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European ATM Master Plan edition 2

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What is the Master Plan?

The European ATM Master Plan is the roadmap driving the modernisation of Air Traffic Management and governing the transition from Single European Sky ATM Research (SESAR) to deployment. It is the basis for the new generation of European ATM systems for 2030, that will help achieve "more sustainable and performing aviation" in Europe.

The plan contains roadmaps for the essential operational and technological changes required from all stakeholders (airspace users, ANSPs, airport operators, the military and the network manager) to achieve the performance objectives set by Single European Sky (SES). It provides the basis for the timely, coordinated and efficient deployment of new technologies and procedures, whilst ensuring alignment with ICAO's Aviation System Block Upgrades (ASBU) for global interoperability and synchronisation.

At its core, the Master Plan is performance-driven, responding to the four key performance areas (KPA) of environment, cost-efficiency, safety and capacity as set by the European decision makers. These are part of the wider set of ICAO KPAs.

To meet these performance objectives, the Master Plan proposes roadmaps of essential operational changes grouped around six key features selected for their capacity to best deliver performance benefits to one or more operating environments (i.e. airport, en-route, terminal manoeuvring area, and network).

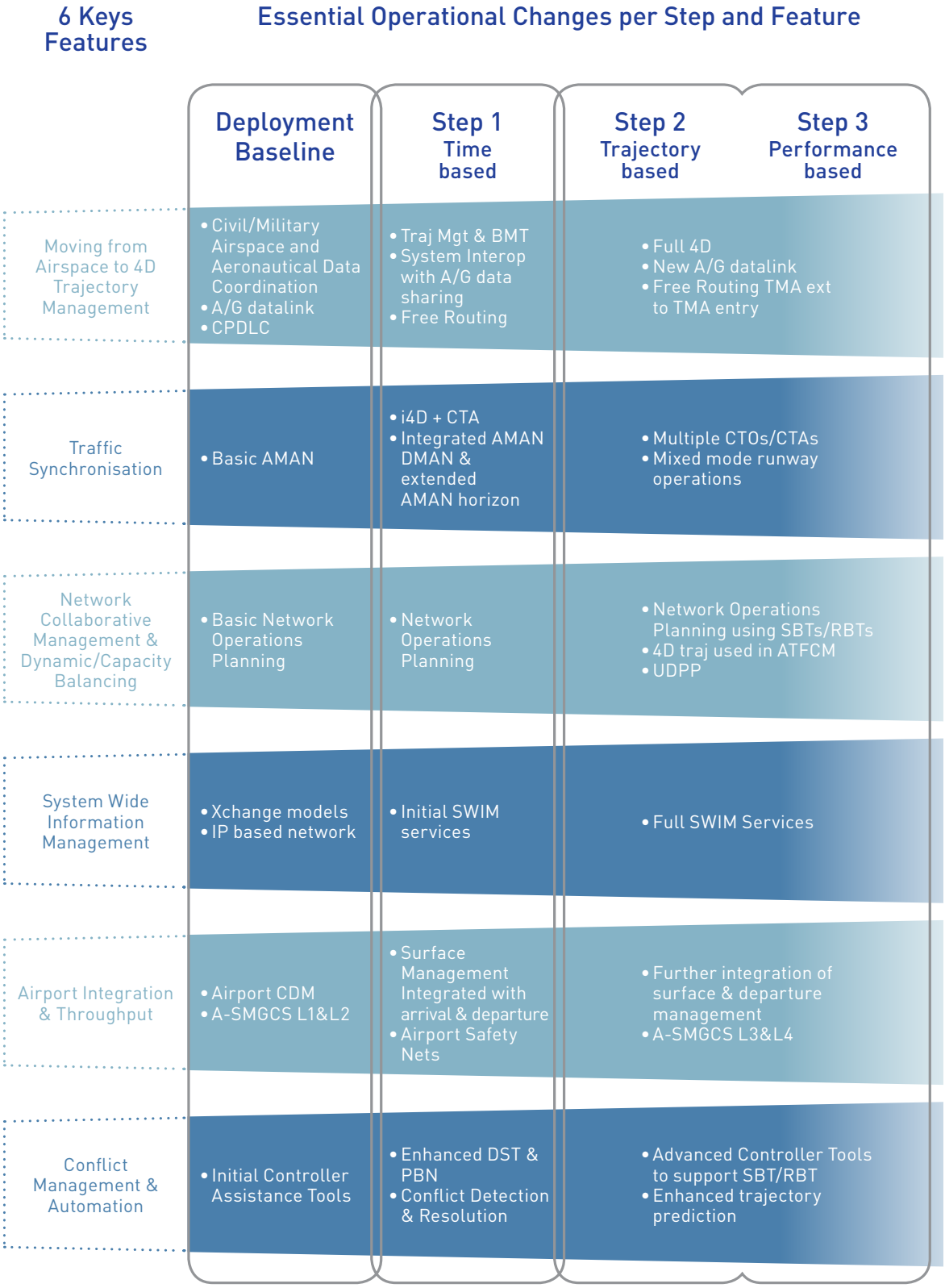
These operational changes evolve through 3 phases, or "concept steps".
This edition of the Master Plan focuses on the essential operational changes of Step 1 and how they respond to SES performance objectives whilst building the way for Step 2 and Step 3 developments.

Step 1 - Time-based Operations: the basis of the SESAR Concept. It focuses on flight efficiency, predictability and the environment.
The goal is a synchronised European ATM system where partners are aware of the business and operational situations and collaborate to optimise their operations.

Step 2 - Trajectory-based Operations: focuses on a further-evolved flight efficiency, predictability and environment and adds capacity.
The goal is a trajectory-based ATM system where partners optimise "business and mission trajectories" through common 4D trajectory information and user defined priorities in the network.

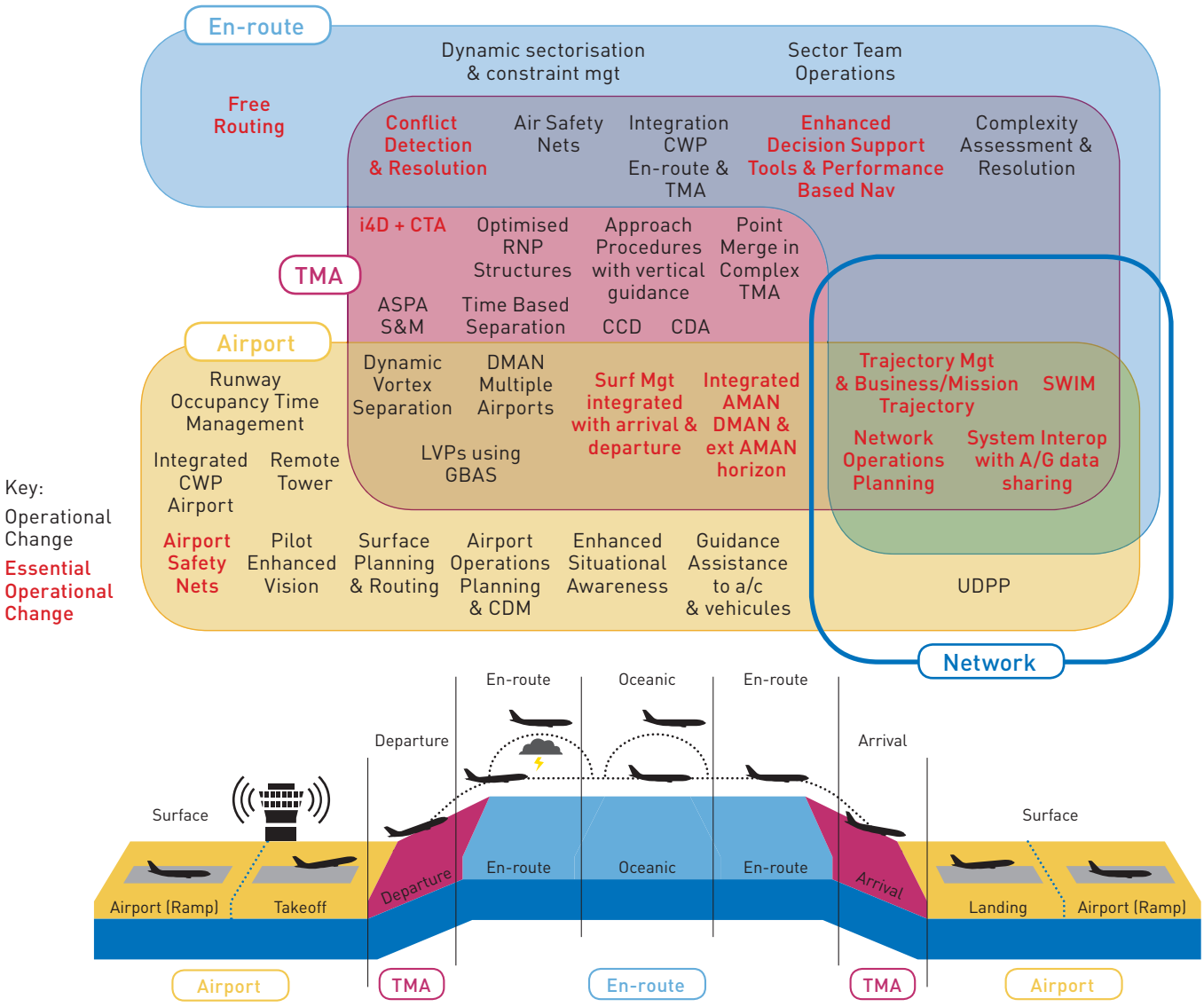
Step 3 - Performance-based Operations: is to achieve the full SES performance requirements.
The goal is the implementation of a European high-performance, integrated, network-centric, collaborative and seamless air/ground ATM system.

A prerequisite to Step 1 is the **Deployment baseline** which consists of a set of operational and technical solutions that are already available and being deployed.



Operational changes will come through the evolution of technical systems, procedures, human factors and institutional changes, including standardisation and regulation.

The full scope of operational changes of Step 1 is outlined in the following figure and mapped against operating environments where they bring the most value:



The Master Plan provides:

- Roadmaps with date references for all the ATM technology changes in Step 1 for each Stakeholder, also including the military.
- Roadmaps for infrastructure (communication, navigation and surveillance) as well as standardisation and regulation. These roadmaps show the synchronised view (e.g. between ground and air deployments) needed to ensure that deployment is planned in a fully coordinated performance-driven way so as to maximise the benefits for all stakeholders.

All deployments feature a high level benefit/cost analysis to be complemented by individual stakeholder's business cases. At this stage, the Master Plan monetises scheduled airlines only, for the period 2014-2030. It shows a positive accumulated net cash flow as of 2017, provided deployment is effective within a synchronised scenario.

"The Master Plan provides the most up-to-date view on the products, technologies and operational procedures which can be further industrialised and deployed to meet the needs of European citizens."

Further information:

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