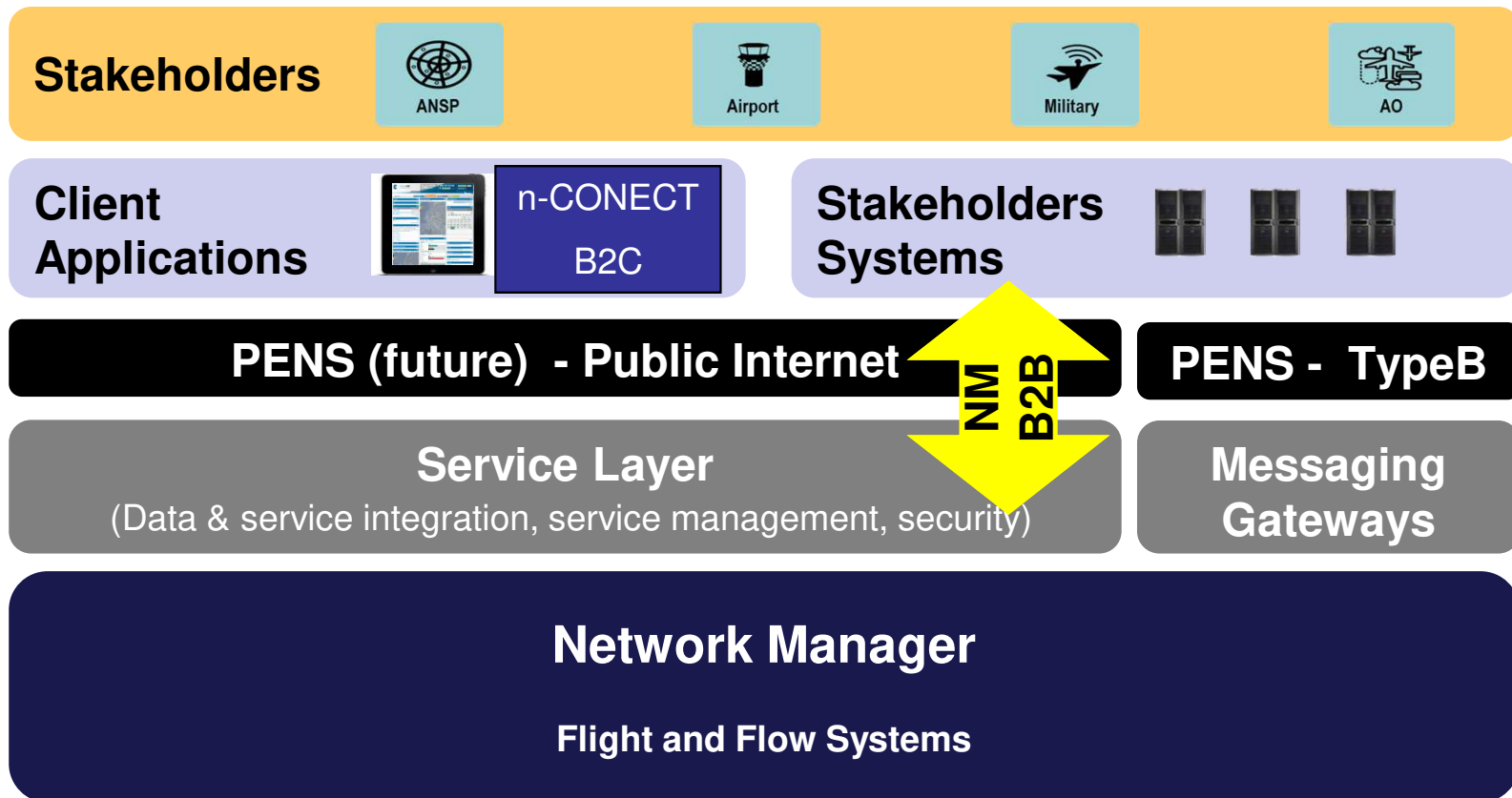


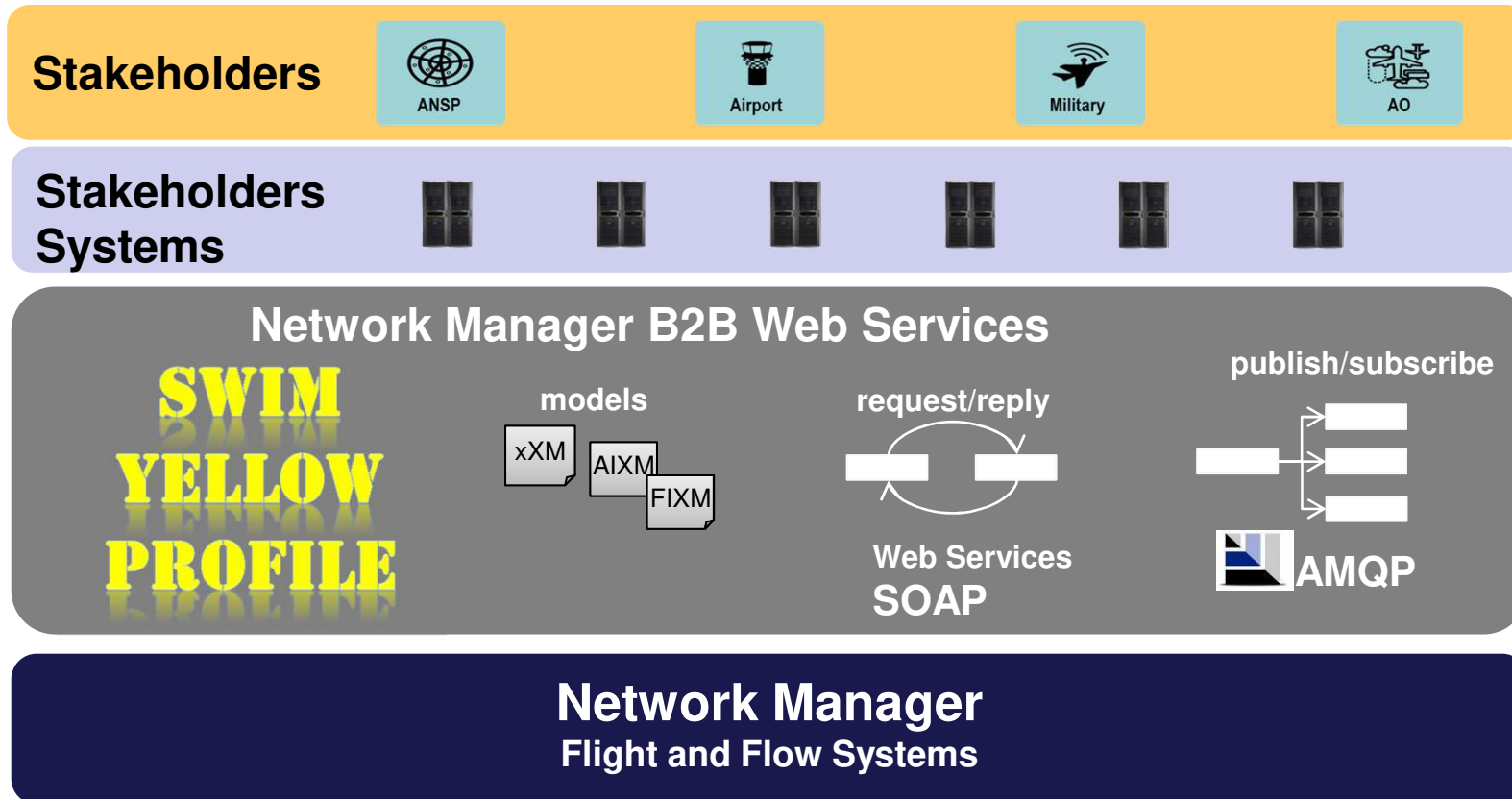
Airport – NM Interoperability

Jean-Pierre Aiguier
Head of NM/NTS
Jan 2018

n-CONNECT Programme



n-CONNECT B2B Architecture



NM B2B

Operational Services



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Flight

FlightPreparation

- validateFlightPlan
- validateExtendedFlightPlan
- proposeRoutes

FlightFiling

- fileNewFlightPlan
- fileFlightPlanUpdate
- fileFlightPlanCancellation
- fileFlightDelay
- fileFlightDeparture
- fileFlightArrival
- retrieveFilingStatus
- fileNewExtendedFlightPlan
- fileExtendedFlightPlanUpdate

FlightManagement

- queryFlightPlans
- queryFlightsByKeys
- queryFlightsByAircraftOperator
- queryFlightsByAerodrome
- queryFlightsByAerodromeSet
- queryFlightsByAirspace
- queryFlightsByPoint
- queryFlightsByTrafficVolume
- queryFlightsByMeasure
- queryFlightsByHotspot
- queryFlightsByAircraftRegistrationMark
- retrieveFlight
- submitEarlyDPI
- submitTargetDPITarget
- submitTargetDPISequenced
- submitAtcDPI
- submitCancelDPI
- submitFlightUpdate
- submitEstimatedAPI
- submitTargetTakeOffAPI
- submitTargetTimeOverAPI
- submitCancelAPI
- submitATCAPI

FlightSafety

- replaceACC3AccreditationList
- replaceTCOAuthorisationList
- updateTCOAuthorisationList

Files

- queryFiles

Common

Flow

TrafficCounts

- queryTrafficCountsByPoint
- queryTrafficCountsByAerodrome
- queryTrafficCountsByAerodromeSet
- queryTrafficCountsByAirspace

- queryTrafficCountsByAircraftOperator
- queryTrafficCountsByTrafficVolume

Measures

- queryRegulations
- queryRegulationProposals
- fileRegulationProposal
- updateRegulationProposal
- revokeRegulationProposal
- queryReroutings
- queryMCDMOnly
- retrieveMeasureOpLog
- addFlightsToMeasure
- removeFlightsFromMeasure
- retrieveATFCMSituation

Mcdm

- queryMCDM
- updateMCDMState

TacticalUpdates

- retrieveSectorConfigurationPlan
- updateSectorConfigurationPlan
- retrieveCapacityPlan
- updateCapacityPlan
- retrieveTrafficVolumeActivationPlan
- updateTrafficVolumeActivationPlan
- retrieveOTMVPPlan
- updateOTMVPPlan
- retrieveRunwayConfigurationPlan
- updateRunwayConfigurationPlan
- queryHotspots

Simulations

- querySimulations
- queryAvailableSimulations
- startSimulation
- stopSimulation

ScenarioRepository

- retrieveRegulationsFromScenario
- retrieveReroutingsFromScenario
- retrieveMCDMOnlyFromScenario
- queryScenarioRepository

Airspace

AirspaceAvailability

- retrieveAUPChain
- retrieveAUP
- createAUP
- updateAUP
- validateAUP
- deleteAUP
- expandRSAAllocations
- getAUPServiceConfiguration
- retrieveEAUPChain
- retrieveEAUPCDRs
- compareEAUPCDRs
- retrieveEAUPRSAs
- compareEAUPRSAs
- getManageableRoutesForAMC
- getManageableRouteSegmentsForAMCAndRoute

AirspaceStructure

- queryCompleteAIXMDatasets
- queryIncrementalAIXMDatasets

General Information

AIMs

- queryAIMs
- retrieveAIMs

NMB2BInfo

- queryNMB2BReferenceManuals
- queryNMB2BWSDLs
- queryNMB2BScenarios
- queryNMB2BAddendaErrata
- retrieveNMRReleaseInformation

Pub/Sub

SubscriptionManagement

- createSubscription
- pauseSubscription
- resumeSubscription
- deleteSubscription
- listSubscriptions
- retrieveSubscription
- subscriptionHistory

Messaging

- pullMessages

Subscription Topics

- AIXM_DATASETS
- ATM_INFORMATION
- EAUP
- FLIGHT_PLANS
- FLIGHT_DATA
- REGULATIONS

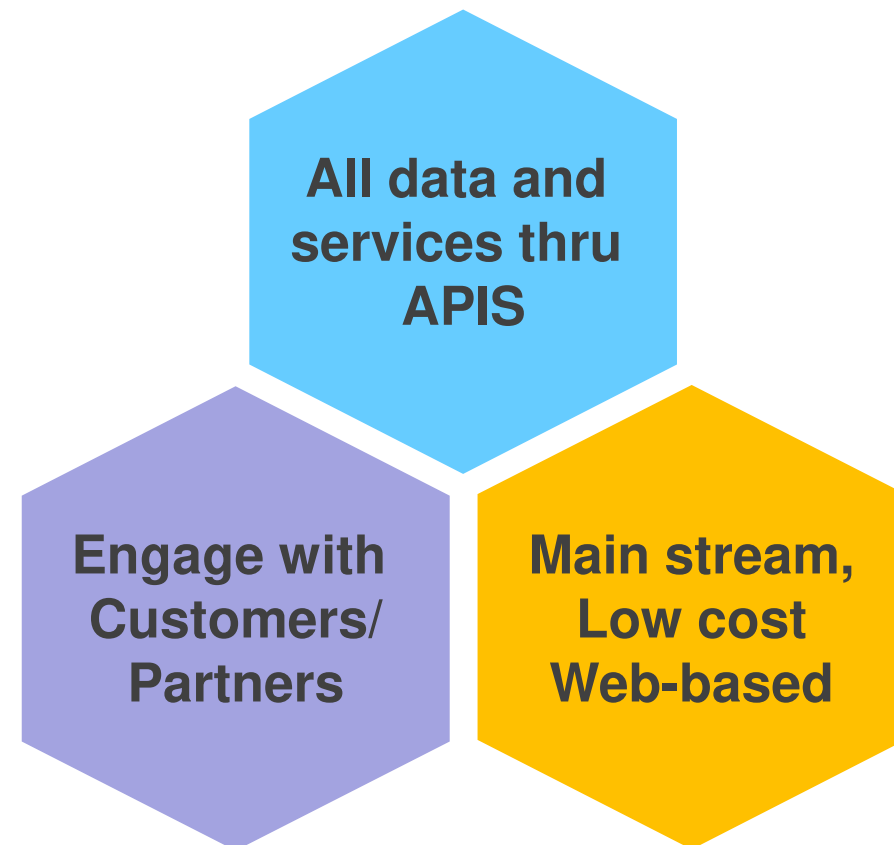
Interoperability Strategy



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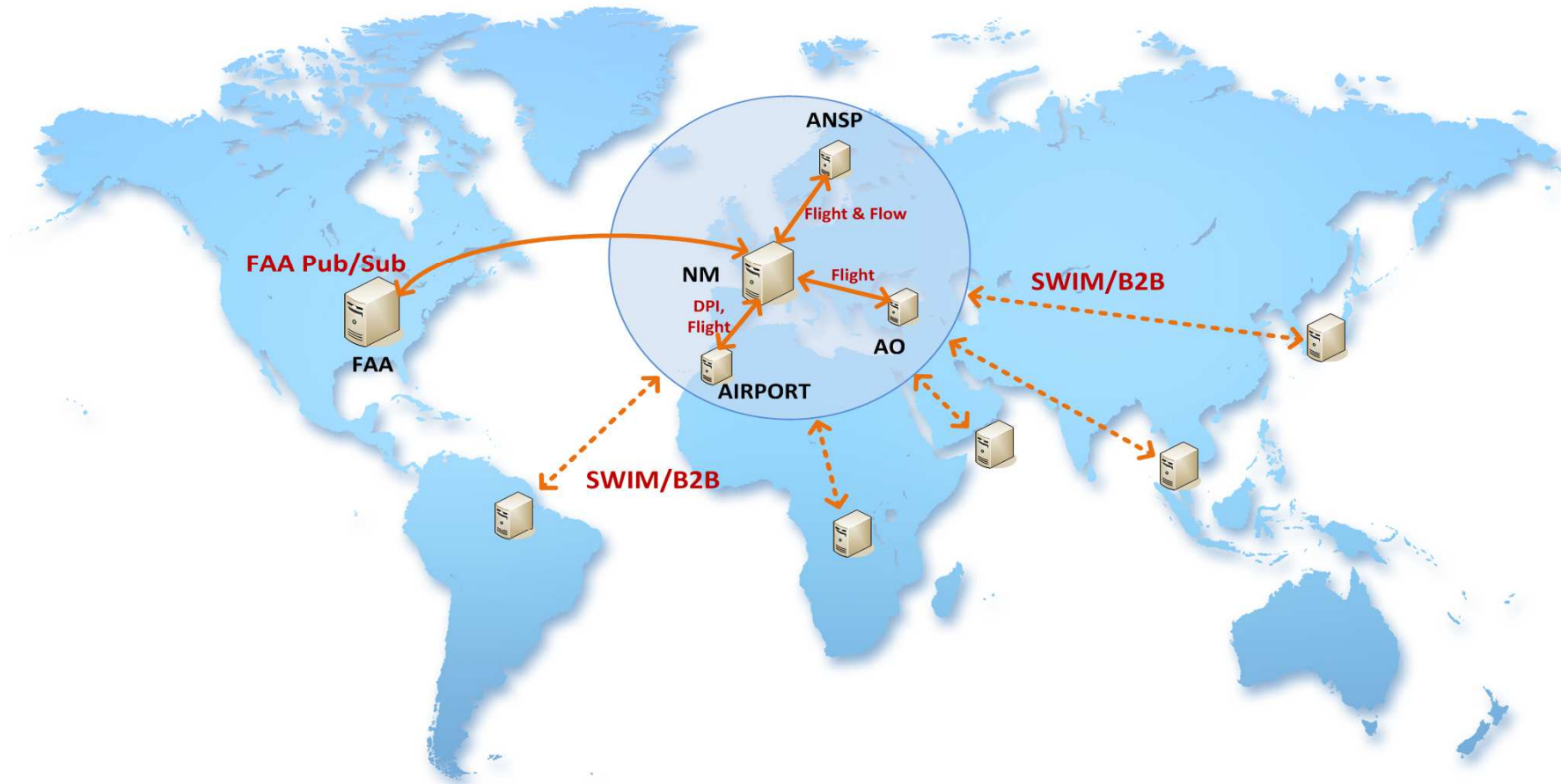


Approved by NDOP in 2016



Interoperability Strategy

Global Interoperability



Interoperability Strategy

Transition Plan

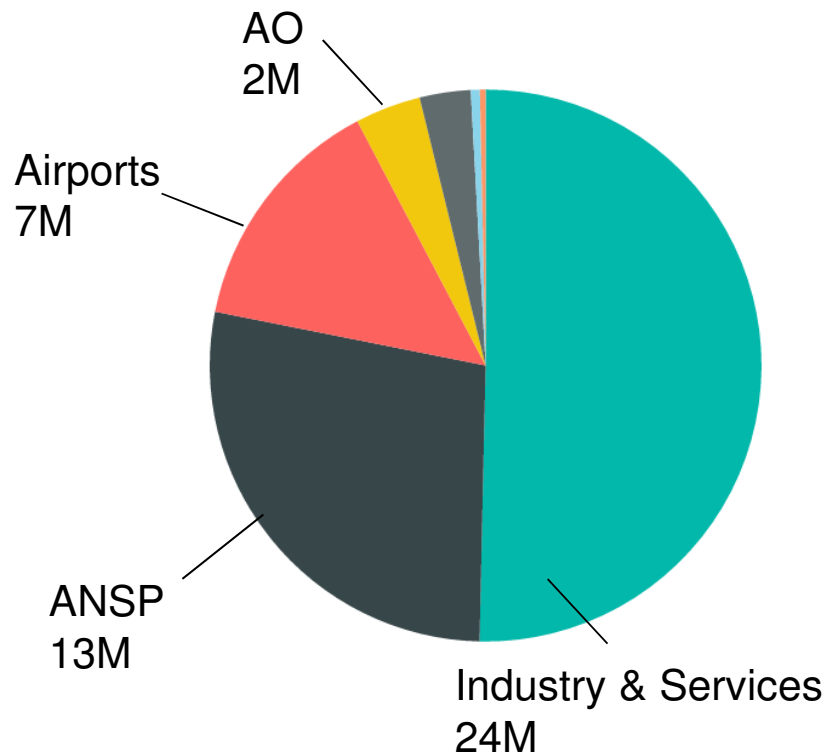
- Implement all messaging via B2B (FUM, DPI, EFD, FPM, CASA messages, ...)
- Decommission old messaging technologies, where possible (no ICAO restrictions)
 - Support to existing users for a limited duration to be defined
- New services provided only via B2B
 - Ex: AOP/NOP, Extended DPI, API, TTA, etc., will not be supported via messaging
- New users of an existing service shall use the B2B service (unless mandated by ICAO or some IR)
- Support stakeholders in the transition

Support to PCP IR deployment

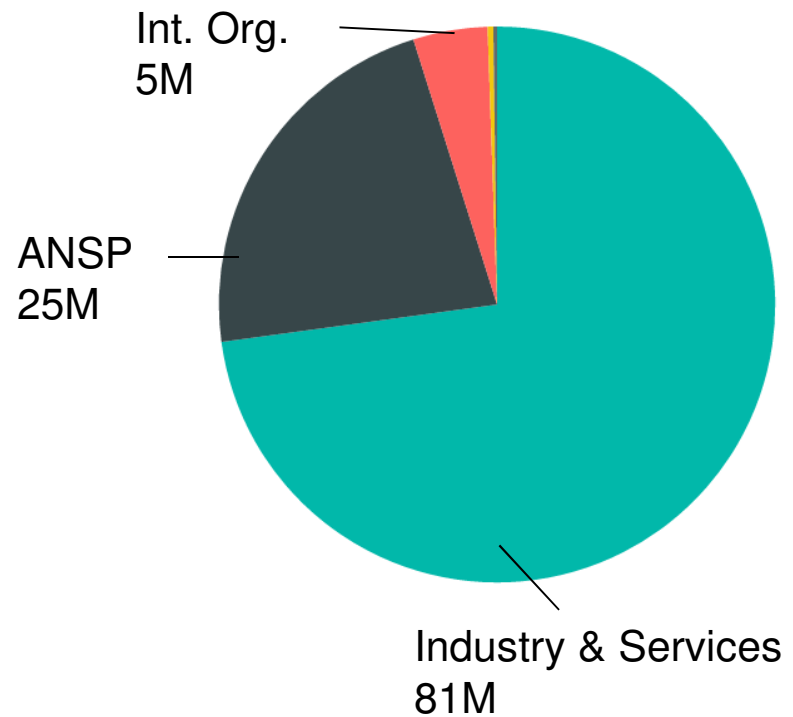
- Deadline: 1 Jan 2025
- All flight, flow and airspace data to be exchanged via SWIM

NM B2B Customer Segmentation per use

Request/Reply



Publish/Subscribe



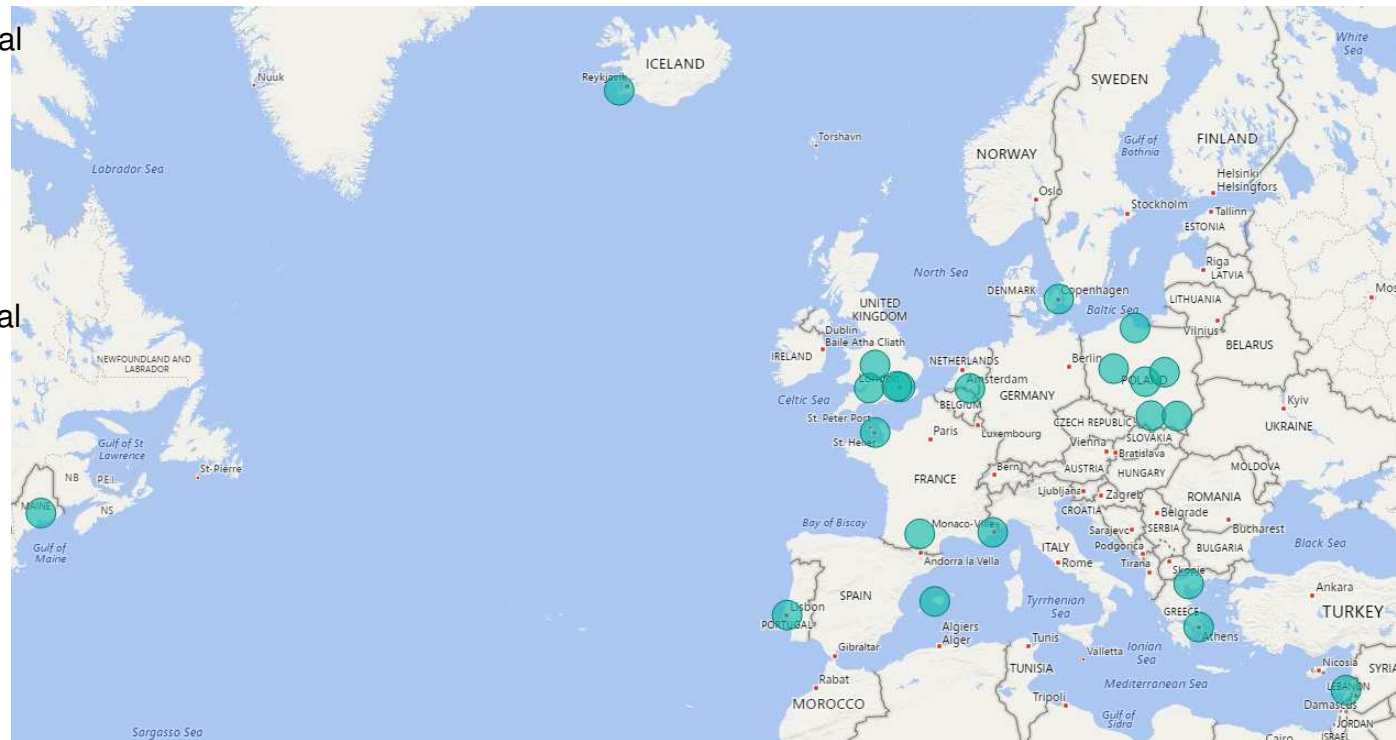
Note: Values are number of requests/messages in the last 30 days

Airports using NM B2B Services



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- Palma
- Nice
- Athens International
- Bangor International
- Birmingham International
- Bristol
- Eindhoven
- Gdansk Lech Walesa
- Thessaloniki
- Keflavík International
- John Paul II International
- Lodz
- London City
- Poznan
- Rzeszow-Jasionka
- Toulouse Blagnac
- Copenhagen
- Jersey
- Lisbon
- RAF Northolt
- Beirut Rafic Hariri
- Warsaw



A-CDM Digital Transformation



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- **Nice** Advanced Tower implementation
 - Were already using B2B for obtaining flight data from NM
 - Implemented Advanced Tower software and processes directly on B2B
 - 6 months process from start of dev to OPS

- **Copenhagen** A-CDM migration from AFTN to B2B
 - Were already A-CDM via AFTN (using ANSP network)
 - Not B2B user at the beginning of project
 - Kick-off in Mar/17, development started in Aug/17
 - FUM migration to B2B Publish/Subscribe – **OPS** since 12/01/18
 - DPI migration to B2B R/R – **OPS evaluation**; target OPS Mar/18