Guidelines for inclusion of Value of Time and Congestion

HEATCO Workshop

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Structure

- Underlying approach to guidelines
- Guidelines
- Meta-analysis
- Implementation

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Approach taken in guidelines

- Balance of pragmatism and theoretical robustness
- Cognisance of data availability (transport models)
- Recommend minimum standard
- More sophisticated approaches are acceptable – some examples given
- Emphasis on local data

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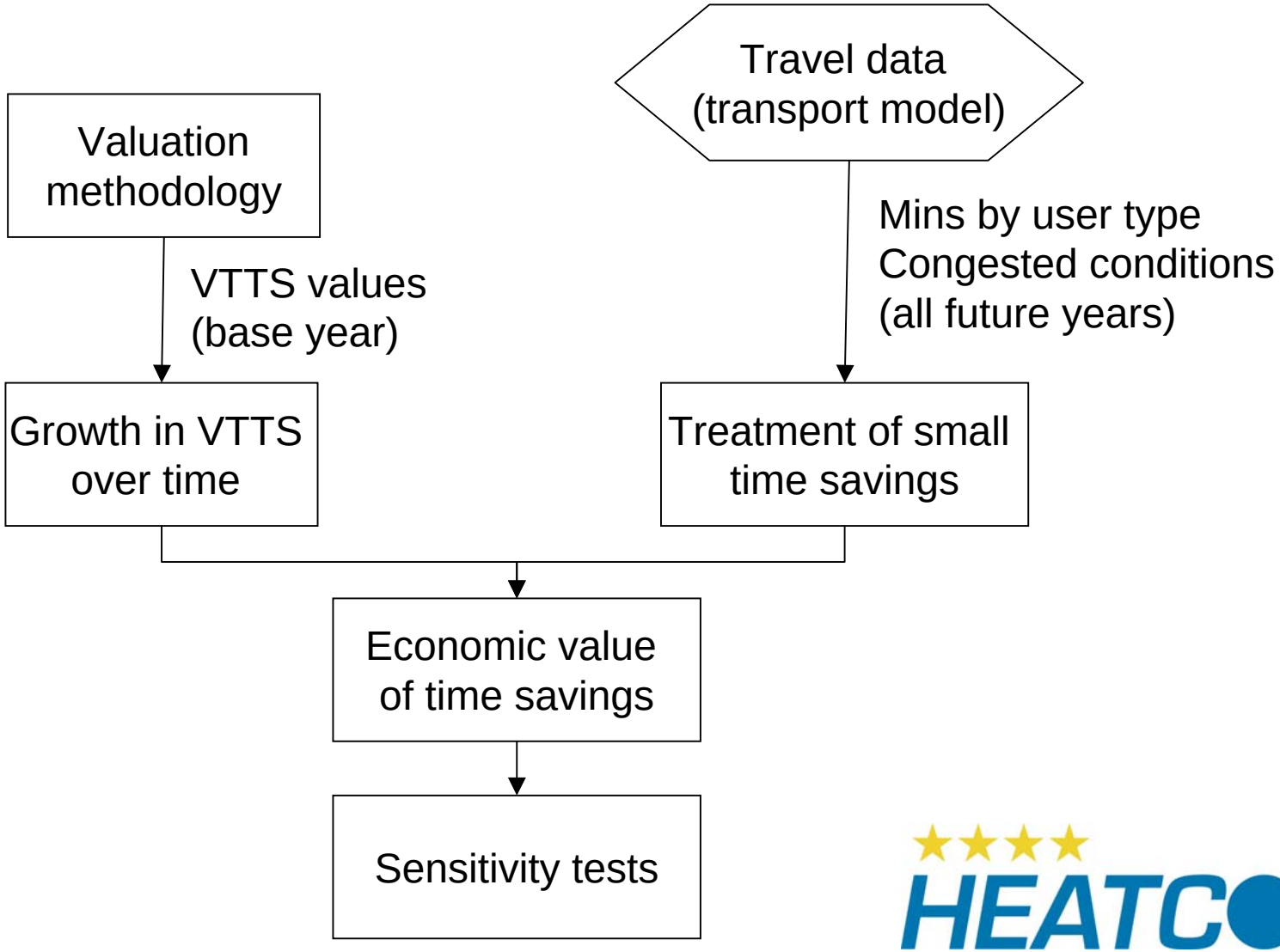
Guidelines - process



Valuation methodology

Trip category	Minimum approach	More sophisticated
Passenger – work	Cost saving (meta-analysis)	Hensher approach
Passenger – non-work	Willingness – to - pay (meta-analysis)	
Commercial Goods traffic	Cost saving (meta-analysis)	Willingness-to-pay

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Disaggregation – minimum

Trip category	Minimum disaggregation	Units
Passenger – work (includes driver)	None	€/person-hr or €/vehicle-hr
Passenger – non-work	None	€/person-hr or €/vehicle-hr
Commercial Goods traffic	Mode (road, rail, sea, waterway, air)	€/tonne-hr or €/vehicle-hr

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Size and sign of time saving

- Theory implies non-linearity in VTTS
  - BUT is a constant value a good approximation for small changes (+/- 20 mins)?
- All countries with guidelines (except one) use a constant VTTS
- Recommend
  - Constant value
  - Identify proportion of benefit due to time < 3mins

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Growth in VTTS

Inter-temporal elasticity to GDP/capita

- Varying country appraisal guidance
- Might expect inter-temporal elasticity to equal cross-sectional elasticity
- Evidence growth in VTTS is not proportional to GDP/capita
- Recommend to:
  - Use an inter-temporal elasticity of 0.7
  - Sensitivity test to elasticity of 1.0

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Treatment of Congestion

- Congestion impacts
  - Increased travel times
  - Poorer quality travel experience
  - Reliability
- Inclusion of quality and reliability
  - Very limited in EU country practice
  - Requires state of the art research
  - Requires transport model with a detailed representation in both time and space
- Recommend
  - MINIMUM - Inclusion of increased travel times
  - MORE SOPHISTICATED - Limited aggregate and disaggregate approaches for reliability and overcrowding where possible.

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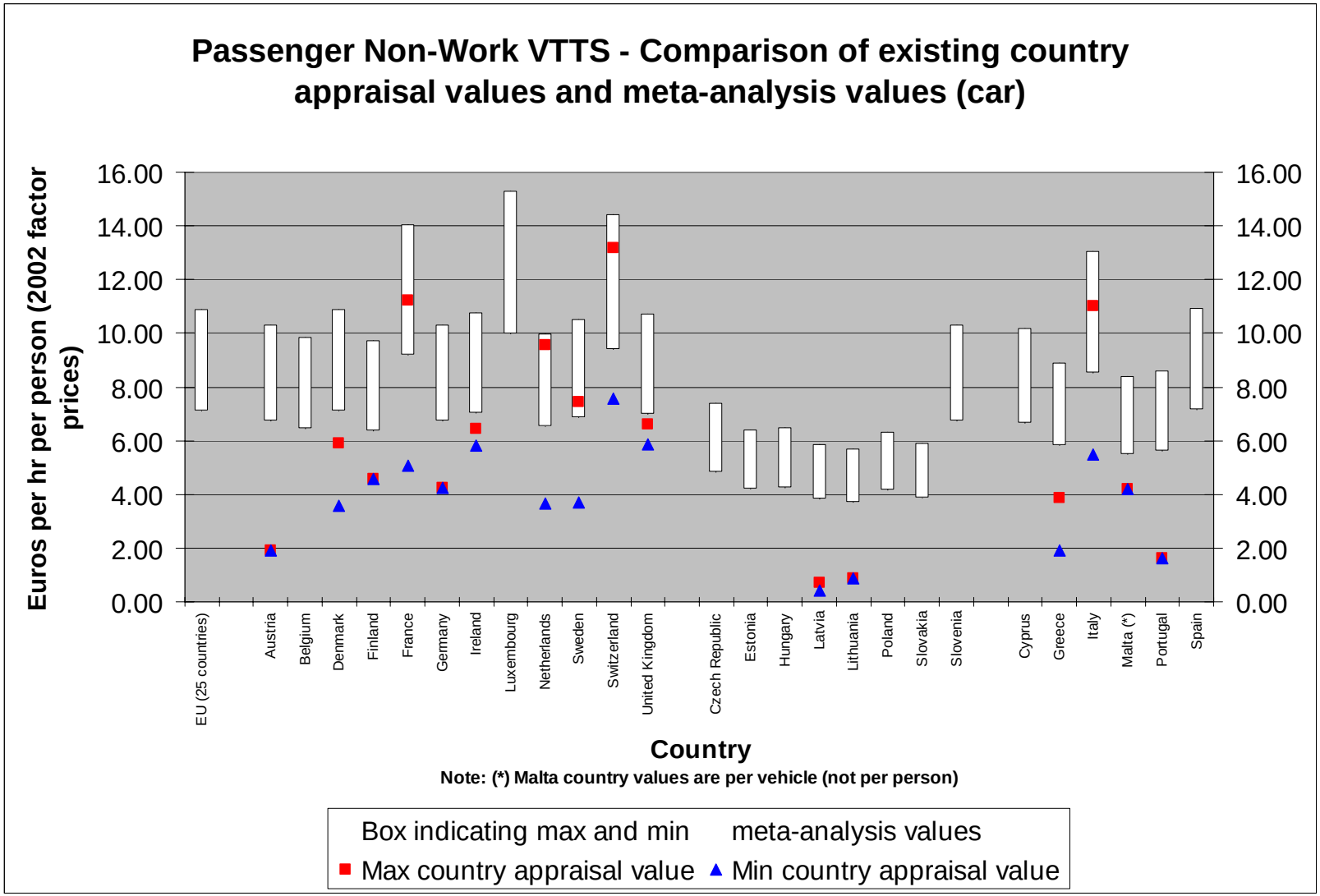
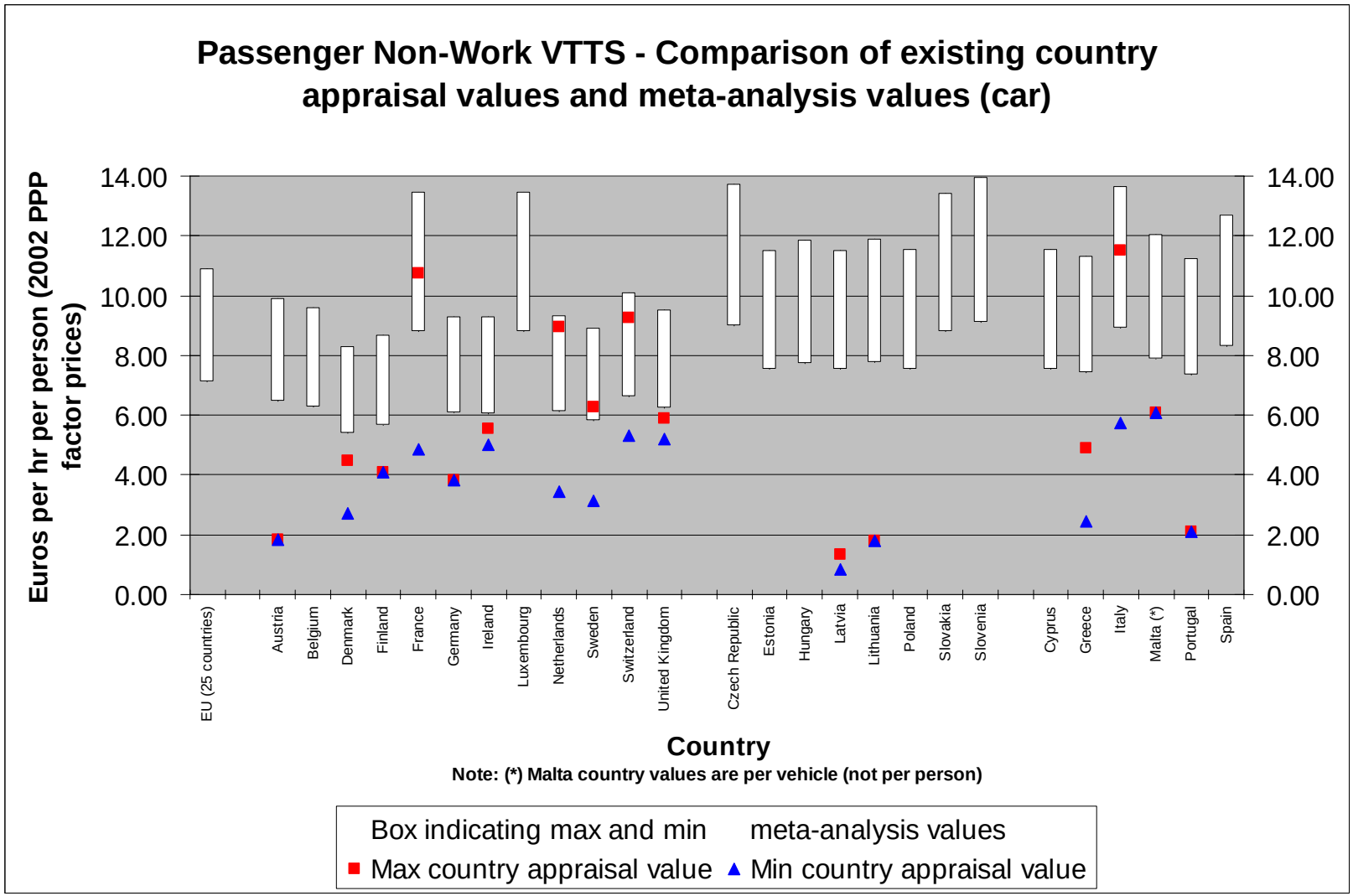
Sensitivity tests

- VTTS values
  - +/- 95% C.I. for project specific data
  - +/- 20% for national country values
  - +/-40% for benefit transfer values(meta-analysis)
- Growth over time – elasticity of 1.0
- Small time savings – time savings < 3 mins

Meta-analysis: Non-work (Euros)



Meta-analysis: Non-work (Euros PPP)



Implementation

- Meet minimum standards
- Use local values wherever possible
- Meta-analysis results can be used as a fall-back
- Ascribe international values to traffic whose nationality can be identified

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Summary

- Guidelines are based on:
  - Theory
  - Existing and best practice
  - Recognise variation in data availability
- Emphasis on:
  - Consistency in valuation methodology
  - Local data
- ‘Fall-back’ values are provided in absence of local data

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