Enabling Information Sharing thru Common Services

Registry

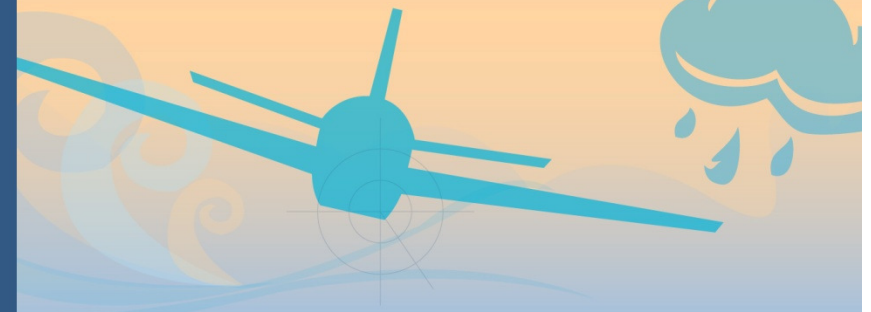## SESAR State of Play

Presented By: Paul Bosman

Date: 31 August 2011

EUROCONTROL

Federal Aviation Administration

Air Transportation Information Exchange Conference - (featuring AIXM, WXXM and FIXM)

August 30, 2011 - September 1, 2011
NOAA Science Center & Auditorium
Silver Spring, Maryland

Unique Partnership

THE SOLUTION

=

- •2.1 bio€
- •15 members
- •13 associate partners = 110 companies in total
- •Present in 27 countries
- •2.000 people working on SESAR
- •300 projects

SESAR is organised in 3 phases

Definition phase

Development phase

Managed by the
SESAR Joint Undertaking

Deployment phase

2006-2008

2014-2025

Created b
European
N°219/20

Ground
Industry

Airborne
Industry

Airports

Air
Navigation
Service
Providers

Staff
associations

7

b€

Airspace
users

National
Authorities/
Military

R&D
community

Bu

Public-Private **p: a première**

- Innovation from p   ctor
- Public financial stability & enforcement power

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SWIM Registry

Looking through the clouds

*'The truth is out there…
Does anyone know the URL?'*

AIS in evolution towards SWIM…
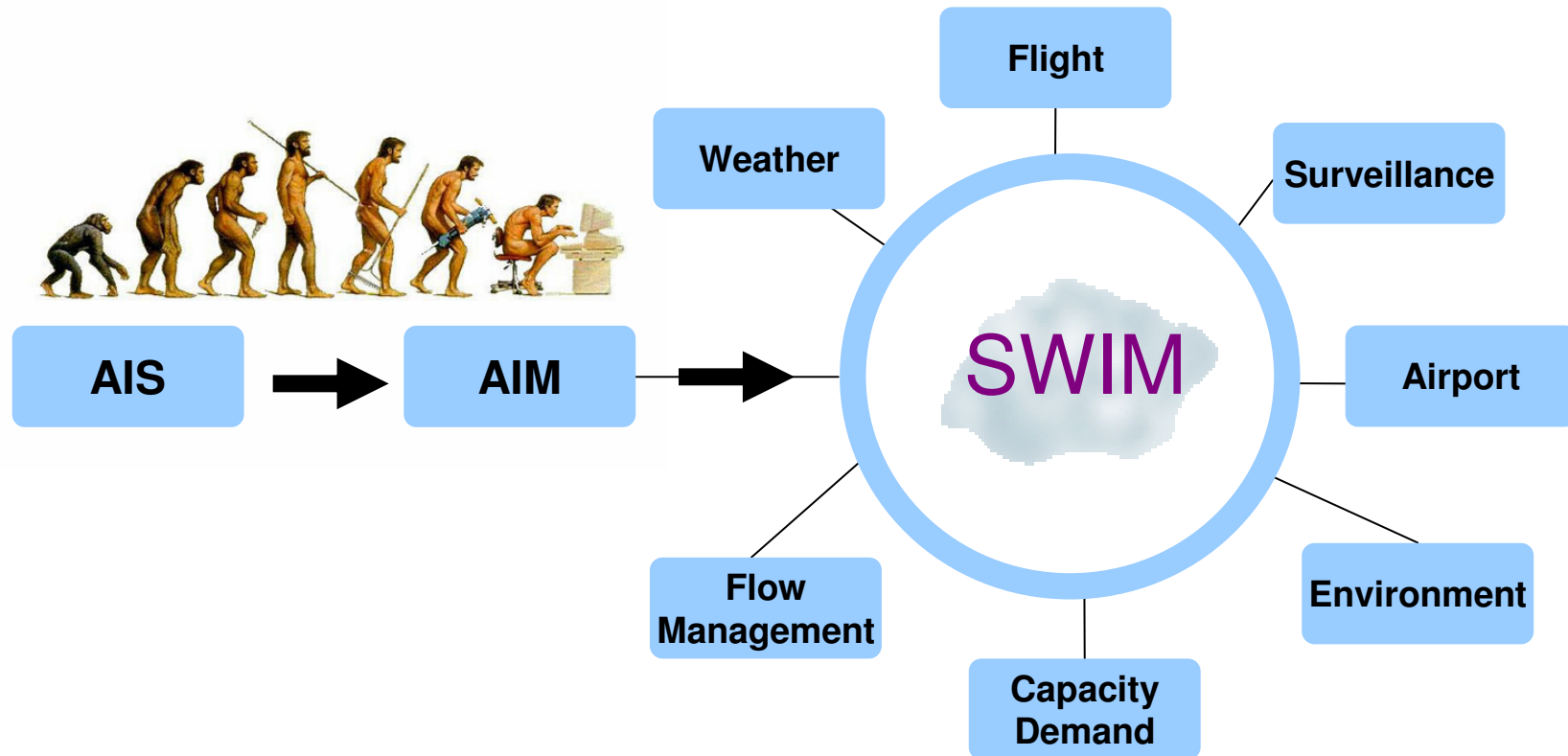
…but what is SWIM?

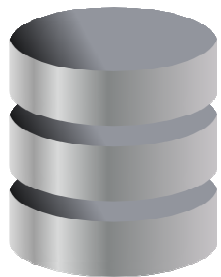Air Transportation Information Exchange Conference - (featuring AIXM, WXXM and FIXM)

How do I interact with it?

What is in it for me?

What does it allow me to do?

SWIM

Who is participating?

Consolidated, Complete, Up-to-date, Trusted View on SWIM

- Capabilities = Services, Interfaces
- Participants = Providers, Consumers
- Rules = Policies, Standards

Available in the Registry

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Current Approach

- Multiple descriptions of the same reality

- Silo approach

- Case by case

- Knowledge in the edge of the network

- Multiple uncoordinated repositories

- High cost of entry

Target Approach

- Single description of the same reality

- Coordinated and collaborative approach

- Common global picture

- Knowledge consolidated and shared

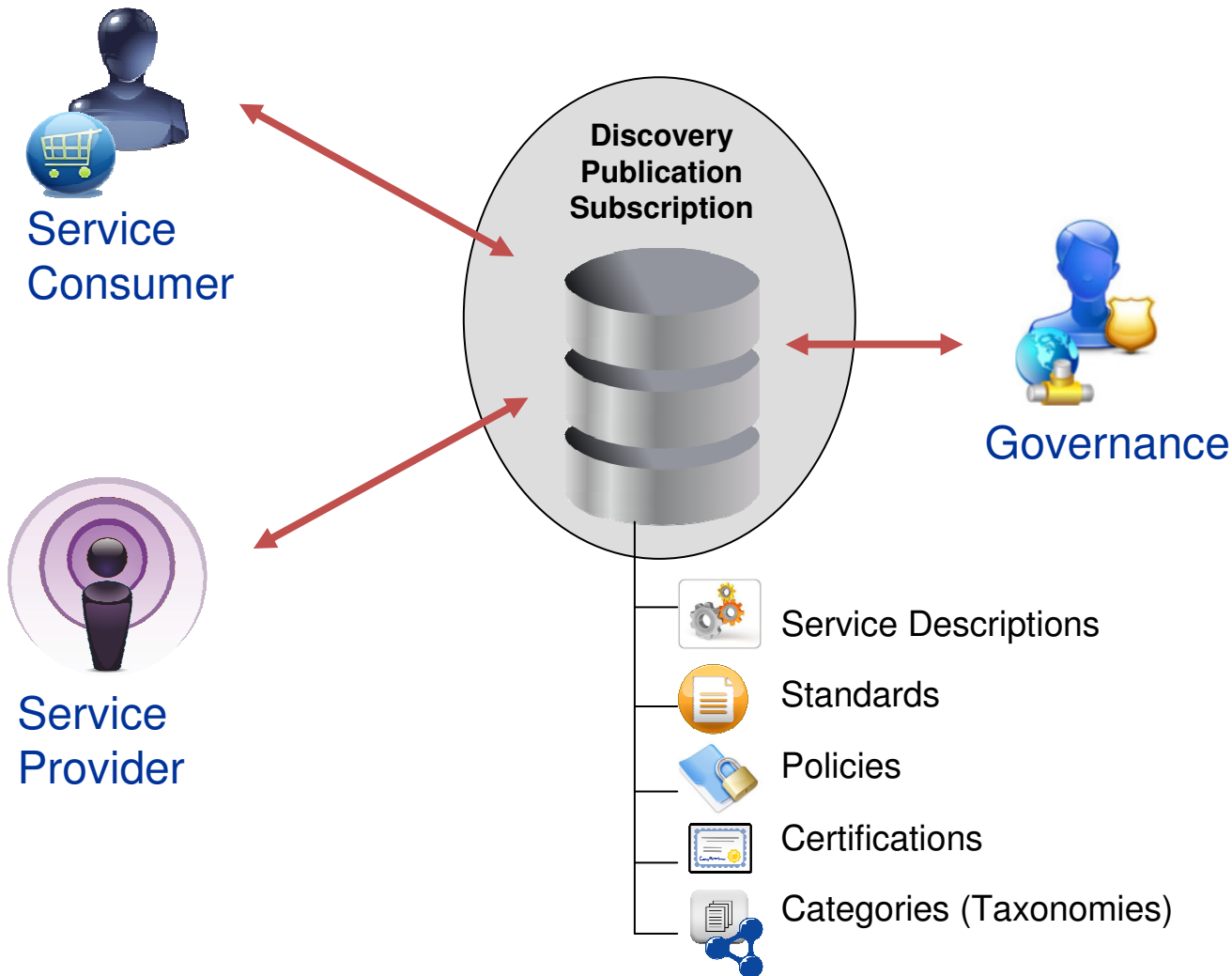- Consistent information

- Lower cost of entry

Target Situation

Widely used, exist since ever
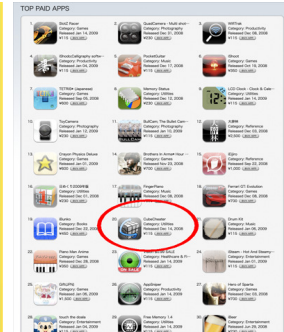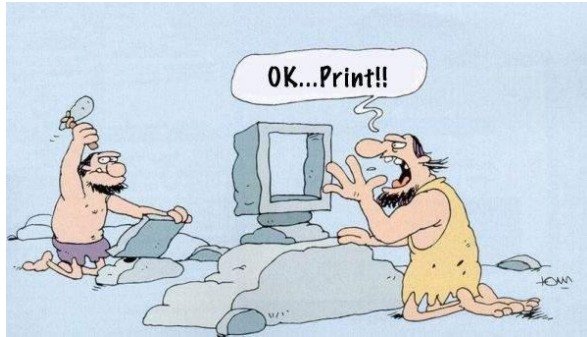
Air Transportation Information
Exchange Conference - (featuring
AIXM, WXXM and FIXM)

- Organizing access to information resources

- ATM related registries

GEOSS
Discovery of services and standards for earth observations

IATA
Publication of IOSA certified airlines

FAA
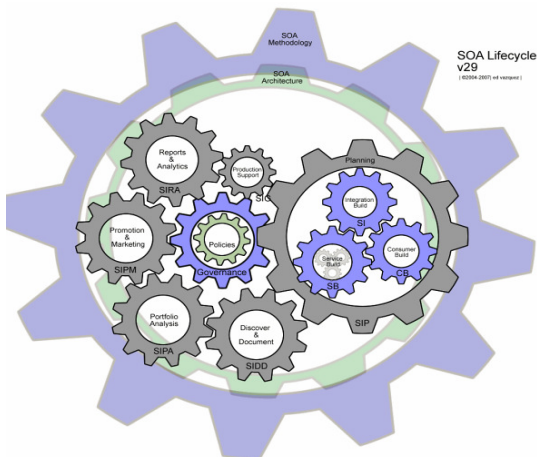SWIM Registry for service design-time lifecycle management

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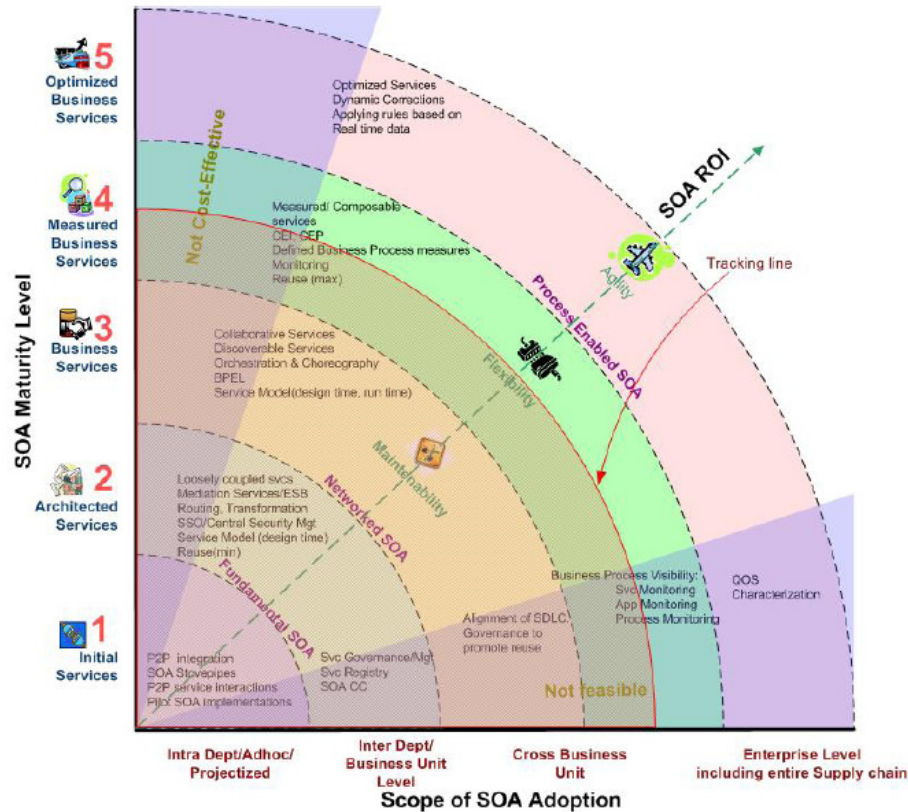
A cornerstone of SOA

SOA Lifecycle
v29

- Service Loose Coupling
- Service Abstraction
- Service Reusability
- Service Autonomy
- Service Granularity
- Service Statelessness
- Service Composability
- Service Discoverability

Registry

Discover Service

Publish Service

Use Service

Consumer

Provider

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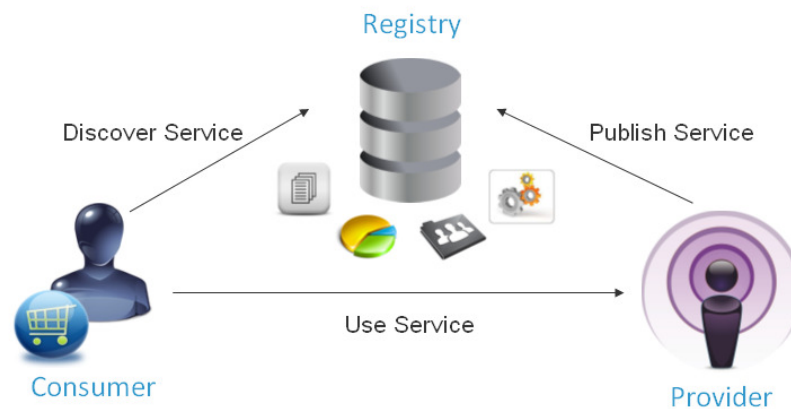
A necessary step for enterprise level SOA

BPTrends ▪ April 2007

SESAR large an complex scope requires a certain SOA maturity level to be applied that prescribes the usage of a registry.
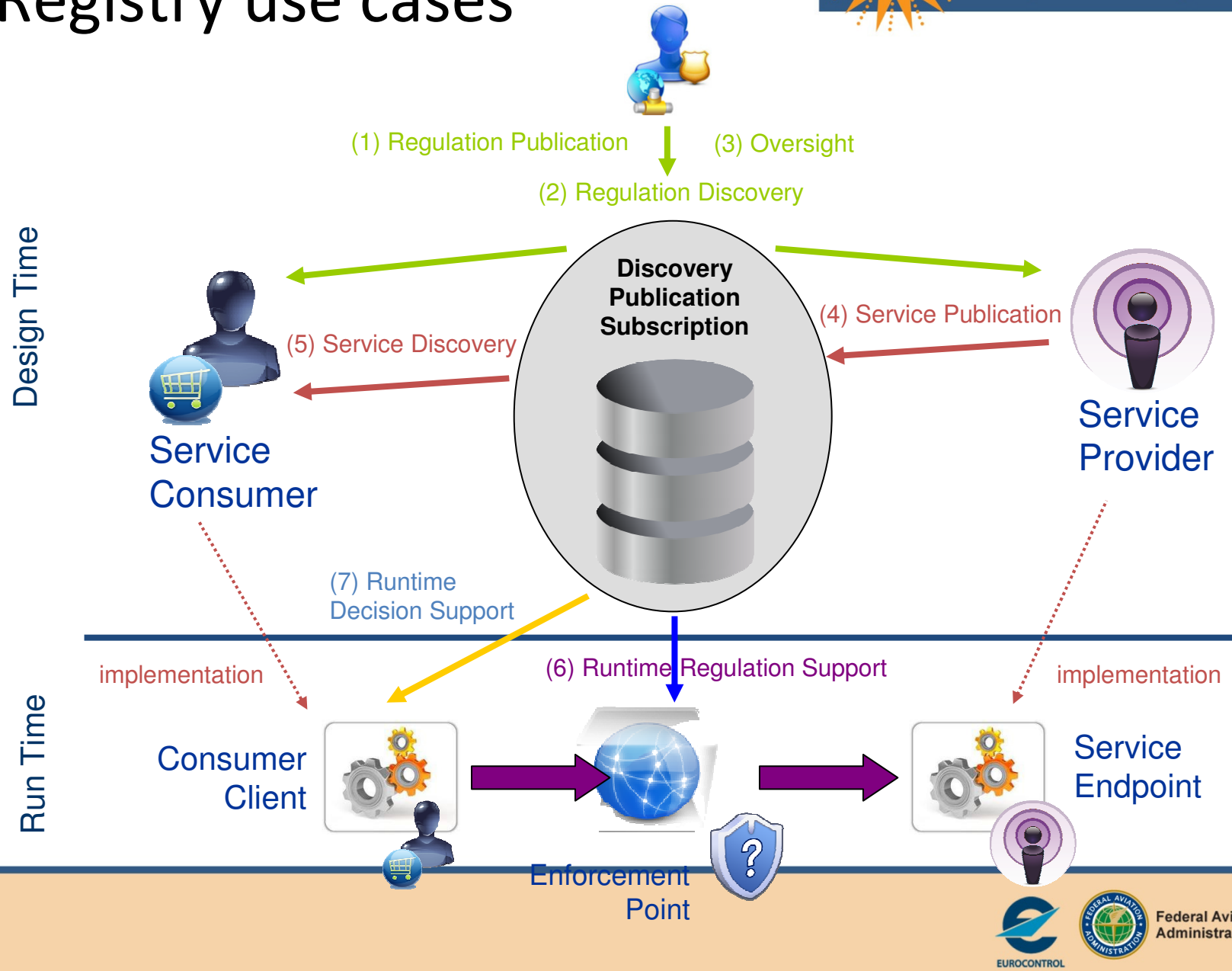
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Registry use cases

The registry is not for everyone

The registry does not provide ATM information but a description of the technical means to obtain it.

- So, it is definitely not for Pilots, ATM Operators,…

- It is for system engineers, information architects, business analysts…

"There are 10 types of people in the world: those who understand binary, and those who don't."

Registry Architecture Drivers
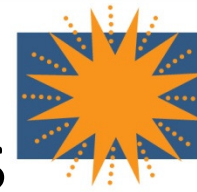
Single point of access to consolidated service information

Local requirements (i.e. latency)

Existing repositories

Single point of access to all service related information
(external references and affiliates contain only subsets of data)

Main entry point for management of service related information
(excluding data stored at External References, and Affiliate Providers)

Affiliate Provider

External Reference

Root

Affiliate Consumer

Affiliate Consumer

External Reference

Affiliate Provider

SESAR Prototyping/Development Plans

- 2012 / Q1 Demonstrator for governance of AIRM&ISRM models

TBD

- 2012 – Extended to Policies / Certifications
- 2013 – Service instance descriptions
- 2014 – Runtime regulation/decision support

Final word of wisdom

'I do not fear computers. I fear the lack of them.'

Isaac Asimov

Questions?

Have a nice day - unless you've made other plans