Future of Air Transport: ATM

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Sustainability Issues

- Pressure for better performance & reduced costs
- Today’s systems/concept are
  - Stretched to the limits
  - Inflexible, not agile, deployed late
- Obsolescent technology: voice radio, limited information exchanges, automation, architecture
  - Resulting in fragmented trajectory management
- Transition issues in a complex network made of autonomous but interacting entities with different businesses and needs
- Human control in the system as manager and decision-maker
- Enhanced automation, e.g. at remote towers
- New separation modes
- Starting in strategic planning phase
- Continuous in the "Network Operations Plan"
- Dynamic airspace design & management
- Performance is the collective result of the decisions by interdependent actors throughout the network
- Trajectory: the common object of decisions defined in 4D, gate-to-gate, including turnaround operations
- System Wide Information Management
- Partnership is required including turnaround operations
- Executed as close as possible to owner's intention
- User-preferred routing (except where capacity requires structured network)
Enablers of Change

Technological
- Common system architecture, service oriented
- Satellite navigation, new data link, more flexible avionics
- Greater use of industry standards, non aviation-specific
- SWIM

Managerial & Institutional
- Business case to support decisions
- Cooperation for global interoperability
- Change management process
- Timely standardisation & rule making
- Effective commitment of all actors
- Financial instruments

- SES
  - Common regulatory framework incl. performance, ATM Master Plan
  - SESAR Joint Undertaking: cohesive programme across industry
  - FABs