# AOM21.1 — Direct Routing

Direct Routing Airspace is described as an airspace defined laterally and vertically with a set of entry/exit conditions where published direct routings are available. Direct Routing aims at offering additional route options to the airspace users while maintaining the same level of safety. It offers flexibility and brings more predictability to the system; it is foreseen as an intermediate step towards Free Route Airspace (FRA).

The Direct Routing implementation is coordinated through the NM European Route Network Improvement Plan (ERNIP) and the Network Operations Plan following the Strategic Objectives and Targets set in the Network Strategic Plan and in the Network Manager Performance Plan.

The geographical scope for Direct Routing is defined by PCP IR as the airspace for which the Member States are responsible at and above flight level 310 in the ICAO EUR Region.

*NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each Military Authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the Military Authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions EXCLUSIVE to MIL Authorities.*

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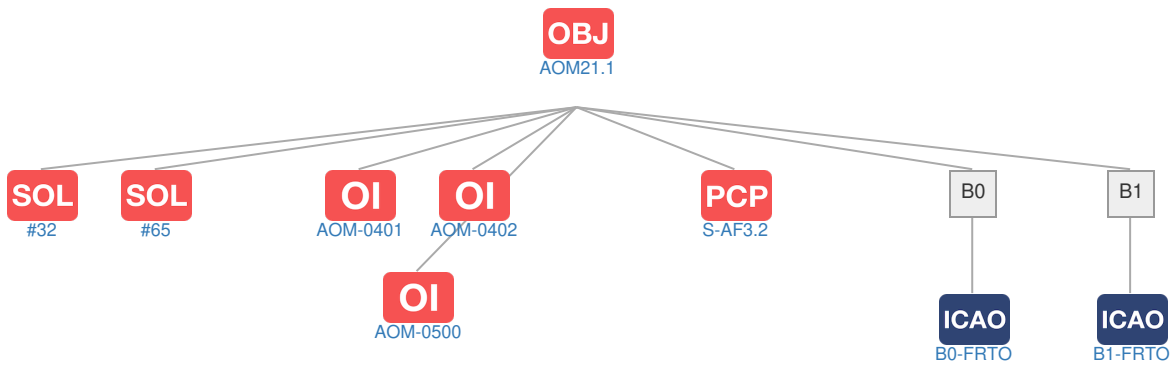
|---|---|
| **Edition** | 2022 |
| **Stakeholders** | Air Navigation Service Provider / Network Manager |
| **Type** | SESAR |
| **Scope** | Multi-National |
| **Status** | Achieved |

## Context

### Related Elements




## Applicability Area(s) and Timescales

**Applicability Area:** All EU SES States except: Belgium, Bulgaria, Estonia, Finland, Hungary, Latvia, Luxembourg, Netherlands, Norway, Portugal, Romania. Plus: Bosnia and Herzegovina, Morocco, North Macedonia, Türkiye, United Kingdom
*(All ECAC States, at and above FL310 (not applicable for those States that have already implement FRA or planned to deploy FRA at and above FL310 before 1 January 2018))*

| Timescales | From | By | Applicable to |
|---|---|---|---|
| Initial Operational Capability | 01-01-2015 | - | Applicability Area |
| Full Operational Capability | - | 31-12-2017 | Applicability Area |

## Links to ATM Master Plan Level 2

### OI Operational Improvment Steps

| Code | Title | IOC | FOC | Related Elements |
|---|---|---|---|---|
| AOM-0401 | Multiple Route Options & Airspace Organisation Scenarios | - | - | OI OBJ ICAO |
| AOM-0402 | Further Improvements to Route Network and Airspace incl. Cross-Border Sectorisation and Further Routing Options | - | - | OBJ ICAO |
| AOM-0500 | Direct Routing for flights both in cruise and vertically evolving for cross ACC borders and in high complexity environments. | 31-12-2016 | 31-12-2024 | SOL OI EN OBJ DS PCP ICAO |

### SOL Links to SESAR Solutions

| Code | Title | Program | Related Elements |
|---|---|---|---|
| #32 | Free Route through the use of Direct Routing | SESAR1 | SOL OI OBJ DS EOC PCP ICAO |
| #65 | User Preferred Routing | SESAR1 | SOL OI OBJ DS EOC PCP ICAO |

### PCP Links to PCP ATM Sub-Functionalities

| Code | Title | Related Elements |
|---|---|---|
| S-AF3.2 | Free Route | SOL OI EN OBJ ICAO |

### ICAO ICAO Block Modules

| Designator | | Title | Related Elements |
|---|---|---|---|
| B0 | | | |
| | B0-FRTO | Improved Operations through Enhanced En-Route Trajectories. | OI OBJ |
| B1 | | | |
| | B1-FRTO | Improved Operations through Optimized ATS Routing | SOL OI OBJ PCP |

## References

**Applicable legislation**
- Regulation (EU) No 677/2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EU) No 691/2010
- Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project

**Applicable ICAO Annexes and other references**
None

**Deployment Programme 2022**
-

**Operating Environments**
En-Route
Network

## Expected Performance Benefits

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| **Safety** | Although the main benefits are expected in the area of environment and operational efficiency Direct Routing implementation has the ambition to at least maintain the current level of safety. |
| **Capacity** | - |
| **Operational efficiency** | Savings in route distances and fuel efficiency through increased use of preferred flight profiles and improved sectorisation. |
| **Cost efficiency** | - |
| **Environment** | Reductions in emissions through use of more optimal routes. |
| **Security** | - |

## Stakeholder Lines of Action

| Code | Title | From | By | Related Enablers |
|---|---|---|---|---|
| ASP01 | Implement procedures and processes in support of the network dimension | 01-01-2015 | 31-12-2017 | |
| ASP02 | Implement system improvements | 01-01-2015 | 31-12-2017 | EN |
| ASP03 | Implement procedures and processes in support of the local dimension | 01-01-2015 | 31-12-2017 | EN |
| ASP04 | Implement transversal activities (verification at local/regional level, safety case and training) | 01-01-2015 | 31-12-2017 | EN |
| NM01 | Implement system improvements | 01-01-2015 | 31-12-2017 | EN |
| NM02 | Implement procedures and processes | 01-01-2015 | 31-12-2017 | |

## Supporting Material

| Title | Related SLoAs |
|---|---|
| EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 1 - European Airspace Design Methodology - Guidelines - 2.0 / 12/2018<br>https://www.eurocontrol.int/publication/european-route-network-improvement-plan-ernip-part-1 | ASP03, ASP04 |
| EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 2 - European ATS Route Network - Version 2019-2024 - June 2019 / 07/2019<br>https://www.eurocontrol.int/publication/european-route-network-improvement-plan-ernip-part-2 | NM02 |
| EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 3 - Airspace Management Handbook - Guidelines for Airspace Management - 5.5 / 11/2017<br>https://www.eurocontrol.int/publication/european-route-network-improvement-plan-ernip-part-3 | NM02 |
| EUROCONTROL - European Route Network Improvement Plan (ERNIP) Part 4 - RAD Users Manual - 2.0 / 12/2018<br>https://www.eurocontrol.int/publication/european-route-network-improvement-plan-ernip-part-4 | NM01, NM02 |

## Consultation & Approval

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|---|---|
| **Working Arrangement in charge** | NETOPS |
| **Outline description approved in** | - |
| **Latest objective review at expert level** | 05/2018 |
| **Commitment Decision Body** | Provisional Council (PC) |
| **Objective approved/endorsed in** | 10/2015 |
| **Latest change to objective approved/endorsed in** | 10/2015 |