

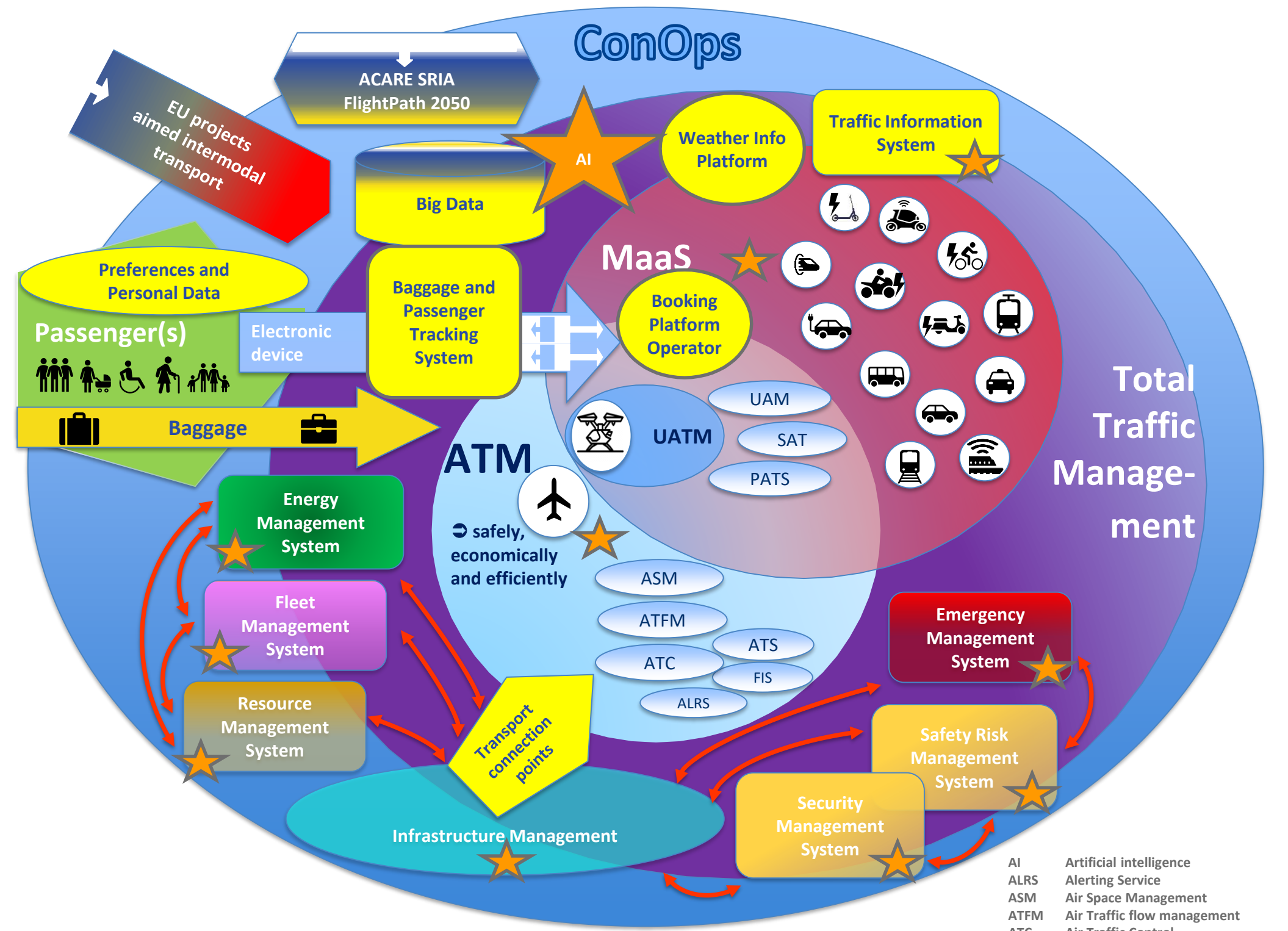
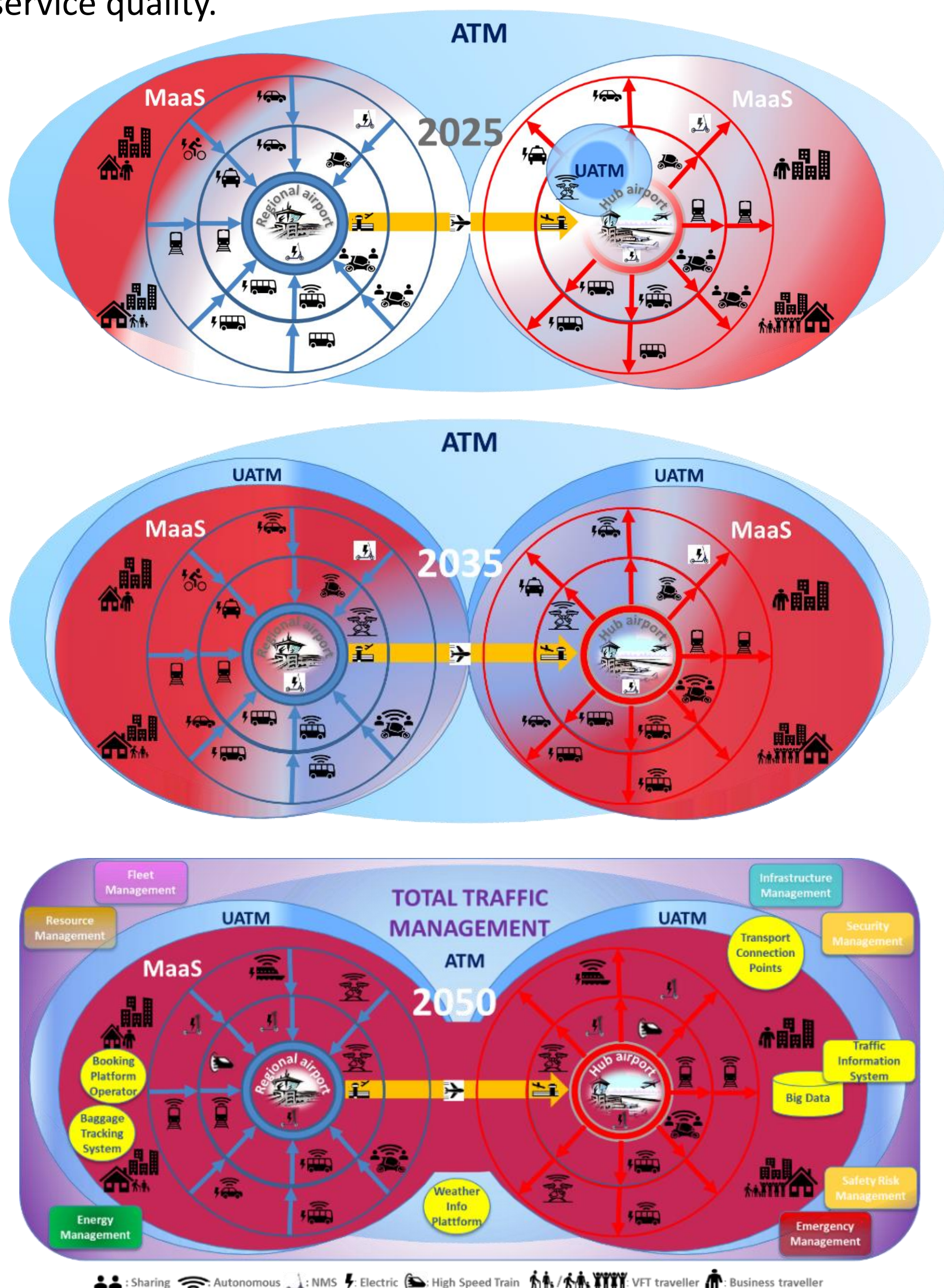
Concept of Operations for Total Traffic Management

Overview

This research deals with developing a Concept of Operations (ConOps) of an intermodal transport system with special consideration of the passengers' satisfaction with up to 4-hour journeys. For this purpose, the influences of quality management systems and other organizational facilities on the quality of passenger travel in the transport system were examined. In the study, integration of various management systems, like resources, traffic information, energy, fleet, emergency, security and infrastructure, and applications such as weather information platforms and tracking systems, is expected.

Architecture outline of timeframes

This section describes the elements of the ConOps and their relationships according to the planned architecture of the intermodal transport system. The three-time horizons (2025, 2035, 2050) considered in the project are differentiated. The management systems, the tools, and the intelligence of the algorithms, which will become the intermodal system, play a decisive role in achieving the ambitious goal of providing complete traffic management for a door-to-door connection in up to four hours. The elements are to be viewed broadly, as service tools are also included, for instance. While new technologies will improve the means and infrastructures, it is also evident that the system's functioning depends heavily on service quality.



CONCEPT OF OPERATIONS

supporting the seamless integration of ATM and Air Transport into an overall intermodal network

- AI Artificial Intelligence
- ALRS Alerting Service
- ASMA Air Space Management
- ATFM Air Traffic flow management
- ATC Air Traffic Control
- ATS Air Traffic Services
- ATM Air Traffic Management
- ConOps Concept of Operations
- FIS Flight Information Service
- MaaS Mobility as a Service
- PATS Personal Air Transport System
- SAT Small Air Transport System
- SMS Safety Management System
- SRM Safety Risk Management
- UAM Urban Air Mobility
- UATM Urban Air Traffic Management

CONCLUSION AND FUTURE WORK

In this research, the first formulation of ConOps for Total Traffic Management was presented, which contains management and service applications that should pave the way to seamless goal for all modes of transport in which the travellers' preferences have a high priority.

For future research, the management systems and applications described in the ConOps should be examined more precisely for possible synergies, interactions and points of friction in an intermodal transport system. To this end, it should be explored how these management systems should be implemented gradually over the time horizons 2025, 2035 and 2050.

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