Integration of Multimodality

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MetaCDM workshop 3

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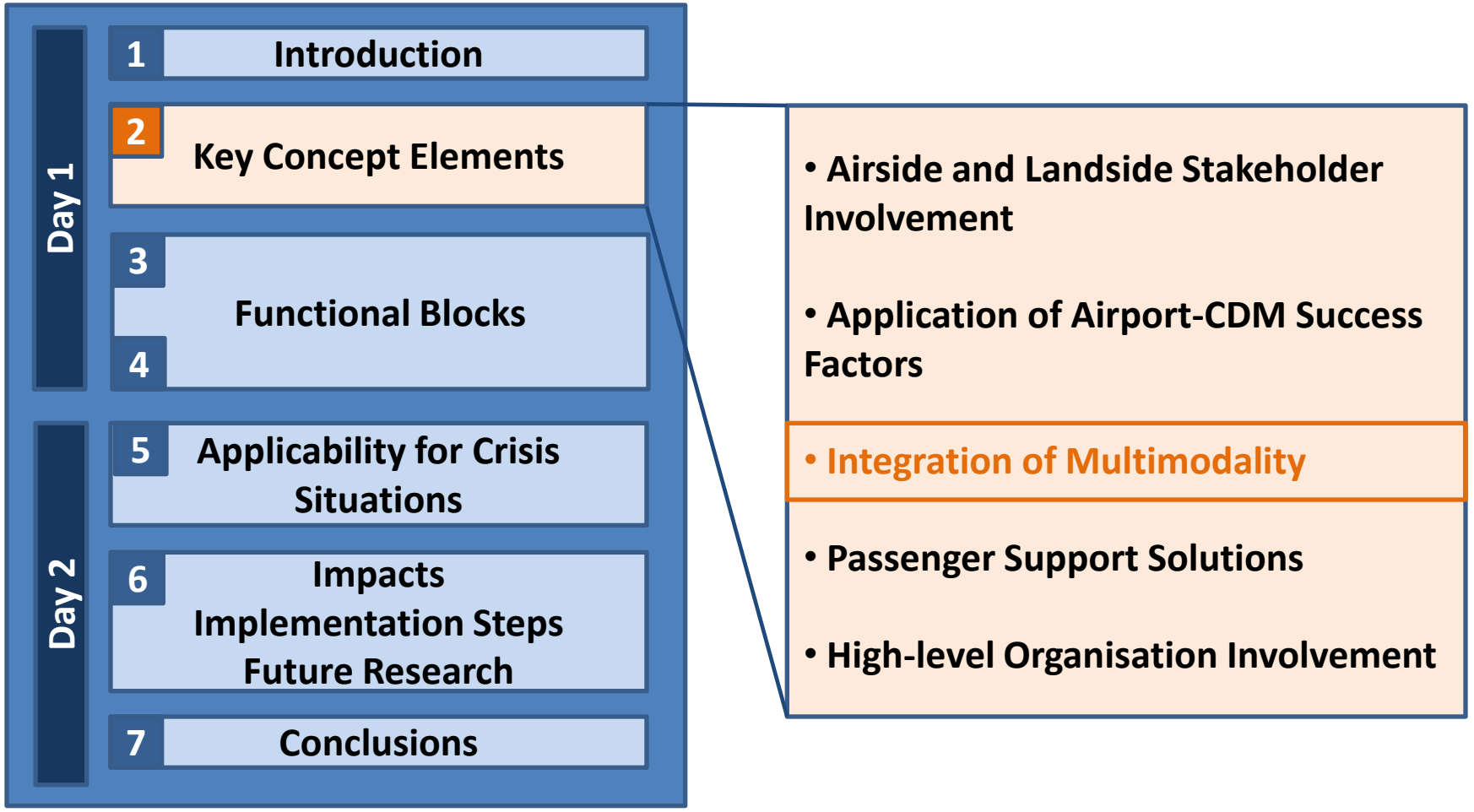
UNIVERSITY OF CAMBRIDGE

Meta CDM
Multimodal, Efficient Transportation in Airports and Collaborative Decision Making

COOPERATION

Workshop and MetaCDM concept structure



Background

- Literature review and interviews revealed that direct integration of other modes is difficult
  - Incompatible databases, security and liability issues, competition, different priorities…
- But also:
  - Passengers often switch modes by themselves when faced with major disruption
  - Multiple information sources exist on alternative mode schedules, disruption, tickets etc.
  - Information on what airlines will reimburse is often unclear
  - **Opportunity to make this process easier for all involved**

Multimodality in MetaCDM

Role of alternative modes depends on situation:

- Flights are running normally or delayed
  - Provide information on getting to the airport (e.g. are roads congested?)
  - Passenger arrival times at milestones
- Flights are cancelled
  - Provide information on alternatives
  - Inform on passenger rights and what the airline will pay for/reimburse
  - Streamline process of rebooking on alternative modes
  - Fallback option is current strategy (hotel/next flight)

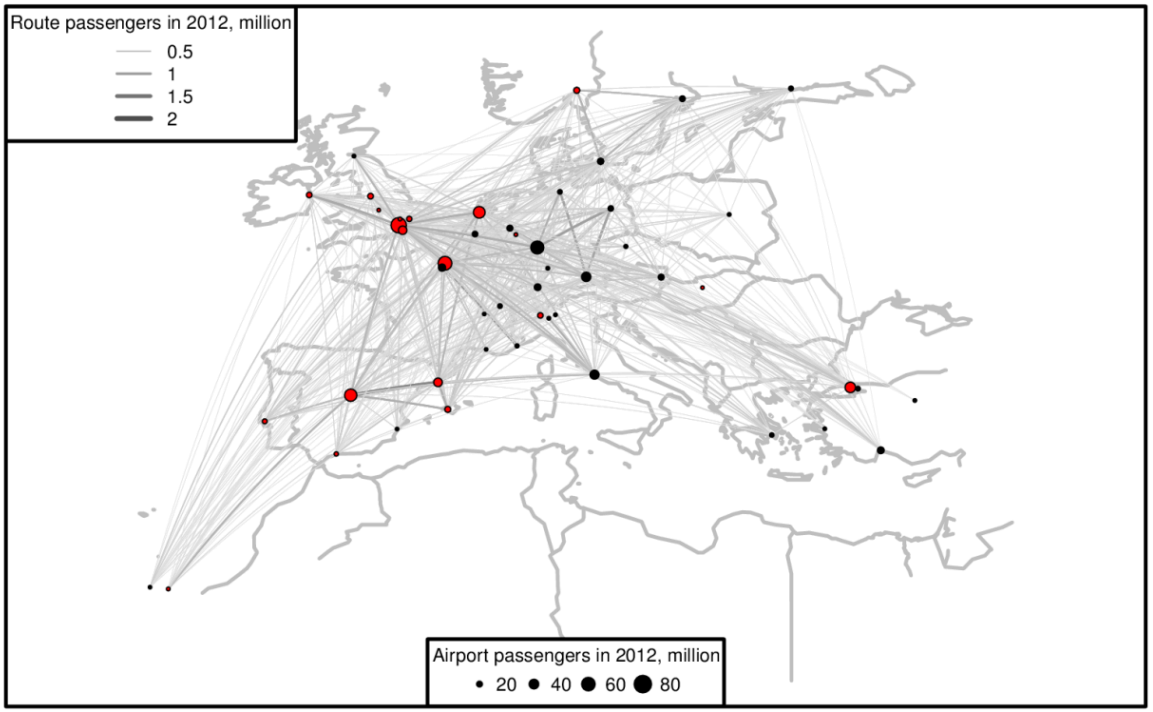
Multimodality in MetaCDM

- Works best if alternatives are flexible: rail, car, coach, ferry, flights from/to alternative airports
- Suitable/best ground transport options will depend on
  - Specific airport/city: geographical location, transport links
  - Type of disruption: is it also affecting ground transport?
  - Costs to airline, passenger, ground transport providers etc.
  - Time of day, schedules of alternative modes
  - Passenger preferences, visa situation, onward connections, luggage…
- Corresponding milestone approach and information exchange needs to be flexible (more on this later)

Scope for using alternative modes

- 50 busiest airports in Europe, 2012 (including all 20 airports with the highest arrival delay, 2012, in red)

- Most delayed airports are also typically major hubs
- Availability and suitability of land routes varies…



[Data: Eurostat 2014, Eurocontrol 2014; IATA 2013]

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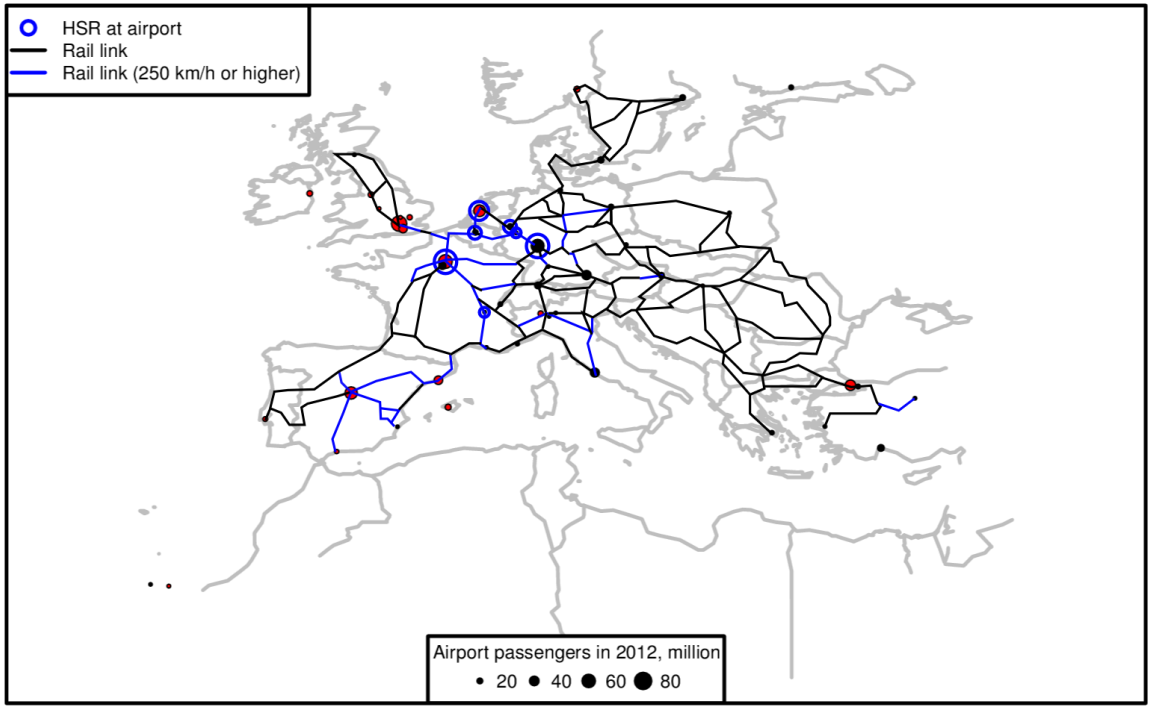


[Data: MODAIR 2014, Eurocontrol 2014; IATA 2013]

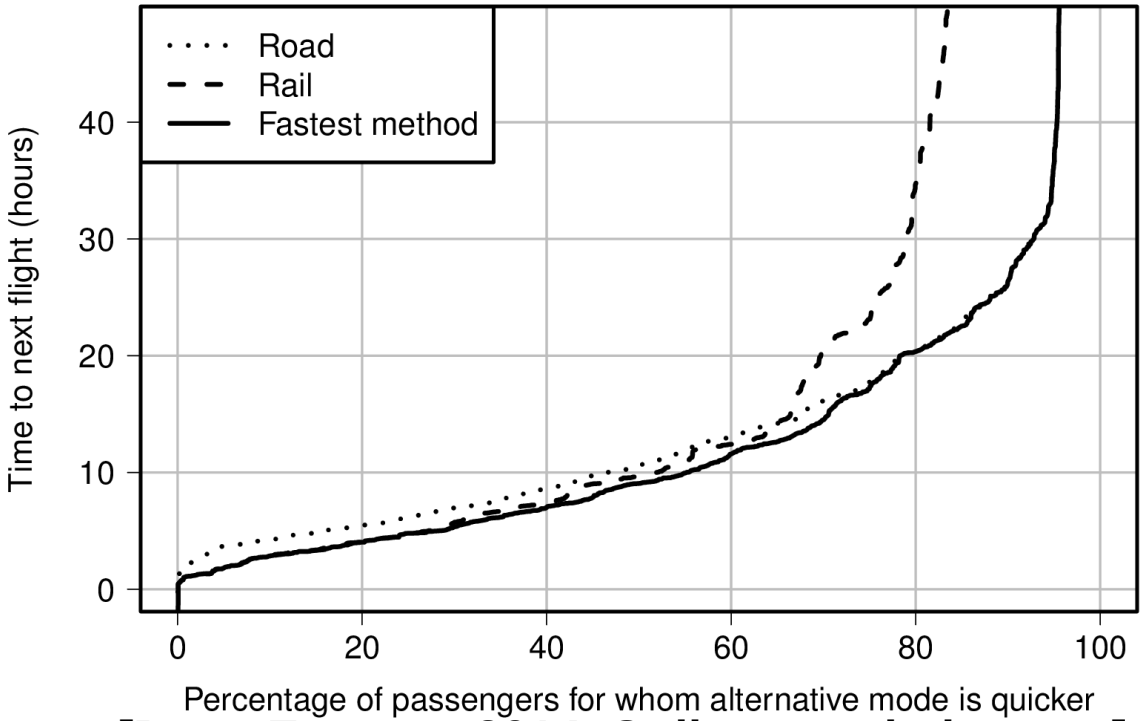
Scope for using alternative modes

- Nearly all airport-pairs have alternate-mode options
- Journey starts at home not at the airport
- Feasibility of route depends on length of delay…

	Arrivals	Departures
2012 total passengers (million)	228	223
On routes with current HSR airport-airport connections	2.7%	2.6%
On routes with current or planned HSR airport-airport connections	8.7%	8.5%
On routes with city-city HSR connections	30.3%	30.0%
On routes with city-city rail connections (any type)	86.0%	83.8%
On routes with road airport-airport connections (excluding ferry/train)	62.8%	62.7%
On routes with road airport-airport connections (including ferry/train)	96.0%	96.0%
On routes with ground access to alternative origin/destination airport	100.0%	100.0%

Scope for using alternative modes

- Need to exclude long, multi-change and other infeasible ground routes
- For a 10-hour time to next flight, over 50% of pax could still arrive sooner by ground modes



[Data: Eurostat 2014, Online travel planners]

Hurdles/Reality check

- Not all passengers can (or will want) to use other modes in crisis situations
  - Need options for information exchange to pax without smartphone data capabilities
  - Need to consider mobility issues along route
  - Lack of face-to-face advice may be a problem for some
- Improving passenger satisfaction requires that passengers feel safe, secure, confident of route etc.
- Fallback options of cancelling travel and hotel/next flight need to remain available