

# Framework for assessing impact of automation in road transportation

SIP-adus Workshop 2017  
Tokyo, 15 November 2017

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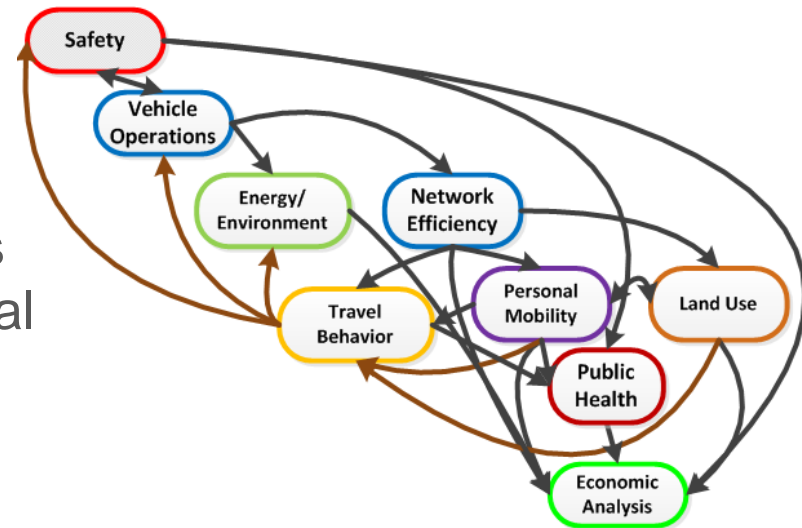
# Trilateral activity for building the framework

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- Cooperation between Europe, US and Japan in ART WG
- Subgroup for impact assessment
  - Formed in 2015
  - 40 members
- Objective:
  - “Harmonization of the high-level evaluation framework for assessing the impact of automation in road transportation”
- High-level framework intended for FOT designers, policy makers and those making impact assessment of ART

# Motivation

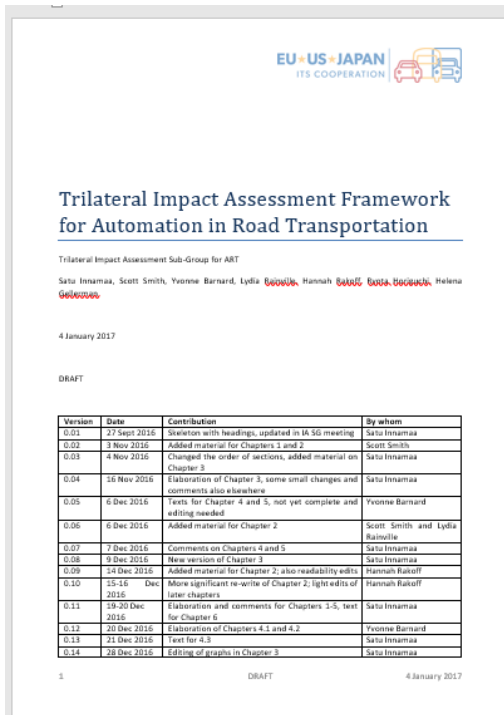
- Potential impacts of automation are far reaching and complex
  - High expectations on what connected and automated vehicles shall be able to contribute to several societal goals
- Field tests are expensive
- International harmonization
  - Design tests and studies to maximize the insight obtained
  - Enable meta-analysis
  - Can arrange complementary evaluation across the world
  - Make better use of each other's findings
  - Exchange best practices



# Impact Assessment Framework Document

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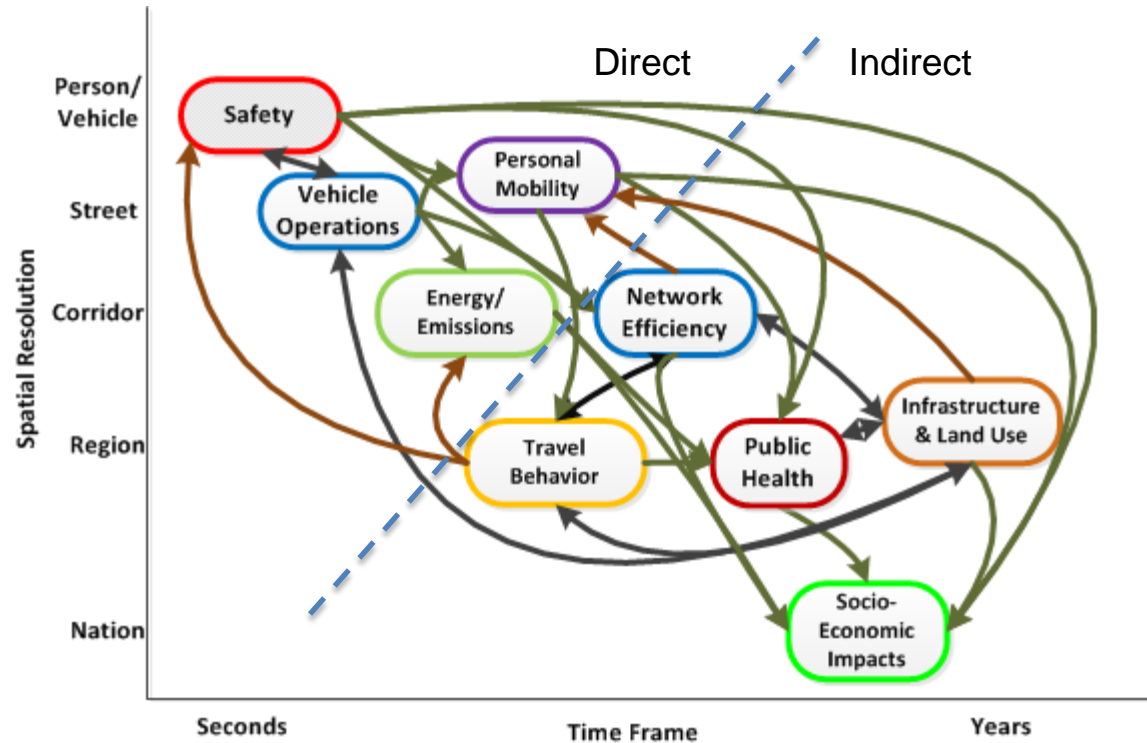
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# System and Impact Classification

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- Direct & indirect impacts
- Definition and KPIs
  - KPIs to be updated based on survey
- System and design domain



# Impact Mechanisms

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The potential impact mechanisms defined for ART to ensure that assessment covers systematically

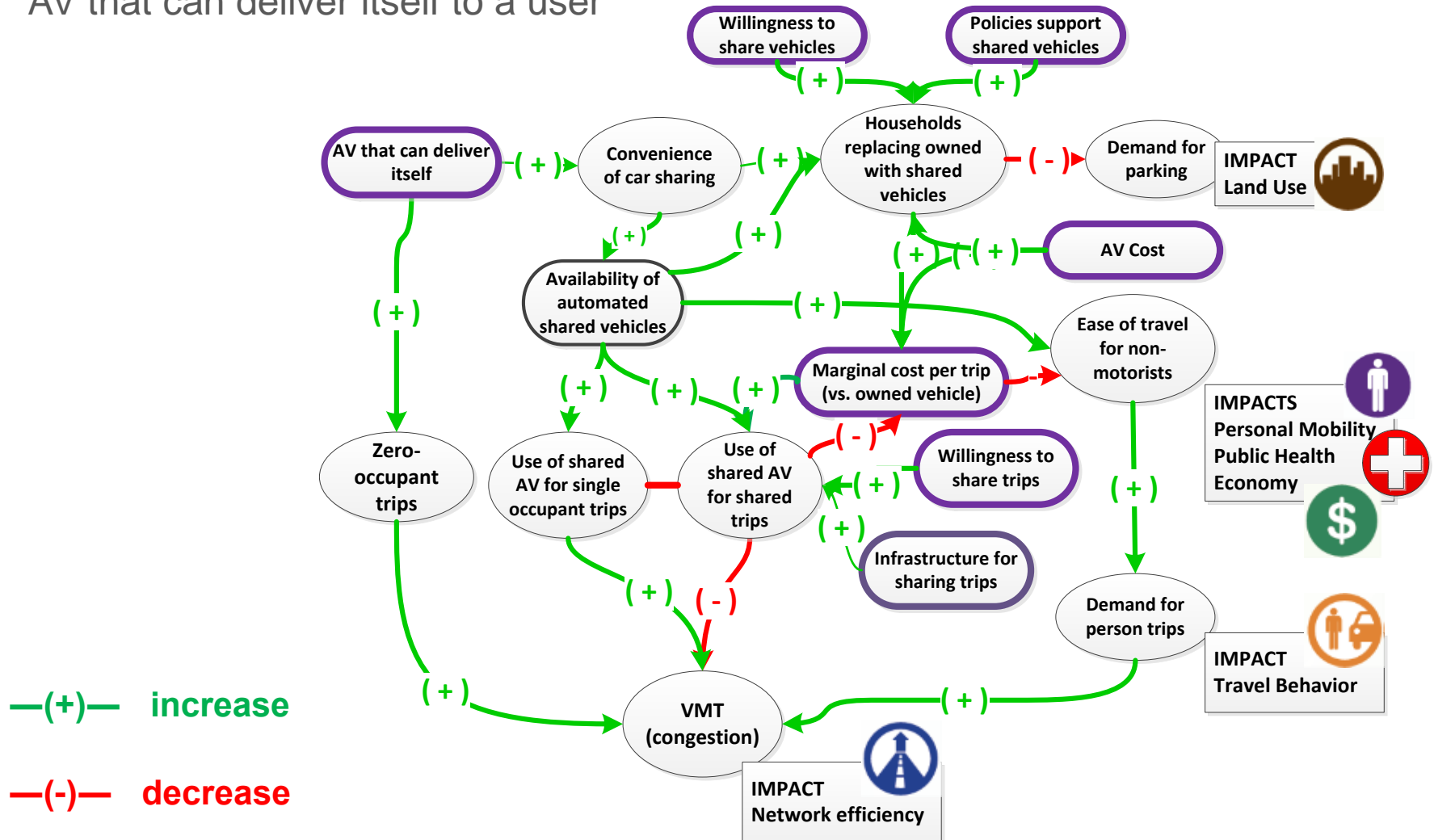
- the intended and unintended
- direct and indirect
- short-term and long-term

impacts of both AV-users and non-users.

It is recommended that these mechanisms be identified for all impact areas, although, not all of them could be assessed.

# Example of elaborating the impact paths from direct impacts to indirect ones

AV that can deliver itself to a user



# Recommendations for experimental procedure

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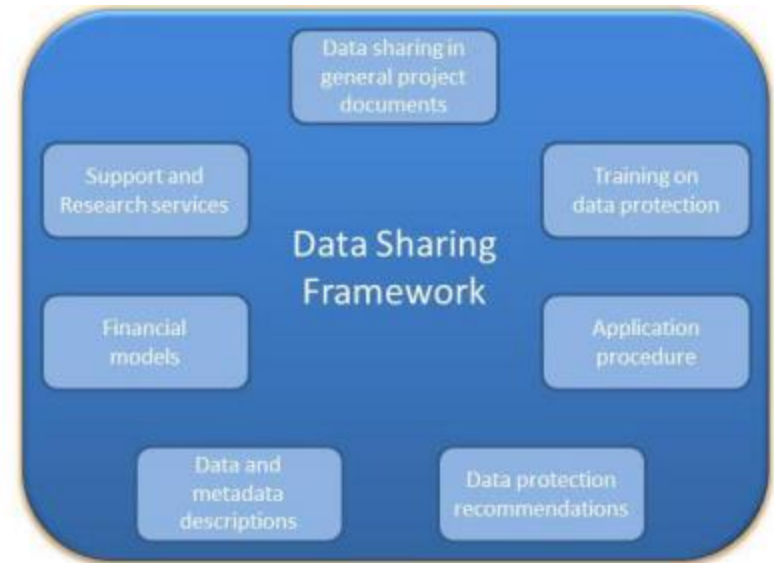
- Basics for setting the study design
  - Recommendations in line with the FESTA V
  - Special for ART
    - It will not always be possible to test AVs in a naturalistic environment → Use of controlled testing and simulation discussed
    - Many (first) AD studies will be performed utilising prototype vehicles, whose performance may not be the same as in the planned production vehicle
- Baseline
  - Sometimes comparison with the “old” situation may not be very useful, and studying new emerging patterns may be of more interest
    - If automation is seen as a process that will continue anyhow, a baseline may become less important
  - Several options for a baseline are discussed



# Recommendations for Data Sharing

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- Reasons for data sharing discussed
  - References to RDE and FOT-Net's Data Sharing Framework
- Obstacles for data sharing and their solutions
  - Competitive information
  - Privacy-sensitive data
  - Different legal and ethical conditions
  - Not always easily-accessible
  - Storing, maintaining and opening data after a project has a cost
- Common dataset needs to be agreed within 1-2 years



# Your feedback is needed!

KPI Survey:

<https://connectedautomateddriving.eu/mediaroom/participate-survey-kpi-automated-driving/>

- Give us your view on most important KPIs!



# Your feedback is needed! (2/2)

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Framework draft 1.0 (4 Jan 2017):

[https://connectedautomateddriving.eu/wp-content/uploads/2017/05/Trilateral\\_IA\\_Framework\\_Draft\\_v1.0.pdf](https://connectedautomateddriving.eu/wp-content/uploads/2017/05/Trilateral_IA_Framework_Draft_v1.0.pdf)

- Give your feedback!
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- Updated version to be published in Jan 2018





# Thank you!



CARTRE and SCOUT are funded by  
the European Union Horizon 2020  
Work Programme

