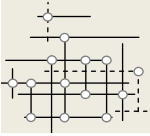


Internet of future application scenario. Airport and Aviation Network Management

Control Chaos Technologies (Hannover) in
collaboration with:
IT-Eyes (Cologne), EADS IW (Hamburg),
University of Münster (WWU), Cologne
University of Applied Sciences (FH Köln)

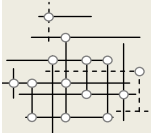


The Internet of the Future *Complex Service Systems*

- Complex Service Systems are characterised by**
- massively distributed activity
 - of widely autonomously acting but nevertheless interdependent agents
 - relying on local, i.e. incomplete information,
 - a ground-floor of interference
 - openness to many contexts
 - and risks of system-wide failures

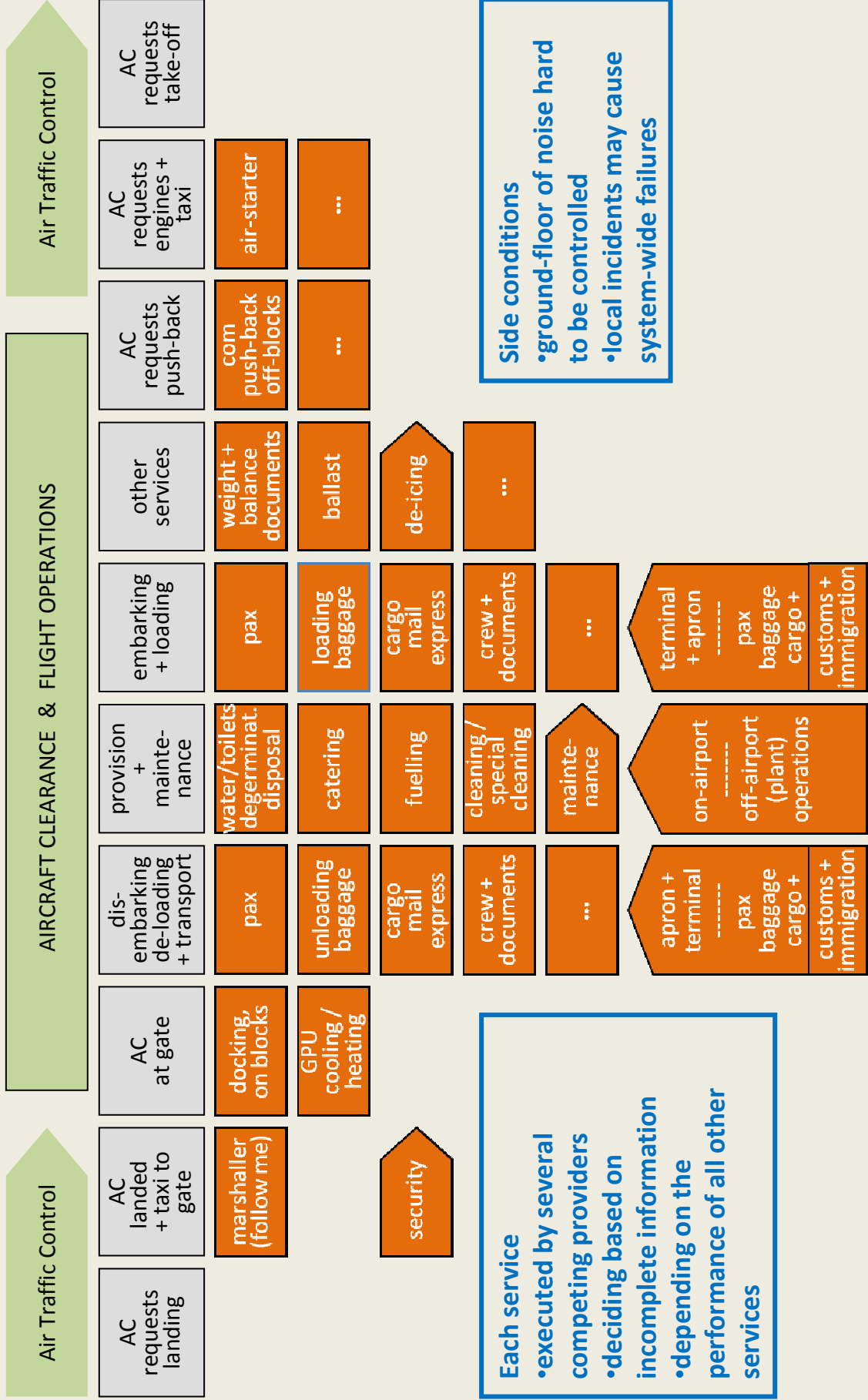
Suggested Architecture:

High-Performance Network integrating local medium- and high-performance computing nodes into a **P2P-realtime system-management infrastructure**



The Internet of the Future

Example: Major Airport Turnaround Services for Aircrafts



Each service

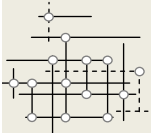
- executed by several competing providers
- deciding based on incomplete information
- depending on the performance of all other services

Side conditions

- ground-floor of noise hard to be controlled
- local incidents may cause system-wide failures

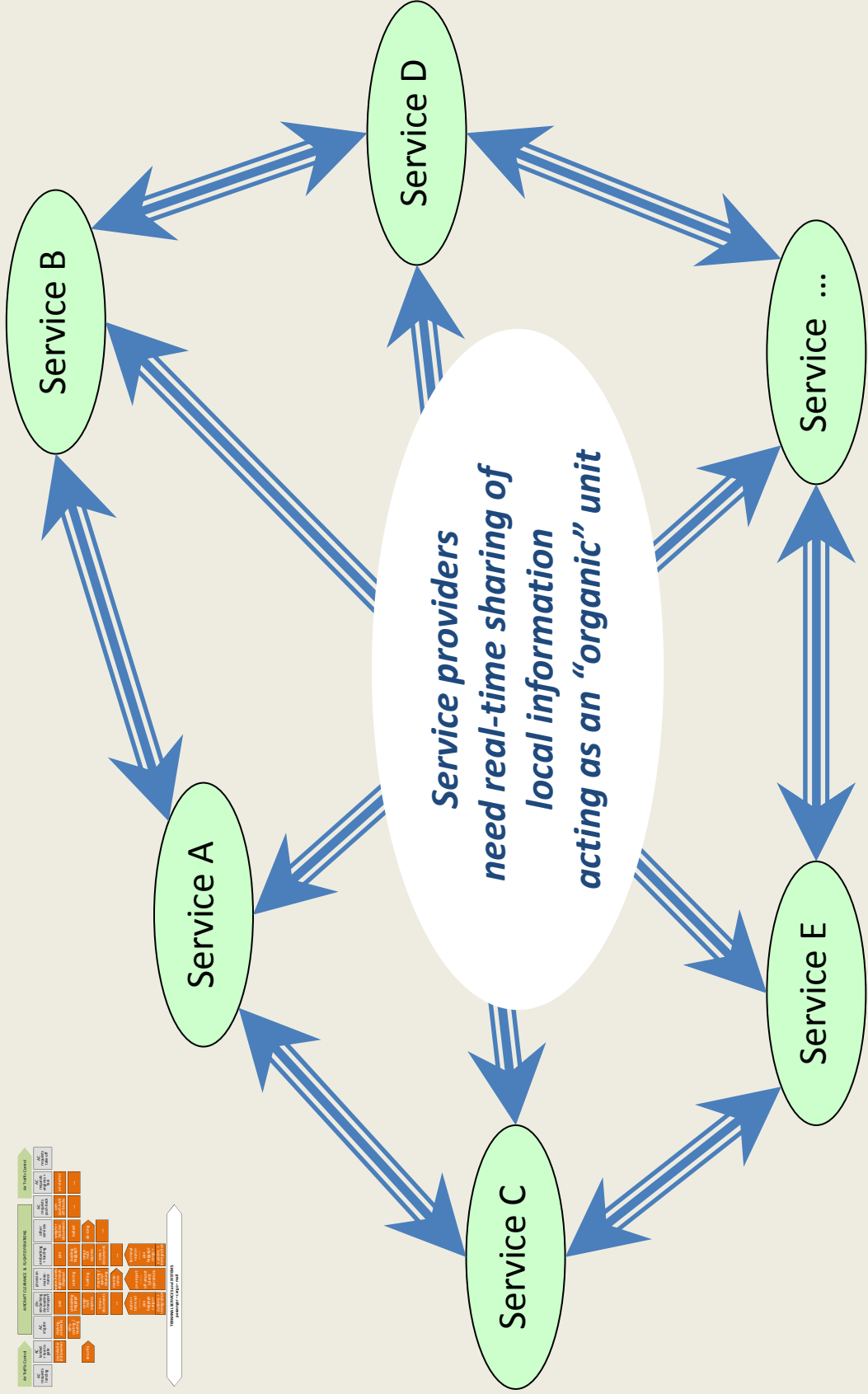
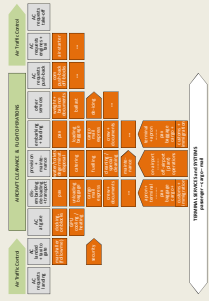
TERMINAL SERVICES and SYSTEMS

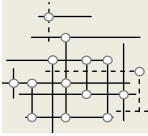
passenger – cargo – mail



The Internet of the Future

A Proposed Architecture of Real-time Service Management



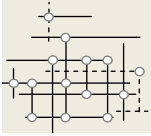


The Internet of the Future

Needs for Massive Parallel Processing

Critical Incidents

- **are unplanned events with a potential of driving serious failures**
- are to be anticipated and shared across the community of service providers
- in order to coordinate in real-time (as local as possible – as global as necessary)
- to hedge risk / to avoid propagation of failures



The Internet of the Future On the Structure of Criticality

