MetaCDM
# Future Research Paths

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Workshop and MetaCDM concept structure

Day	#	Topic
Day 1	1	Introduction
	2	Key Concept Elements
	3	Functional Blocks
	4	
Day 2	5	Applicability for Crisis Situations
	6	Impacts Implementation Steps Future Research
	7	Conclusions
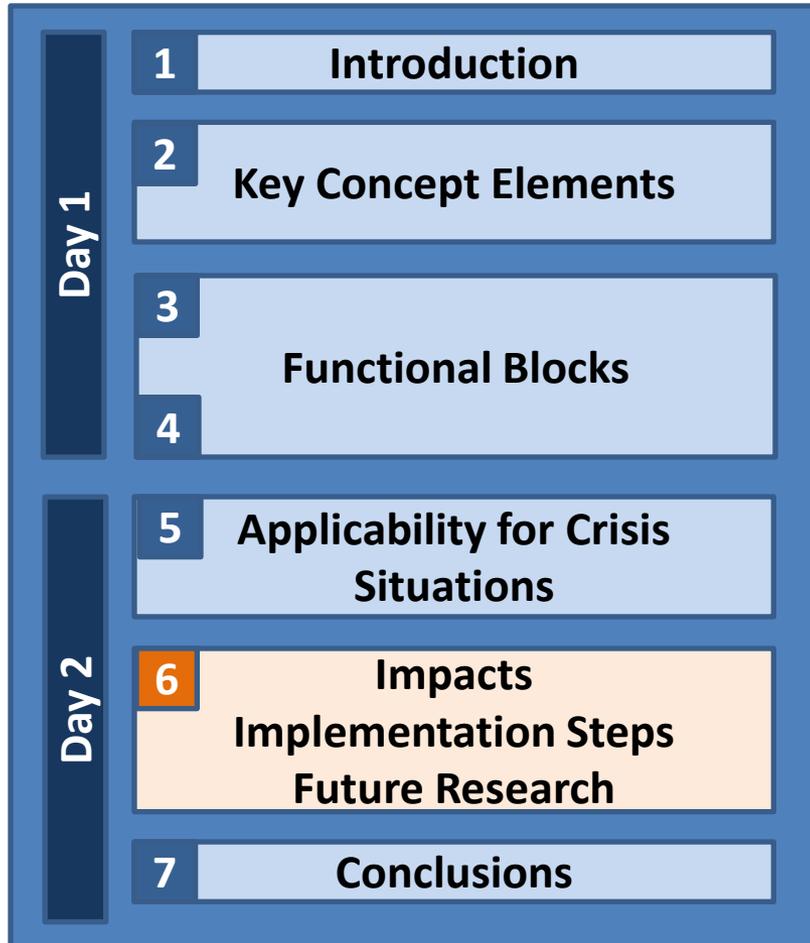
Outline

- Introduction

- Door-to-door Journey

- Towards Network Performance

- Data Analytics for Customer-centric Operations

- Air Transportation in Europe and taking steps forward

- Conclusion

Introduction

Introduction

- Context of growing passenger traffic

Introduction

- Delays are commonplace and serious perturbations regularly paralyze the air transportation network

- Sydney airport traffic grounded by gridlock (July 2013) : Landside issues matter to the airside

Door-to-door Journey

Door-to-door Journey

- Airside / landside collaboration is the first step towards making the passenger door-to-door journey more integrated.

- Need for harmonisation in Europe, including airside/landside interactions

- Globally harmonized does not stand for identical

- Transparence of schedules and interfacing

- Reliability of estimated transit times

Door-to-door Journey

- In case of perturbations :
  - Dynamic reaccomodation/ rerouting taking into account passengers' preferences
  - Reliable real-time information provision accessible from anywhere in the world, for both operators and passengers
  - Communication and Collaboration at the network level

Towards Network Performance

Towards Network Performance

- What is Air Transportation Performance?

- Eurocontrol : Collaborative network management - common objective lowest network delay possible

- Will current targets drive performance improvements or skew behaviour?

- To improve performance, should we focus our efforts on improving the best performers, the worst performers, or the average performance?

Towards Network Performance
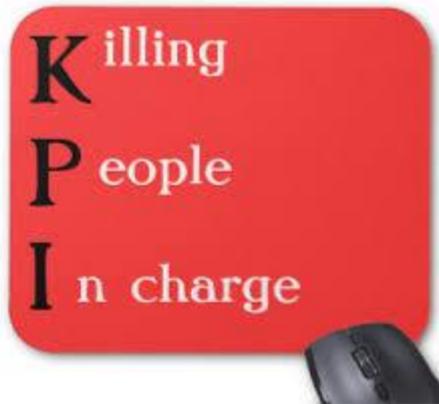
- Performance evaluated according to KPAs/KPIs. Lack of transparency and communication on stakeholder performance assessment.

- We need to better understand chokepoints, system resilience and improve processes based on feedback from disruptive events

- Identification of routes/modes where subsitution is possible/reasonable

Data Analytics for Customer-centric Operations

Data Analytics for Customer-centric Operations

- To better evaluate performance, we need to understand the available data.

- Many issues to be tackled:

  – Different data sources and reporting methods used across Europe

  – Unless given incentives or provided with potential benefits, stakeholders worry about sharing their data and submitting themselves to open comparison with competitors

  – Cost/benefit analysis of action upon stakeholders and the overall system

Data Analytics for Customer-centric Operations

- Data is now collected from passenger voluntary participation by third-party entities and often sold.

- Could we ask for a trade between passenger data they are ready to provide and stakeholders data?

  - Passengers provide data in exchange for more reliable information from the airline/airport/ground transport estimates

  - Stakeholders gain more insight on their customers and can make more informed decisions

Data Analytics for Customer-centric Operations

- How do we even decide which data should be collected?

- The passengers are willing to provide their insight, their preferences, their information (age, nationality, travel habits) if it helps make their journey more flexible/ reliable/ controllable.

- Can big data help pave the way towards multimodal ticketing?

Air Transportation in Europe and taking steps forward

Air Transportation in Europe and taking steps forward

- Europe has been a front-runner of passenger rights valorisation.

- Europe has a dense multimodal network and is an air transit platform between different continents.

- Europe has ambitious goals to reduce door-to-door travel times.

- Europe needs to keep developing its expertise to keep sharing its own experience with the world

Air Transportation in Europe and taking steps forward

- ACI and CANSO looking at promoting implementation of A-CDM worldwide

- Singapore/ Bangkok A-CDM trial (Fall 2014)

- Middle East: Local states wish to go ahead with ATFCM and Implementation

- Airbus and Boeing working with China on ATM issues:
  - air traffic flow management (ATFM) and airport collaborative decision-making (CDM) at Beijing Capital International Airport

Air Transportation in Europe and taking steps forward

- How do we provide the best overall service to passengers - not just a good experience while airborne?
  - Harmonisation
  - Showcasing Best Practices
  - Information sharing and Transparency
  - Network level Optimization

Conclusion

- Airside/landside improved interfacing supports more reliable door-to-door journeys.

- Performance analysis and data analytics support informed decision-making

- Paving the way for enhanced operations around the world

Acknowledgements

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