



Workshop
The MANUFUTURE Platform
 Milan, October 20th, 2004



Platform "RAIL TRANSPORT"
 presentation by

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Platform "rail transport"
VISION

Rail Transport

Future oriented industry , focused to offer a
 More attractive, affordable, safe, clean, reliable Transport mode

through key success factors:

Products Innovation , Harmonisation , Interoperability

for

Creating a single European Railway system without tech. & operational barriers

Releasing economies of scale and delivering high quality services

Increasing competitiveness and achieving a modal shift

EU drives the innovation and harmonisation process through
 several initiatives, legislation and measures :

European Rail Agency (ERA)

Directives on Interoperability for High speed & Conventional rail

Directive on Safety

Directive on urban rail


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Platform "rail transport"
STRATEGIC AGENDA

Rail Research Priorities


6 main lines of research

Interoperability
Concept development and demonstration of the benefits of harmonised services, to speed the implementation of directives

Intelligent Mobility
for interoperable IT & Signaling systems

Safety & Security
for accelerating conformity acceptance :
Introduction of new approval techniques and facilities, capable of maintaining existing high level of safety & security

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STRATEGIC AGENDA

Rail Research Priorities

Environmental issues
Noise and Vibration attenuation techniques
Electromagnetic emission reduction
CO2 and toxic emission reduction
Recycling of materials in manufacture and refurbishment
Energy efficiency and alternative sources

Innovative materials and manufacturing techniques
To allow : strenght optimization , weight reduction, fire resistance, manufacturing costs reduction, maintenance cost reduction, potential to recycle
for
Lower whole life cycle costs of the transport system

Production methods
Common design codes, common tools for virtual certification process,...




Platform "rail transport"
PLATFORM GOVERNANCE

ERRAC - European Rail Research Advisory Council :
It's the instrument for defining and fostering Strategic rail
Research in Europe
Participants : EC, Member States, European Association of Rail
Industries, European Associations of Railways

SRRA 2020– Strategic Rail Research Agenda :
It's the main product delivered and updated by ERRAC to drive
Joint Rail Research activities,
Giving a vision for 2020, the scenario, the objectives and the
priorities for the growing of the rail mode

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Platform "platform title"
**Synergies & complementarities with
the Manufacture Platform**

**Innovative Materials & Manufacturing techniques is
a transversal research priority , supporting other rail strategic priorities**

Expected benefits
lower whole life cycle costs of rail products

Expected contribution
expertise from other industries and application (aeronautics, aerospace, maritime,..)

Issues of interest for rail sector
Joining Technology (metallic, ceramic, polymer) by welding, adhesive,...
Friction Stir welding for long panels
Surface protection and material removal
Composite materials
Sandwich panel laser-welded for structural application
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