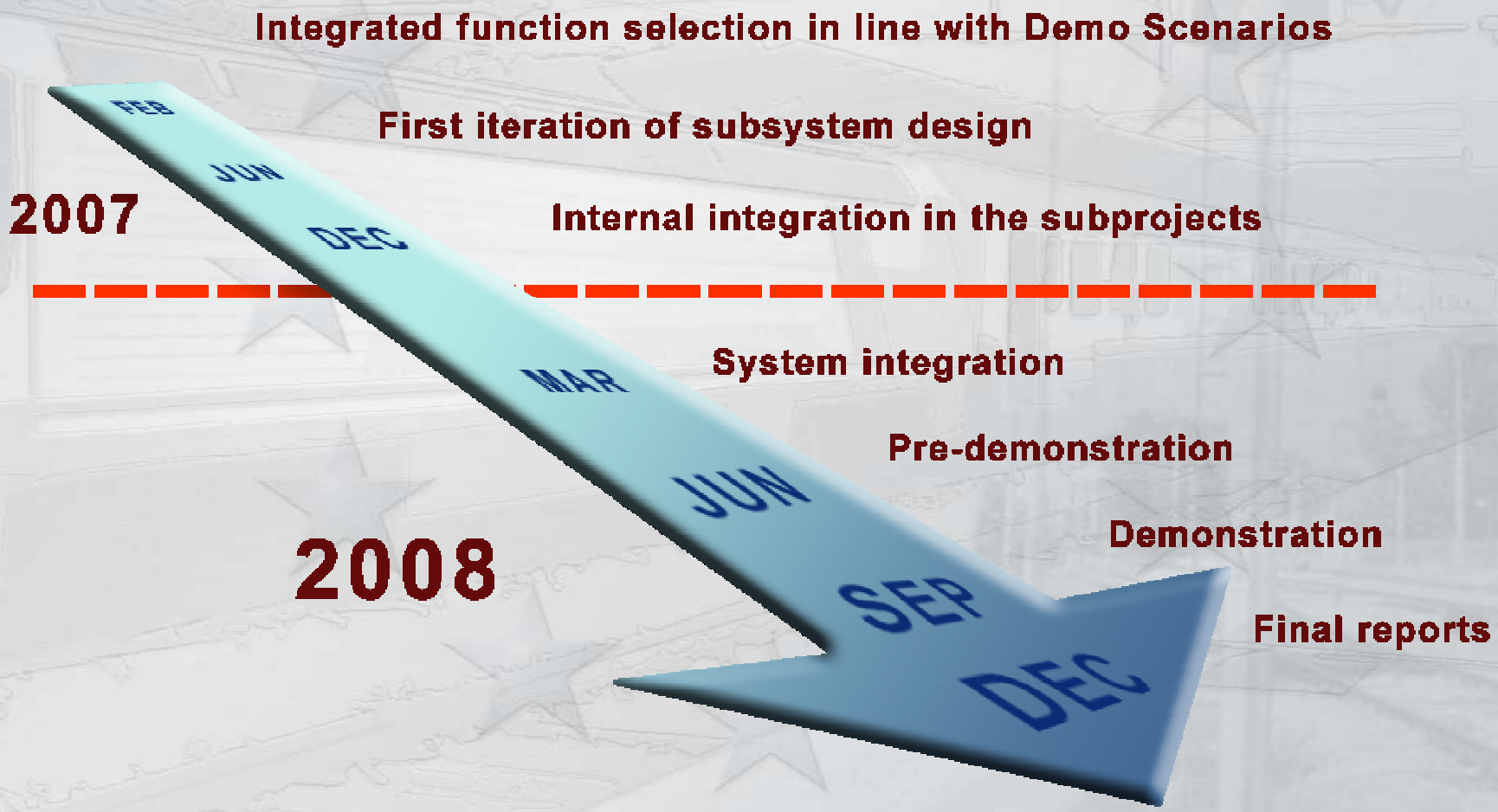
The converging process



Generic system architecture viewpoint



The way ahead



Conclusion

- *InteGRail: an integrated system for integrated railways*

Thank you for your kind attention

More information on: *www.integrail.info*