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Hitachi's research focus on Smart Mobility: An overview

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Mission:

Create business innovation amidst uncertainty

Global Center for Social Innovation (CSI)

Create service business by accelerating collaborative creation

550

Center for Technology Innovation (CTI)

Build-up technology platforms for Service & Product business growth

2,050

Center for Exploratory Research (CER)

Challenge future societal issues through open innovation

100

Total 2,700

“Co-Creation” approach

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Customer

CSI

Front BU

Share visions with customers

Create new concept

Develop prototype

Assess at customer sites

Go-to-Market

Lumada

NEXPERIENCE
•Ethnography
•Cyber-PoC, etc.

Lumada use case

Customer value

Solution core

Enabler

Big data

Infrastructure

CTI technologies

Hitachi Insight Group

PoC: Proof of Concept, BU: Business unit

Hitachi global research network and CSI-Europe

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CSI-Europe

Co-create solutions in transportation, industry, energy and healthcare to resolve issues of matured societies

Rail	Automotive	Industry	Energy	Healthcare
				
Rolling stocks Maintenance	Connected autonomous driving	Smart manufacturing	Smart energy	Hospital efficiency

NA: North America

Private vehicle

Societal issues

- Urbanization
- Traffic congestion
- Pollution
- Population growth
- Natural resources
- ⋮

Multi modal transport

- High speed rail
- Electric vehicle
- Traffic management
- Connected car
- Integrated ticketing
- Autonomous driving
- On-demand transport
- Journey planning
- Real time transport info.

Traffic congestion could be reduced by **20**%
Emissions could be reduced by **10**%
Road accidents could be reduced by **25**%

Railway solution in Europe

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Raise total value of railways by transforming rolling stock, maintenance & operations

Rolling stock/Maintenance

Scalable carriage design

Monitoring standard condition

Optimizing maintenance

Raising efficiency by reliability-centered maintenance

Traffic management system (TMS)

Energy efficient driving

Efficient cars & crew operations

Coordinated cooperation with the field through TMS

Connected autonomous driving in Europe

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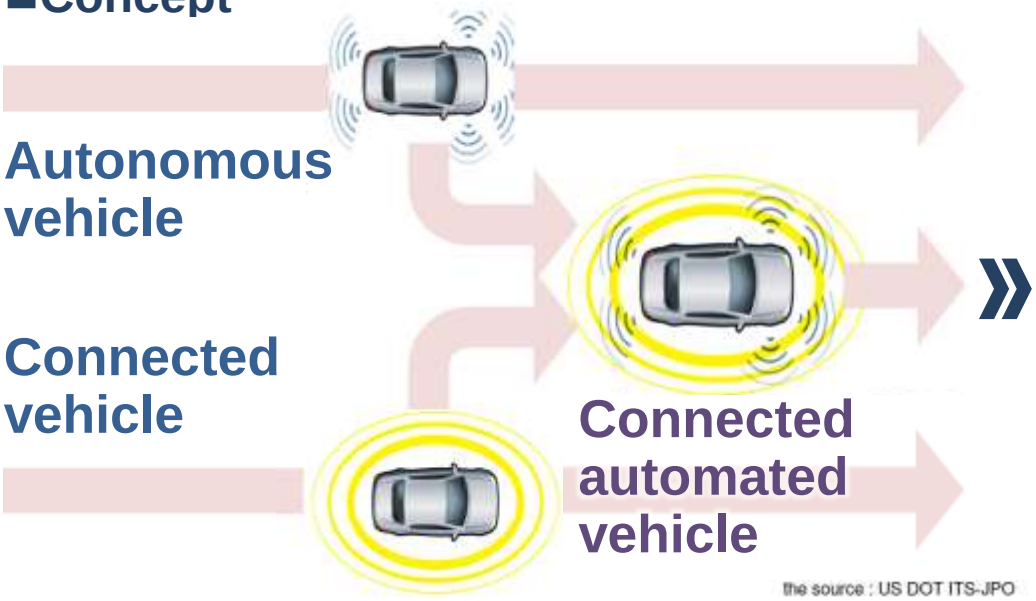
Convergence between autonomous driving and cooperative V2X communications

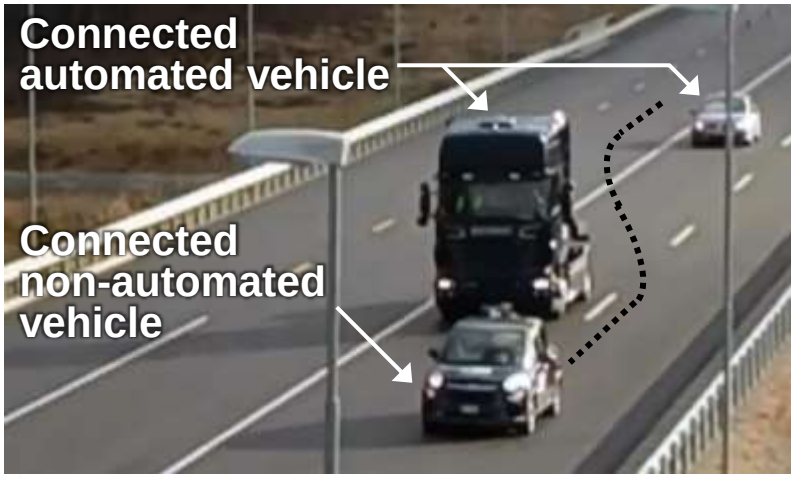
AutoNet 2030

- Hitachi has defined extension to EU standards for V2X communication and contributes to ongoing standardization activities in EU
- Follow-up actions from co-creation/business point of view are ongoing

■Concept



■Proof-of-Concept



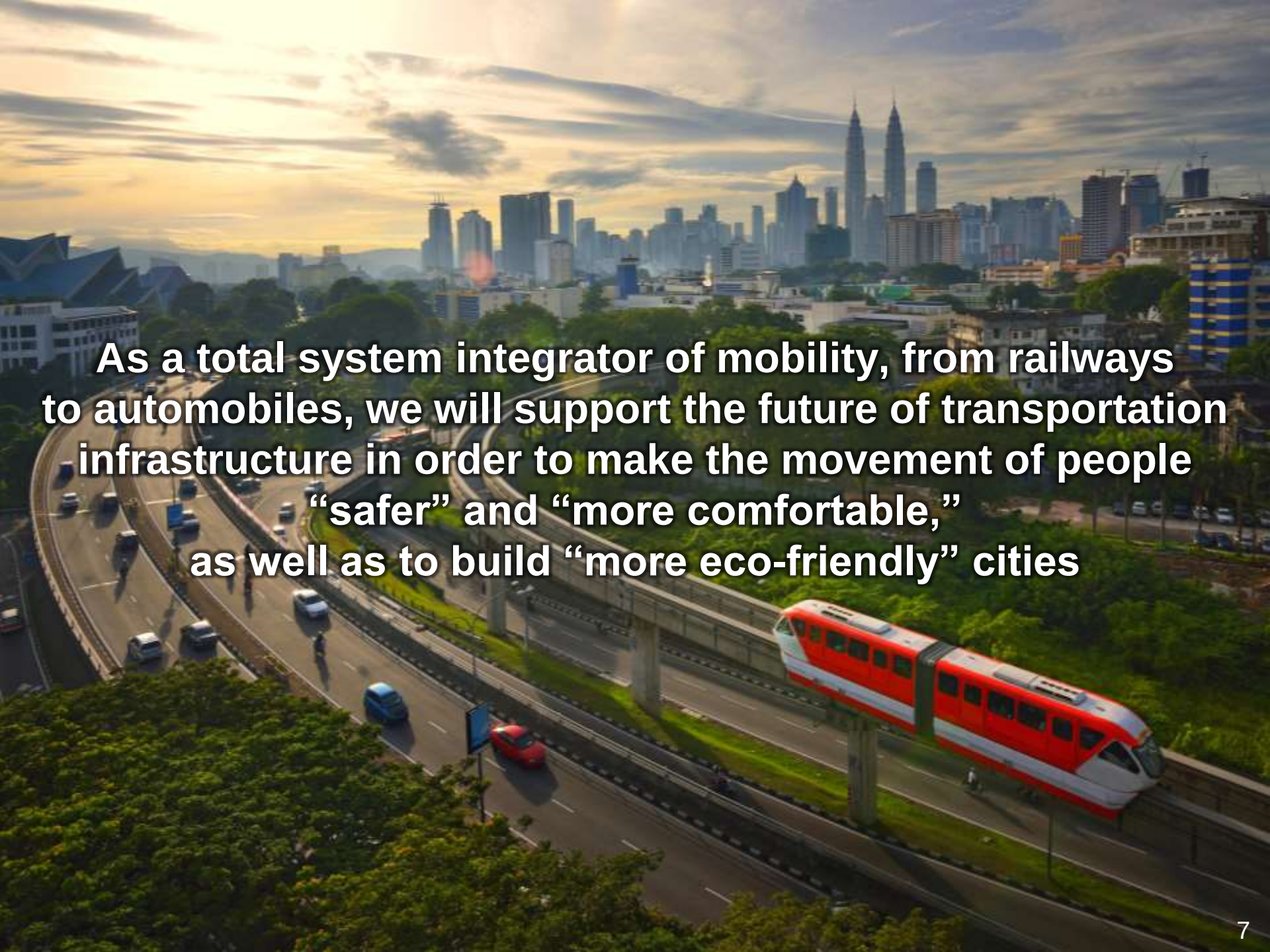
Use case of merging / splitting between automated and non-automated vehicles

AutoNet 2030 core technologies

Improved vehicle control	Enhanced sensing	Extended communication

V2X: Vehicle to X

Hitachi Contributions


As a total system integrator of mobility, from railways
to automobiles, we will support the future of transportation
infrastructure in order to make the movement of people
“safer” and “more comfortable,”
as well as to build “more eco-friendly” cities




An Innovation Partner for the IoT Era

Delivering new value to society through collaborative creation with our customers and partners





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