





## 欧州: Horizon 2020 (2014-2020)

### 成長戦略 Europe 2020

- スマートな成長 (情報通信技術、イノベーション、若者の支援)
- 持続可能な成長 (資源効率の高い社会、国際化に対応した産業政策)
- 包括的な成長 (新しいスキルと仕事、貧困対策)

### 科学技術・イノベーション政策 Horizon 2020 (2014-2020)

#### 重点分野

- 卓越した科学技術
  - 産業界のリーダーシップ確保
  - 社会的課題への取り組み
- 総予算 約€80 billion (11兆3千億円)

#### 交通分野 (社会的課題への取り組みの一部)

#### Smart, Green and Integrated Transport

- Mobility for Growth
- Green Vehicles
- Small Business and Fast Track Innovation for Transport

総予算 約€6.3 billion (8,900億円)

2



## 欧州: Horizon 2020 ITS分野2014年度計画

欧州連合 Horizon2020  
交通分野 2014年度予算  
€ 63 million (約89億円)



#### 協調型システム



#### 自動運転



#### 電気自動車と スマートグリッドの融合



3



# 欧州 : AdaptiveIVe

## AdaptIVe

# Automated Driving Applications & Technologies for Intelligent Vehicles

Budget: EUR 25 Million  

European Commission: EUR 14,3 Million

Duration: 42 months (January 2014 – June 2017)

Coordinator: Aria Etemad,  
Volkswagen Group Research

8 Countries: France, Germany, Greece, Italy, Spain, Sweden,  
The Netherlands, UK

出典: Aria Etemad, Volkswagen Group Research,  
17th International Task Force on Vehicle Highway Automation, October 13, 2013



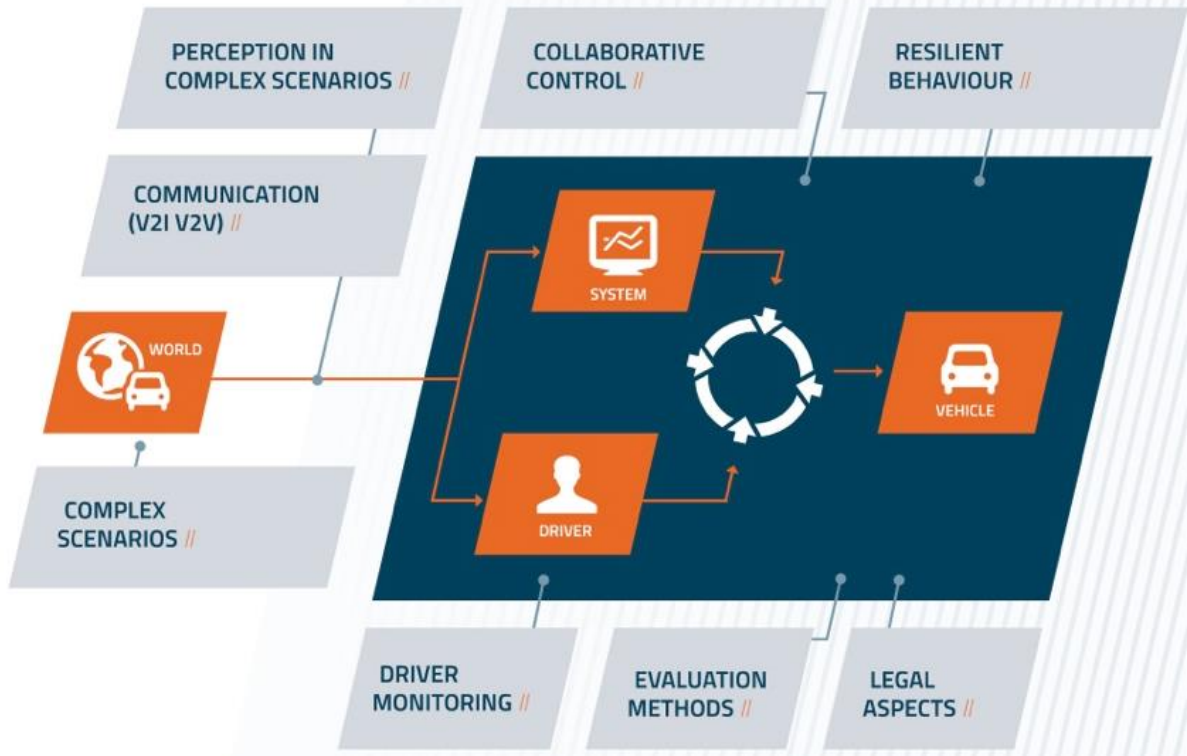
# 欧州 : AdaptiveIVe - Consortium



出典: Aria Etemad, Volkswagen Group Research,  
17th International Task Force on Vehicle Highway Automation, October 13, 2013



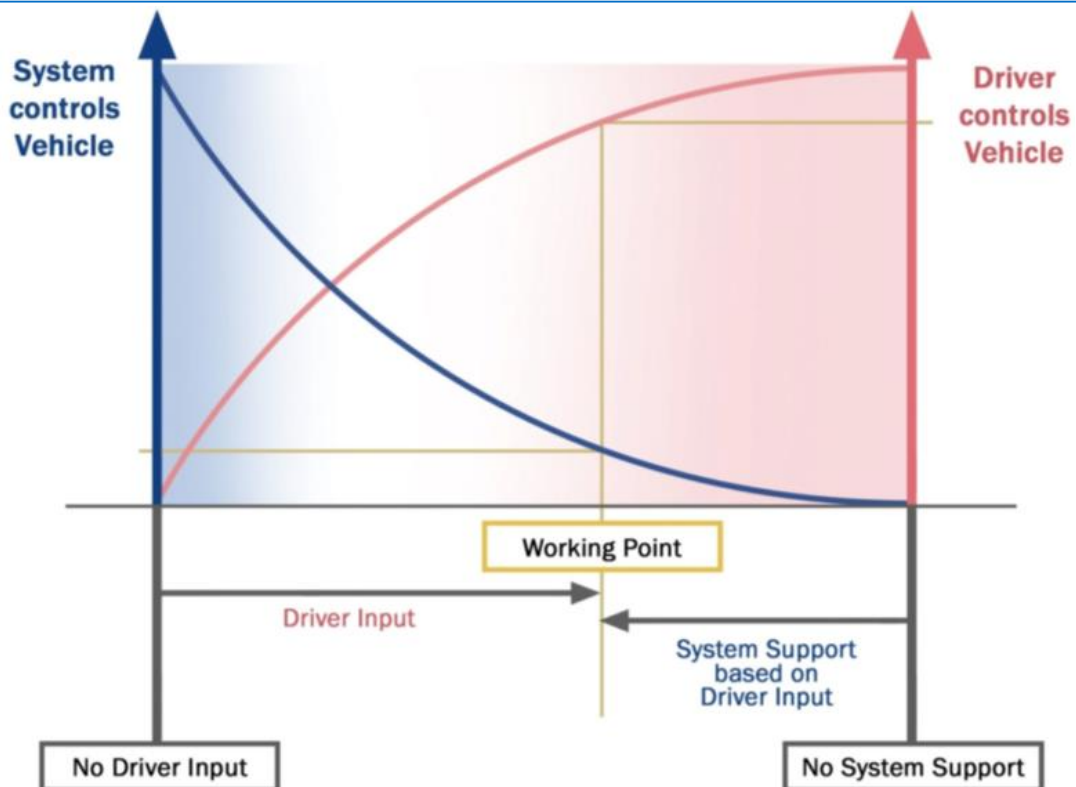
# 欧州 : AdaptiveIVe - Overview



出典: Aria Etemad, Volkswagen Group Research,  
17th International Task Force on Vehicle Highway Automation, October 13, 2013



# 欧州 : AdaptiveIVe - Human factors



出典: Aria Etemad, Volkswagen Group Research,  
17th International Task Force on Vehicle Highway Automation, October 13, 2013





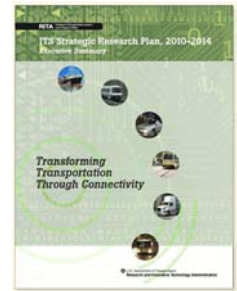
# 米国： Strategic Research Plan

## <戦略的開発計画>

USDOTのRITA (Research and Innovative Technology Administration) が  
5-Year ITS Strategic Research Plan を発表 (2009.12.8)

期間: 2010年 - 2014年

本プランの核となるのは、



(出典: USDOT)

## Connected Vehicle Research

DSRCを利用し開発・実用化を加速

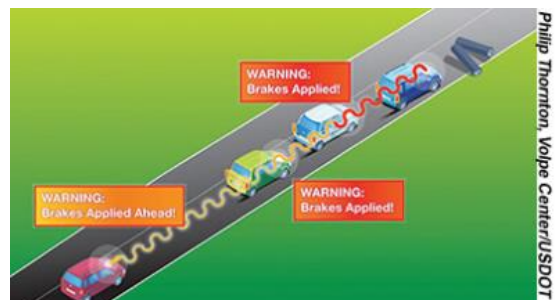
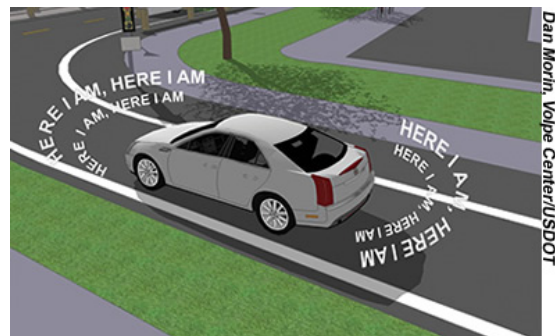
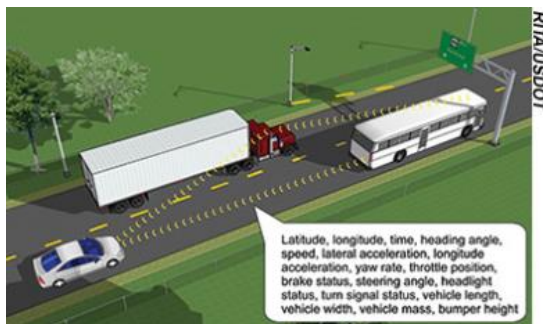
### Vision:

National, multi-modal surface transportation system that features a connected transportation environment among vehicles (cars, trucks, buses, fleets of all kinds), the infrastructure, and mobile devices to serve the public good by leveraging technology to maximize **safety, mobility and environmental performance**. Connectivity is achieved **through dedicated short range communications (DSRC)**.

対応分野 : **Safety Mobility Environment**



# 米国： Connected Vehicle Research



(出典: USDOT)



## 米国：新たな長期陸上交通予算

2014年4月29日、連邦運輸省は、新たな長期陸上交通予算案を議会に提出。

### GROW AMERICA Act

( The Generating Renewal, Opportunity, and Work with Accelerated Mobility, Efficiency, and Rebuilding of Infrastructure and Communities throughout America Act )

### 総額 3,020 億ドル / 4年 (約30兆円)

通常の財源に加えて成長のための法人税改革に伴う 1,500億ドルを原資とする。  
4年間にわたりHighway Trust Fund の破綻を防ぐとともに、成長目標を達成するために必要な公共投資を支える。

### 12 の重点領域

- Supporting a healthy environment
- Expanding our ability to move freight
- Growing investment in transportation
- Making critical investments in highways and bridges
- Promoting innovative financing
- Building ladders of opportunity
- Empowering local decision makers
- Creating more efficient project delivery
- Investing in rural America
- Improving transportation safety
- Supporting safe, reliable public transit
- Shaping a pathway to transportation careers

出典: Grow America, U.S. Department of Transportation

10



## 米国： Strategic Research Plan (2015-2019)

### 1. Interoperability

機器、車両、インフラ、アプリケーションの互換性確保

### 2. Automation

安全、効率、モビリティ向上などのための自動運転技術開発

### 3. Big Data / Data Management

車両、移動端末、インフラからのデータ融合による交通管理と効果評価

### 4. Smart Cities / Digital Society

持続可能な交通システムのためのスマート・モビリティの研究

### 5. Resilience

大規模災害への備えと発災時の交通システムの対応能力

### 6. Cyber Physical Systems (CPS)

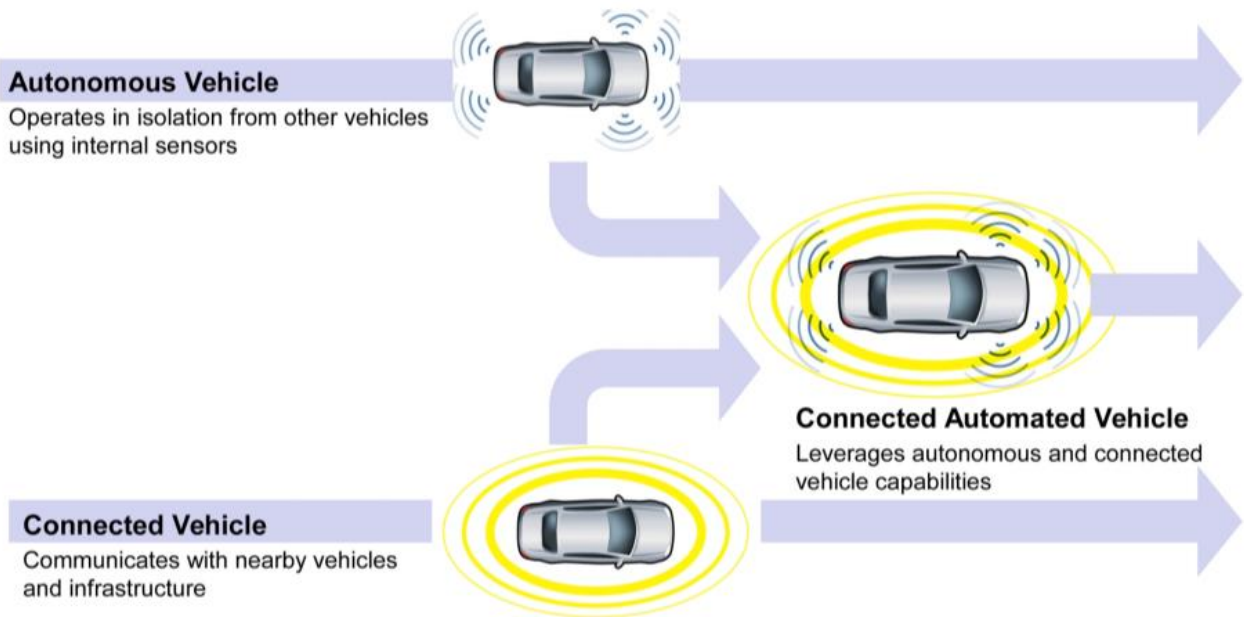
協調システムを中心とした、車両などの実体と情報技術の融合

出典: Research and Innovative Technology Administration,  
U.S. Department of Transportation, at Connected Vehicle Public Meeting, September 26, 2013

11



## Connected and Automated Vehicles

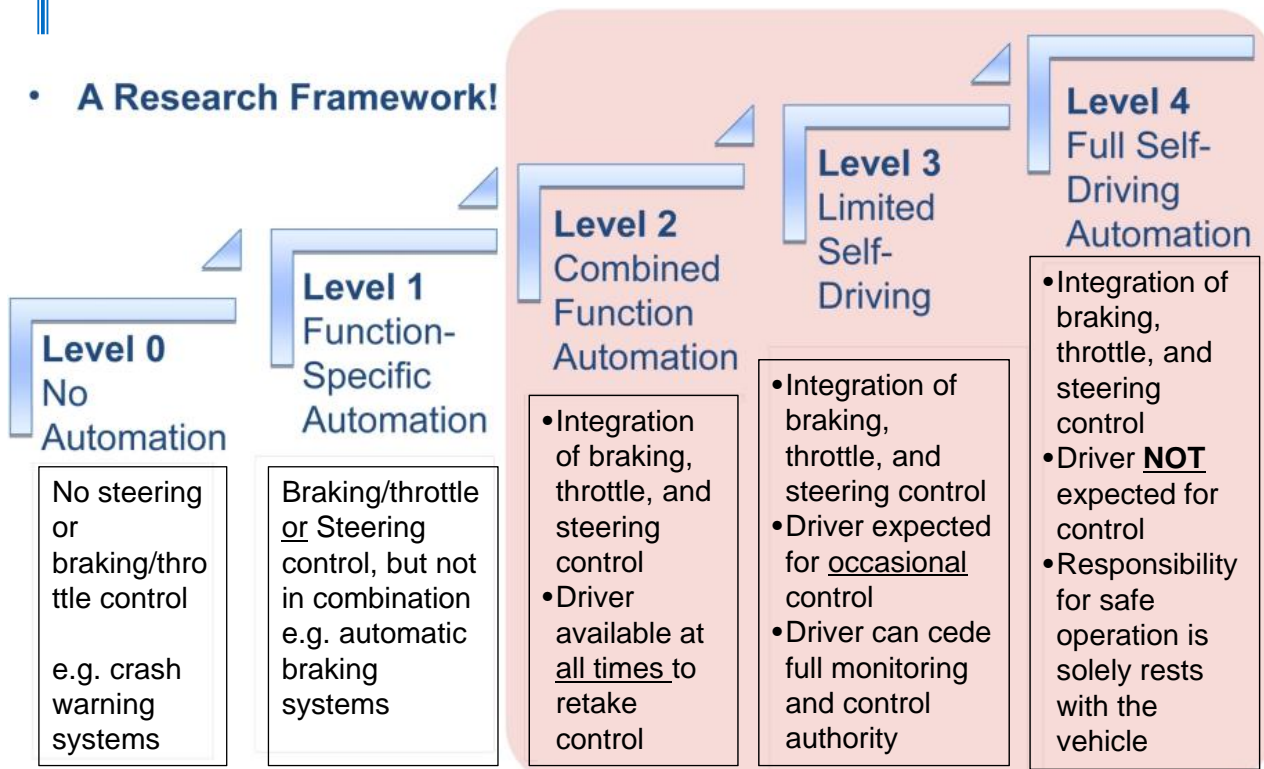


出典: Kevin Doherty, ITS Joint Program Office, U.S. Department of Transportation, Automated Vehicle Symposium 2014, July 17, 2014



## USDOT-NHTSAの自動運転レベル定義

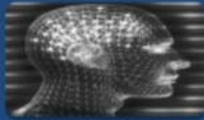
### • A Research Framework!



出典: Nat Beuse, National Highway Traffic Safety Administration, U.S. Department of Transportation, Automated Vehicle Symposium 2014, July 17, 2014



# USDOT-NHTSA の自動運転関連開発テーマ



## Human Factors Research

- Human factors evaluation of Level 2 and Level 3 automated driving concepts
- Initial human factors design principle for L2/L3



## Electronic Control Systems Safety (including Cybersecurity)

- Functional safety of safety-critical automotive systems and extensions to L2-L4
- Cyber security threats, vulnerabilities, countermeasures assessment



## Systems Performance Requirements

- System performance requirements framework
- Objective test procedures



## Benefits Assessment

- Target crash population estimation for automated vehicles L2-L4
- Multi-modal benefits framework development



## Testing and Evaluation

- Controlled test track studies
- Field operational tests

出典: Nat Beuse, National Highway Traffic Safety Administration, U.S. Department of Transportation, Automated Vehicle Symposium 2014, July 17, 2014 14



# 世界の自動運転関連の動き

