



SESAR in support of the GANP

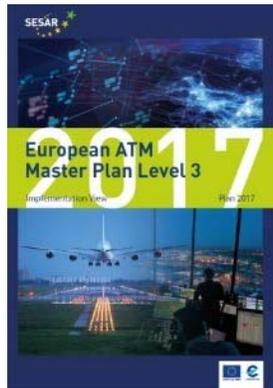
SESAR link to ASBU framework

Marie-France Deslandes

Master Plan Maintenance Project Coordinator -
EUROCONTROL

13th December 2018

Inputs for ASBU Report

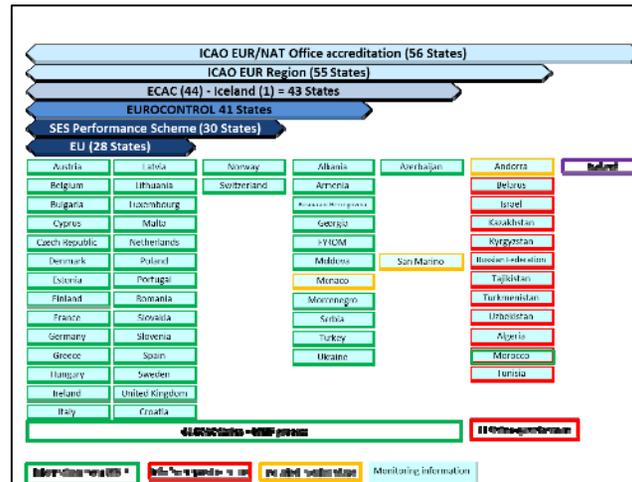


BB-APTA			
NOV10	Implement APV procedures		
Optimization of Approach Procedures including vertical guidance			Status
Relevant actions:		Completion Date	Percentage of completion (%)
<ul style="list-style-type: none"> Design and publish APV/ASDs and/or APV/ASDs products Publish APV/ASD coordinates data in WGS 84 in accordance with ICAO Annex 15 requirements 			
<p>Explain how and when you intend to complete this objective</p>			
BB-DATM			
INF04	Implement integrated briefing		
Service Improvement through Digital Aeronautical Information Management			Status
Relevant actions:		Completion Date	Percentage of completion (%)
<ul style="list-style-type: none"> Implement integrated briefing 			
<p>Explain how and when you intend to complete this objective</p>			
FFY-ADO			
Ensure quality of aeronautical data and aeronautical information			
Service Improvement through Digital Aeronautical Information Management			Status
Relevant actions:		Completion Date	Percentage of completion (%)
<ul style="list-style-type: none"> Implement a quality management system (QMS) Implement data quality requirements Implement the common data and digital exchange format Establish formal arrangements 			
<p>Explain how and when you intend to complete this objective</p>			



LSSIP process

ECAC States + Morocco



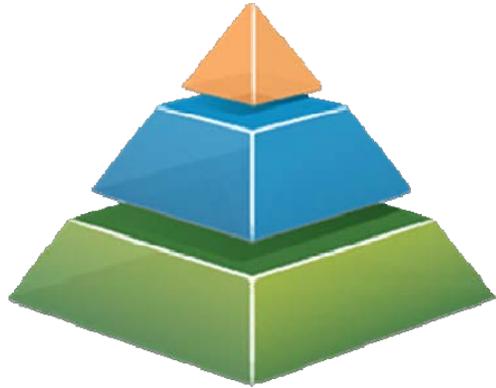
Questionnaire

Non-ECAC States

Focusing on the ATM Master Plan Level 3 + LSSIP



Role of the Master Plan



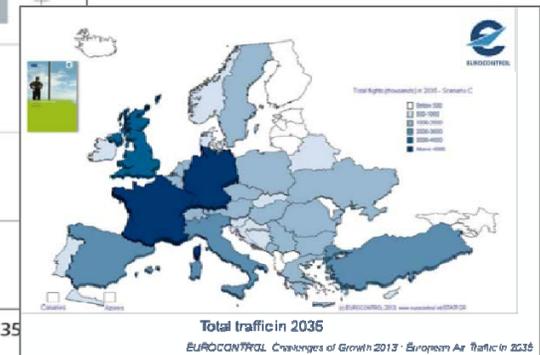
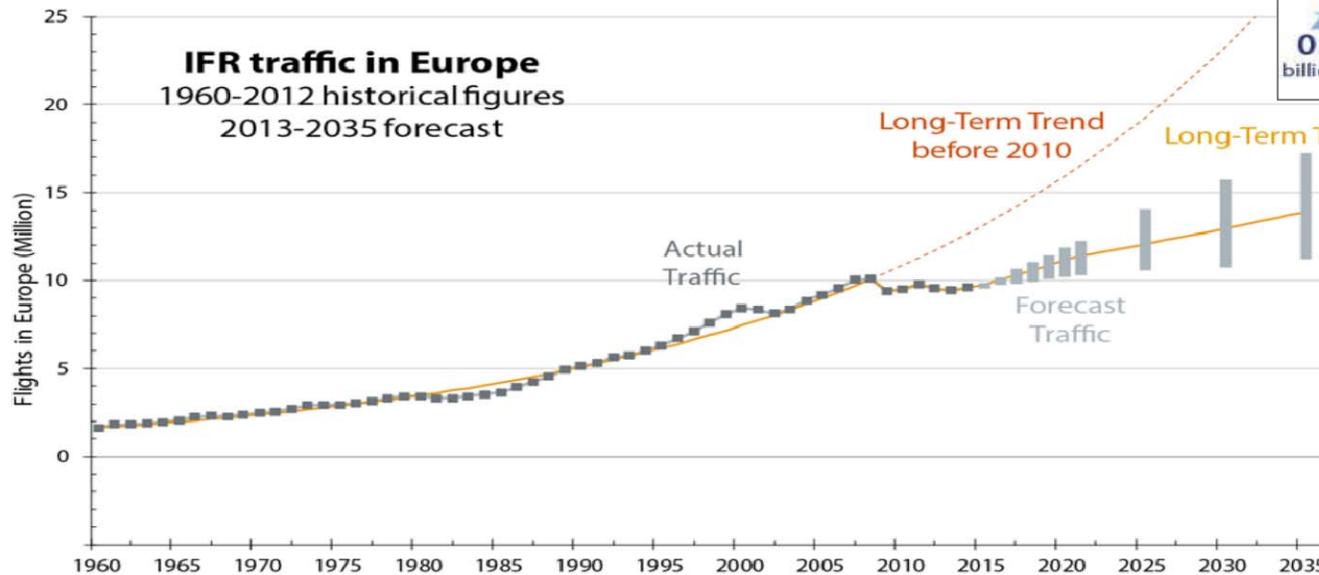
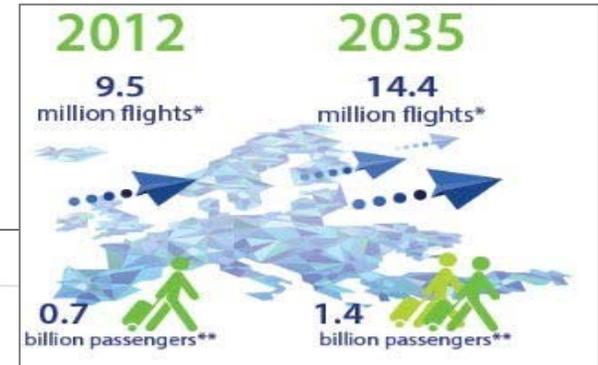
From Strategic View
to Timed Deployment



Performance Requires Change



& Safer More Traffic
User Needs
Less Costs



SESAR Performance ambitions



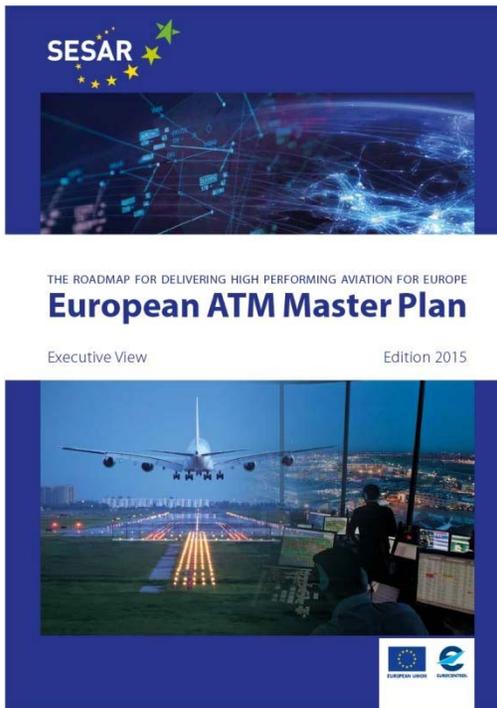
- ✓ Consistent with ICAO Framework SES high-level goals
- ✓ Cross-readable with SES performance scheme



What is the European ATM Master Plan?



The roadmap driving the modernisation of the European ATM system



Level 1: Not just a paper exercise

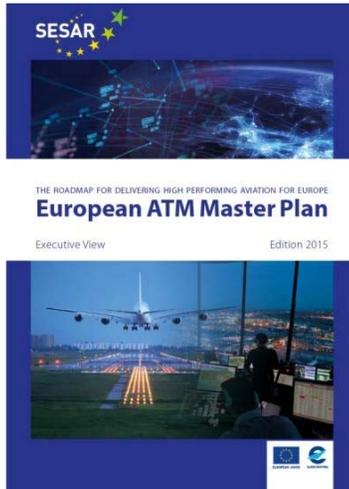
Connecting R&D with deployment

Defining a Vision 2035+ and highlighting ways to achieve it

Driving at top level all EU funding priorities for both ATM development and deployment



MP Outline overview



WHY

Vision and Performance ambitions

WHAT

Description and prioritisation of technical solution

WHERE, WHEN & WHO

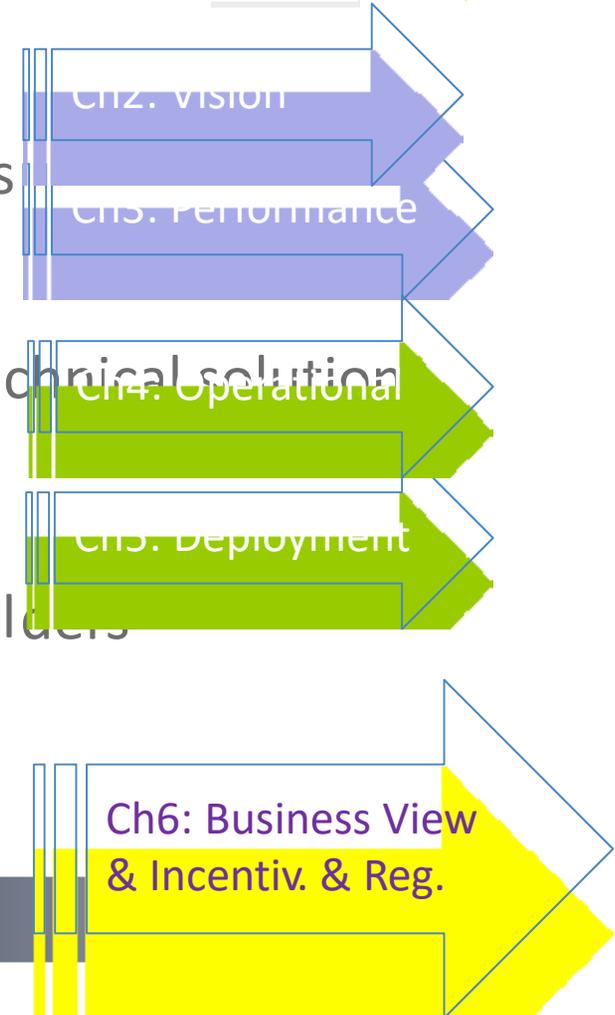
Deployment scenarios per stakeholders

HOW MUCH

Investment needs

HOW

Standardisation and regulatory roadmap



European ATM Master Plan



Performance
Changes
Choices
One Direction

Reference for:



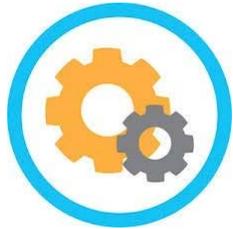
R&D

SESAR 2020

Deployment

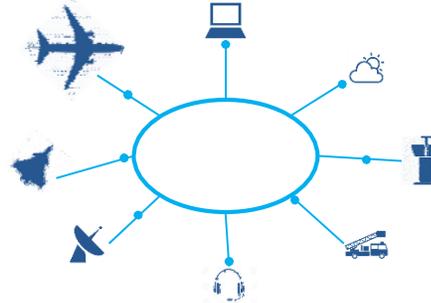
Common Projects

MP: Enabling changes in ATM capabilities by 2035



Automation of routine tasks

Automation and use of data communication to ease & support staff workload



Integrated systems

Lean and modular systems, easily upgradable and interoperable



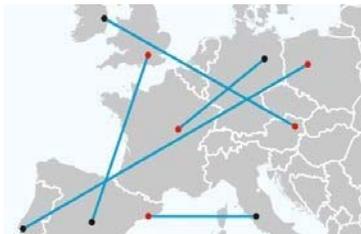
Integration of all vehicles

All air vehicles fully integrated in ATM environment (incl. RPAS)



Sharing of information

Information shared digitally via common information platform



Flight-centric operations

Air users fly their preferred, more direct route



Virtualization

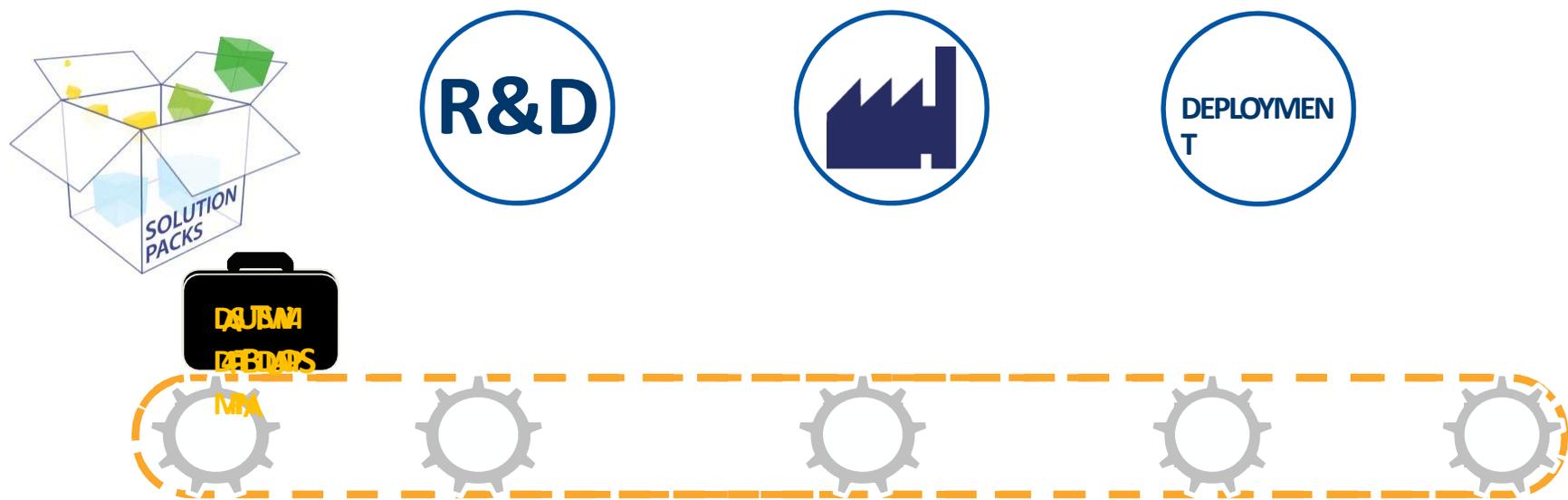
Virtualization allowing dynamic capacity management



A simplified approach to Master Planning activities



- Every 3 / 4 years.../...
- Yearly, provide a snapshot of the progress of R&D and deployment

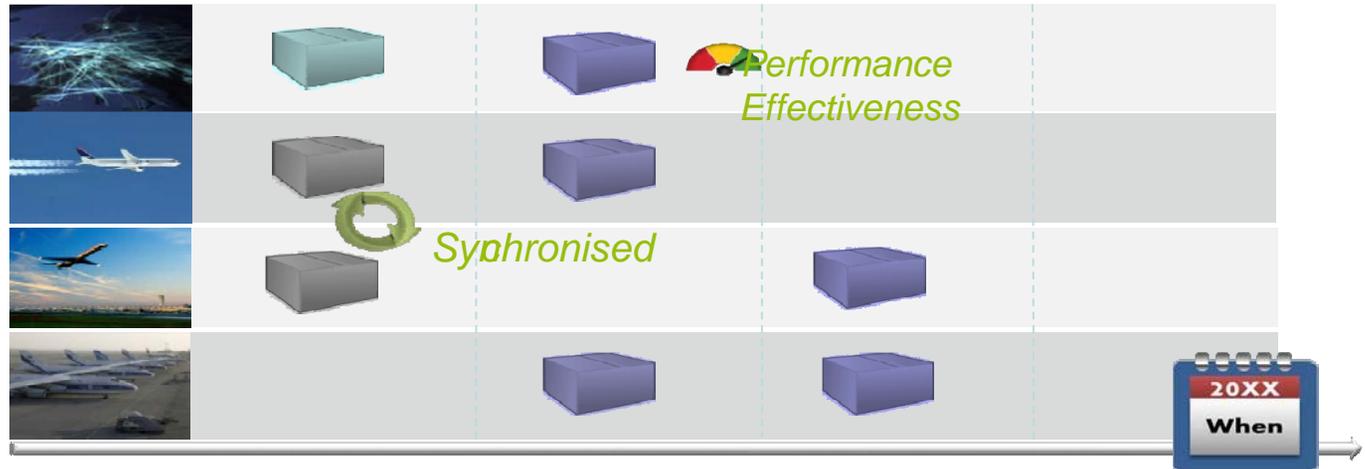


Solution Deployment Scenarios

Performance



Where

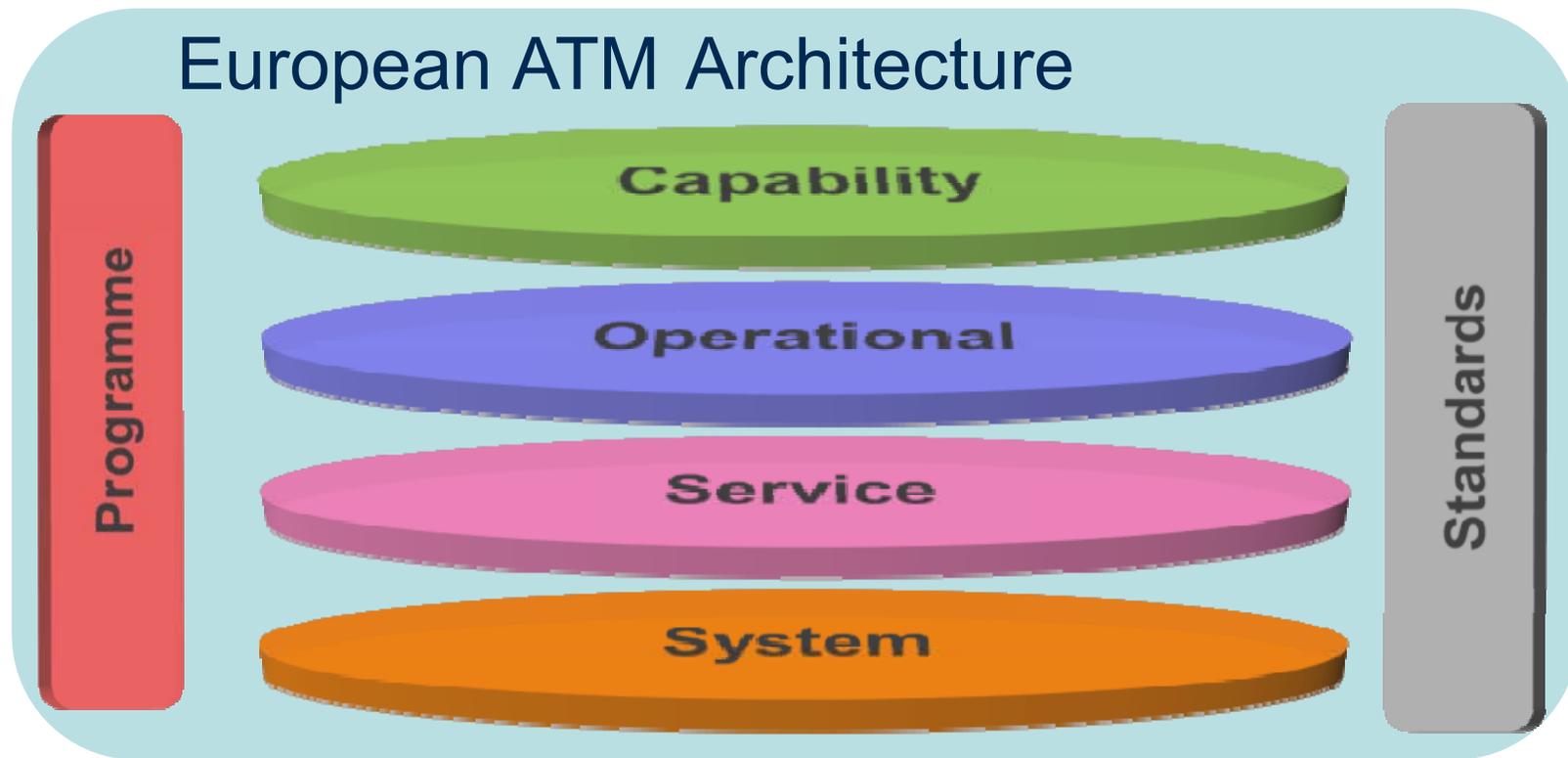



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Navigation											
ATM Tech											
Information data sharing											
ATC tools											
Airspace management system											
AMAN/DMAN											
Capacity management tools											
ATIS systems and services											
Flow and capacity balancing											
Conflict management tool											
ATIS CWP											
Enhanced FDP											
Flight object implementation											
Planning and demand data											
ATIS communications and											
Navigation infrastructure											
ATIS infrastructure											
ATIS tools											
Surface management											

e.g. Roadmap per stakeholder (Civil & Military)



Level 2: Changes organised and described in



HOW? ... to see this?



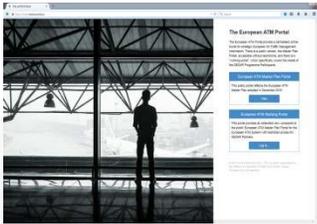
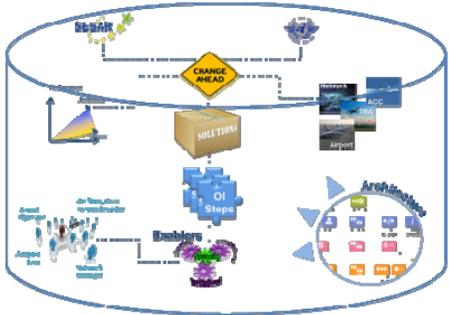
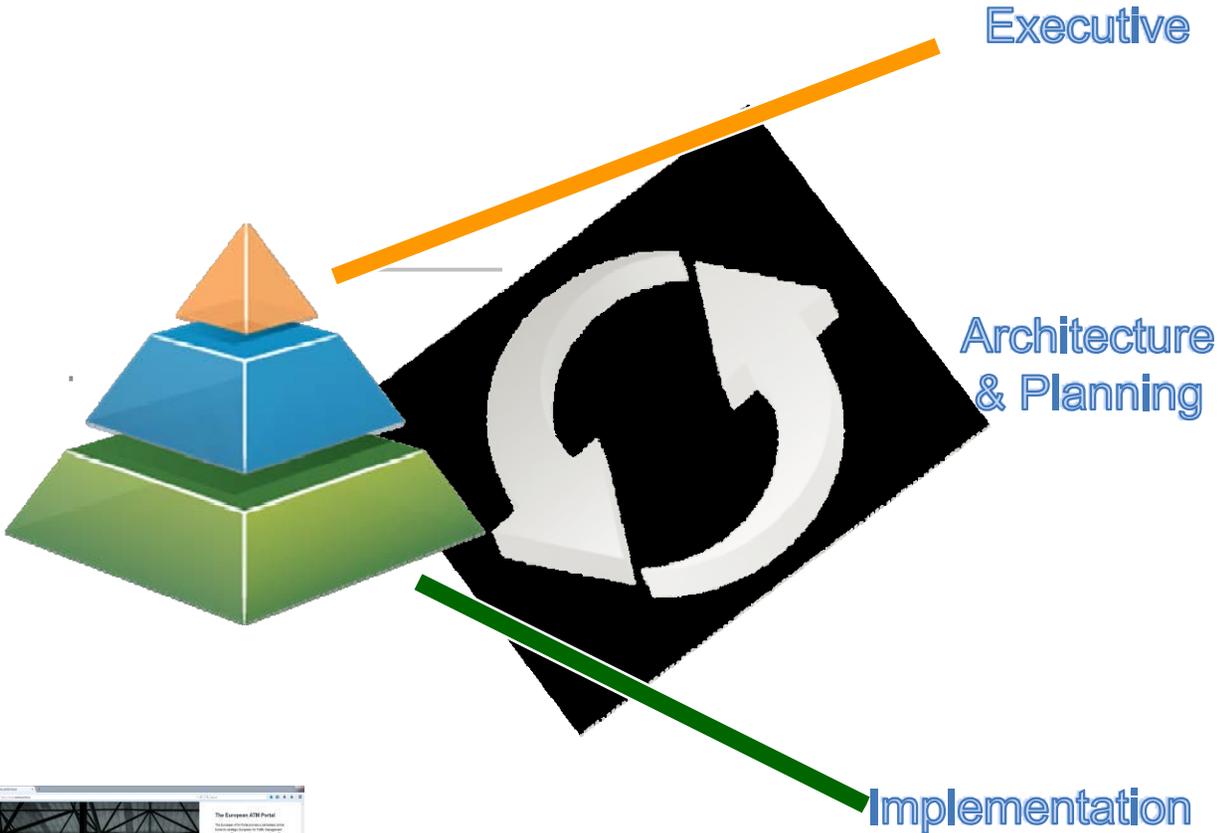
The screenshot shows the homepage of 'The European ATM Portal'. At the top, it says 'THE HOME OF STRATEGIC EUROPEAN AIR TRAFFIC MANAGEMENT INFORMATION' and features the SESAR logo. Below the header is a navigation bar with 'Executive Overview', 'Research & Development View', and 'Deployment View'. The main content area includes a welcome message, a search bar, and several filters to browse the portal: 'By Master Plan Level' (Level 1, 2, 3), 'By Stakeholder' (ANSP, APT, AU, MIL, NM, REG), 'By Operating Environment' (ER, TMA, APT, NW), and 'By Topic' (Performance, Operational Concept, Services, Technology, Planning, Monitoring, Standards). A large blue arrow points from the 'Research & Development View' tab to a detailed view of that section.

This screenshot shows the 'R&D Overview' page. It features a navigation bar with 'Executive Overview', 'Research & Development View', and 'Deployment View'. A sidebar on the left lists various categories like 'Capability Configurations', 'Systems', 'Functional Blocks', etc. The main content area is titled 'R&D Overview' and contains several icons representing different architectural and operational areas: 'ARCHITECTURE OVERVIEW', 'OPERATIONAL ARCHITECTURE', 'ARCHITECTURE VIEWS', 'OFA DASHBOARD', 'TECHNICAL ARCHITECTURE', and 'PRODUCT DOCUMENTS'.

<https://www.eatmportal.eu>



The ATM Master Plan : three levels



<https://www.eatmportal.eu>



Global landscape



Global Air Navigation Plan

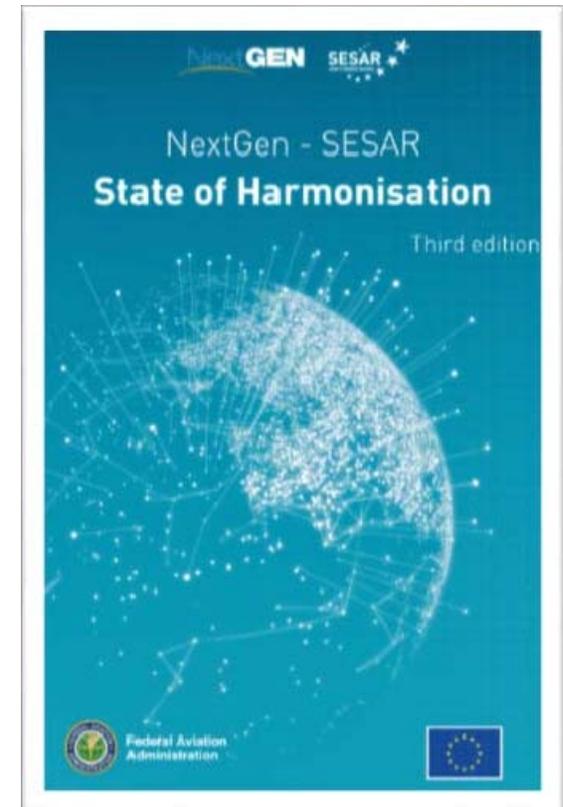
Other Regions



U.S./FAA NEXTGEN – EU/SESAR STATE OF HARMONISATION



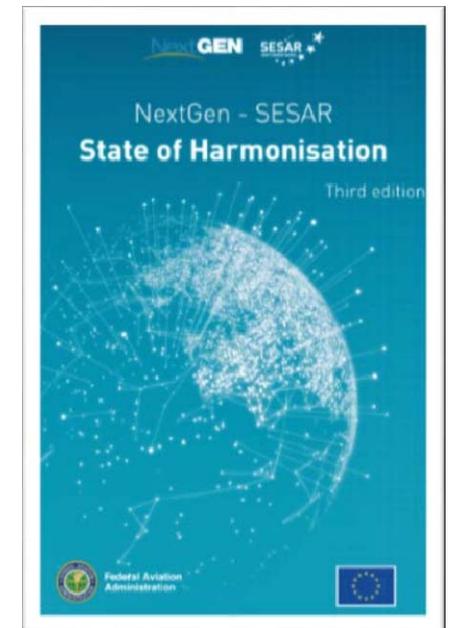
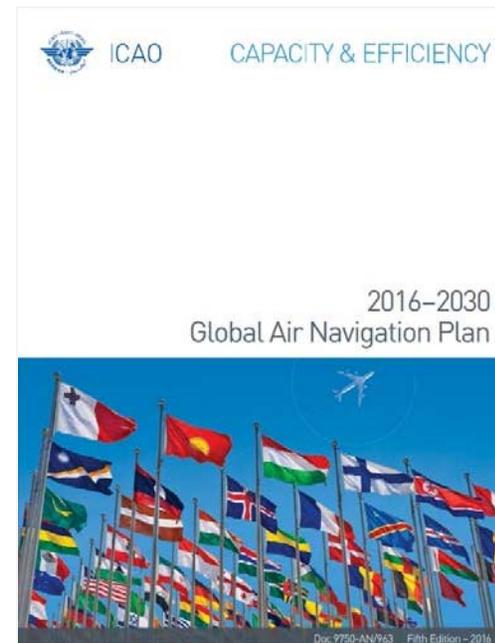
- National and regional planning and the ICAO GANP and GASP
- Harmonisation Risks, Issues and Opportunities Framework (HRIOM)
- Economic Impact Assessments, CBA's, Business models
- Roadmap comparisons - standardisation, avionics, navigation etc.
- A/G Data Comm strategy - short/medium/long term
- SWIM Strategy – safe and secure applications of infrastructural services
- UAS/RPAS, New Entrants Integration – Automation model and technologies
- TBO and Integrated CNS and Spectrum (2019)
- Safety and Security Methodologies – Human Performance and Automation



THE NEED FOR GLOBAL HARMONISATION AND INTEROPERABILITY



- Ensure that the same aircraft can operate in all systems
- Align strategic views of Aviation/ATM modernisation and its enabling asset capabilities/services
- Ensure common standards available and applicable when needed
- Increase operational and economic performance by sharing results and efforts



Links to GANP2016



- currently in the ATM Master Plan portal

Latest released data

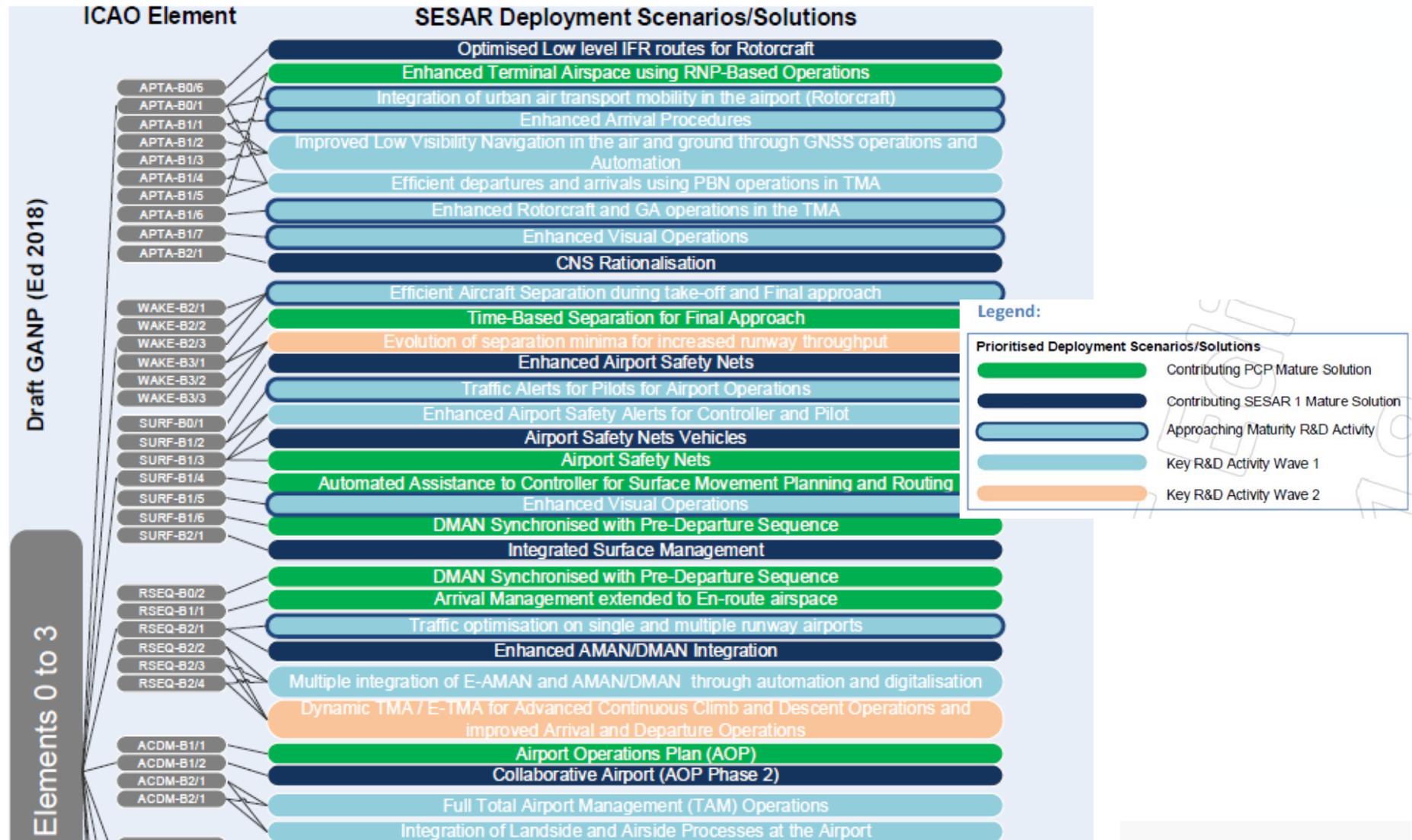
Deployment View / ICAO Block Modules

Designator	Title	Related Elements
B0		
B1		
B1-ACDM	Optimized Airport Operations through A-CDM Total Airport Management	SOL OI OBJ DP PCP
B1-AMET	Enhanced Operational Decisions through Integrated Meteorological Information (Planning and Near-term Service)	SOL OI PCP
B1-APTA	Optimised Airport Accessibility	SOL OI OBJ DP PCP
B1-ASEP	Increased Capacity and Flexibility through Interval Management	SOL OI DP
B1-CDO	Improved Flexibility and Efficiency in Descent Profiles (CDOs) using VNAV	SOL OI
B1-DATM	Service Improvement through Integration of all Digital ATM Information	SOL OI OBJ DP PCP
B1-FICE	Increased Interoperability, Efficiency and Capacity through FF-ICE, STEP 1 application before departure	SOL OI OBJ DP PCP
B1-FRTO	Improved Operations through Optimized ATS Routing	SOL OI OBJ DP PCP





Figure 37 Mapping SESAR Operational changes – ICAO ASBU / Block Elements 0 to 3



A consensual definition and prioritisation



European Commission

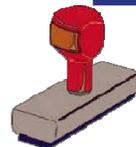
Air Navigation Service Providers



Military

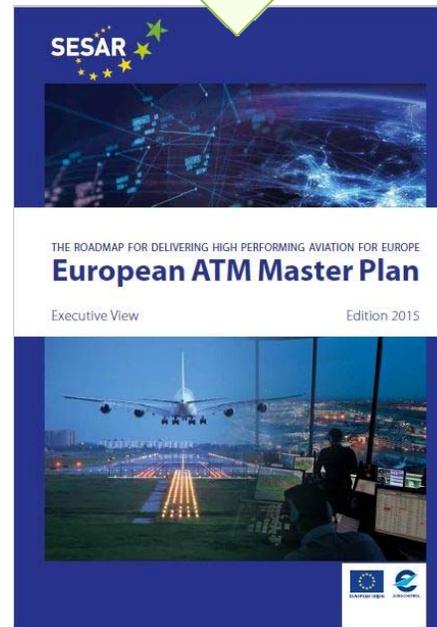


Ground & aerospace manufacturing



Performance

Business Case



Airspace Users



Network Manager



Airport Operators



