Public Workshop on the 3SA-SDB

TOWARDS COLLABORATIVE GOVERNANCE OF THE DIGITAL BACKBONE FOR THE SINGLE EUROPEAN SKY

A JOINT INITIATIVE BY OPERATIONS FOR OPERATIONS
SUPPORTING THE VISION OF THE SINGLE EUROPEAN SKY

Agenda

10:00 – 10:15	1. Opening and Welcome	Mariagrazia La Piscopia (SDM) Philippe Merlo (ECTL) Ralf Bertsch (DFS - A6 Alliance)
10:15 – 11:45	2. **Session #1:** Setting the Scene	
11:45 – 12:45	3. **Session #2:** Expected Benefits and Key Consideration of the 3SA-SDB	
12:45 – 13:45	Lunch Break	
13:45 – 15:00	4. **Session #3:** Break-Out Sessions	
15:00 – 15:20	5. **Session #4:** Wrap-up and Next Steps	Marcel Sobottka (DFS – A6 Alliance) Paul Bosman (ECTL)
15:20 – 15:30	6. Closing Remarks	Mariagrazia La Piscopia (SDM) Philippe Merlo (ECTL) Ralf Bertsch (DFS - A6 Alliance)

Opening & Welcome

MARIAGRAZIA LA PISCOPIA
SESAR DEPLOYMENT MANAGER

RALF BERTSCH
DFS (A6 ALLIANCE)

PHILIPPE MERLO
EUROCONTROL

Session #1:
Setting the Scene

FREEK DE WITTE
SESAR DEPLOYMENT MANAGER

Agenda (1/2)
Session #1

10:15 – 11:45	2. Session #1: Setting the Scene	
10:15 – 10:30	2.1 Introducing the initiative	Mariagrazia La Piscopia (SDM) Philippe Merlo (ECTL) Ralf Bertsch (DFS - A6 Alliance)
10:30 – 10:45	2.2 Introducing the 3SA-SDB (Cont')	Marcel Sobottka (DFS – A6 Alliance) Paul Bosman (ECTL)
10:45 – 11:15	2.3 Introducing the Components of the SDB	
	1st SDB Component: NewPENS	Herman Baret (ECTL) Nathalie Moedersheim (ECTL) Ralf Bertsch (DFS - A6 Alliance)
	2nd SDB Component: SWIM Governance	Stéphane Dubet (DSNA – A6 Alliance)
	3rd SDB Component: Datalink Services	Gianguido Bragagnini (ENAV – A6 Alliance)
	4th SDB Component: Cyber Security	Patrick Mana (ECTL)

Agenda (2/2)
Session #1

10:15 – 11:45	**2. Session #1: Setting the Scene**	
11:15 – 11:25	2.4 Value Proposition of the 3SA-SDB	Marcel Sobottka (DFS – A6 Alliance) Paul Bosman (ECTL)
11:25 – 11:45	2.5 Q&A Session #1	Freek de Witte (SDM)

You can ask us any question!

We'd love to make sure we address your most important questions at today's workshop.

Therefore, we'll be using an online tool that allows you to submit your questions.

To join:

Simply take out your smartphone and open your browser

Go to **sli.do** and enter the event code **[#SESDB].**

All non-confidential questions with a wider relevance & our answers will be made available on sesardeploymentmanager.eu

Introducing the Initiative

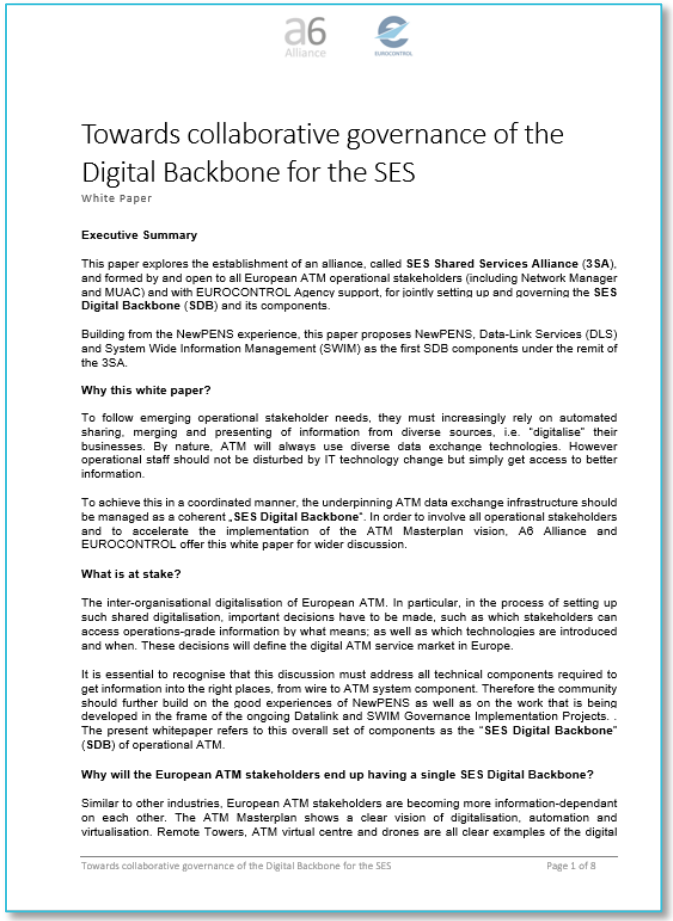
MARIAGRAZIA LA PISCOPIA
SESAR DEPLOYMENT MANAGER

RALF BERTSCH
DFS (A6 ALLIANCE)

PHILIPPE MERLO
EUROCONTROL

3SA-SDB: The initiative until now

- 01/10/18: A6 Alliance of ANSPs & Eurocontrol published a White Paper on the SES Digital Backbone (SDB) and its SES Shared Services Alliance (3SA) governance through operational stakeholders
- 05/04/19: SESAR Deployment Manager together with A6 Alliance of ANSPs and Eurocontrol undertake a Workshop for all interested stakeholders to openly and jointly mature the initiative further
- until now: Dedicated briefings and information exchange with operational stakeholders, encouraging their engagement into the initiative



Towards collaborative governance of the Digital Backbone for the SES

White Paper

Executive Summary

This paper explores the establishment of an alliance, called **SES Shared Services Alliance** (**3SA**), and formed by and open to all European ATM operational stakeholders (including Network Manager and MUAC) and with EUROCONTROL Agency support, for jointly setting up and governing the **SES Digital Backbone** (**SDB**) and its components.

Building from the NewPENS experience, this paper proposes NewPENS, Data-Link Services (DLS) and System Wide Information Management (SWIM) as the first SDB components under the remit of the 3SA.

Why this white paper?

To follow emerging operational stakeholder needs, they must increasingly rely on automated sharing, merging and presenting of information from diverse sources, i.e. "digitalise" their businesses. By nature, ATM will always use diverse data exchange technologies. However operational staff should not be disturbed by IT technology change but simply get access to better information.

To achieve this in a coordinated manner, the underpinning ATM data exchange infrastructure should be managed as a coherent „**SES Digital Backbone**". In order to involve all operational stakeholders and to accelerate the implementation of the ATM Masterplan vision, A6 Alliance and EUROCONTROL offer this white paper for wider discussion.

What is at stake?

The inter-organisational digitalisation of European ATM. In particular, in the process of setting up such shared digitalisation, important decisions have to be made, such as which stakeholders can access operations-grade information by what means; as well as which technologies are introduced and when. These decisions will define the digital ATM service market in Europe.

It is essential to recognise that this discussion must address all technical components required to get information into the right places, from wire to ATM system component. Therefore the community should further build on the good experiences of NewPENS as well as on the work that is being developed in the frame of the ongoing Datalink and SWIM Governance Implementation Projects. . The present whitepaper refers to this overall set of components as the "**SES Digital Backbone**" (**SDB**) of operational ATM.

Why will the European ATM stakeholders end up having a single SES Digital Backbone?

Similar to other industries, European ATM stakeholders are becoming more information-dependant on each other. The ATM Masterplan shows a clear vision of digitalisation, automation and virtualisation. Remote Towers, ATM virtual centre and drones are all clear examples of the digital

Towards collaborative governance of the Digital Backbone for the SES Page 1 of 8

Defining the 3SA/SDB

Role of the SESAR Deployment Manager (1/2)

The SESAR Deployment Manager main task – according to Reg. (EU) n. 409/2013 – is to **plan, synchronize and coordinate the deployment of Common Projects**

Under SDM's coordination, Implementing Partners are deploying **common governances** related to Common Project elements, as well as technology **specifically mandated** by European Commission

Datalink
DLS Implementation Projects
2016 and 2017 CEF Call

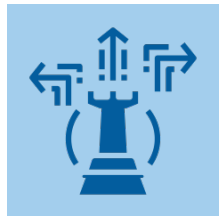
SWIM
SWIM Governance Implementation Project
2016 CEF Call

Common Public Key Infrastructure and Cybersecurity
Implementation Project
2017 CEF Call

Defining the 3SA/SDB

Role of the SESAR Deployment Manager (2/2)

Continue to synchronize and coordinate the implementation while ensuring alignment of the content developed and delivered by the Implementation Projects.

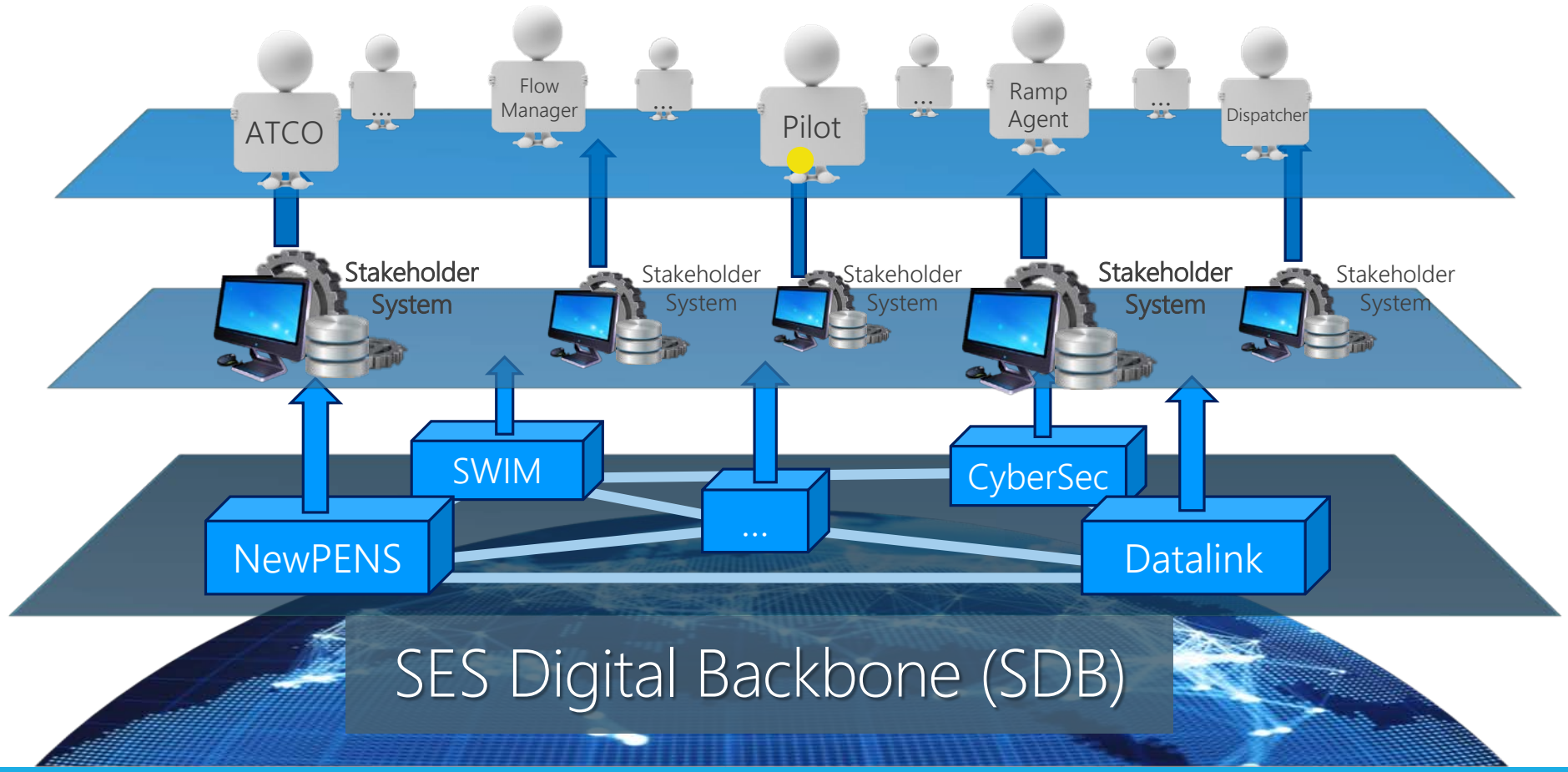


Foster a **strategic alignment of the different components** (i.e. the SES Digital Backbone) to complement one another and therewith **increase the value of integrated *end-to-end* digitalization** of European ATM improving performance

Bringing the ATM industry together by organizing workshop and using its **Stakeholders' Consultation Platform to assess the community buy-in**, as well as taking additional improvement recommendations

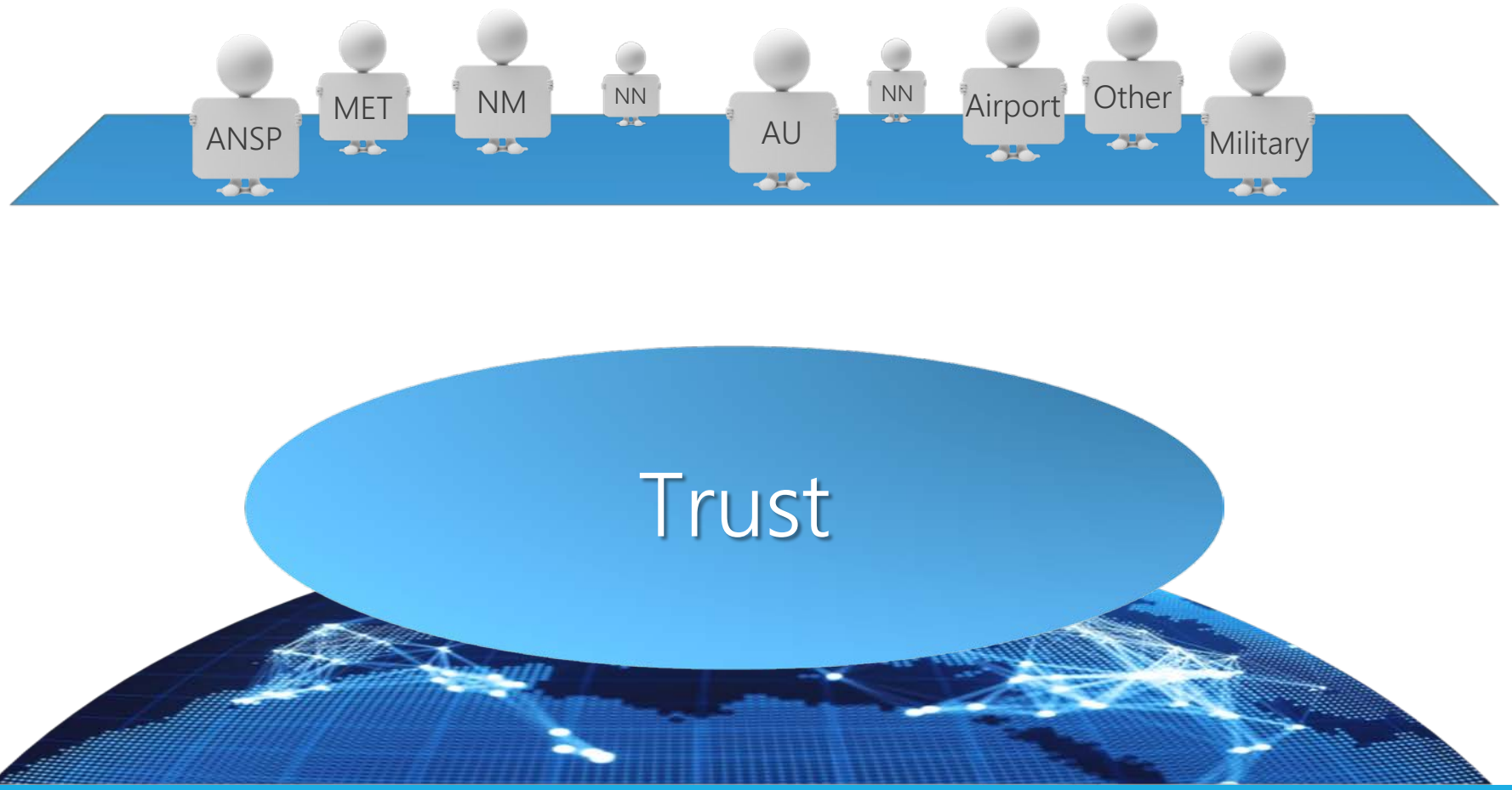
End-to-end digitalisation of ATM

A matter that requires close coordination



SDB Cooperation of ATM Stakeholders

Successful digitalisation depends on working together closer than ever

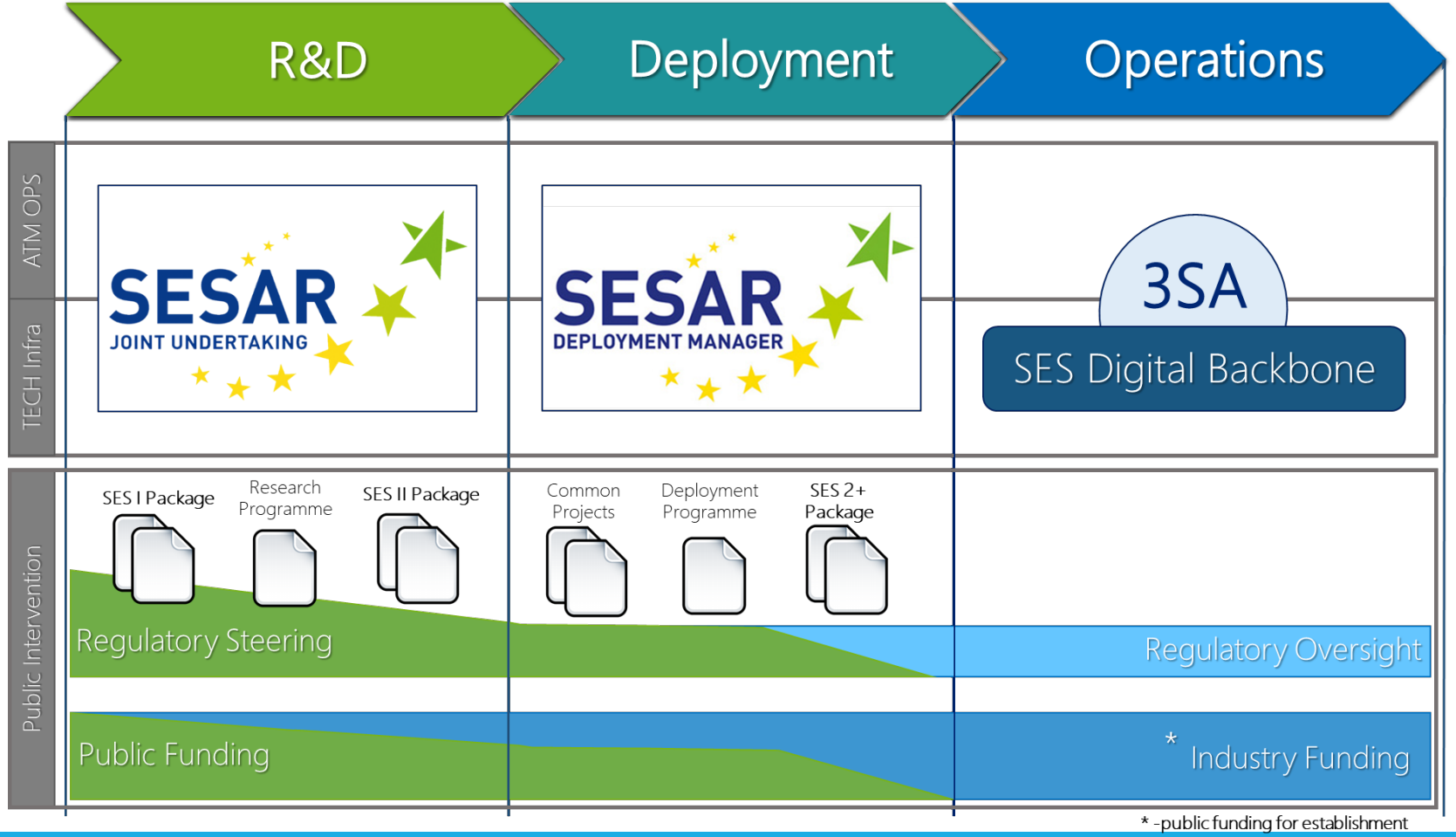


By Operations for Operations

Successful digitalisation depends on working together closer than ever

3SA fitted for the SES Framework

Closing the SESAR loop on common technological solutions



Introducing the 3SA-SDB

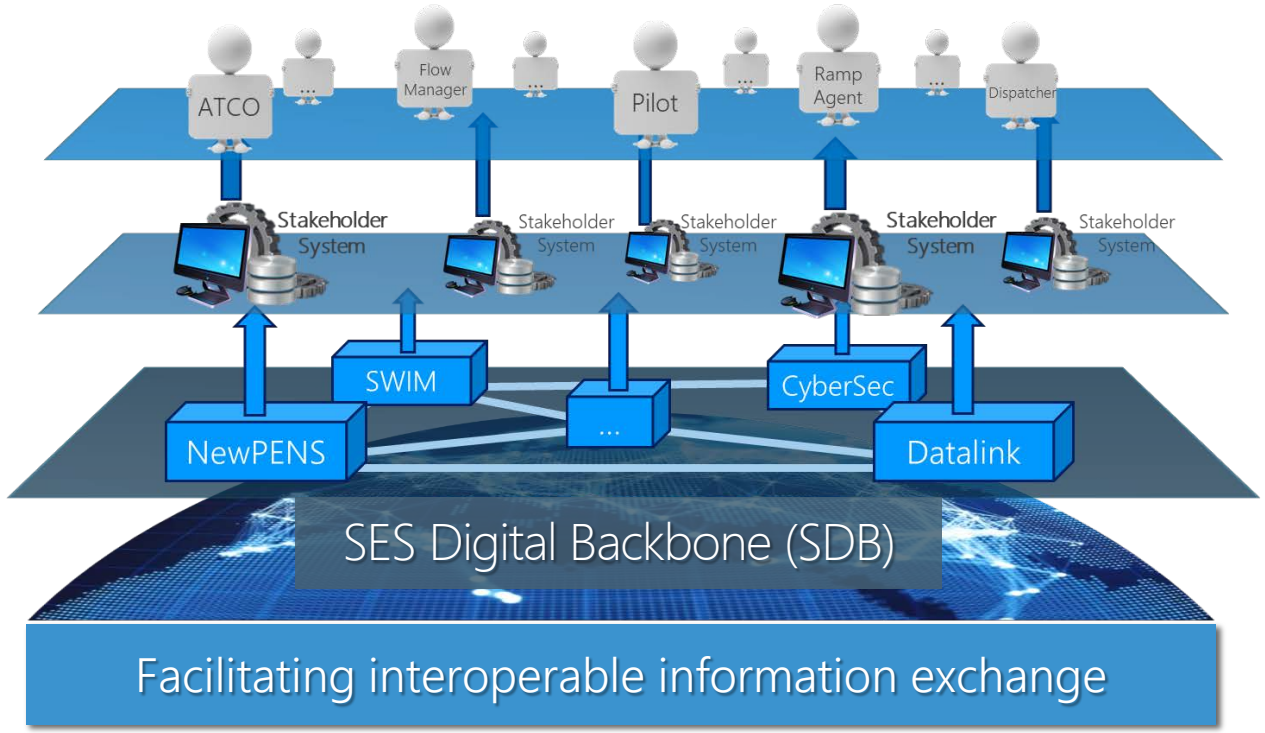
PAUL BOSMAN
EUROCONTROL

MARCEL SOBOTTKA
DFS (A6 ALLIANCE)

End-to-end digitalisation of ATM

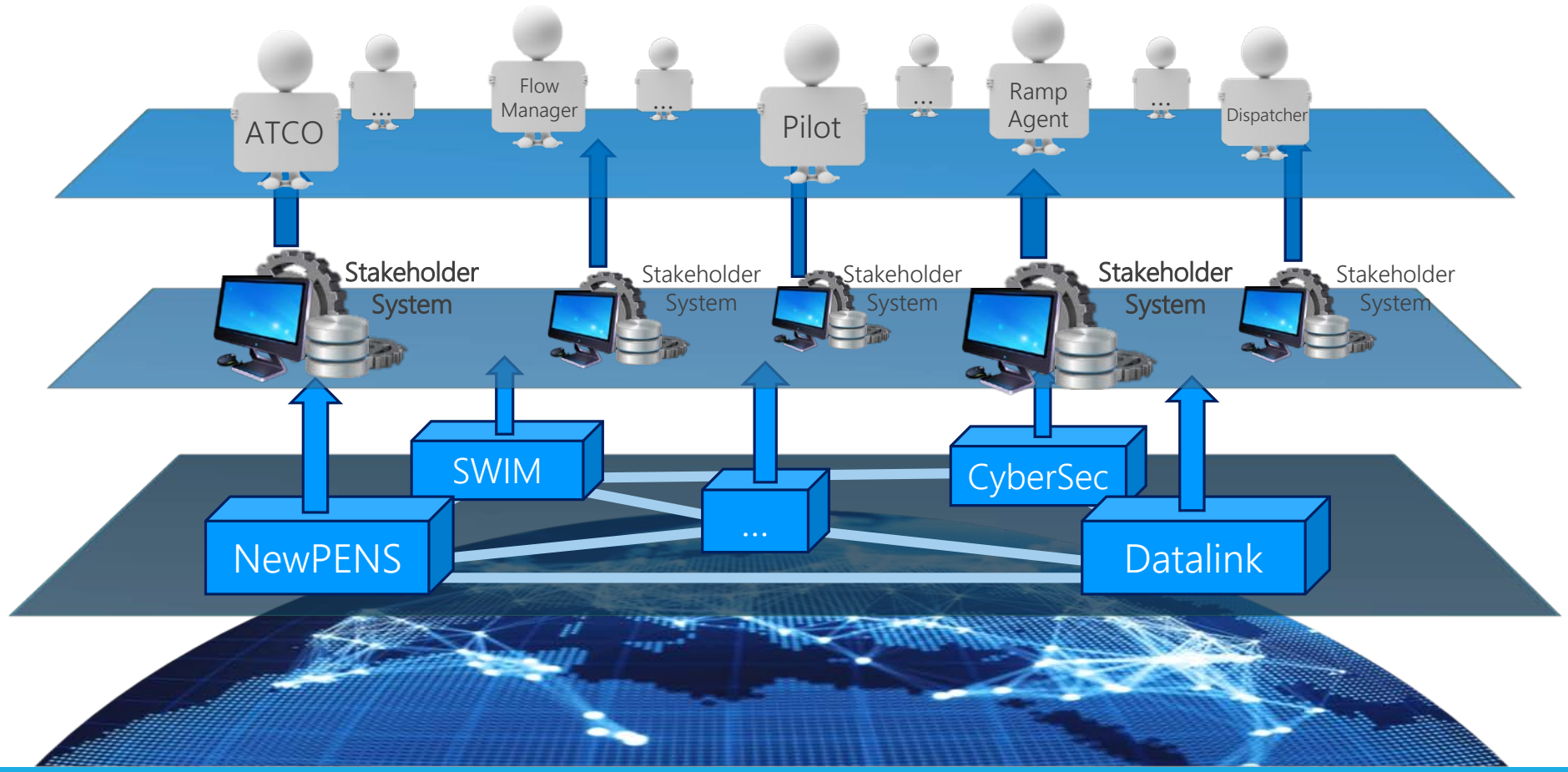
A matter that requires close coordination

- ATM Digitalisation and interconnection of operational stakeholders is key for increasing capacity and efficiency
- Data distribution in SDB components enable the transition to the Airspace Architecture Study as means of technical defragmentation
- Accelerated digitalisation fostering synergies amongst SDB components
- Addressing common safety, security, interoperability and resilience needs



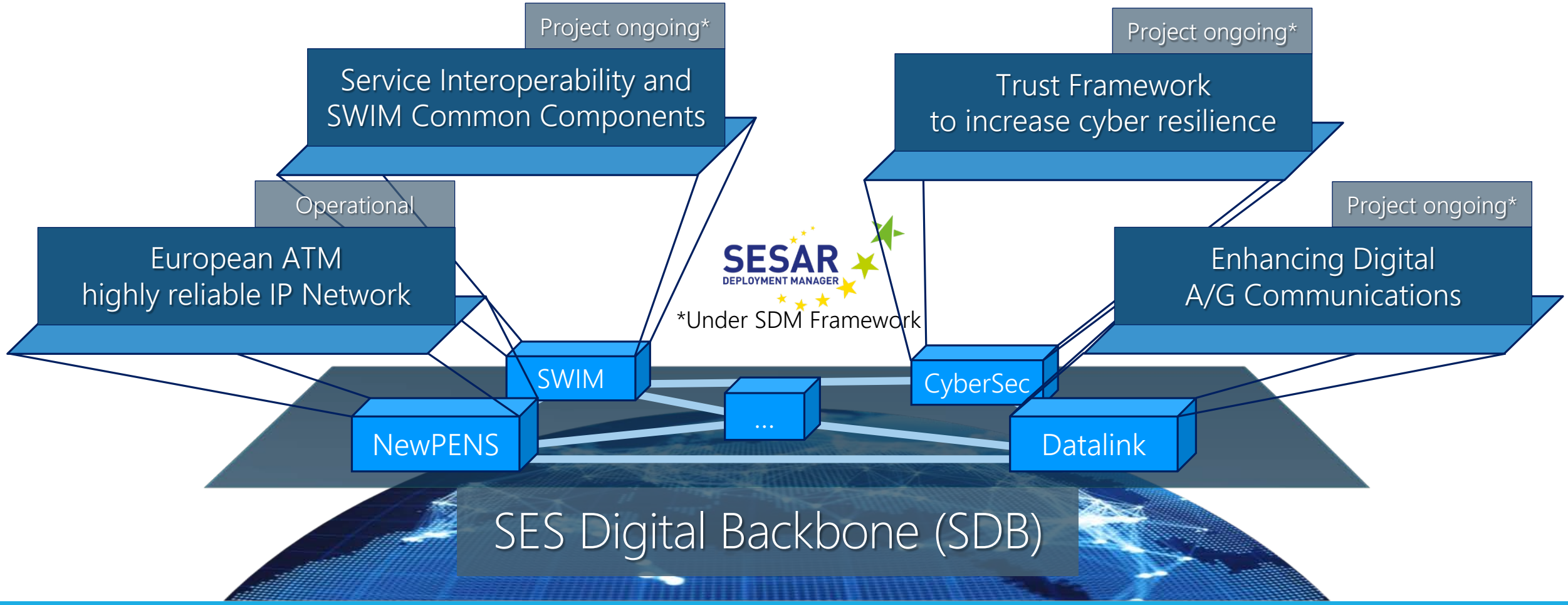
SES Digital Backbone (SDB)

The ATM community is developing the “pillars” of the SDB



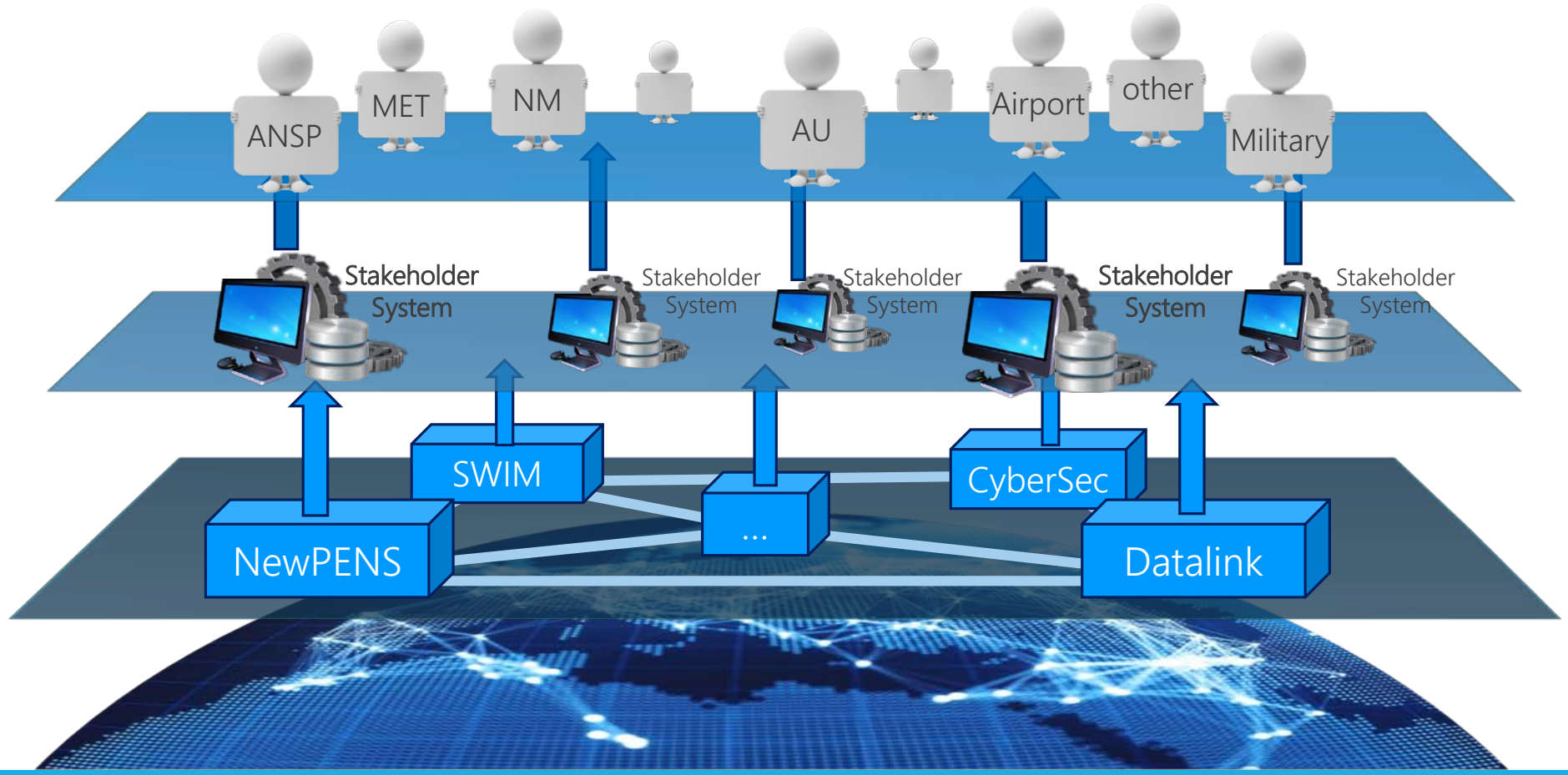
SES Digital Backbone (SDB)

The ATM community is developing the “pillars” of the SDB



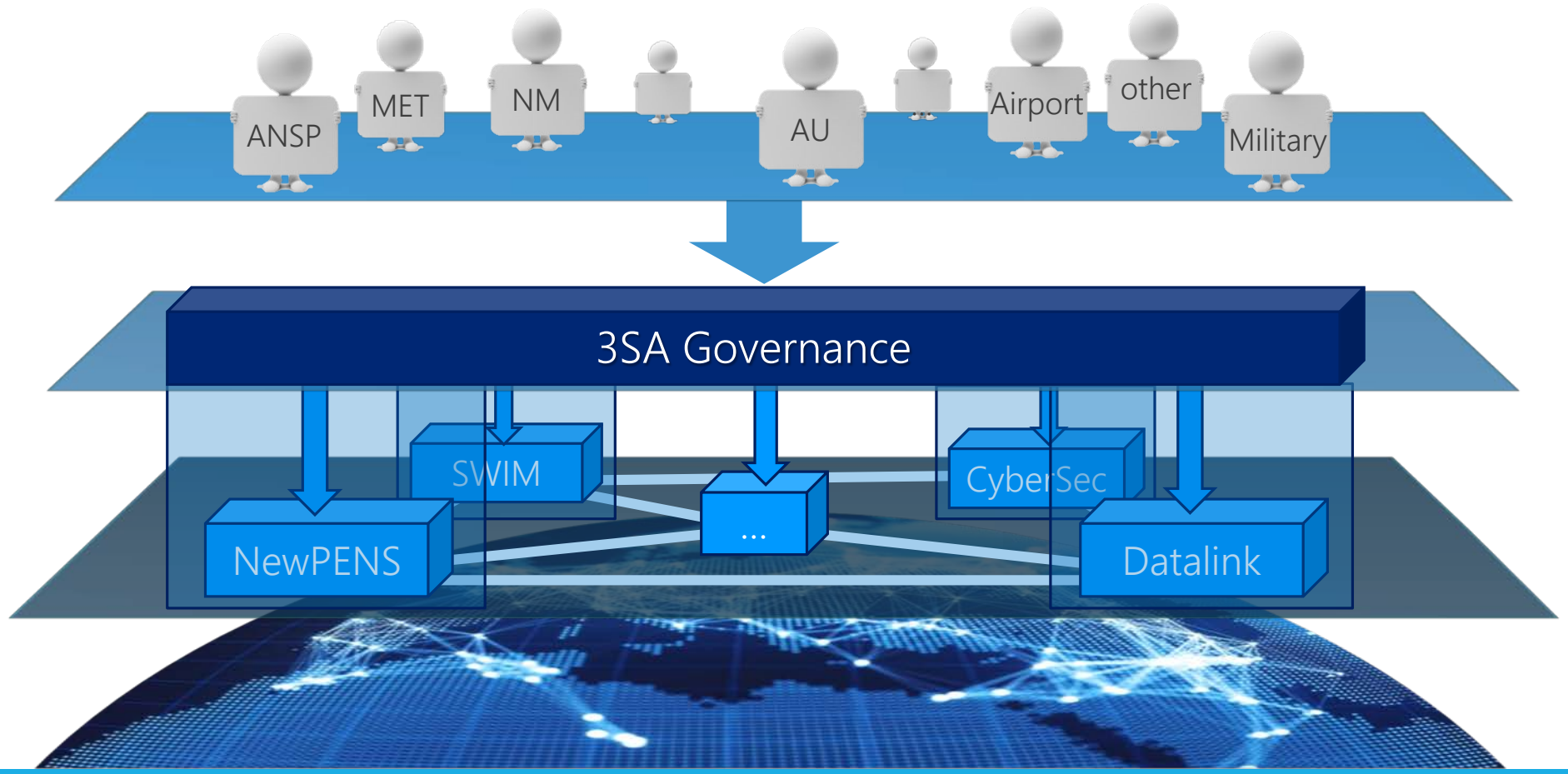
SES Shared Services Alliance (3SA)

Successful digital transition depends on working together closer than ever



SES Shared Services Alliance (3SA)

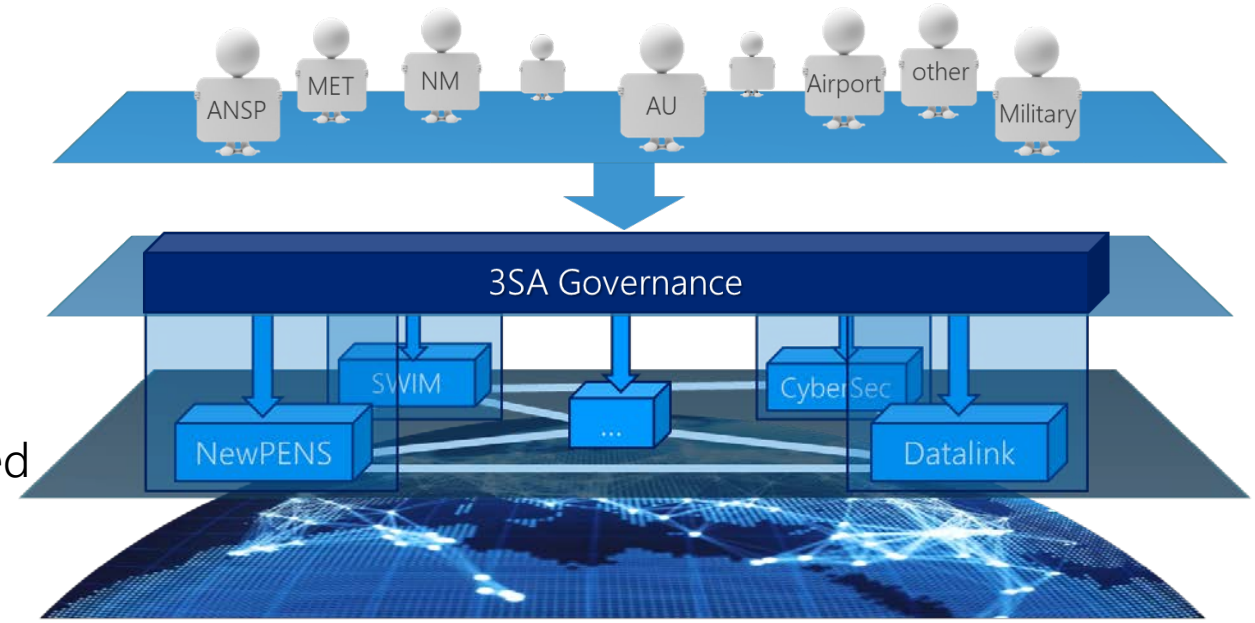
A shared governance framework to realise the added value of the SDB



SES Shared Services Alliance (3SA)

The 3SA enables trust for managing the SDB

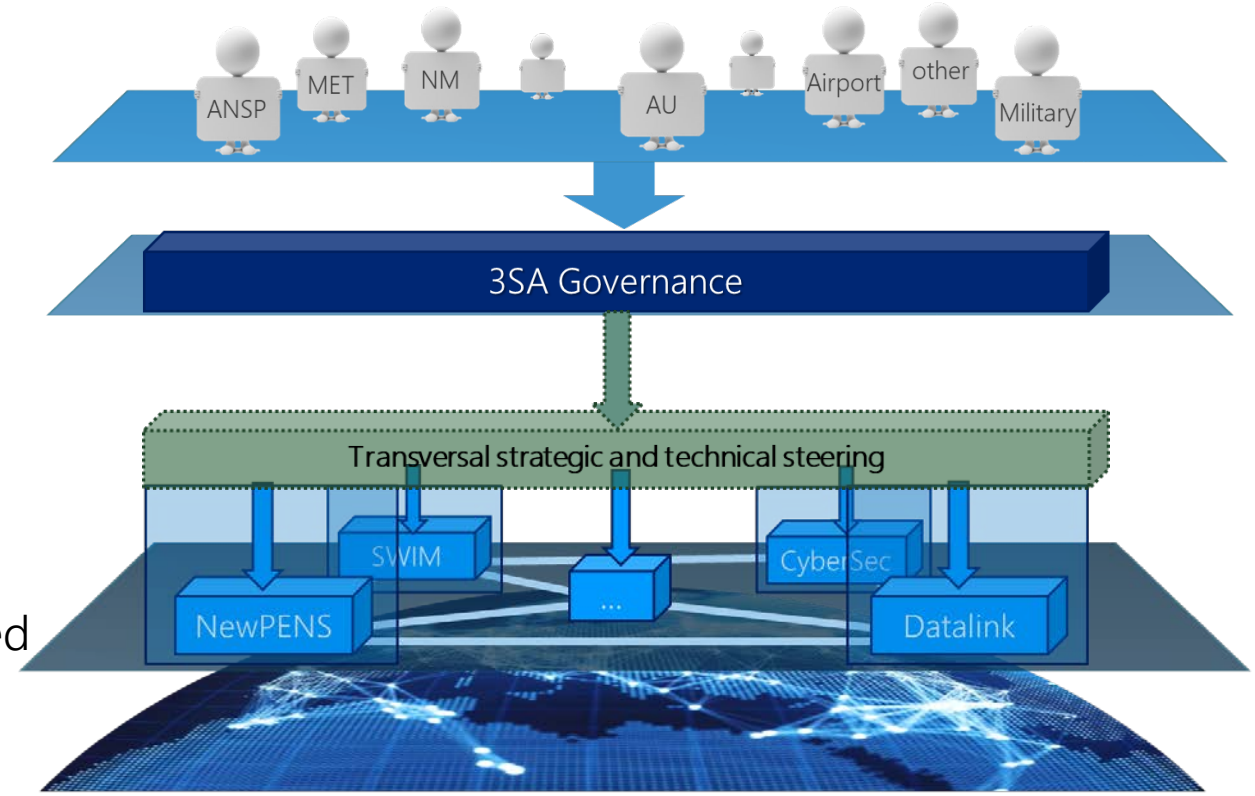
- A shared governance framework to foster the added value of the SDB
- Joint management and evolution of common digital ATM components
- Providing common Trust
- By Operations for Operations
- Ensuring Competition, Fair Evolution, Responsibility and Agility
- Economies of Scale – Commonly procured
- Voluntary participation



SES Shared Services Alliance (3SA)

The 3SA enables trust for managing the SDB

- A shared governance framework to foster the added value of the SDB
- Joint management and evolution of common digital ATM components
- Providing common Trust
- By Operations for Operations
- Ensuring Competition, Fair Evolution, Responsibility and Agility
- Economies of Scale – Commonly procured
- Voluntary participation



Introducing the Components of the SDB

NEWPENS SWIM DATA-LINK SERVICES CYBER SECURITY

1st SDB Component:
NewPENS

RALF BERTSCH
DFS (A6 ALLIANCE)

HERMAN BARET
EUROCONTROL

NATHALIE MOEDERSHEIM
HEAD OF PENS MANAGEMENT UNIT (PMU)
EUROCONTROL

New Pan-European Network Services (NewPENS)

The Goal

A unique, secure, cost-effective ground ATM communications service using IP technologies for all ATM stakeholders

- **Building on PENS** (initiated in 2009 - NM and18 ANSPs in 2013)
- **Widening the scope**
  - geographically – participants
  - Voice/Data between participants and within respective organisations
- **Strengthening the Governance**

A little history
Collaboration EUROCONTROL - A6 Alliance

- **Early 2014** - EUROCONTROL and A6 Alliance on overlapping tracks
  - Both had applied in March 2014 for TEN-T funding … for similar projects
  - EC requested proper coordination in order to ensure synergies and avoid any overlap.

- **22 October 2014** – 1st Meeting

  collaboration has to be fair and balanced … and respect needs of all
  parties agree that politics should be set aside …
  the technical solution is /should be the same…

- **Need to robustify**
  - It was decided that an *agreement on Governance, Procurement and Financing* were necessary prior to *conducting joint workshops with the Stakeholders of the EUROCONTROL Member States*

A little history
Towards a Wide Open Collaboration

- **10 December 2014** - Declaration of collaboration (DG EUROCONTROL / A6 CEOs)
  - A step wise approach
  - 2 duly mandated teams lead by Ralf Bertsch (A6) and Herman Baret (EUROCONTROL)
- **Meetings in December 2014, January and March 2015**
  - A Common Procurement Agreement (CPA) is prepared – decision making as needed
- **End April 2015 -** acceleration
  - Collaboration had progressed significantly on the Governance, Procurement and Financing
  - Agreement to ask EUROCONTROL to conduct procurement on behalf of
  - Considering the expiration date of the PENS contract, urgency to launch the procurement activities (requirements, Call For Tenders, etc)

It was time to expose the results of the work done to ALL ATM Stakeholders of EUROCONTROL

- **3 June 2015** - workshop to present the CPA to all interested candidates – invitation to join

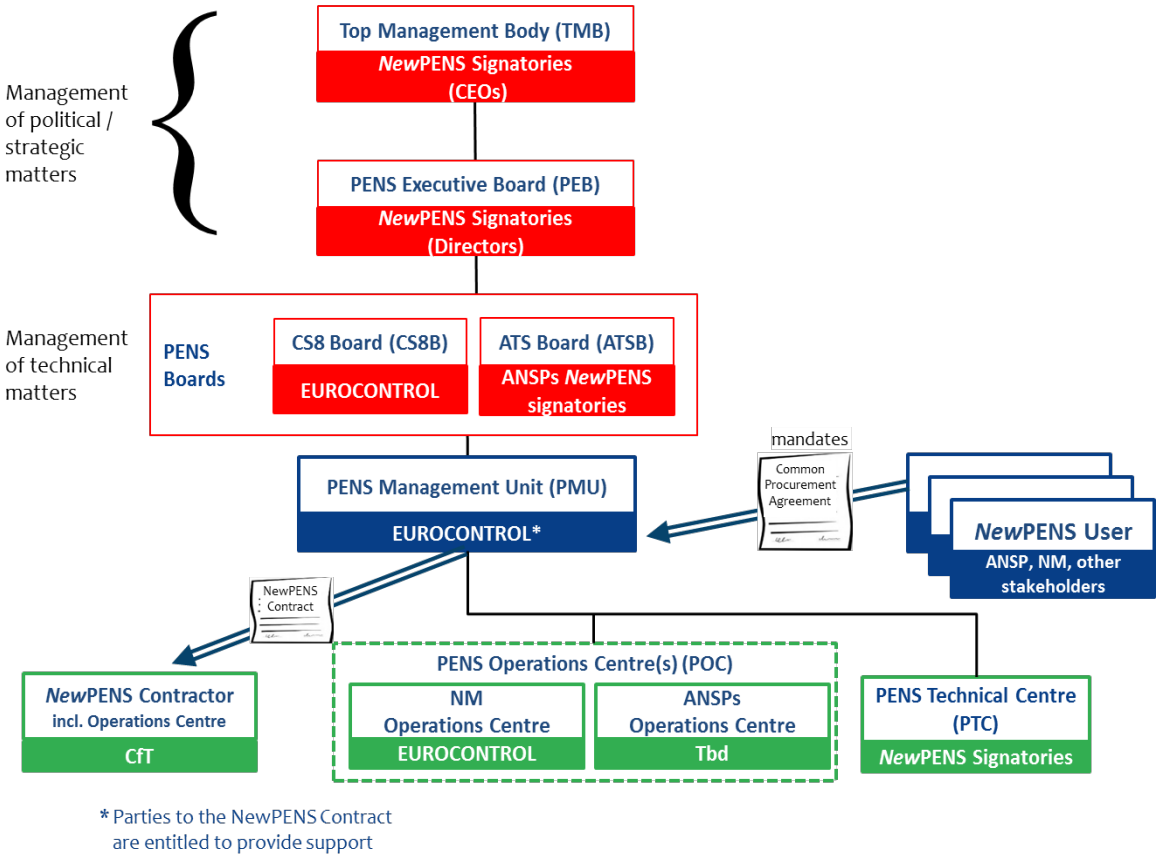
Directive Permanent Commission 15/88

21 May 2015

The Director General of the Agency shall conclude, on behalf of the Organisation, a common procurement agreement (CPA) for the common procurement of the New Pan-European Network Services (NewPENS) with the Air Navigation Service Providers and other Parties interested to use the NewPENS from the EUROCONTROL Member States and other States within the ICAO EUR/NAT Region and bordering States.

NewPENS Governance

A 3-layer structure



* Parties to the NewPENS Contract are entitled to provide support

From CPA to Contract Signature to Implementation

- Governance formally established on 31 May 2015
- Strict respect of the roles and bodies established by the CPA (e.g. Conflict of Interest)
- Talented PEB Chairman - Good cooperation from all
- Contract signed on 17 April 2018 – Less than 3 years after PC Decision !
  - 36 ANSPs and NM
  - Current value : 50 Mio euros over 10 years
- More are joining
  - Accession of 10 Parties in progress (including 1 Military)
  - 10 prospects: Airlines, Airport Operator, MET service provider, SAT service provider, MIL
- Eventually getting to 1 ATM Network for ALL ATM Stakeholders –
  would be great to extend from Inter-SPs usage to Intra-SP usage

Signatories
Prospects

	NewPENS Users	Country		NewPENS Users	Country
1	EUROCONTROL (NM - MUAC)		19	LFV	Sweden
2	ALBCONTROL	Albania	20	LPS SR	Slovakia
3	ANA	Luxemburg	21	LGS	Latvia
4	ANS CR	Czech Republic	22	LVNL	The Netherlands
5	ANS Finland	Finland	23	M-NAV	Macedonia (FYROM)
6	AUSTROCONTROL	Austria	24	MATS	Malta
7	AVINOR	Norway	25	NATS	United Kingdom
8	AZANS	Azerbaijan	26	NAV Canada	Canada
9	BULATSA	Bulgaria	27	NAV Portugal	Portugal
10	CROCONTROL	Croatia	28	NAVIAIR	Denmark
11	DFS	Germany	29	OACA	Tunisia
12	DHMI	Turkey	30	ORO NAVIGACIJA	Lithuania
13	DSNA	France	31	PANSA	Poland
14	EANS	Estonia	32	Ports of Jersey	Jersey
15	ENAIRE	Spain	33	SKEYES	Belgium
16	ENAV	Italy	34	SKYGUIDE	Switzerland
17	IAA Ireland	Ireland	35	SLOVENIACONTROL	Slovenia
18	ISAVIA	Iceland	36	ROMATSA	Romania

Pending Accession	Country
BHANSA	Bosnia Herzegovina
DCAC	Cyprus
ENNA	Algeria
HCAA	Greece
HUNGAROCONTROL	Hungary
IAA Israel	Israel
ONDA	Morocco
RNLAF	The Netherlands
SMATSA	Serbia and Montenegro
UKSATSE	Ukraine

Prospects
KNMI (The Netherlands)
Swiss Airline
Aéroport de Paris
ESSP-SES France
Air France
Inmarsat
Aegean Airlines (Greece)
Olympic Air (Greece)
FAA
Ministère des Armées (France)

NewPENS
Conclusions

When there is a need and a will, there is a go to cooperate

Full CPA elaborated over 6 months
Procurement to contract signature in less than 3 years

No issue which could not be resolved

2nd SDB Component:
SWIM Governance IP

STÉPHANE DUBET
DSNA (A6 ALLIANCE)

Defining the 3SA/SDB

Implementation Projects under SDM coordination (1/4)

SWIM Governance

CEF Call 2016

Timeframe: **7 February 2017 – 1 October 2019**

Addressing Family 5.1.3 of the SESAR Deployment Programme

Project Leader: DSNA

Project Contributors:

- Air France
- ANS Finland
- Austrian Airlines
- Austrocontrol
- BULATSA
- Copenhagen Airport
- DFS
- ENAIRE
- ENAV SpA
- EUMETNET
- Eurocontrol
- Lufthansa AG
- Fraport
- French MoD
- Hungarocontrol
- LFV
- LPS SR
- Munchen Airport
- NATS
- NAV Portugal
- PANSA

Overall Budget

€ 3.474.266

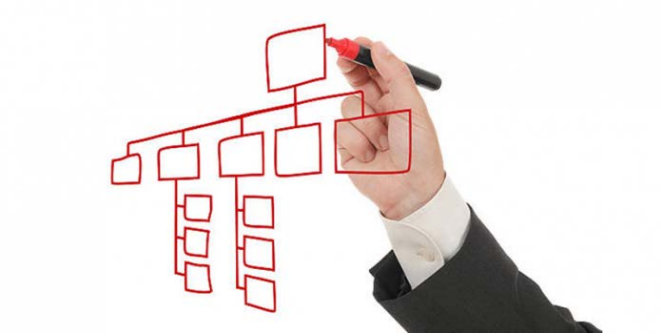
EU Funding

€ 1.493.934

Current progress

67%

SWIM Governance Implementation Project



- ✓ Setup SWIM governance
- ✓ Standardization
- ✓ Manage and execute SWIM governance
- ✓ Legal and financial aspects
- ✓ Common Components
- ✓ Security
- ✓ Communication and coordination

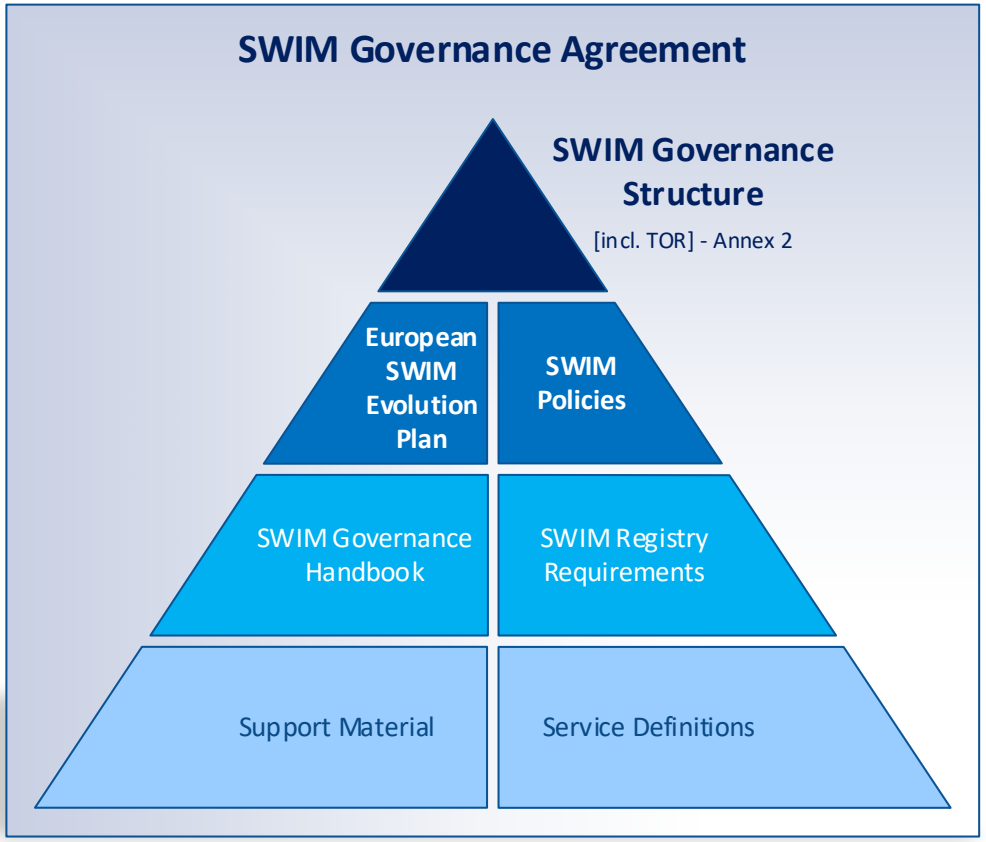
Project highlights

Interoperability

Trust

Implementation support

Collaborative approach



3rd SDB Component:
DataLink Services IP

GIANGUIDO BRAGAGNINI
ENAV (A6 ALLIANCE)

Defining the 3SA/SDB

Implementation Projects under SDM coordination (2/4)

IP1 - DLS European Target Solution assessment

CEF Call 2017

Timeframe: **16 April 2018 – 30 September 2019**

Addressing Family 6.1.3 of the SESAR Deployment Programme

Project Leader: ENAV

Project Contributors:

- Airtel ATN
- ALTYS
- Arinc
- Austrocontrol
- BULATSA
- Croatia Control
- DFS
- DSNA
- ENAIRE
- ESSP
- EUROCONTROL
- Hungarocontrol
- Inmarsat
- Leonardo
- LFV
- MATS
- NATS
- NAV Portugal
- PANSA
- Salzburg University
- SITA France
- SITA Canada
- SITA Switzerland
- Thales

Overall Budget

€ 8.618.534

EU Funding

€ 4.309.237

Current progress

48%

Defining the 3SA/SDB

Implementation Projects under SDM coordination (3/4)

DLS Implementation Project - Path II

CEF Call 2016

Timeframe: **15 February 2017 – 31 December 2020**

Addressing Family 6.1.3 of the SESAR Deployment Programme

Project Leader: ENAV

Project Contributors:

- ANS Finland
- Arinc
- Austrocontrol
- BULATSA
- Croatia Control
- DCAC Cyprus
- DFS
- DSNA
- LGS
- EANS
- ENAIRE
- ESSP
- Hungarocontrol
- LFV
- LPS SR
- Lufthansa AG
- MATS
- NATS
- NAV Portugal
- PANSA
- Ryanair
- SITA
- TAP Portugal

Overall Budget

€ 4.869.217

EU Funding

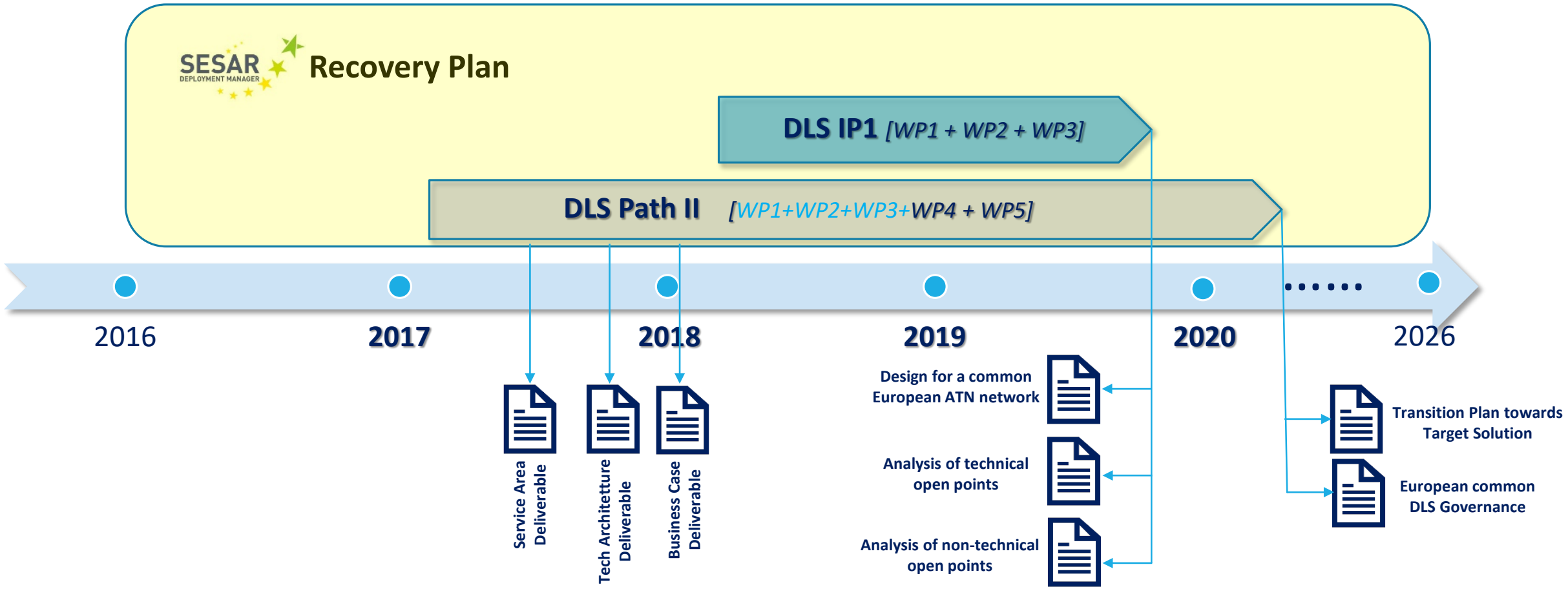
€ 2.093.763

Current progress

56%

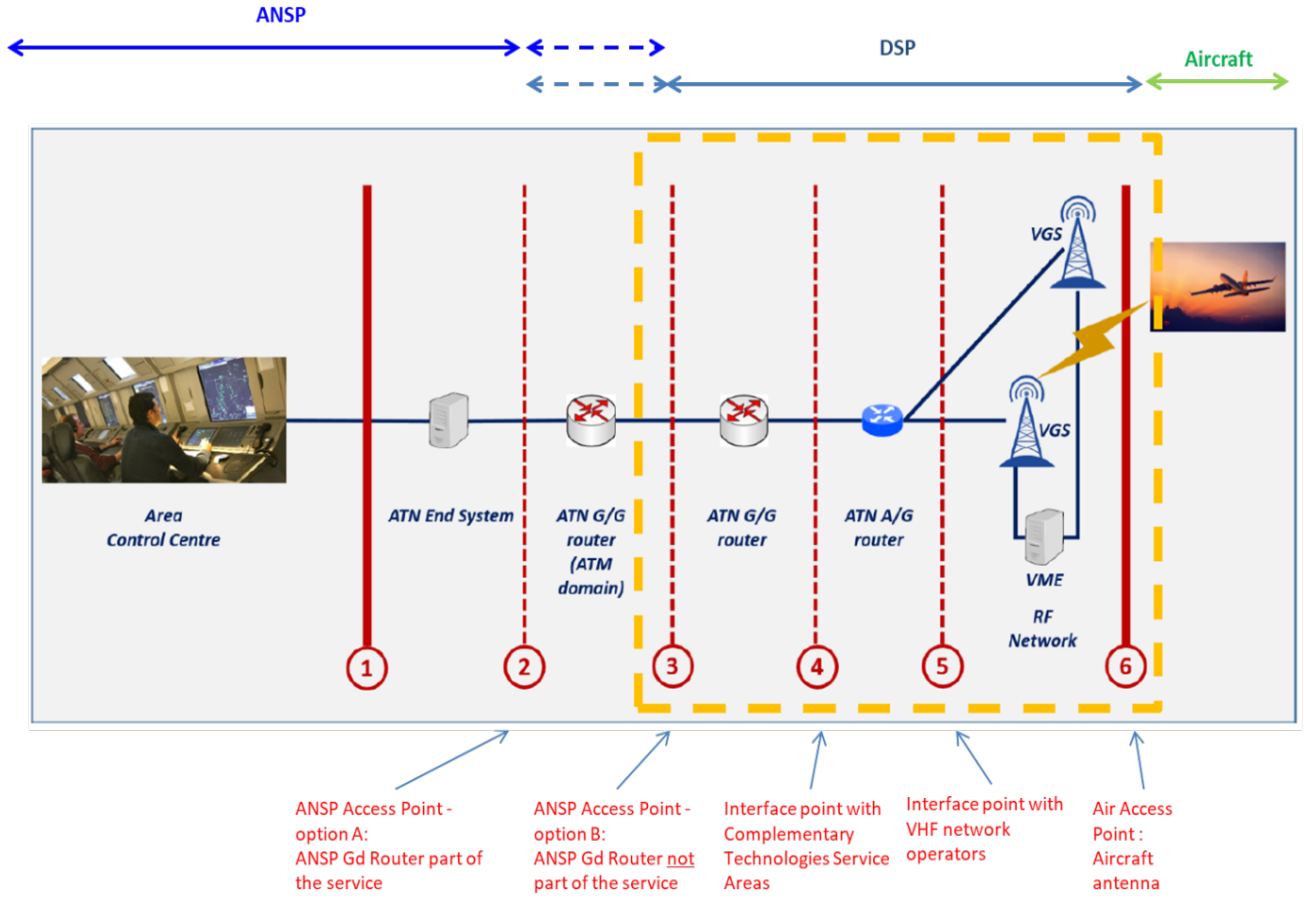
DLS Implementation Projects (IPs)

Path II and IP1 Projects – Timelines



DLS Implementation Projects (IPs)

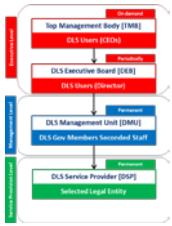
Path II and IP1 Projects – Scope



CEAB

BCA

European DLS Governance



4th SDB Component:
Cyber Security IP

PATRICK MANA
EUROCONTROL

Defining the 3SA/SDB

Implementation Projects under SDM coordination (4/4)

SWIM PKI and Cybersecurity

CEF Call 2017

Timeframe: 13 November 2018 – 31 December 2021

Addressing Family 5.1.4 of the SESAR Deployment Programme

Project Leader: EUROCONTROL

Project Contributors:

- Aeroports de Paris
- Air France
- ANS Finland
- Austrocontrol
- BULATSA
- Copenhagen Airport
- DFS
- DSNA
- ENAV
- FABCE
- French MoD
- HCAA
- Hungarocontrol
- LFV
- LPS SR
- Lufthansa AG
- LVNL
- Manchester Airport
- NATS
- NAV Portugal
- Naviair
- Oro Navigacija
- PANSA
- ROMATSA
- Ryanair
- Skeyes
- Slovenia Control
- SMATSA
- Spanish Air Force

Overall Budget

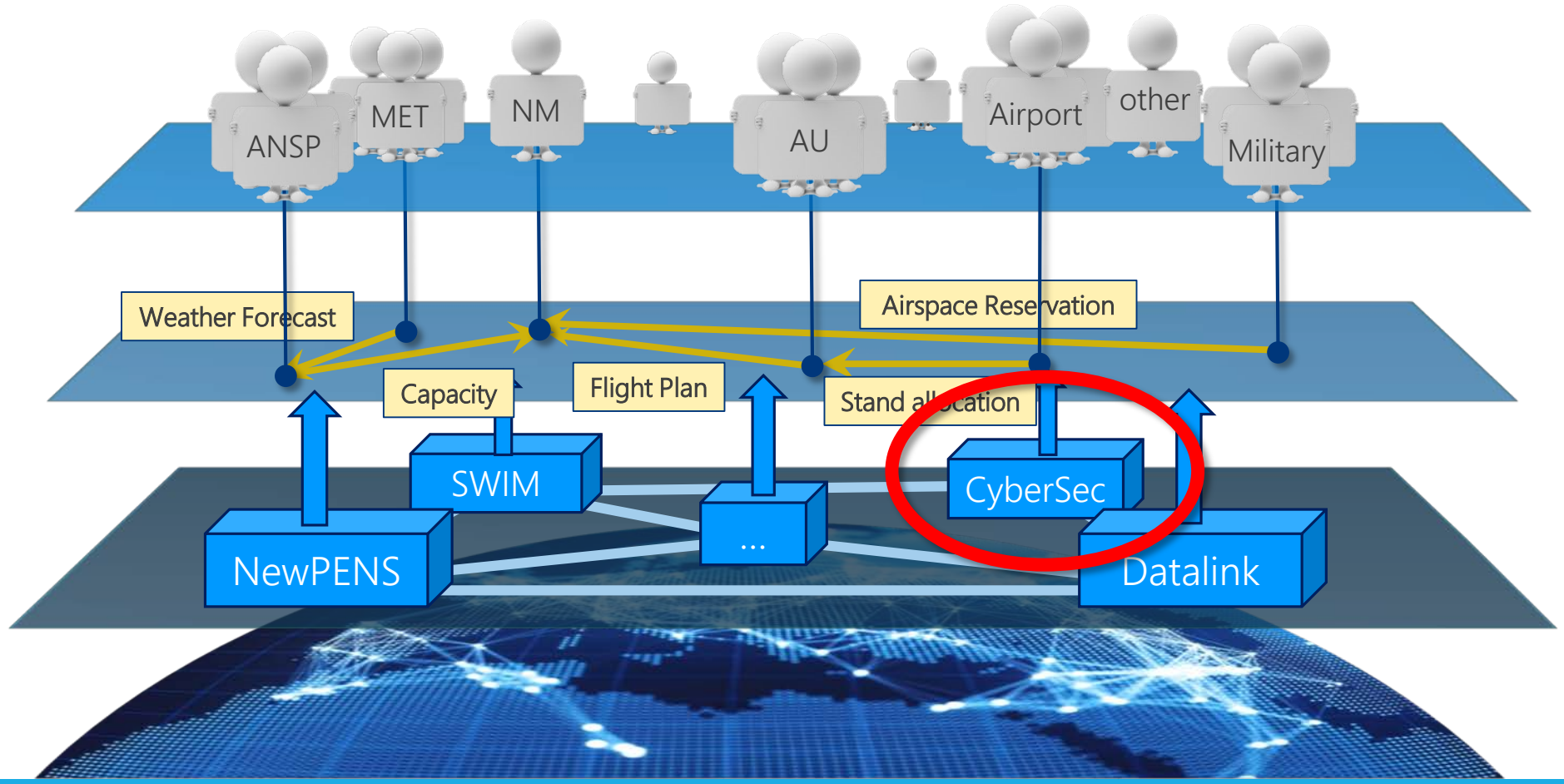
€ 10.018.306

EU Funding

€ 5.009.153

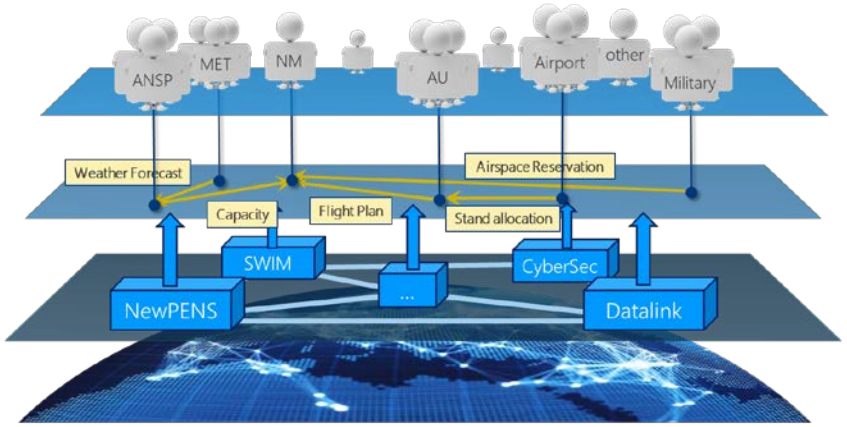
Current progress

2%


ANSP
MET
NM
AU
Airport
other
Military
Weather Forecast
Airspace Reservation
Capacity
Flight Plan
Stand allocation
SWIM
CyberSec
NewPENS
...
Datalink

Cyber-Security = transversal services

- To be provided based on common needs



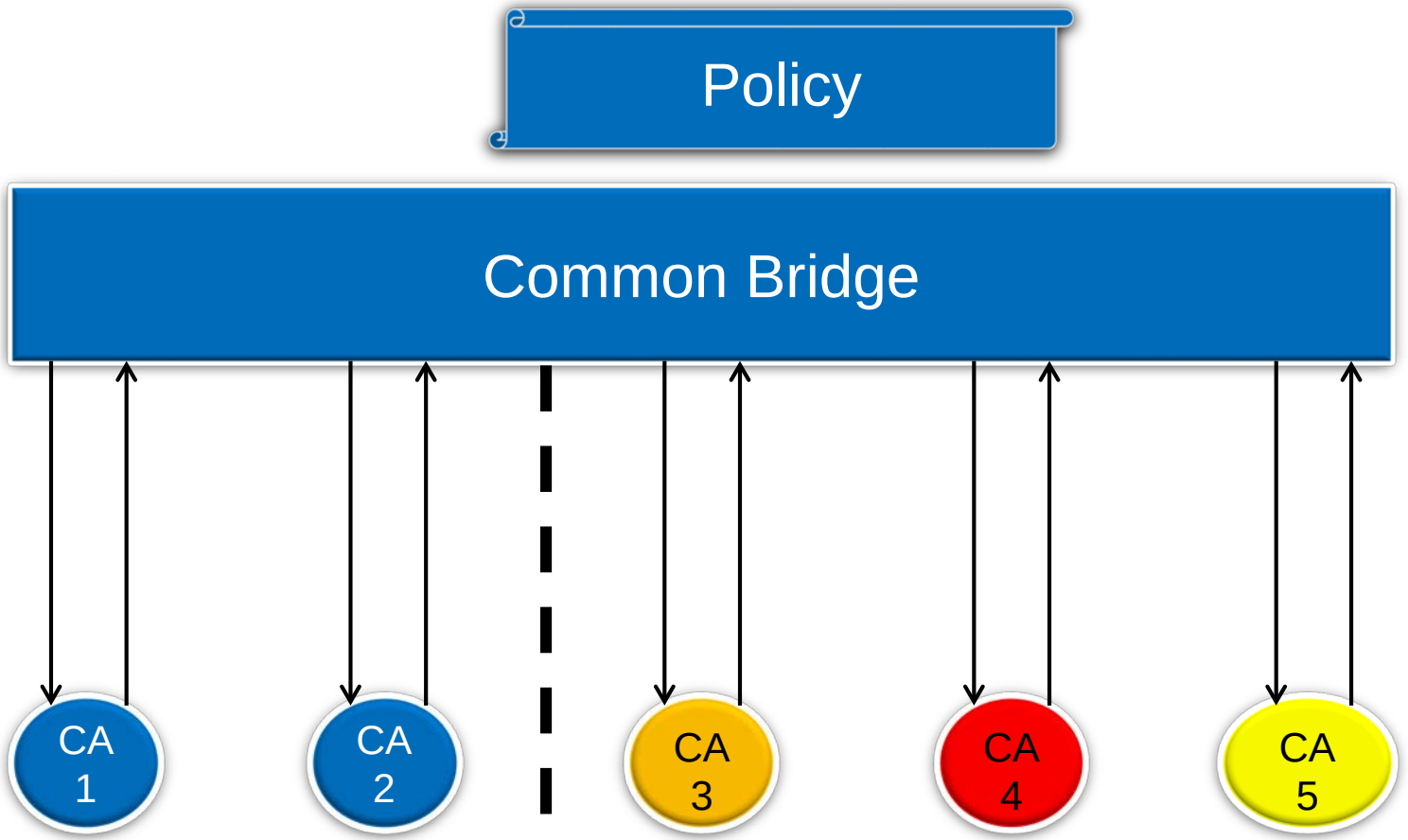
Cybersecurity services are effective
if all stakeholders adopt them, not only some.

Common 'Trust Framework' (also discussed at ICAO)
with multiple levels

Common PKI + Trust Framework

TRUST FRAMEWORK

PKI



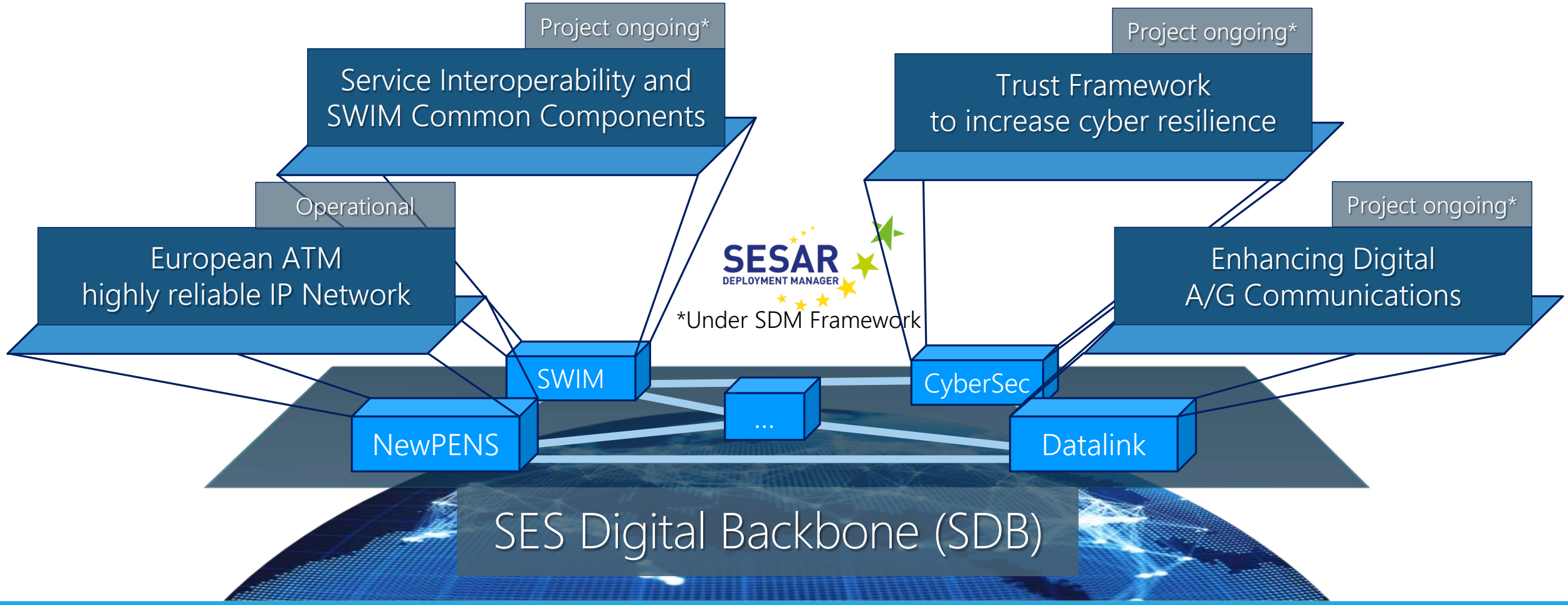
Value Proposition of the 3SA-SDB

PAUL BOSMAN
EUROCONTROL

MARCEL SOBOTTKA
DFS (A6 ALLIANCE)

SES Digital Backbone (SDB)

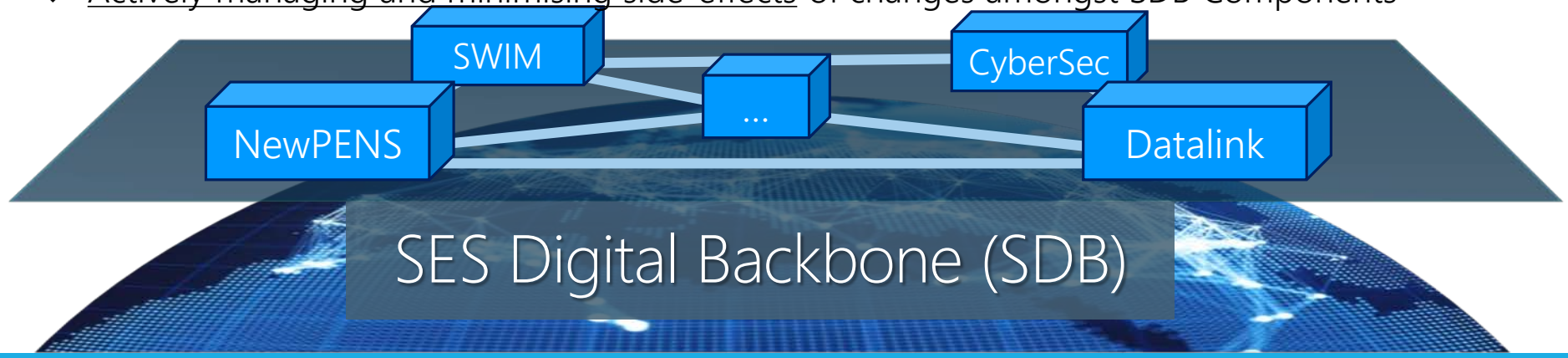
The ATM community is developing the “pillars” of the SDB



SES Digital Backbone (SDB)

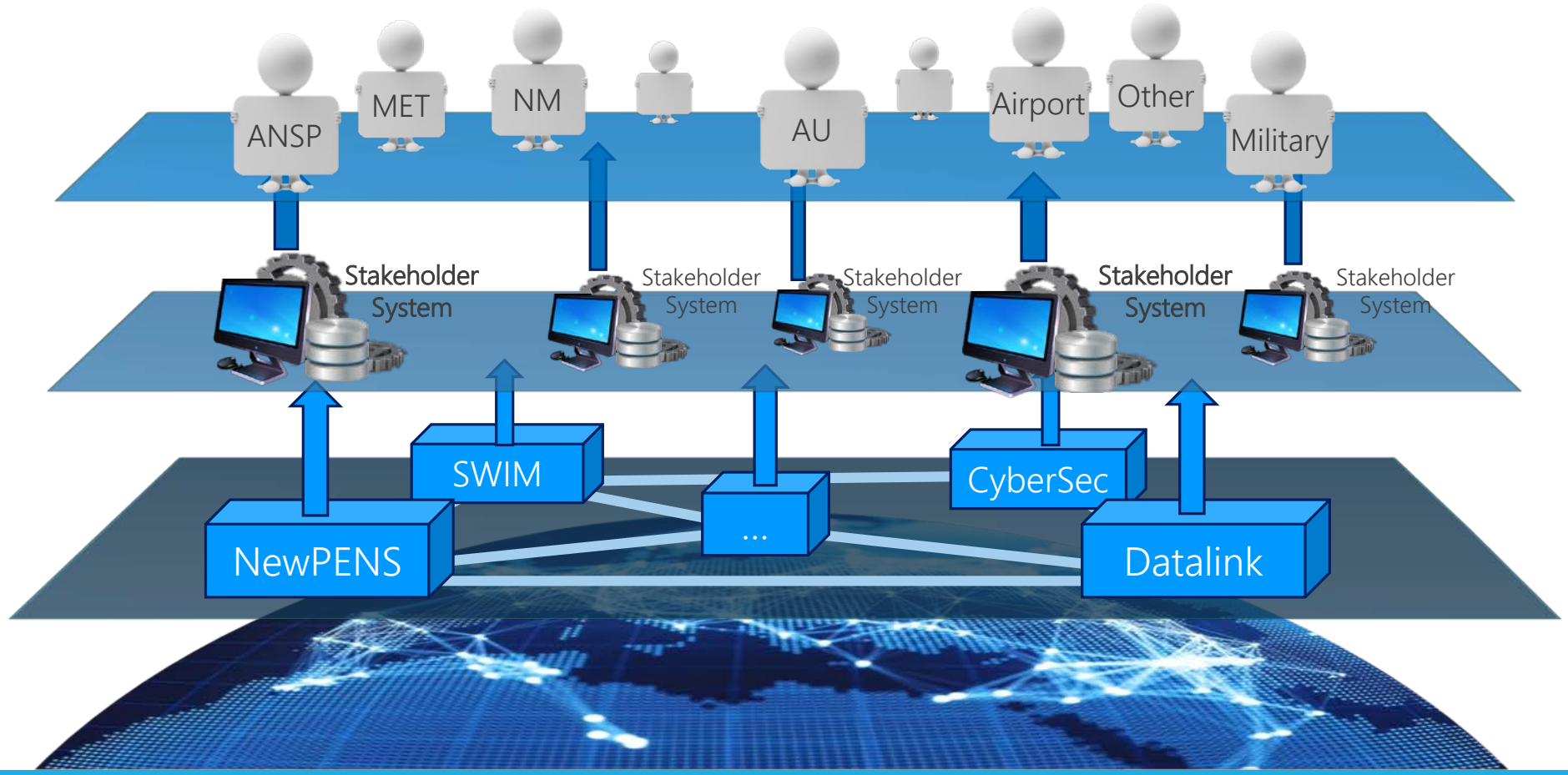
More than the sum of it parts

- **Each SDB component can only deliver its benefit in connection with others**
  - Each component places requirements on others, affecting their timelines, priorities and **cost**
  - Optimising one component in isolation can generate inefficiencies in other components
- **Efficiency of information access will only be optimised using a holistic approach**
  - Taking decisions considering overall cost, benefit and efficiency
  - Ensuring that the SDB components are set up for optimized overall performance
  - Actively managing and minimising side-effects of changes amongst SDB Components



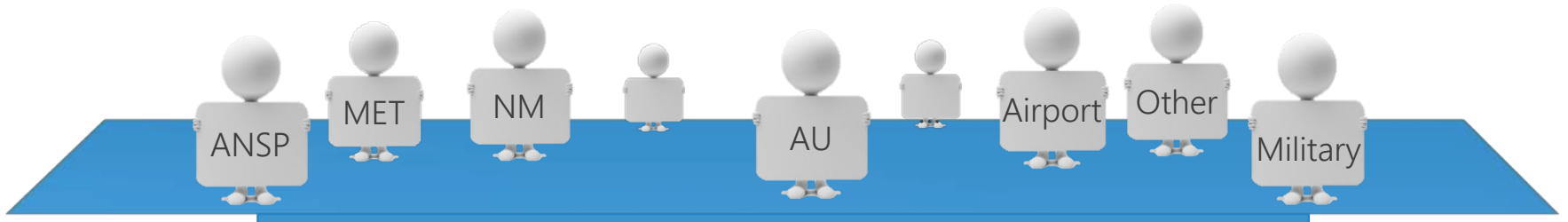
SES Shared Services Alliance (3SA)

The glue that keeps the SDB Components together



SES Shared Services Alliance (3SA)

The glue that keeps the SDB Components together



SES Shared Services Alliance (3SA)

- Competition
- Fair evolution
- Responsibility
- Agility

- Provides trust by means of a joint governance framework
  - Ensure all-inclusive collaborative decision making
  - Safeguarding key principles in the management and evolution of the SDB

The SES Digital Backbone is a key technical enabler for the Single European Airspace System (SEAS/AAS)

- With a strong buy-in from operational stakeholders, SESAR Joint Undertaking delivered SEAS.
- SEAS, building on Pilot Common Project deployment, underlines the importance of establishing a common and interoperable framework facilitating improved sharing of relevant operational information leading to optimized operations and improved overall network performance.
- The **SES Digital Backbone is a vital component in providing this framework**
- As such, the SES Digital Backbone is the technical cornerstone of operational stakeholders to enable implementation of new performance driven concepts and services such as but not limited to virtualization, air/ground end-to-end digitalization of ATM, the realization of ATM Data Service Providers, and many more…

Q&A Session #1

FREEK DE WITTE
SESAR DEPLOYMENT MANAGER

Session #2:
Expected Benefits and Key Considerations of the 3SA-SDB

FREEK DE WITTE
SESAR DEPLOYMENT MANAGER

Agenda (1/2)
Session #2

11:45 – 12:45	3. Session #2: Expected Benefits and Key Consideration of the 3SA-SDB	
	3.1 Business Case	Raquel Moldes Teijeiro (ENAIRE – A6 Alliance)
	3.2 Competition Concerns	Carlos Fornas (DFS – A6 Alliance)
	3.3 Data Protection and Ownership	Philip Burton (NATS – A6 Alliance)
	3.4 Governance Aspects	Stéphane Dubet (DSNA – A6 Alliance)
	3.5 Liabilities and Accountabilities	Tadeusz Grocholski (PANSA – A6 Alliance)
	3.6 Common Procurement	Carlos Fornas (DFS – A6 Alliance)
	3.7 SWOT Analysis	Dennis Hart (ECTL)

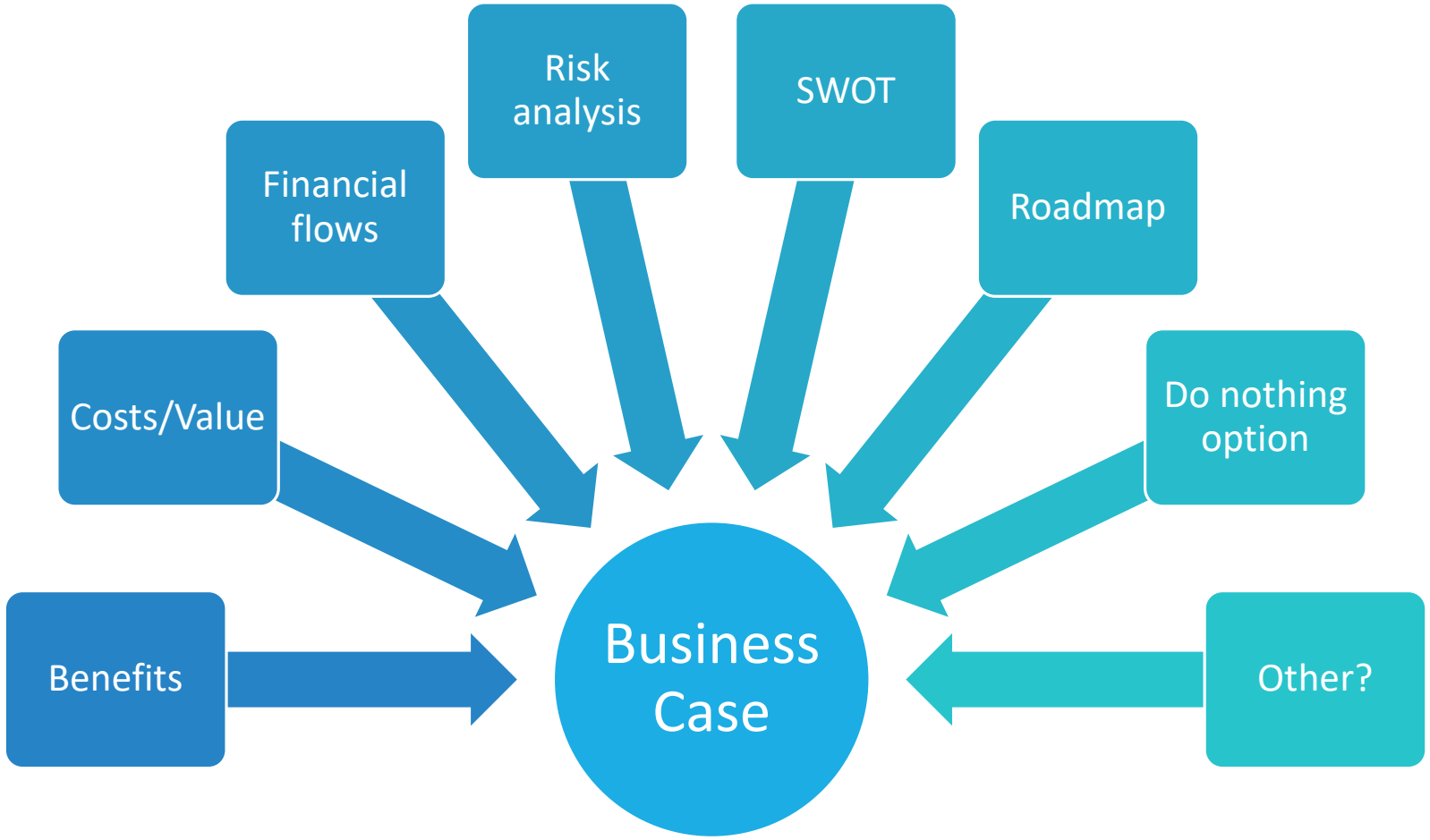
Agenda (2/2)
Session #2

11:45 – 12:45	**3. Session #2: Expected Benefits and Key Consideration of the 3SA-SDB**	
12:20 – 12:40	3.8 Q&A Session #2	Freek de Witte (SDM)
12:40 – 12:45	3.9 Introduction to Breakout Sessions	Freek de Witte (SDM)
12:45 – 13:45	**Lunch Break**	

Business Case

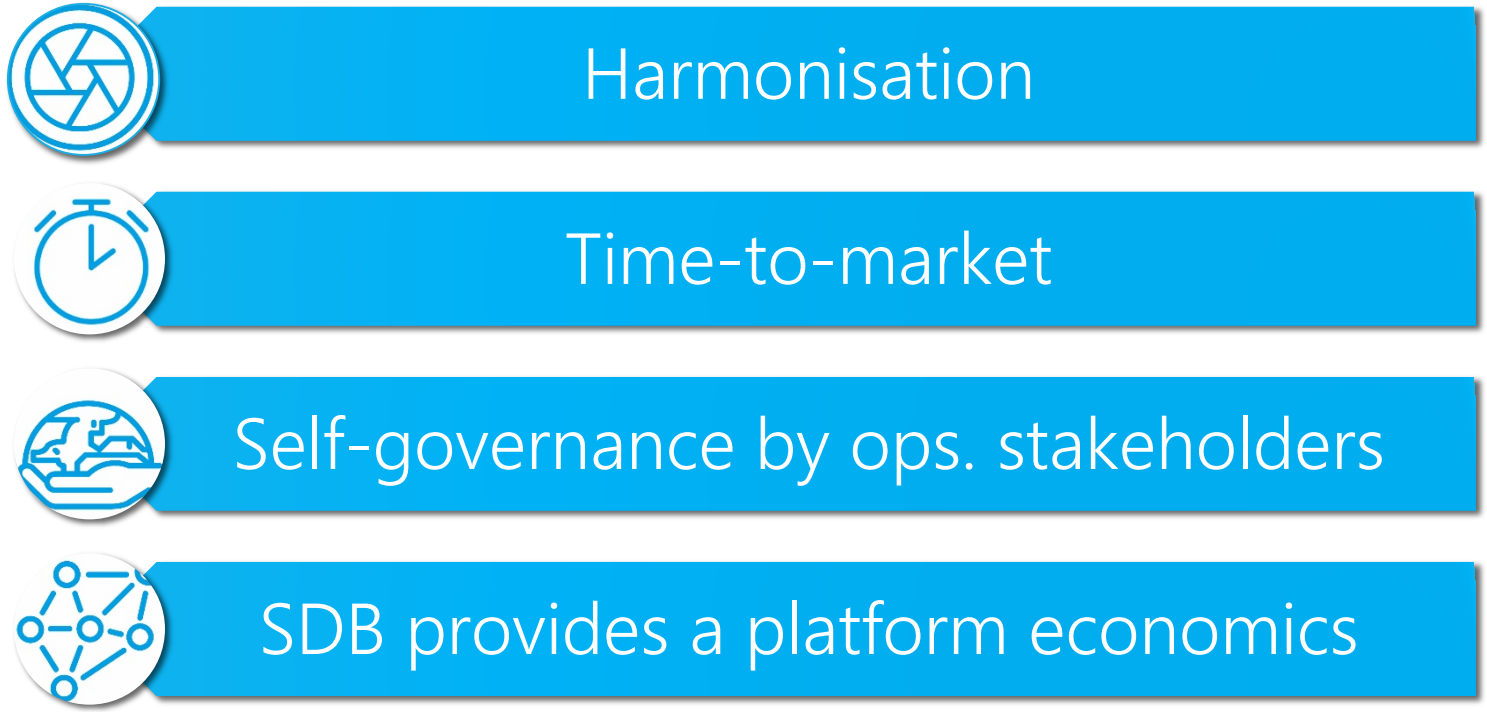
RAQUEL MOLDES TEIJEIRO
ENAIRE (A6 ALLIANCE)

What do we all get extra by this initiative?



Why do we propose this initiative?

Already identified benefits:



Is it worth setting up the 3SA?

We can only find out together

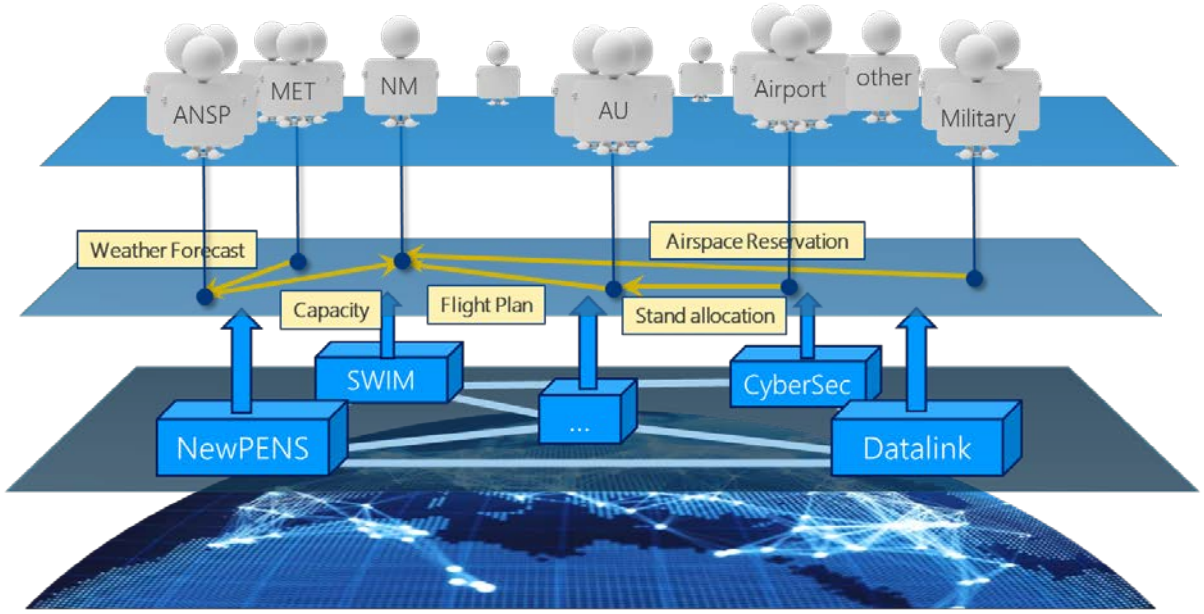
Competition Concerns

CARLOS FORNAS
DFS (A6 ALLIANCE)

Competition Concerns (1/2)

SDB digitalisation respects competition amongst Operational Stakeholders

- The **3SA-SDB respects the current business models** of Operational Stakeholders
- It boosts the digital evolution of these business models, in particular **facilitating the new competition models** encouraged by AAS implementation.
- **3SA opens** new **competition** for providing ICT services for information exchange for the benefit of Operational Stakeholders.



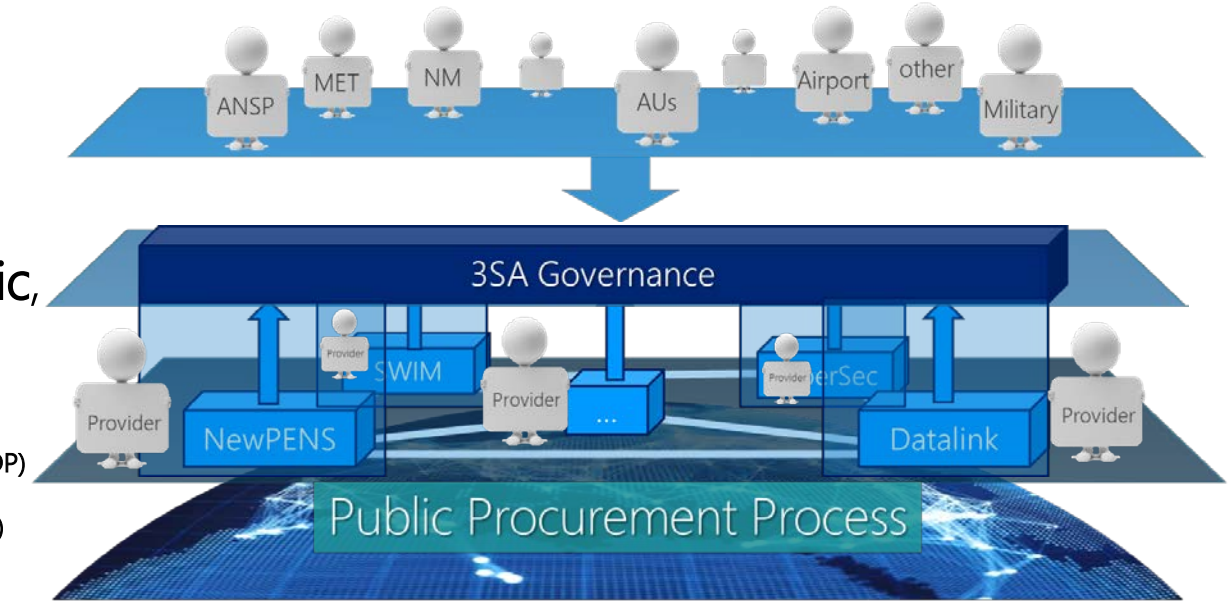
Competition Concerns (2/2)

3SA governance prevents monopolistic practices in the SDB operation

- The ICT* services in question are commodities; except Data-Link Services
  - Service contracts for a limited period of time
  - Voluntary participation for each contract

- **Combined purchasing power of ATM for commodity ICT services is not monopolistic**, relative market weights considered:
  (Source: European Commission, 2015 data)
  - Air transport market ≈ 110 Bn€ (0.7% EU's GDP)
  - ICT service market ≈ 523 Bn€ (3.5.% EU's GDP)

- Additional safeguards:
  User-driven 3SA governance and
  fair selection of SDB component providers
  via public common procurement process



* Information and Communications Technology (ICT)

Data Protection and Ownership

PHILIP BURTON
NATS (A6 ALLIANCE)

Protecting the data flow

Supplier/Client Data Content
Service Agreements

Common Data Flow Governance

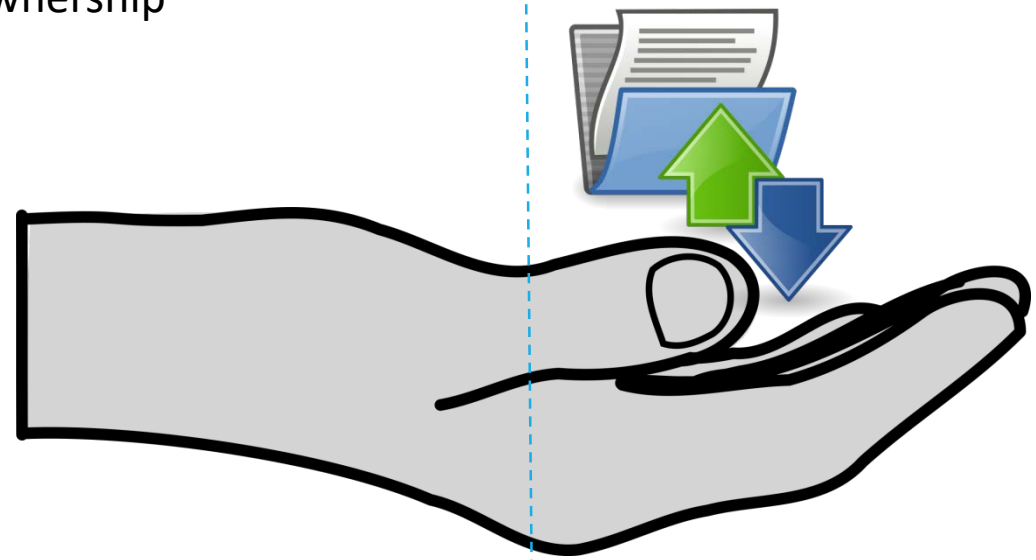
Data Ownership

Data usage control

Data Stewardship

Data Consumer Arrangements

Data Storage



Protecting your data in transition

DATA Providers and users

SES Digital Backbone

Security Governance Overview (All elements of SDB)

Security Standards (includes Security Training Requirements)

Network Security

Read Only Protection

Secure Technology

Security Regulation

Data Accessibility

Network Technology

Network Data Encryption

Network Integrity

Governance Aspects

STÉPHANE DUBET
DSNA (A6 ALLIANCE)

THE OBJECTIVE

COMMON GOVERNANCE PATTERN

SWIM Governance

datalink

NewPENS

Top Management level

Sponsorship

Executive level

Strategic steering

Technical management level

Coordination

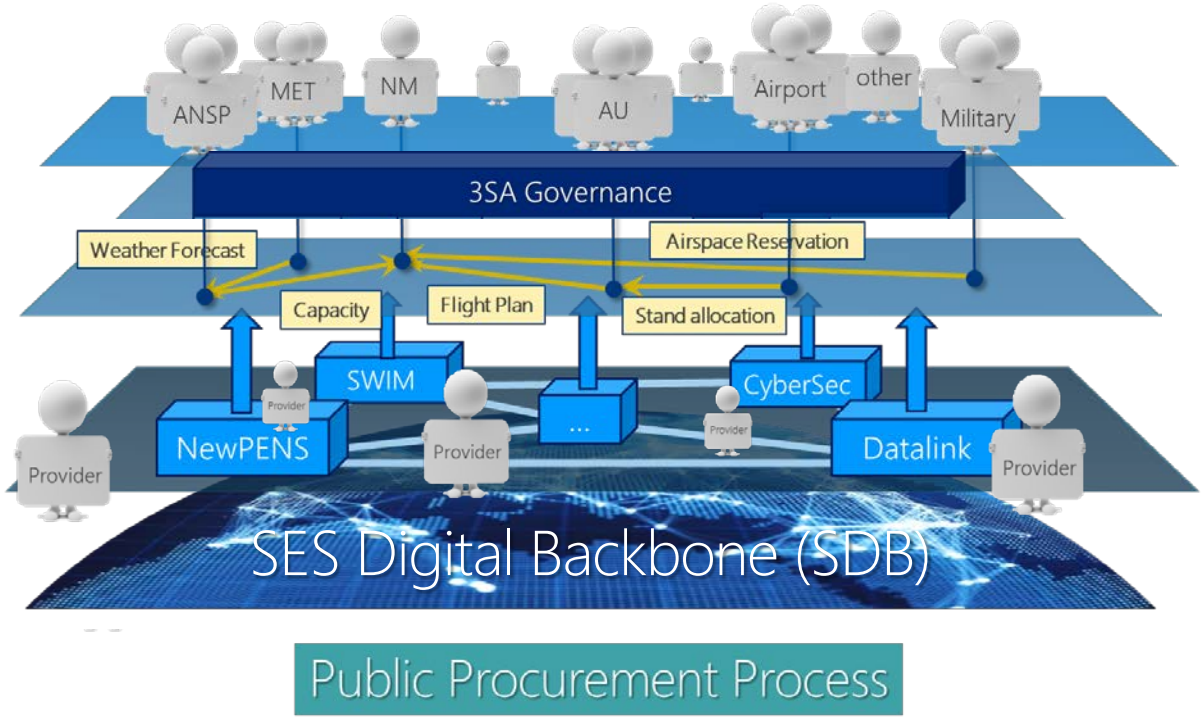
Liabilities and Accountabilities

TADEUSZ GROCHOLSKI
PANSA (A6 ALLIANCE)

Liabilities and Accountabilities

3SA Objectives: Competition, Fair evolution, Responsibility, Agility,

- The **3SA-SDB** will respect the current business models and legal requirements of Operational Stakeholders
- The **3SA-SDB** will respect the liability and accountability expectations of Operational Stakeholders proposed during the workshop in the SWIM Governance project and through assessments provided subsequent to the workshop
- **3SA** will provide liable and accountable results-oriented ICT* services for information exchange – based on Public Procurement



* Information and Communications Technology (ICT)

Liabilities and Accountabilities

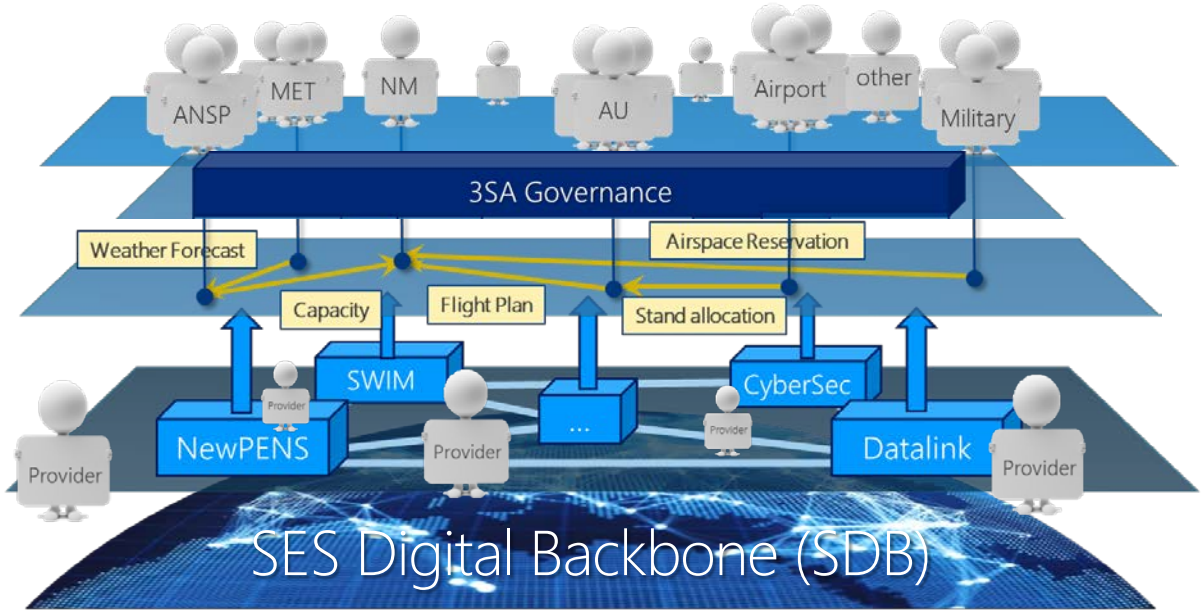
3SA Objectives: Competition, Fair evolution, Responsibility, Agility,

- Limitation of liability of EUROCONTROL and the other NewPENS Signatories* – based on NewPENS CPA**
  (NewPENS will be one of the SDB pillar)

- 3SA Governance shall put arrangements and limitation of liability of 3SA members inspired in the NewPENS model

- Appropriate to the potential loss and damage in question, taking into account the legal status of the 3SA (Consortium, Association, ?)

- Should be limited according to MoC



Public Procurement Process

*https://www.eurocontrol.int/new-pens

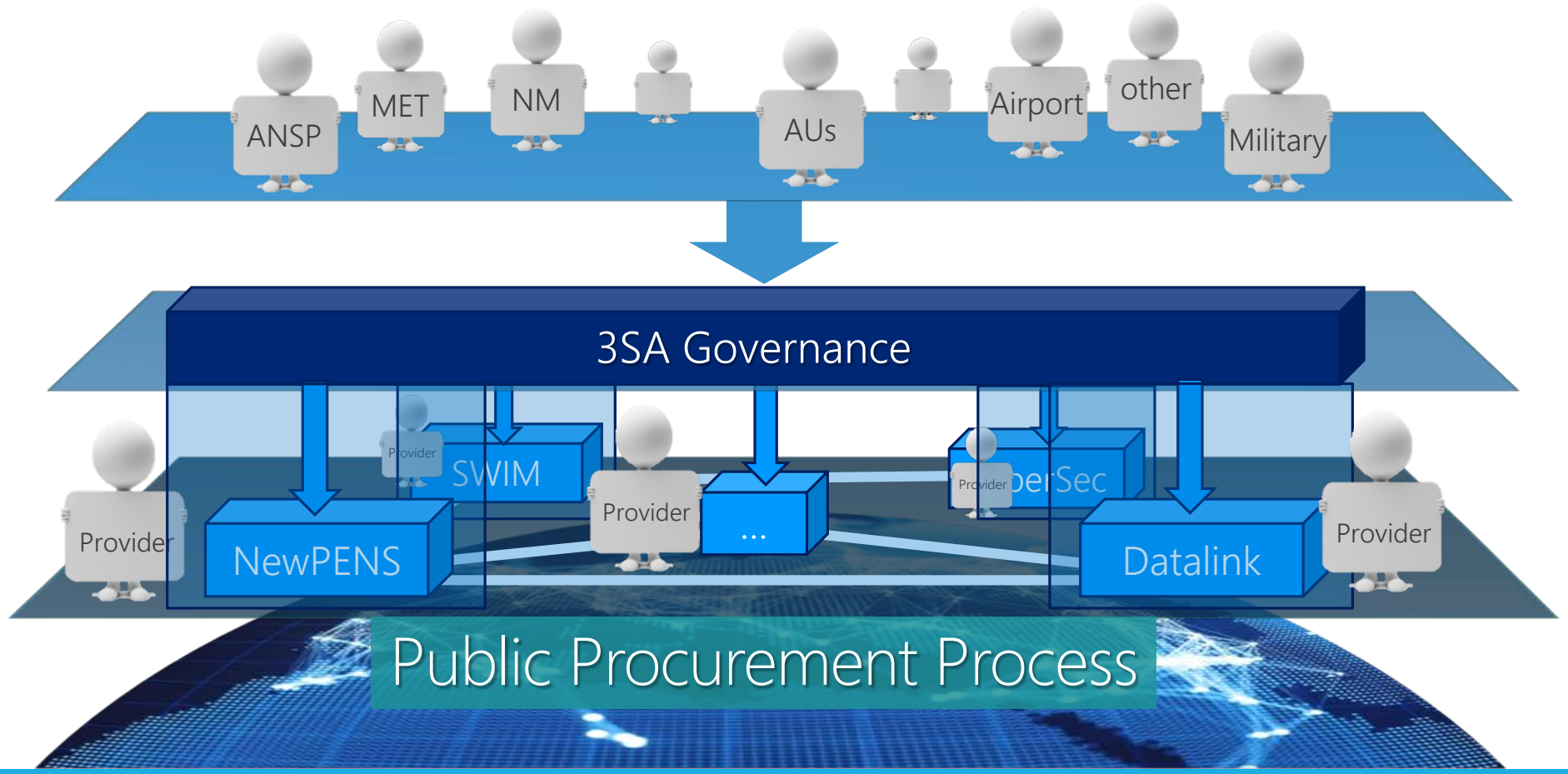
*CPA - Common Procurement Agreement

Common Procurement

CARLOS FORNAS
DFS (A6 ALLIANCE)

Service Provision of SDB Components

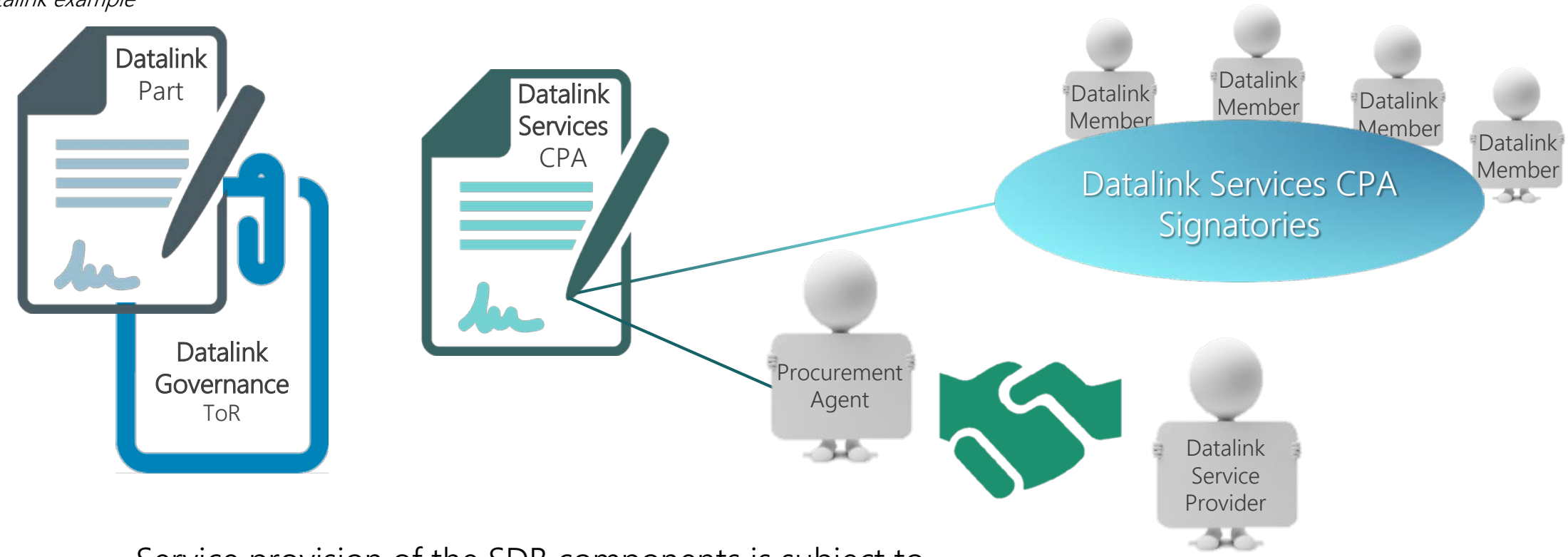
Ensuring best market conditions and preventing market distortions



Common Procurement Agreement (CPA)

Open competition - best value for money

Datalink example

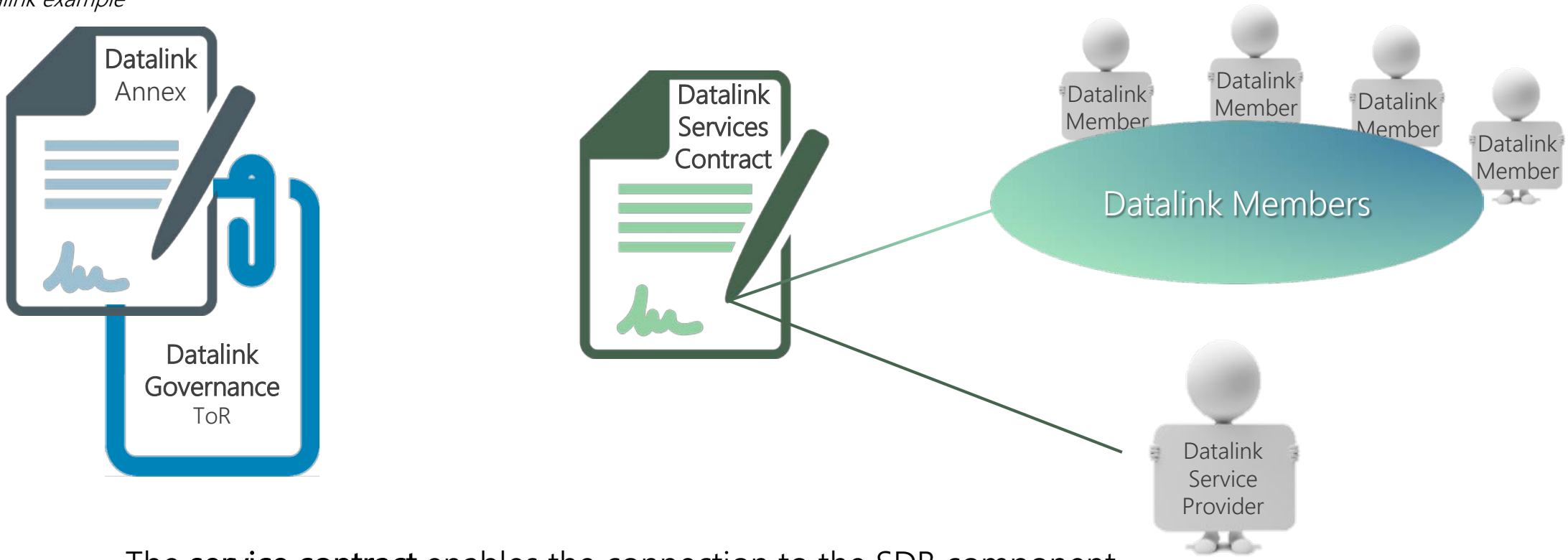


Service provision of the SDB components is subject to **market conditions and open to all**, selected via public procurement processes.

Common Procurement Agreement (CPA)

Open competition - best value for money

Datalink example



The **service contract** enables the connection to the SDB component after completion of the of the public procurement process.

SWOT Analysis

DENNIS HART
EUROCONTROL

How does the 3SA-SDB score?

Our initial analysis

Detailed SWOT part of next steps in developing the initiative further

Delivering a reliable and secure digital backbone

Introducing transparent and all-inclusive decision-making on common infrastructure

Removing isolated approaches in development, operations and management of common infrastructure needs

Providing common solutions for common needs on safety, security, interoperability and resilience

Building purchasing power through common procurement

Providing a common forum for all operational stakeholders in support of harmonisation

Strengths

Weaknesses

To identify and discuss with you!

Opportunities

Threats

Accelerating European ATM Digitalisation

Enabling much needed capacity and efficiency

Facilitating new 'common' services

Accelerating SES and responding to the Airspace Architecture Study's needs

Enabling early adopters of leading edge technologies on information exchange for operational use

To identify and discuss with you!

The road to a successful SDB

Challenges to get there…

Engagement with all required stakeholders

Focus on an operational backbone and not on governance as the end-objective

Focus on common infrastructure.
It is not about data-ownership

…to prevent creating roadblocks

To create the SDB and its governance that's…

All-inclusive

Proportional to the 'problem'; demonstrates added-value compared to existing structures, and is agile and flexible

- **Accepting that collective decision making could mean giving up some autonomy**
- **Accepting that transversal governance could be an extra effort but brings added value**
- **Accepting that all-inclusive and consensus-based decision making could take more time**

Not constraining early adopters and best-in-class today

Prevents monopolies in providers of infrastructure

Prevents stifling of competition between service providers

Q&A Session #2

FREEK DE WITTE
SESAR DEPLOYMENT MANAGER

Session #3:
Break-Out Sessions

FREEK DE WITTE
SESAR DEPLOYMENT MANAGER

Break-Out Sessions for Brainstorming

A. Technical Challenges and Opportunities for the SDB

B. Governance Challenges and Opportunities for the 3SA

Lunch Break

Session #3:
Break-Out Sessions

FREEK DE WITTE
SESAR DEPLOYMENT MANAGER

Agenda
Session #3

13:45 – 15:00	**4. Session #3: Break-Out Sessions**	Moderated by Freek de Witte (SDM)
13:45 – 14:20	4.1 Work in Groups A. Technical Challenges and Opportunities for the SDB B. Governance Challenges and Opportunities for the 3SA	
14:20 – 14:30	4.2 Debriefing by each group in plenary	
14:30 – 15:00	4.5 Plenary Discussion	Freek de Witte (SDM)

Break-Out Sessions for Brainstorming

A. Technical Challenges and Opportunities for the SDB

B. Governance Challenges and Opportunities for the 3SA

Session #3:
Debriefing

Debriefing
Technical Challenges

Break-out session 1 Pegase
Technical Challenges and Opportunities for the SDB

- Room for additional components, care should be taken to a correct prioritisations based on Stakeholders need
- Security by design and guidance should be managed by SDB and not regulated
- Cloud services, ensure that SDB is and stays future prof. Service lifecycles be shortened
- SDB shall not equal centralized infrastructure
- Existing and planned infrastructures should not be excluded.

Break-out session 2
Technical Challenges and Opportunities for the SDB

- Clarification of regulatory issues – The SDB is supporting the implementation of the reviewed PCP regulation
- Before going into implementation a kind of Business Case needs to be developed
- Harmonisation, Interoperability also at global level and Standardisation is an issues – ICAO, EUROCAE , … needs to taken into account
- Monopolistic situations need to be avoided
- No stakeholder left behind

Debriefing
Governance Challenges

Break-out session 3
Governance Challenges and Opportunities for the 3SA

- We need more time to discuss
- We need to balance transversal governance in line with detailing their interdependencies between SDB components
- We need to clarify the scope (geographical, ATM, functional, which OP stakeholders are in)

Break-out session 4
Governance Challenges and Opportunities for the 3SA

- Need to further work on representation and decision making
  - Make sure all affected stakeholders are consulted
  - Use representation mechanisms as required
  - Strive for consensus, plan arrangements if this is not achieved
- Financial aspects to be refined
  - Detail Cost models / financial flows (incl. per domain)
  - Look at other industries and their experience in similar initiatives
  - Keep it simple
- More transparency and clarity
  - Services and infrastructure of SDB and per pillar
  - Further refine the split between governance per pillar and global governance

Session #3:
Plenary Discussion

MODERATED BY

FREEK DE WITTE
SESAR DEPLOYMENT MANAGER

Session #4:
Wrap-Up & Next Steps

PAUL BOSMAN
EUROCONTROL

MARCEL SOBOTTKA
DFS (A6 ALLIANCE)

Recapitulation of the Workshop

Recapitulation of the 3SA-SDB Initiative

By Operations for Operations for realising the SES vision and SEAS (AAS)

Why now?

Shared digitalised SESAR components such as Datalink including a common ATN Backbone and SWIM will start to be ready for **operational deployment starting in 2019.** In particular, Datalink timelines are crucial.

What?

To establish the **SES Digital Backbone (SDB)** for fostering and actively manage synergies across common digital components for operational stakeholders, such as NewPENS, and the work results of SESAR Deployment Implementation Projects in SWIM, DLS and Cyber Security.

How?

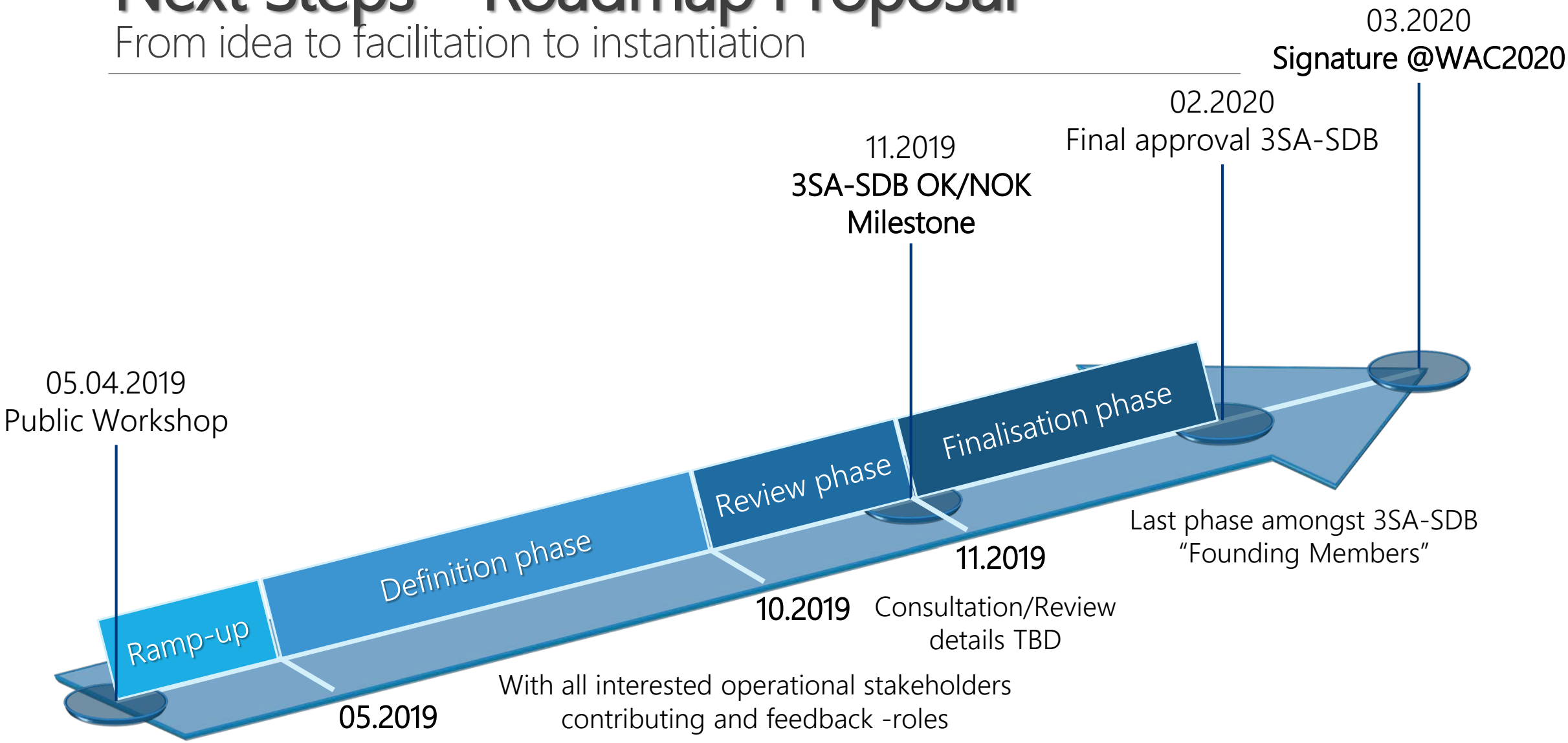
Formed by and open to all European ATM operational stakeholders, establishing the all-inclusive **SES Shared Services Alliance (3SA)** to manage the SDB through a joint trust-based collaboration governance framework.

Challenges?

On-boarding all operational stakeholders to join the initiative in order to **jointly tackle ATM digitalisation challenges** for increasing performance, which ultimately **enable the Single European Airspace System** (SEAS/AAS).

Next Steps – Roadmap Proposal

From idea to facilitation to instantiation

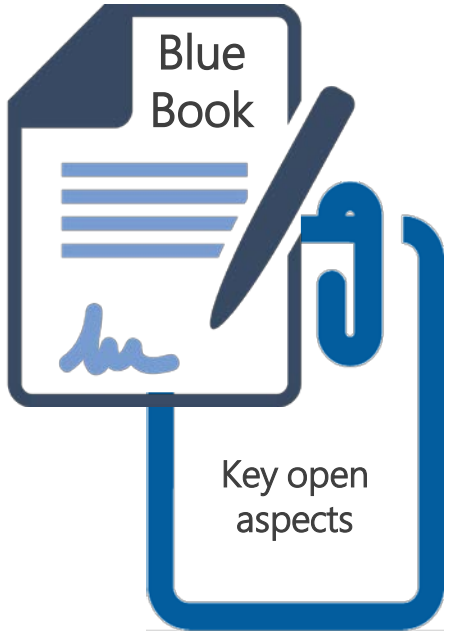


Next Steps – Develop a concrete joint proposal

Working together towards successful digitalisation of ATM in Europe

3SA-SDB Agreement

- Core Articles
- SDB definition and critera
- 3SA definition and principles
- Transversal governance aspects

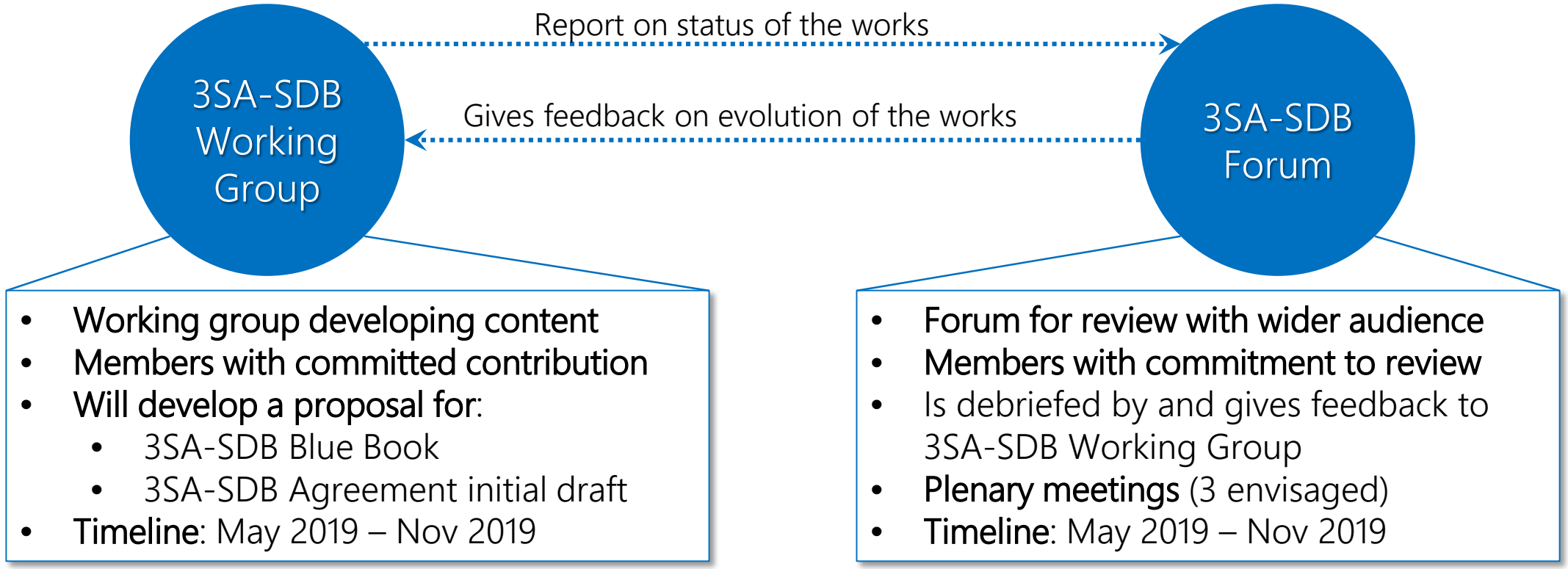


3SA-SDB Blue Book

- End-game scenario definition
- Business Case
- Key aspects (e.g. competition)
- Transition roadmap

Next Steps – Working Group and Forum

Working together towards successful digitalisation of ATM in Europe



Next Steps – What comes next?

Working together towards successful digitalisation of ATM in Europe

Who will do the work?

For further defining 3SA-SDB, the "**3SA-SDB Working Group**" is created. **All Operational Stakeholders are invited to join the WG.** The WG will undertake the necessary work to realise the Roadmap proposal

How can I join?

Any interested stakeholder wishing to contribute and be part of the 3SA-SDB WG **can nominate WG members by email @**:
3SA-SDB.WorkingGroup@sesardeploymentmanager.eu
Work will start in May.

How can I be informed?

Join the "3SA-SDB Forum" and nominate your PoCs by email @:
3SA-SDB.Forum@sesardeploymentmanager.eu
1st Forum meeting will be announced soon.

Closing Remarks

MARIAGRAZIA LA PISCOPIA
SESAR DEPLOYMENT MANAGER

RALF BERTSCH
DFS (A6 ALLIANCE)

PHILIPPE MERLO
EUROCONTROL

Thank you for your attention!

Join the 3SA-SDB initiative

Let's move the Single European Sky forward together!

JOIN THE '**3SA-SDB WORKING GROUP**' TO CONTRIBUTE @
3SA-SDB.WorkingGroup@sesardeploymentmanager.eu

KEEP YOURSELF INFORMED BY JOINING THE '**3SA-SDB FORUM**' @
3SA-SDB.Forum@sesardeploymentmanager.eu