



Day 2

Socio-economic Impact of CAD

Cost-Benefit Assessment of Connected and Automated Driving

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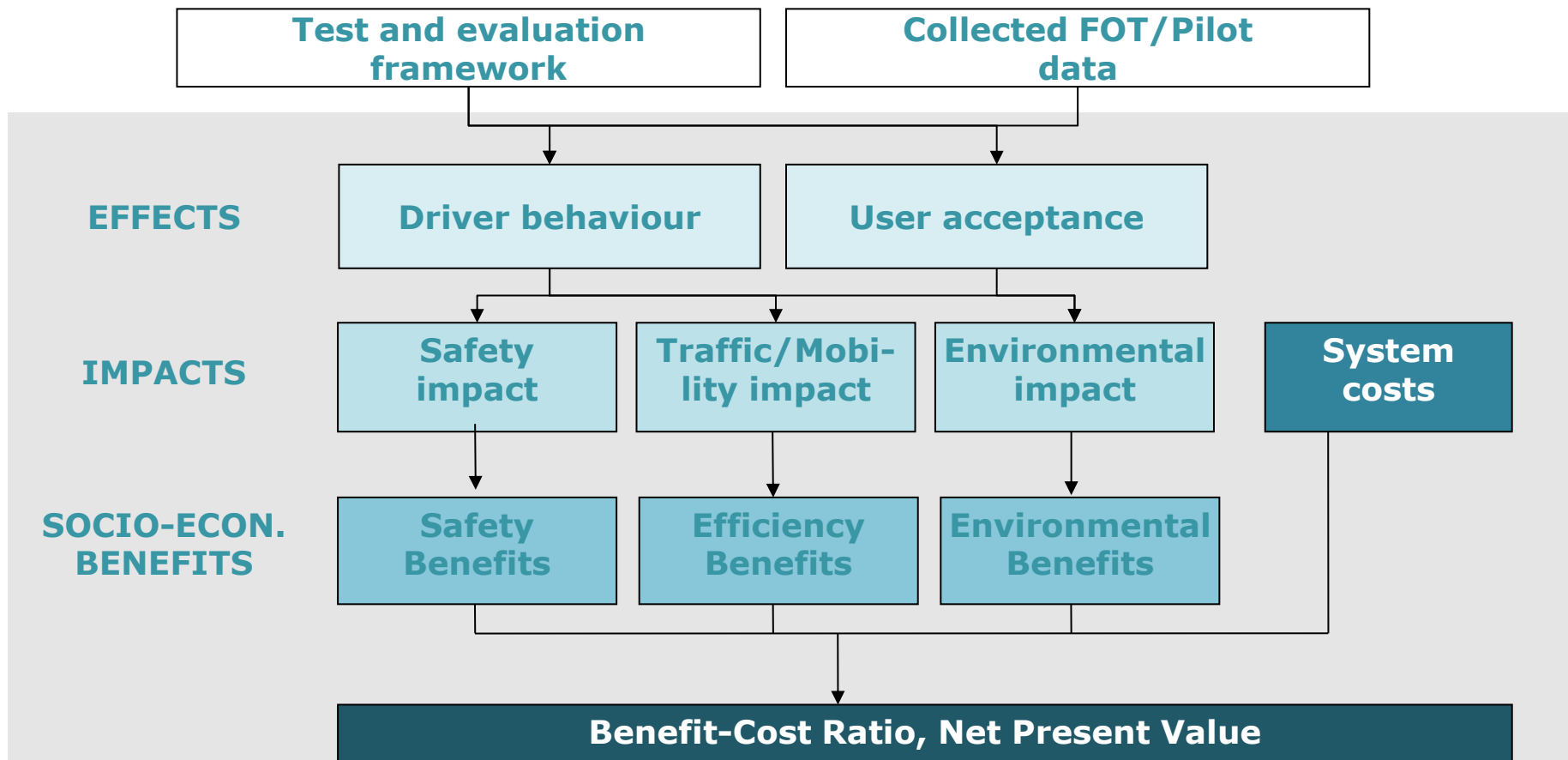
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April 2017

Brussels



Socio-economic Impact Assessment Framework – Traditional CBA setup with focus on road transport





Existing tools and knowledge provide opportunities in Socio-economic Impact Assessment of CAD

- Methodological framework of CBA can be properly filled with FOT/Pilot data
- FESTA Handbook as useful source for practitioners
- Additional guidance coming from evaluation guidelines (e.g. on EC level, WebTAG, BVWP)
- Better micro foundation (events) of macro impacts (economy)
- Ideally confirmation of ex-ante assessment – in order of magnitude – by ex-post assessment results
- Fairly consistent results – what are the (acceptable) limits?



FESTA Handbook

Version 6

Updated and maintained by
FOT-Net

(Field Operational Test Networking and Methodology Promotion)



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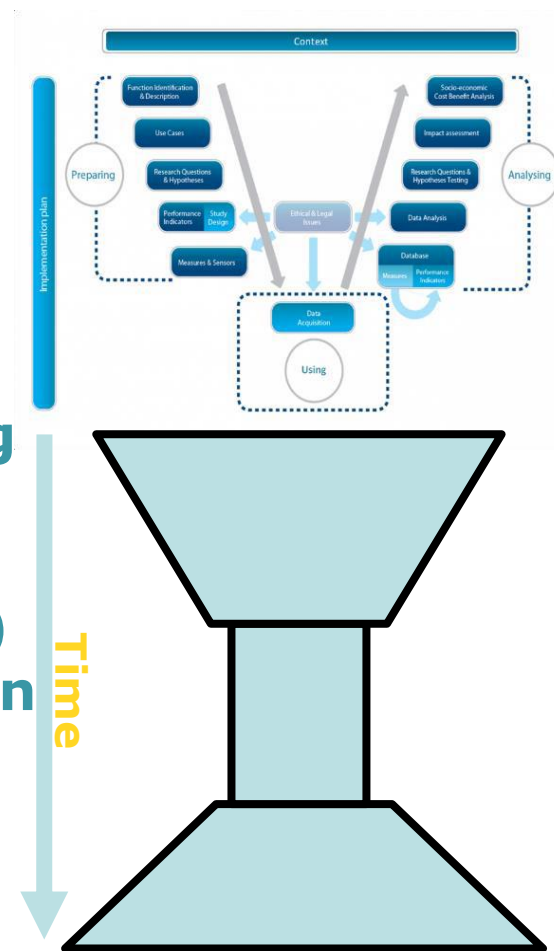


European
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Process threats to Socio-economic Impact Assessment – The devil takes the hindmost

- Typical hourglass pattern of activity
- Framework definition and specification of data requirements
- Stay tuned – on watch
- Assessment as final element of project faces continuously buffer time shrinking
- FOTs and pilots increase tendency to late deliveries (complex coordination, assessment, significance of results etc.)
- Discrepancy between resource allocation and public attention
- CBA is not a rookie's job





Input from Impact Assessment is decisive for CBA

- Causal chain from events to impacts (e.g. reduction of accidents / severity)
- Significance of impacts
- Built-in pessimism bias (of measured impacts)
- Knowledge of driving and traffic flow patterns for upscaling of impacts

**Example:
euroFOT
"challenge"**

	Safety	Traffic efficiency	Environment	User acceptance	Up-scaling to EU-27 (Safety)	Cost-Benefit Analysis
ACC + FCW	✓	✓	✓	✓	✓	✓
LDW + IW	✓	n/a	n/a	✓	n/a	n/a
Navigation Systems	✓	✓	✓	✓	n/a	n/a
SRS	✓	✓	✓	✓	n/a	n/a
BLIS	✓	n/a	n/a	✓	n/a	n/a
FEA	n/a	n/a	✓	n/a	n/a	n/a
CSW	n/a	n/a	n/a	✓	n/a	n/a



Socio-economic Impact Assessment – No limits but different dimensions

- In-depth measurement of limited spectrum of impacts in FOTs and pilots
- Proving the benefits of optimising transport
- Broader view of benefits for the society (What happens with the time, fuel, capital ... more generally, with the savings of productive resources?)
- Time savings dominance in benefits – what comes next in levels of high automation?
- Addressing the impacts on productivity, growth, employment and also effective incidence (across sectors, citizens)

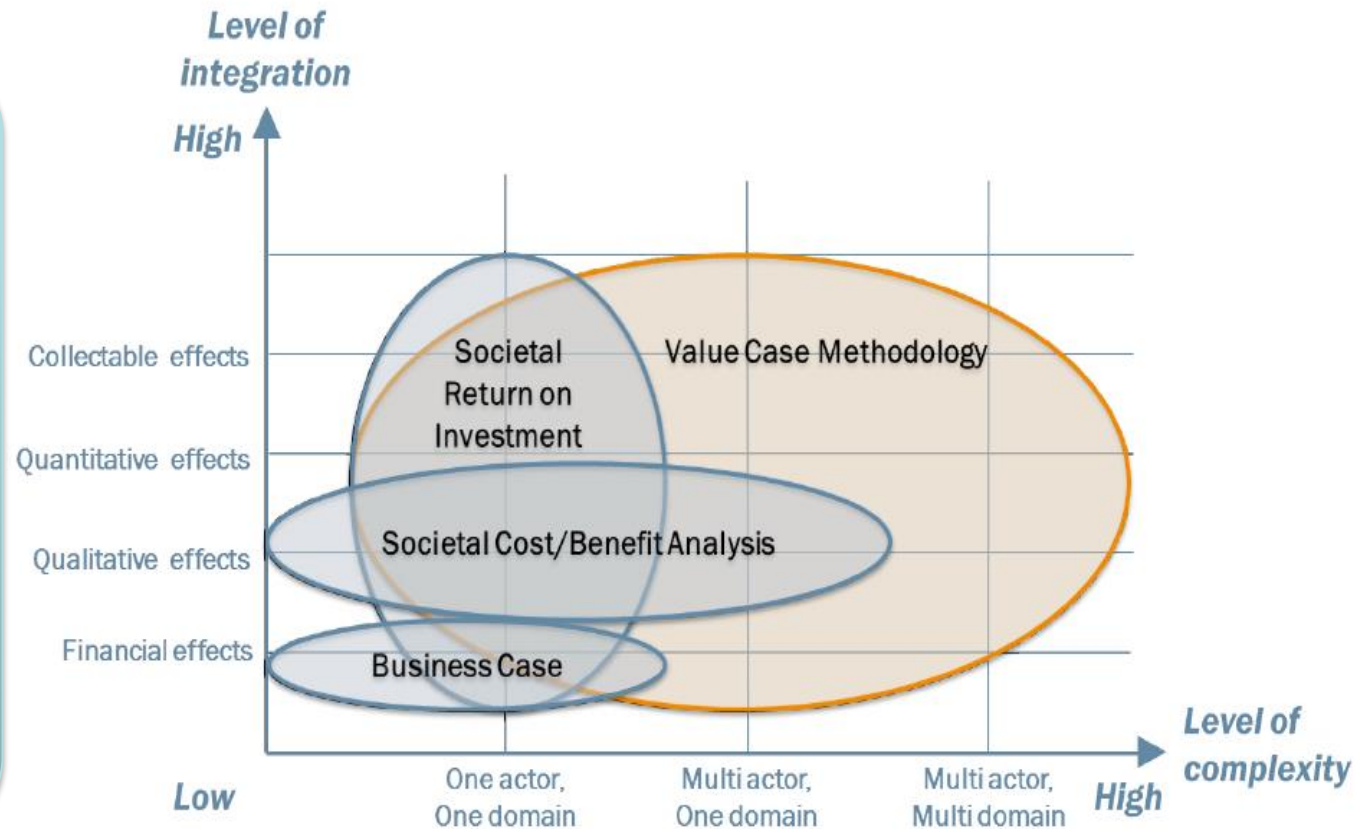


Source:
www.digitalkamera.de



Challenging future of Socio-econ. Impact Assessment – Multi-actor Multi-domain Assessment

1. Value Identification
 2. Value Quantification
 3. Value Sensitivity
 4. Value Alignment
- Decision basis for collective Action





Outlook

- **All factors point towards more complex and time consuming analyses**
- **Can we afford it? – Constraints in terms of budget/time**
- **Assessment processes are highly automated but e.g. data mining, arranging input data and drawing conclusions (How to generalise from the details? ...) still involves human work, skills and time**
- **Compensation might be sought in introducing more rule-of-thumb elements (reducing level of detail) in some parts of the assessment**
- **Guiding star: Be economic in the Socio-economic Impact Assessment**