

interactive



Accident avoidance by active intervention for Intelligent Vehicles

www.interactIVe-ip.eu

interactIVe – Accident avoidance by active intervention for Intelligent Vehicles

Aria Etemad
Volkswagen Group Research

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VOLKSWAGEN

AKTIENGESELLSCHAFT

Project overview: Facts

- Budget: EUR 30 Million
- European Commission: EUR 17 Million
- Duration: 47 months (January 2010 – November 2013)
- Coordinator: Aria Etemad (1/2010 – 4/2013),
Christoph Kessler (5/2013 – 11/2013)
Ford Research and Advanced Engineering Europe
- 10 Countries: Czech Republic, Finland, France, Germany,
Greece, Italy, Spain, Sweden, The Netherlands,
UK



European Commission
Information Society and Media



Consortium

- OEMs



- Suppliers



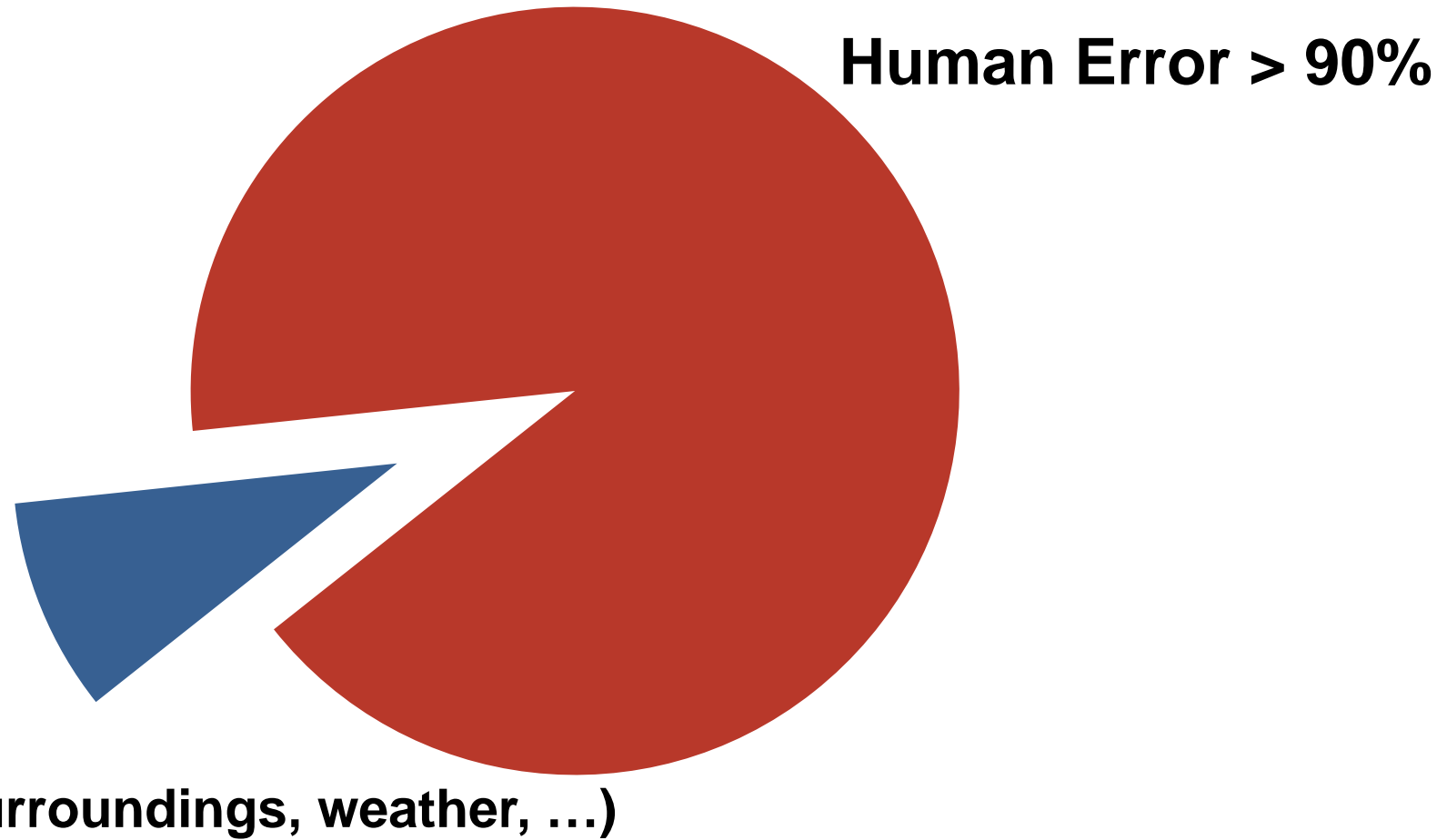
- Research



- SMEs



Causes of accidents



Source: GIDAS Database

Mission

The interactive vision:
Accident-free traffic and systems contributing to active safety in all vehicles.

- **Overcome the obstacle of independent functions and high system costs:**
 - Integrated solutions
 - Affordable systems
- **Consider all vehicle classes:**
 - Build up seven demonstrator vehicles: six passenger cars & one truck

Research concept

Normal Driving



SECONDS

Continuous driver support



Increasing Hazard



INCA

Collision avoidance support



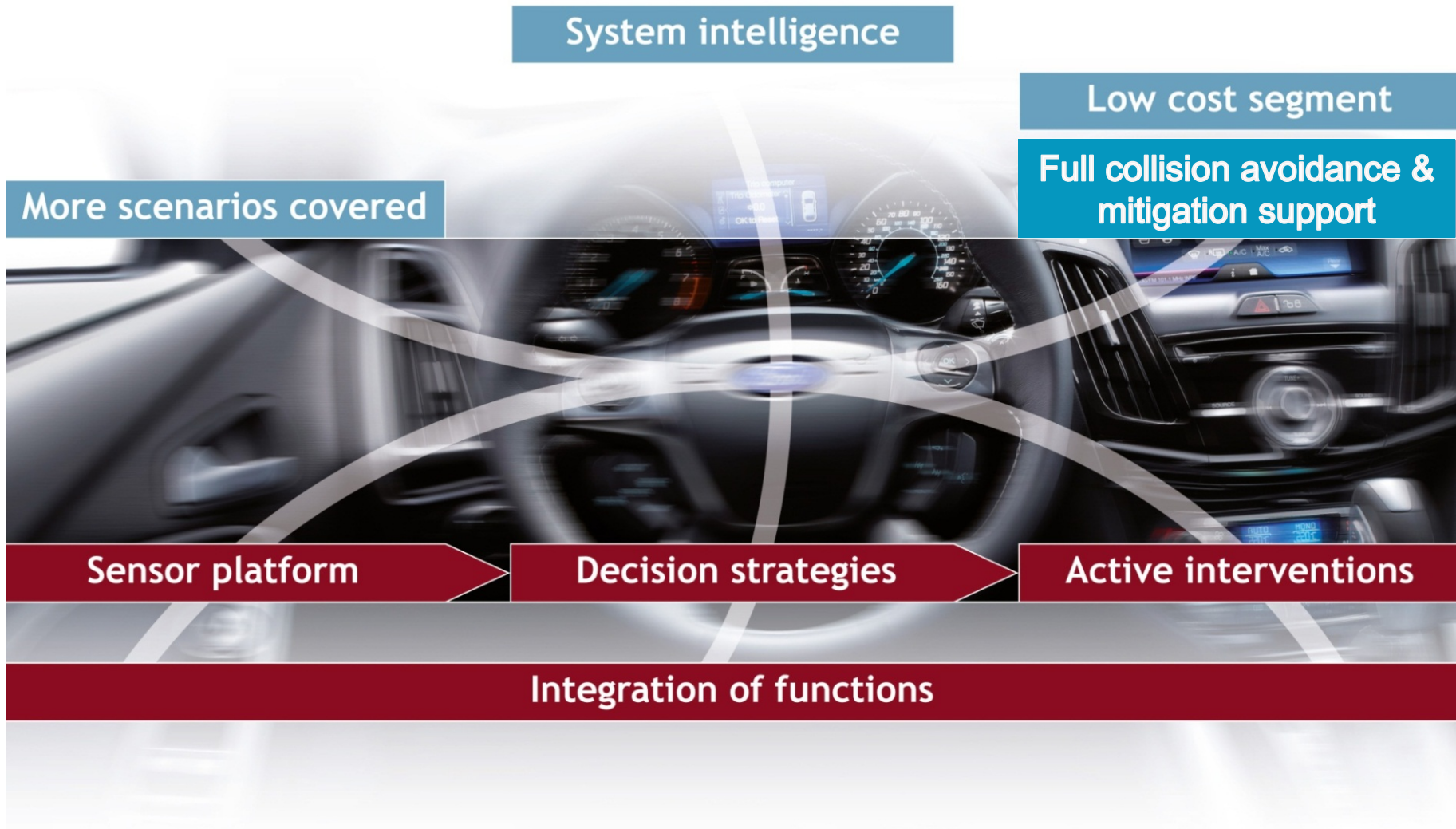
Crash



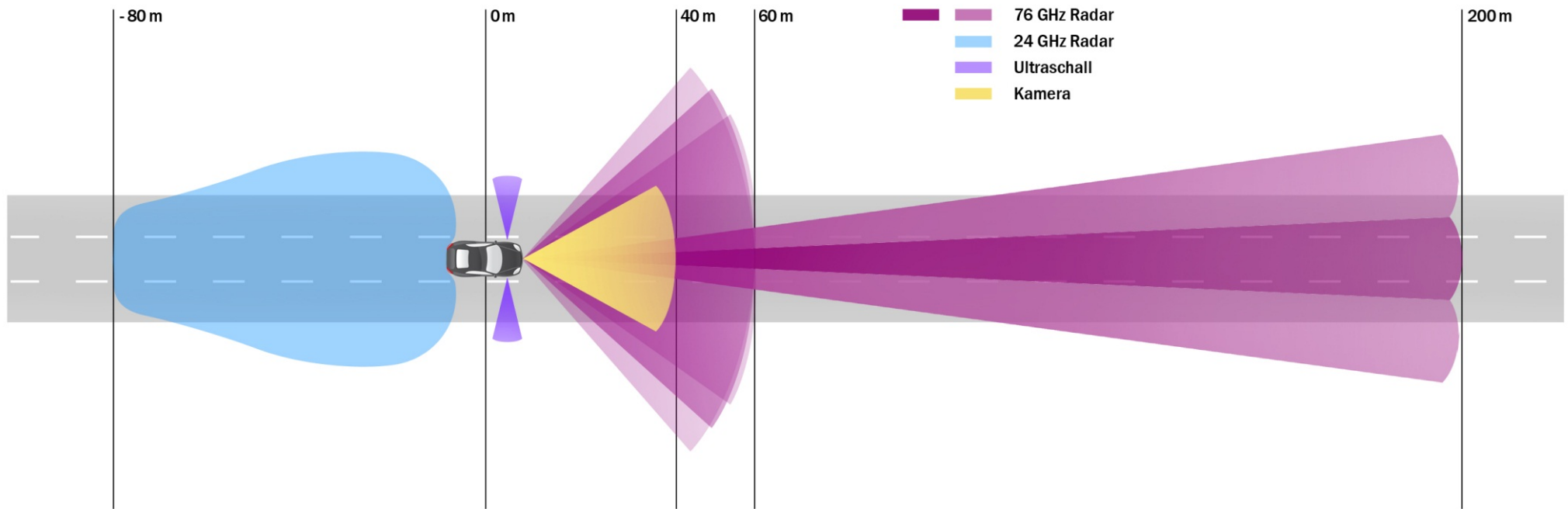
EMIC

Collision mitigation support

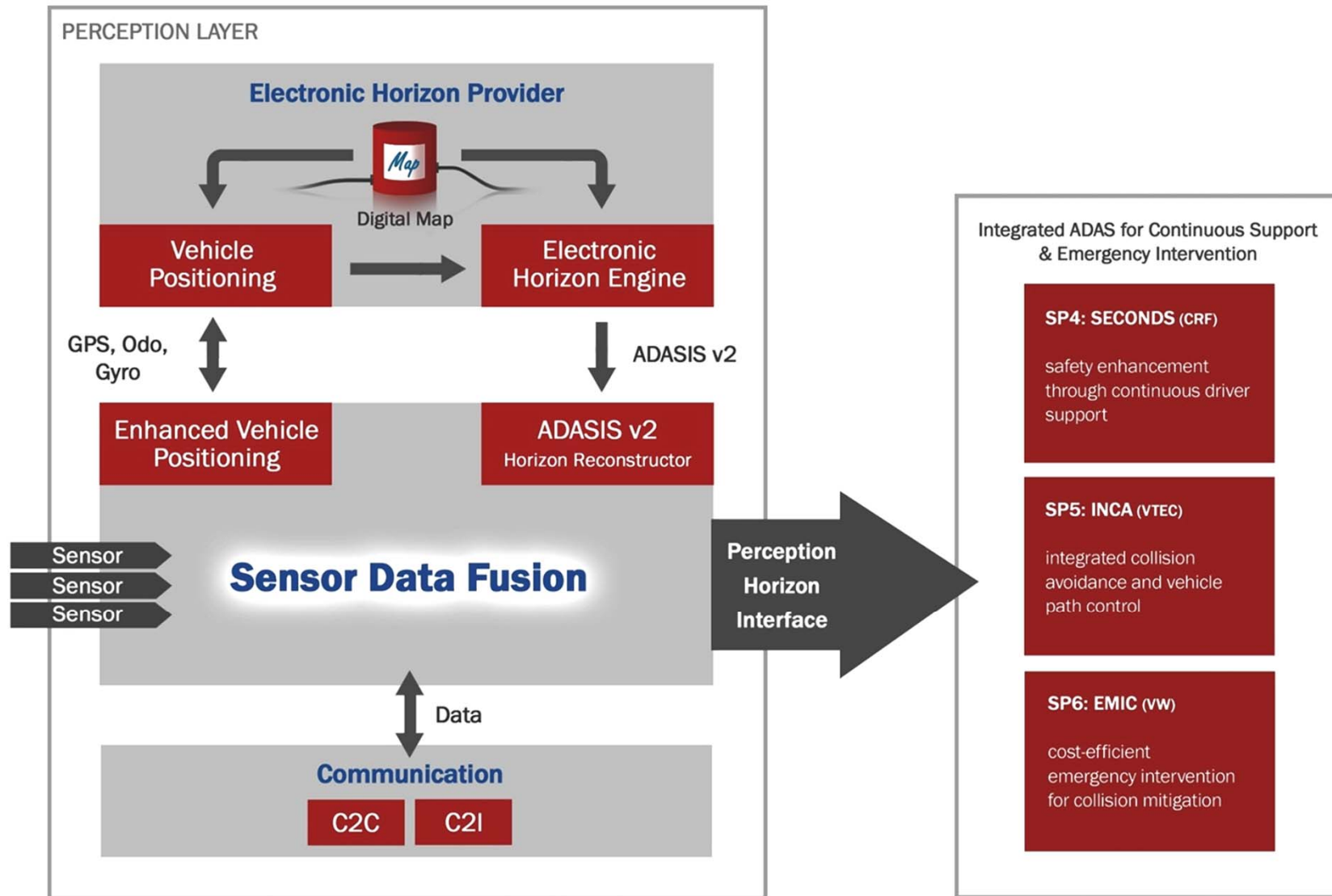
Objectives



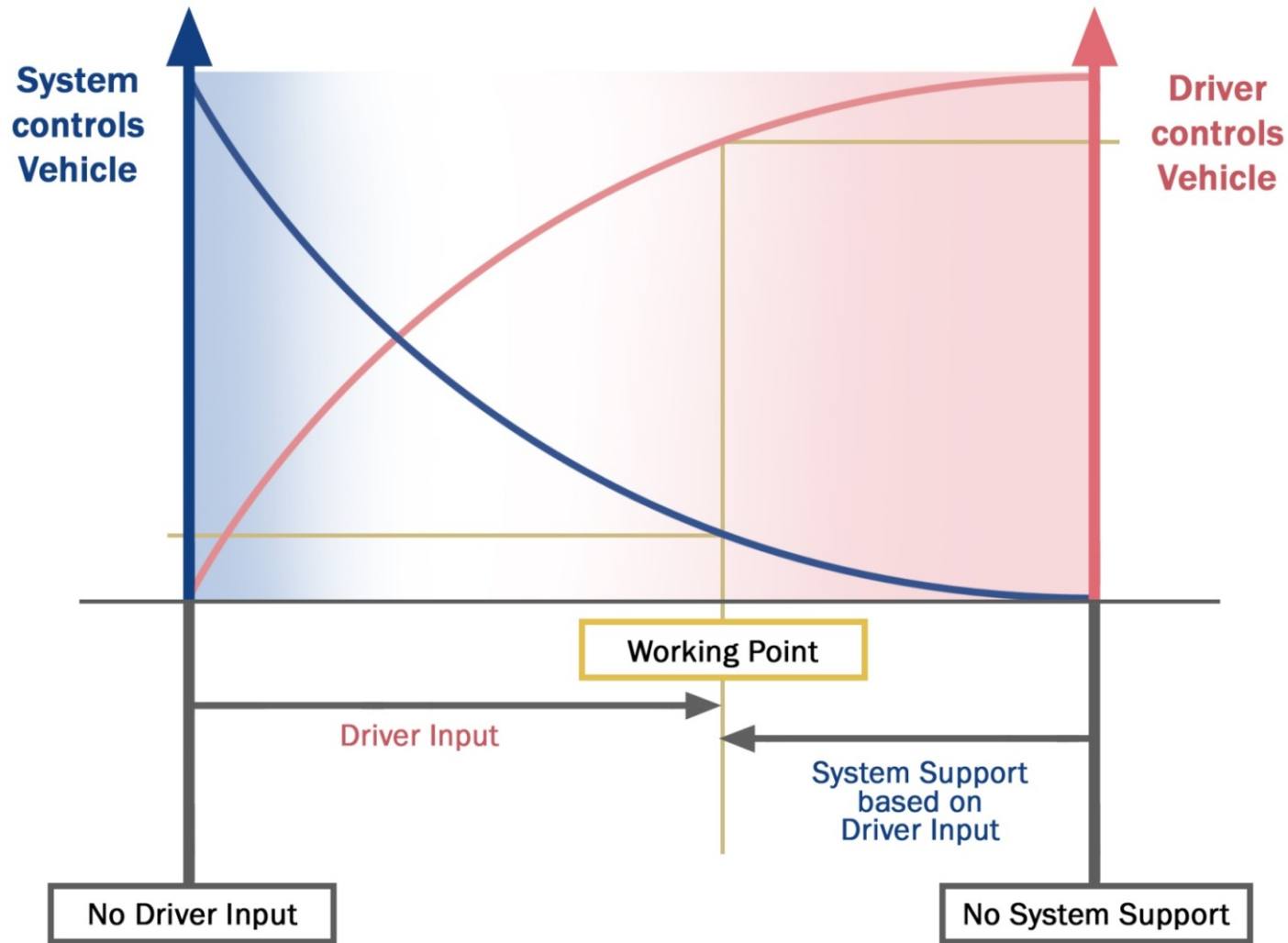
Sensor concept



Perception



Support: splitting driving task between driver and vehicle



Project structure

Sub-project 1: **Integrated project (IP) management**



Integrated advanced driver assistance systems (ADAS) for continuous support and emergency intervention

Sub-project 2: **Perception**

Specifications for sensor interfaces and fusion modules

DELPHI



Sub-project 3: **Information, warning and intervention (IWI) strategies**

Definition of use cases and requirements | Specifications for IWI strategies

VOLVO

Sub-project 4: **SECONDS**

Safety enhancement through continuous driver support



Sub-project 5: **INCA**

Integrated collision avoidance and vehicle path control

VOLVO

Sub-project 6: **EMIC**

Cost-efficient emergency intervention for collision mitigation

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Seven demonstrator vehicles: six passenger cars and one truck

Sub-project 7: **Evaluation and legal aspects**

Test and evaluation framework for interactive applications | Analysis of legal aspects



Seven demonstrator vehicles

SECONDS

INCA

EMIC

BMW

Enhanced dynamic pass predictor



Fiat

Continuous support with focus on haptic HMI solutions



Volvo car

Collision avoidance, continuous support and SafeCruise



Ford

Collision avoidance, continuous haptic support and automated driving



Volvo truck

Collision avoidance and run-off road prevention by braking and steering, stability considerations for heavy vehicles



VW

Collision mitigation support with focus on cost-efficient sensors and algorithm approach



Conti

Emergency steering assistance with focus on radar/vision combination



Final Event | Don't miss it!

- Joint Final Event with eCoMove Project
- November 20, 2013 Technical presentations & Exhibition in Aachen (Germany)
- November 21, 2013 Demo drives on Ford Proving Ground in Lommel (Belgium)
- Registration: www.interactive-ip.eu/news/project_events

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Thank you.

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