

Policy strategies to foster and guide innovations in the air traffic system

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The "Big" European/US ATM scenarios for 2020-2025

Efficient	High service quality	Green & quiet	Safe & secure
<p>A/C Manufacturer</p> <ul style="list-style-type: none"> Aircraft fuel consumption Range/payload performance 	<p>Airline</p> <ul style="list-style-type: none"> Destinations Frequencies Prices Punctuality Customer satisfaction: The Onlince Aircraft 	<p>Manufacturer</p> <ul style="list-style-type: none"> CO_x, NO_x, Sox, HC, Noise 	<p>Airport/authority/airline/ANSP</p> <ul style="list-style-type: none"> Security standards SMS
<p>Airport</p> <ul style="list-style-type: none"> Airport charges Airport capacity 	<p>Airport (Image)</p> <ul style="list-style-type: none"> Terminal facilities: available space, process quality → Punctuality Facilitator of inter-modal transport operations 	<p>ANSP (ATC)</p> <ul style="list-style-type: none"> Procedures for approach/departure Minimum noise routes 	<p>Manufacturer/airline</p> <ul style="list-style-type: none"> Production (approval) and maintenance standards
<p>ANSP (ATC)</p> <ul style="list-style-type: none"> Air space charges Air space capacity 		<p>Airline</p> <ul style="list-style-type: none"> ETS based on CO₂ 	<p>Image: airport, airline, ANSP (ATC)</p>
<p>Airline</p> <ul style="list-style-type: none"> Flight planning Cost Index 		<p>Airport</p> <ul style="list-style-type: none"> Noise insulation 	<p>... market driven</p> <p>... policy driven</p>
		<p>Image: airport, airline, ANSP (ATC)</p>	

Innovations and drivers needed beyond 2025 ...

- „Shifting the balance between modes of transport“
[White Paper, European Commission, 2001]: Use the most efficient and ecological mode(s) of transport for the trip:
 - How will weight time versus money (productivity will have to increase in high tech countries) ? -> what is "cost effective" ?
 - What will be the "typical" trip (mobility pattern) ? Logistics and work chains to be forecast. Technically: No existing alternatives to air traffic for middle+ range, but for short range (< 500 km)
- Railway/Road: require an high speed passenger network, towards multimodal corridors but "efficiency" may slow down the operation speed
- Road sector: „No“ to Gigaliners – How to increase productivity ?
- Policy strategies: Guide and management "efficiency" of different traffic modes by
 - *"Zero External Effects (Costs) Vision" for all transport*
 - *The Customer / User pays for the infrastructure*
 - *ETS with adjustable cap and indicator, worldwide, pricing market driven*



The Infrastructure to be adopted to forecast scenarios

- Discuss alternatives from current settlement and investment policy:
"support infrastructure development to strengthen weak regions"

→ centralization:

- Focus on hub airports/airport cluster
- Middle/regional airports: loss of feeder function, rights to exist for point-to-point and tourism traffic
- Mini airports: unprofitable, no subsidies

- Political intervention?

- Targeted development and license policy (European master plan?) → cargo, pax
- Harmonization of network structures and conditions for airports/airlines

Source: www.johomaps.com/eu/maps.html

