

Automated Driving and Human Responsibility



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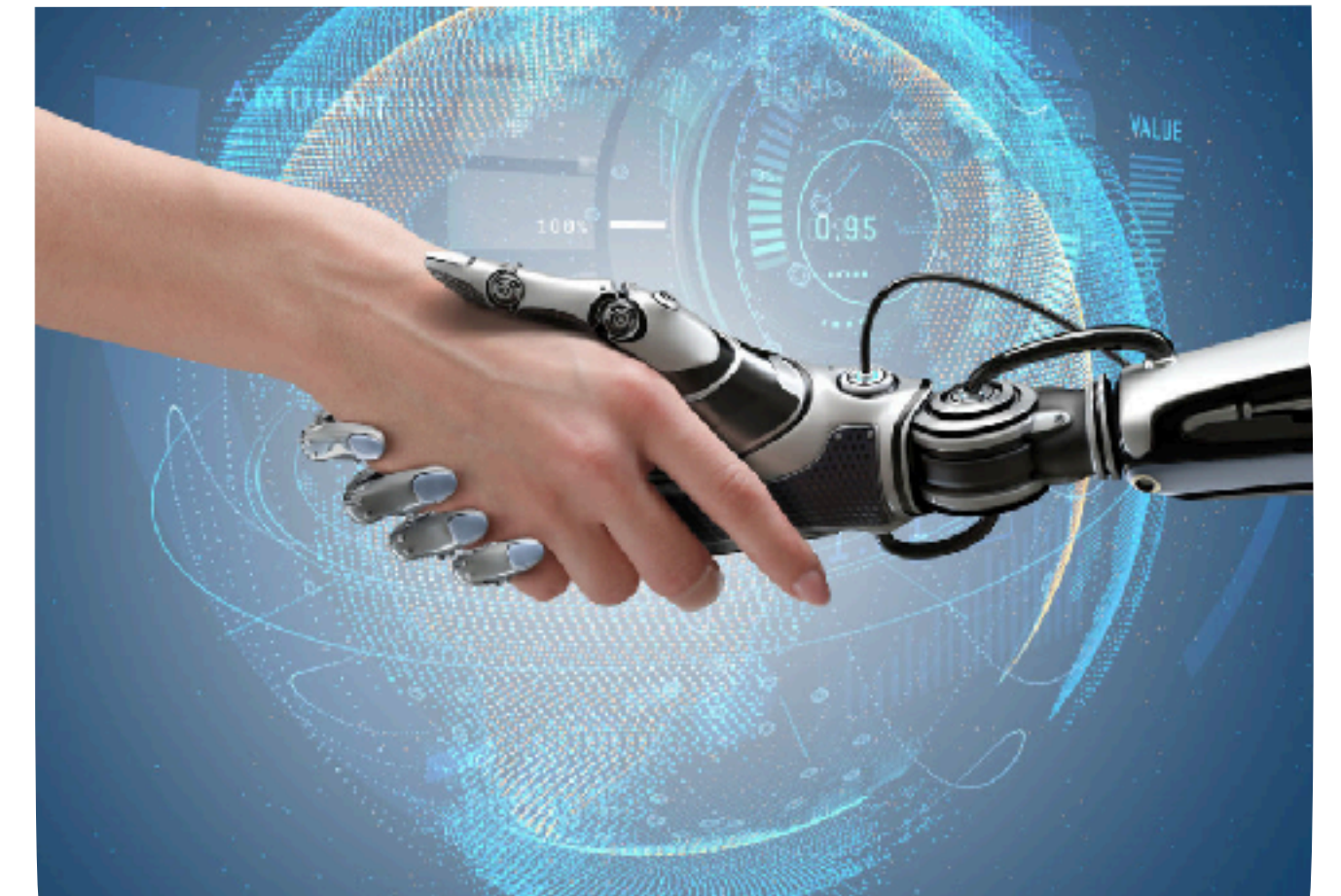
“COMPREHENSIVE ENGINEERING”



Engineering Systems
and Services



Multi-Actor Systems



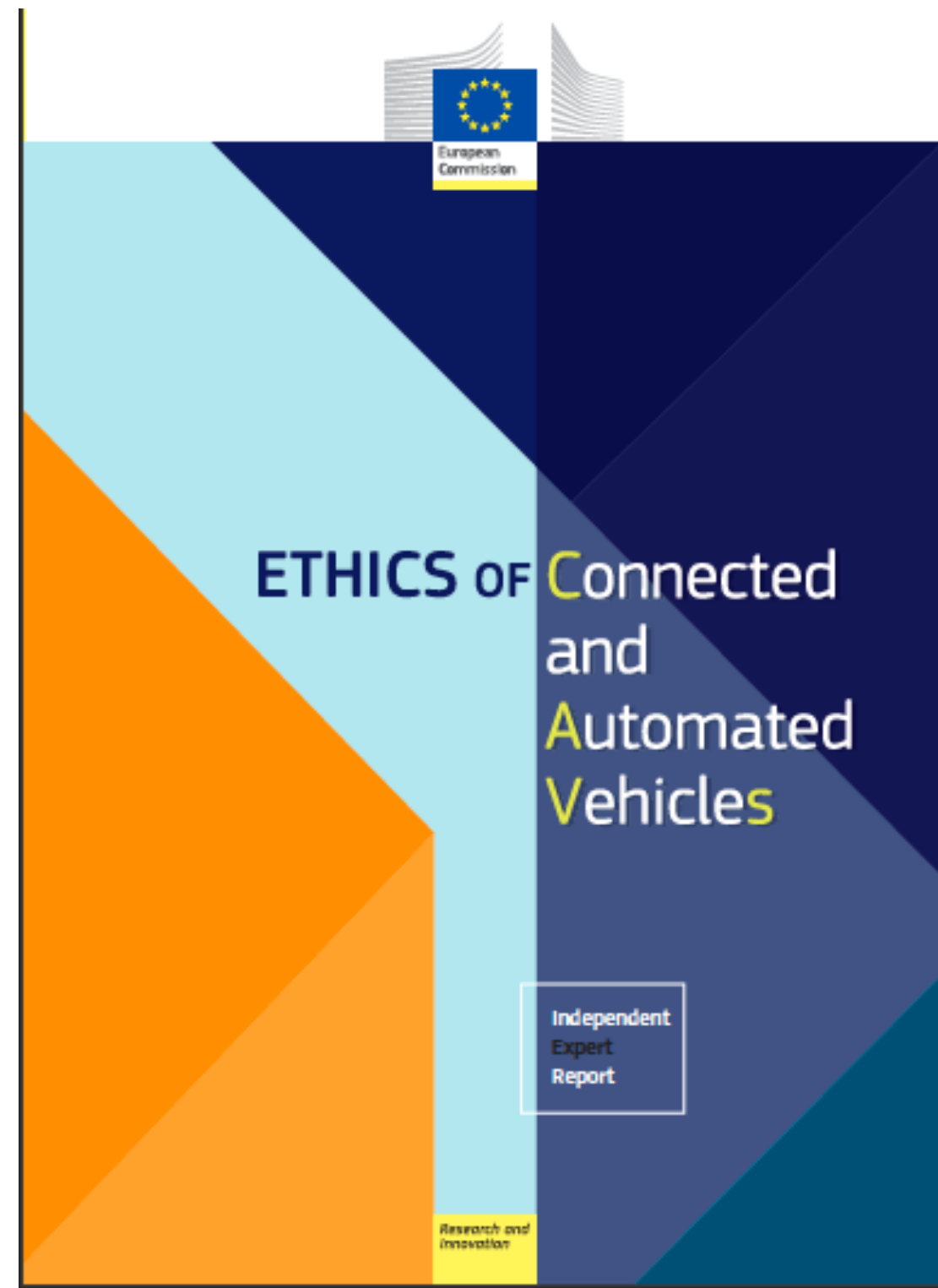
Values, Technology
and Innovation

Faculty of Technology, Policy and Management, TU Delft

SAFETY

REQUIRES

HUMAN RESPONSIBILITY



Rather than reducing or eliminating human responsibility, the use of CAVs will redistribute responsibilities across the network of human individuals and organisations involved in their manufacture, deployment, and use.

RESPONSIBILITY (GAPS)

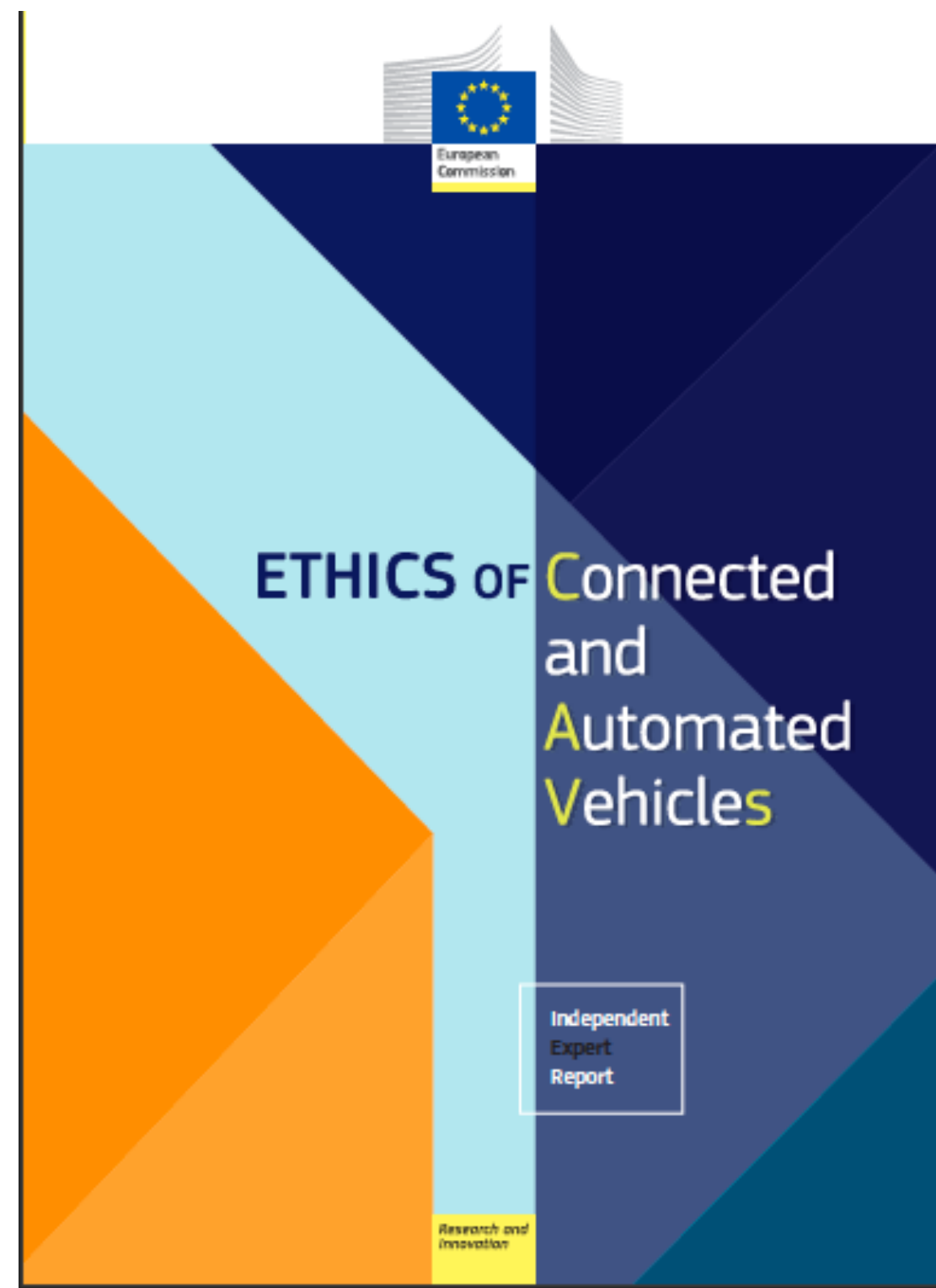
(LEGAL) CULPABILITY

MORAL ACCOUNTABILITY

PUBLIC ACCOUNTABILITY

ACTIVE RESPONSIBILITY





Creating a “culture of responsibility”

RESPONSIBILITY

REQUIRES

“MEANINGFUL HUMAN CONTROL”

Meaningful Human Control over Automated Driving Systems



Filippo Santoni de Sio, Giulio Mecacci, Bart van Arem, Simeon Calvert, Marjan Hagenzieker, Daniël Heikoop

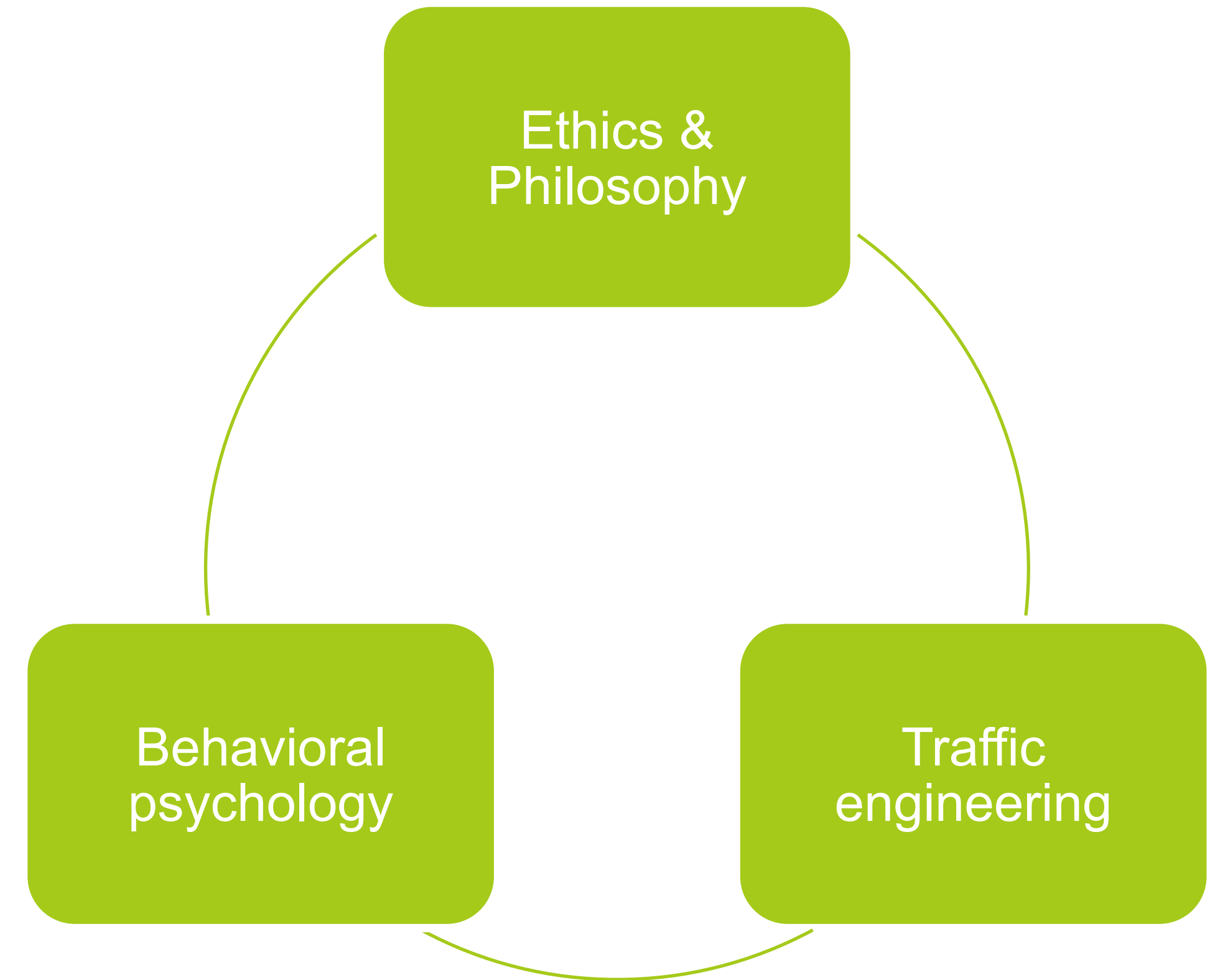


... so much more than robot-dilemmas

What is MHC?

How to design with MHC?

How can humans execute MHC?



Use cases



Varieties of control



“Dumb” systems

Intelligent systems



Meaningful human control

Alignment between AVs and relevant
human **reasons** (values, norms, intentions)
human (moral) **capacities**



Meaningful human control

Some practical implications:

- Interests of all road users
- Public v private interests
- Democratic deliberation
- Drivers' capacities
- Companies' culture
- Engineering education
- ...



References

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- Mecacci, G., & Santoni de Sio, F. (2019). *Meaningful human control as reason-responsiveness: the case of dual-mode vehicles*. *Ethics and Information Technology*, 22, 103-115. doi: 10.1007/s10676-019-09519-w

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