eXTEnded AtM for Door2Door travel
X-TEAM D2D

Data sharing and access to travelers' data as a facilitators of multimodality

SYN+AIR project

X-TEAM D2D project

Workshop 'Passenger-centred Mobility'

ART/ACARE/CAMERA

Online, June 16, 2021

SESAR JOINT UNDERTAKING

X-TEAM D2D Objectives and Consortium

The consortium

CIRA — Italian Aerospace Research Centre

DLR

d-flight

ISSNOVA — Institute for Sustainable Society and Innovation

Łukasiewicz — Institute of Aviation

Amsterdam University of Applied Sciences

The benefits expected from X-TEAM D2D project

for more info, visit
www.xteamd2d.eu/

X-TEAM D2D will emphasize the role of Aviation for achieving a smoother travel time with the final goal of reducing travel times in door-to-door journeys.

X-TEAM D2D is building a framework to increase the efficiency of the overall transport chain by improving the interoperability of the different modes of transport (already available today and/or available up to the final target 2050 time horizon), while at the same time increasing environmental sustainability, making an efficient use of the existing and future infrastructures.

X-TEAM D2D project aims at increasing the overall efficiency of European transportation network to cope the variety of transportation demand by passengers thanks to the Door to Door journey optimisation achievable with the proposed extended ATM Concept of Operations for services to passengers

Transport data role in future passenger-centred mobilty according to X-TEAM D2D

- **More focus on longer time-horizon**

  - X-TEAM D2D addresses the 2025, 2035 and final 2050 time-horizon enabling setting the scene taking full advantage of progress in numerous aviation and non-aviation but transport domains

- **Potential of data generated by TPs and passengers**

  - Green, sustainable and efficient transport system should be optimised on highest possible management level. The key is access to data.

  - Multimodal mobility to be closer to the passenger needs requires access to current and actual data

- **Within urban, suburban up to regional transport**

  - Aviation enters into the cities – UAM

 - City as transport hub joining the transport of various type

X-TEAM D2D: Trends in transport technologies development

Digitalisation

- Capacity to generate accurate real-time data by the system components (i.e. transport mode)
- In all modes which are dedicated to be integrated
- Improved reliabilty and operational efficiency
- Often requires deployment of new technologies, upgrading, some investments.
- Supported by European Commission in the European Digital Strategy
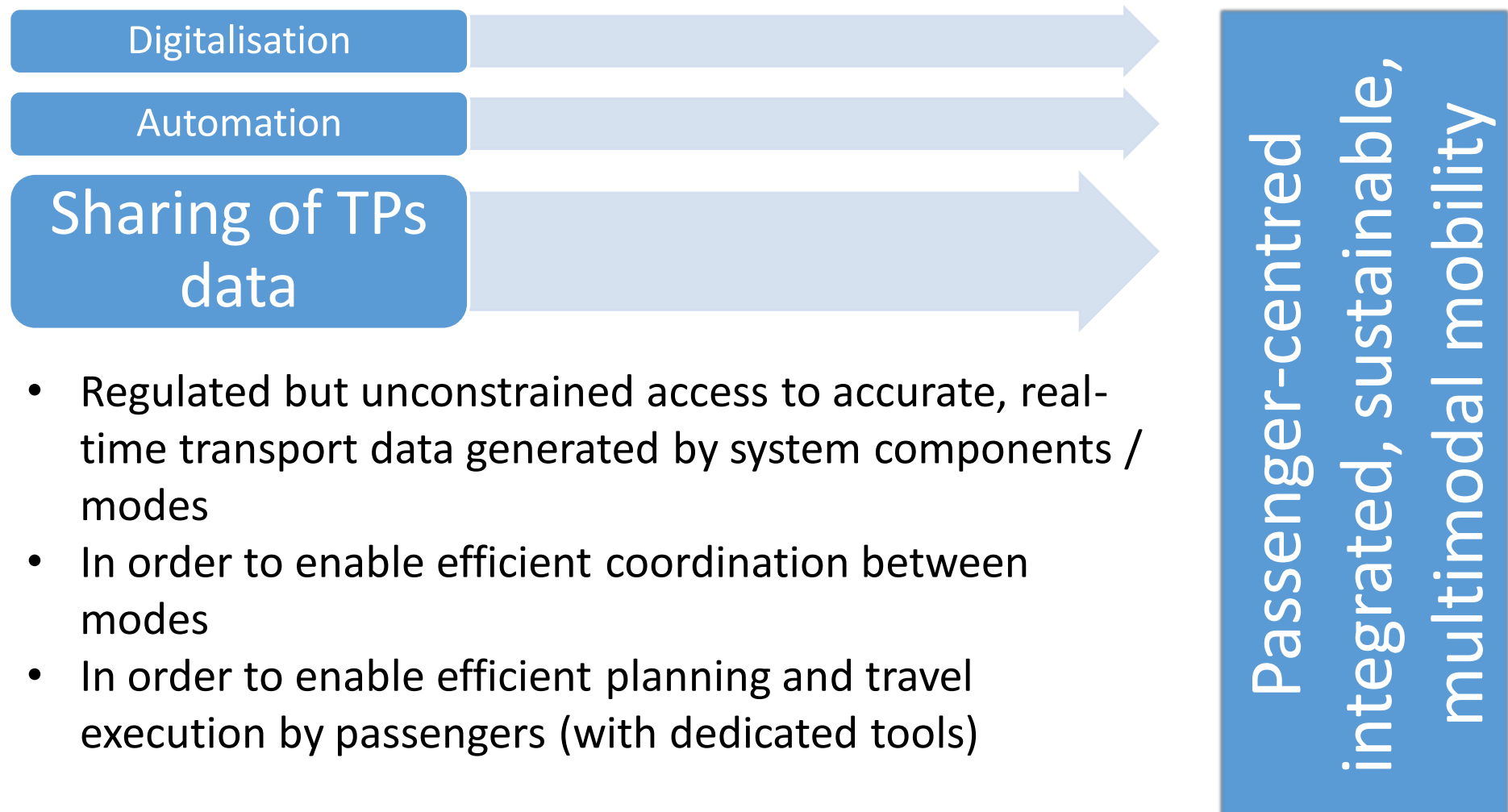- Key for automation

Passenger-centred integrated, sustainable, multimodal mobility

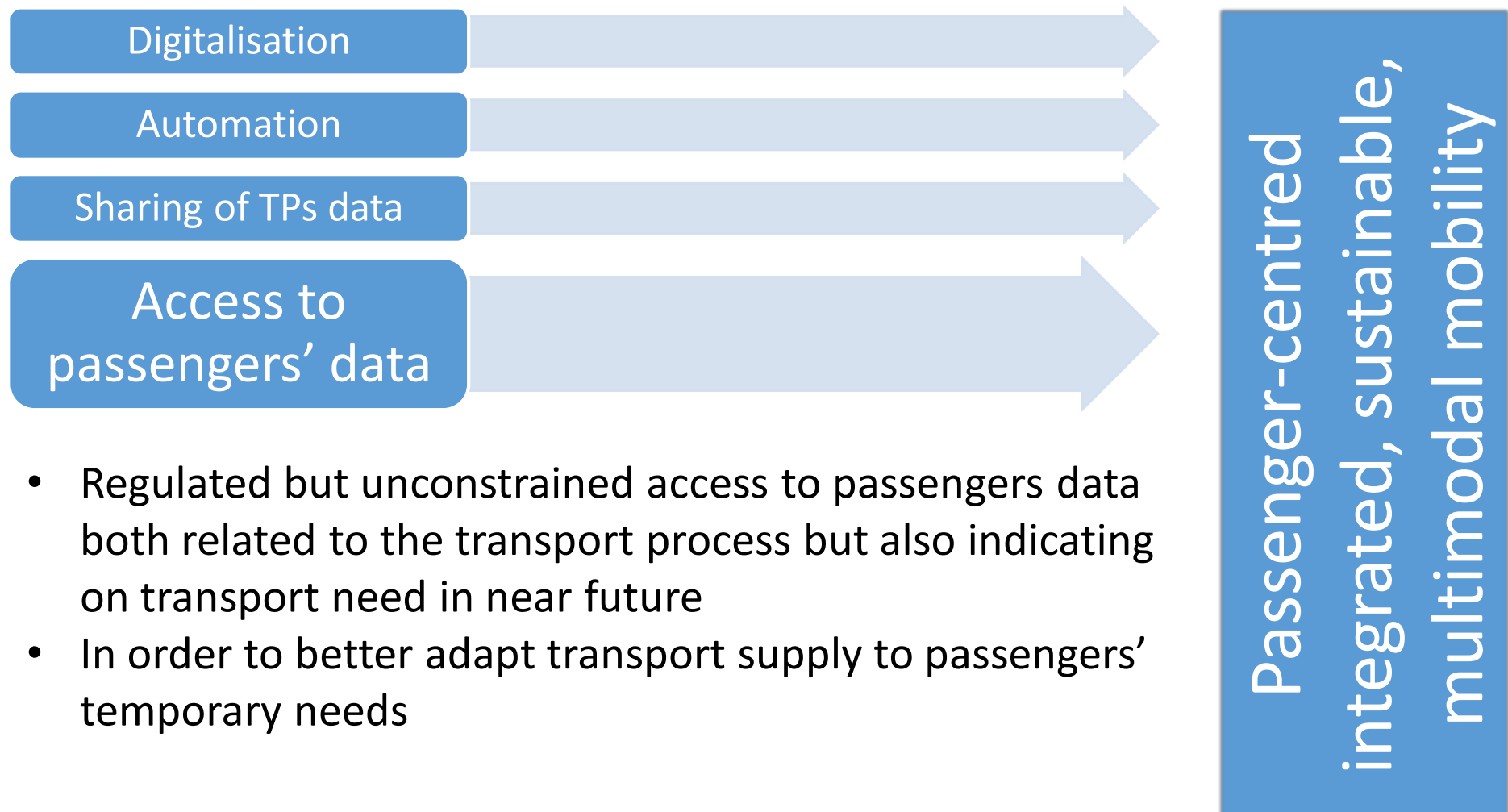# X-TEAM D2D: Trends in transport technologies development

Digitalisation

Automation
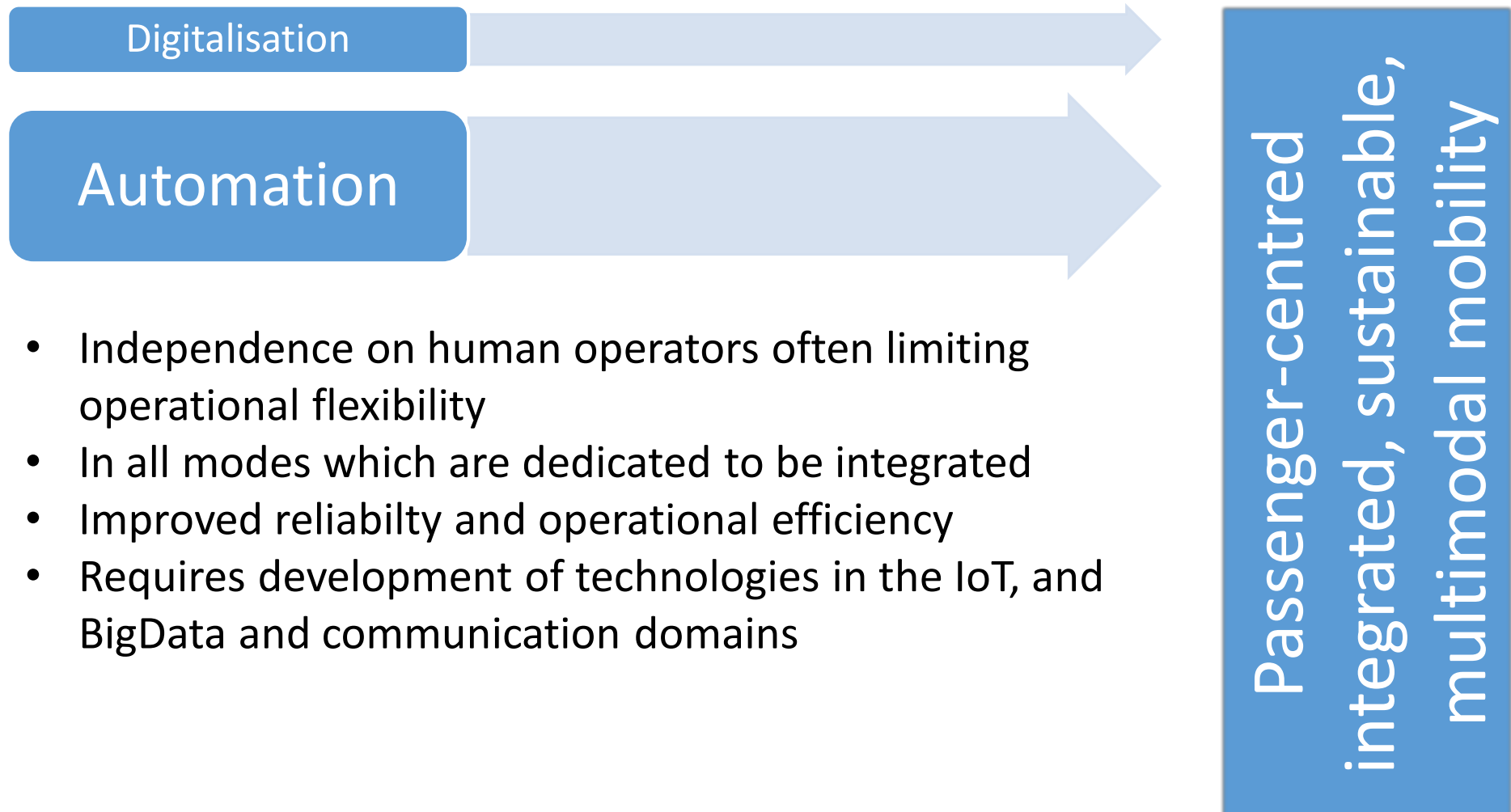
- Independence on human operators often limiting operational flexibility
- In all modes which are dedicated to be integrated
- Improved reliabilty and operational efficiency
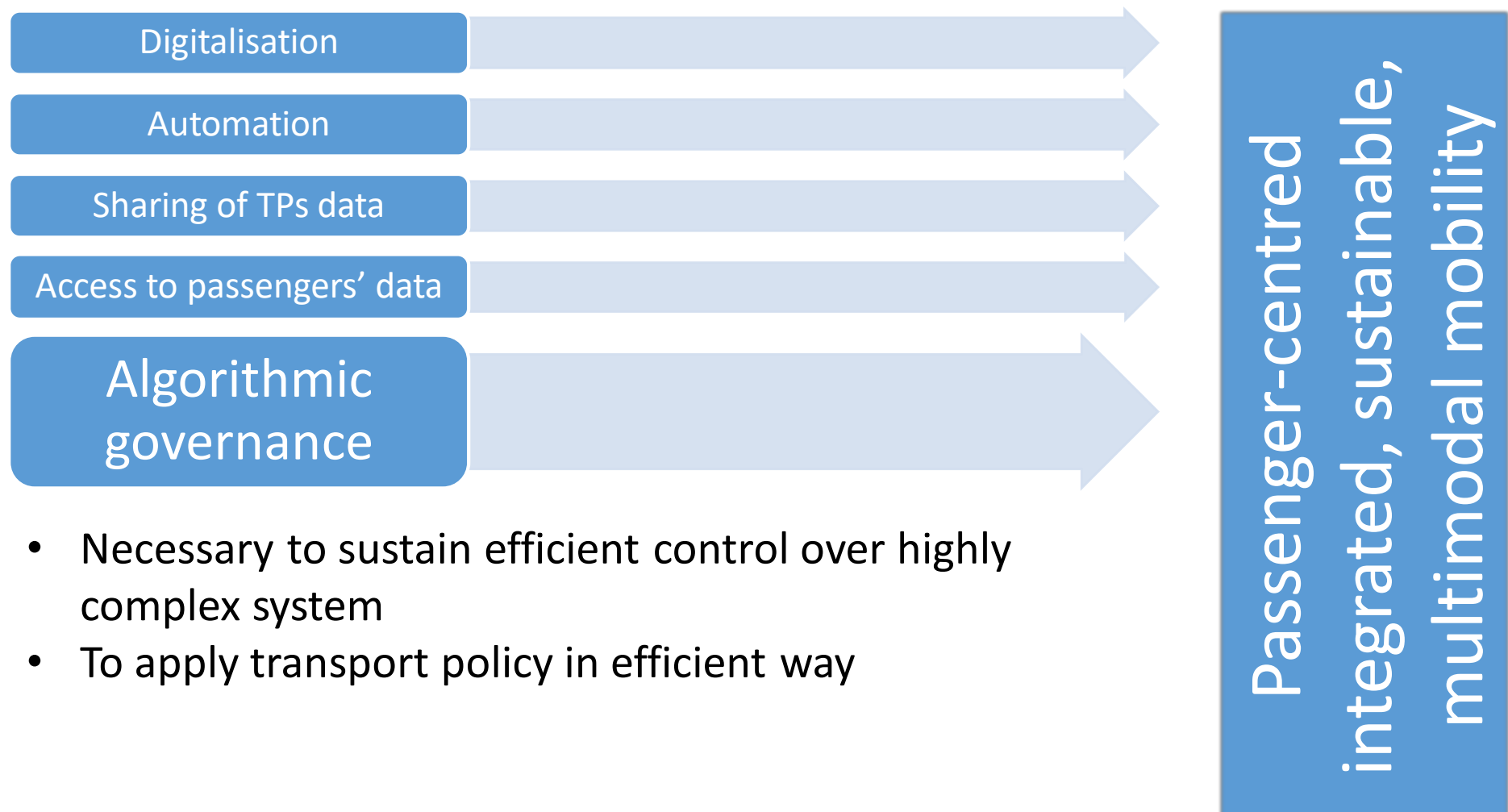- Requires development of technologies in the IoT, and BigData and communication domains

Passenger-centred integrated, sustainable, multimodal mobility

X-TEAM D2D: Trends in transport technologies development

Digitalisation

Automation

Sharing of TPs data

- Regulated but unconstrained access to accurate, real-time transport data generated by system components / modes
- In order to enable efficient coordination between modes
- In order to enable efficient planning and travel execution by passengers (with dedicated tools)

Passenger-centred integrated, sustainable, multimodal mobility

X-TEAM D2D: Trends in transport technologies development

Digitalisation

Automation

Sharing of TPs data

Access to passengers' data

Passenger-centred integrated, sustainable, multimodal mobility

- Regulated but unconstrained access to passengers data both related to the transport process but also indicating on transport need in near future
- In order to better adapt transport supply to passengers' temporary needs

X-TEAM D2D: Trends in transport technologies development

Digitalisation	
Automation	
Sharing of TPs data	
Access to passengers' data	
Algorithmic governance	

Passenger-centred integrated, sustainable, multimodal mobility

- Necessary to sustain efficient control over highly complex system
- To apply transport policy in efficient way

X-TEAM D2D: Trends in transport technologies development

Digitalisation

Automation

Sharing of TPs data

Access to passenger data

Algorithmic governance

Passenger-centred integrated, sustainable, multimodal mobility

X-TEAM D2D: How trends will shape the multimodal transport?

- **Digitalisation and automation**

- will enable significant progress in transport efficiency, flexibility and reliability
- will enable provision of tailored transport supply

- **Unconstrained but regulated access and sharing data generated by TPs and private passengers**

- will enable near-real time demand modelling
- will enable efficient real-time disruption management
- will provide passenger with broaden, more accurate information about his/her travel

- **Algorithmic governance**

- will allow for efficient management of complex automated transport systems on higher level (System of Systems)
- Will allow for efficient and quick application of transport policy (priorities, tariffs, etc)
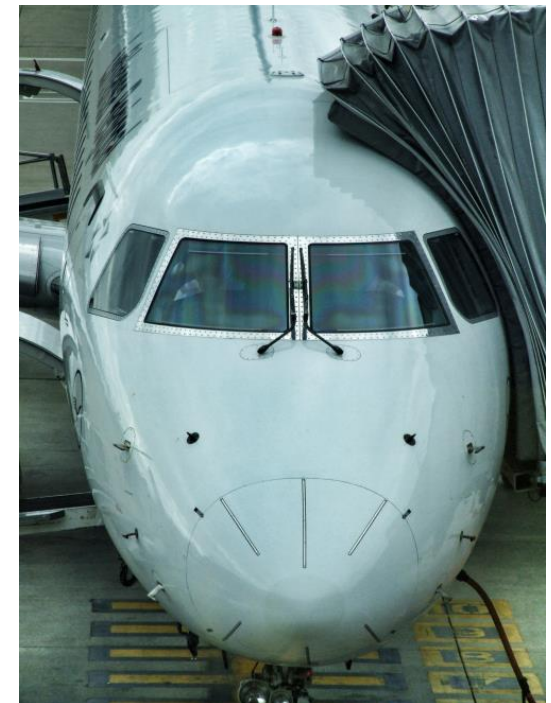
X-TEAM D2D: Possible ConOps?

Integrated multimodal transport system

Demand modeling:

- Transport Providers status data
- Passenger status data
- Nowcasted demand

Transport supply:

- Tailored to the modelled near-real time demand
- Applying given transport policy

Data sharing and access to travelers' data as a facilitators of multimodality

X-TEAM D2D: What it means for passengers?


- **Travel planning**

- Less effort necessary for planning and organisation of the journey, including additional services like baggage transport

- One payment for entire travel

- Travel assistant on portable device

- **Travel execution**

- Less time spent on waiting during changes, less congestion

- No need for paper tickets, wireless travel validation (face recognition or with use of portable device

- Travel assistant active during travel executions (monitoring situation)

- **Disruption management**

- Automatic disruption management by activation of additional resources in other, functional mode of transport with personal notification for passenger from travel assistant.

- Information for other independent mode of transport (i,e, airline, international train, etc.) about passenger status
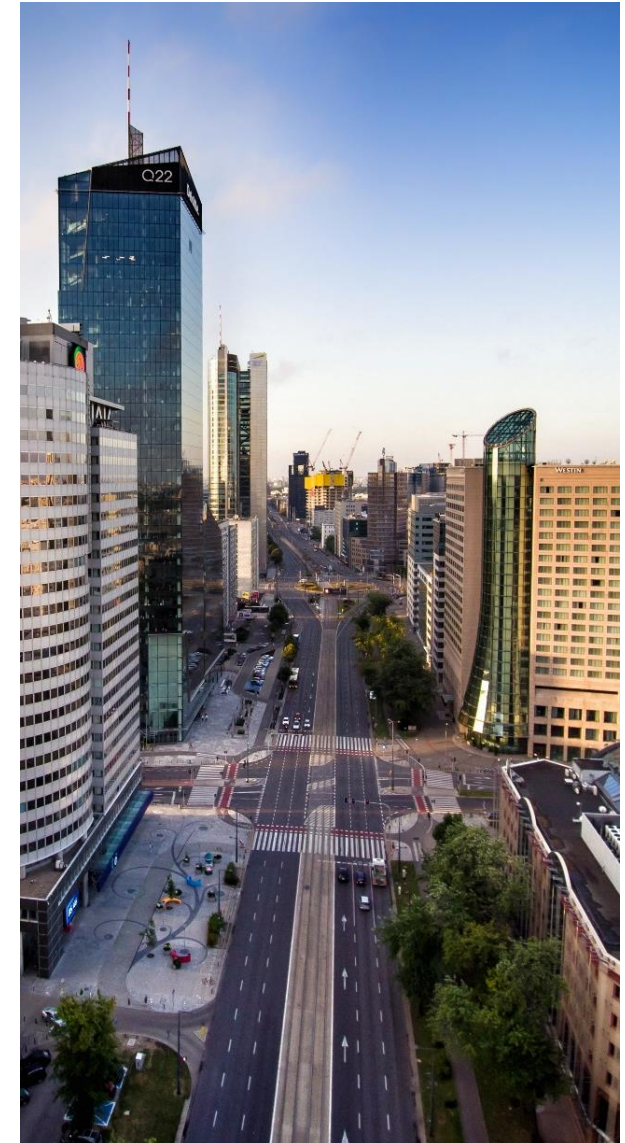
X-TEAM D2D Contacts

- **If you have any questions or like to learn more about X-TEAM D2D:**

- **X-TEAM D2D Website**

- www.xteamd2d.eu

- **X-TEAM D2D Twitter**

- @XTeamd2d

- **X-TEAM D2D LinkedIn**

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Data sharing and access to travelers' data as a facilitators of multimodality

Thank you very much
for your attention!

Stay in touch with us

www.xteamd2d.eu   @XTeamd2d

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