

# SWIM Master Class

June – October 2012

Initiation Day – June 2012 the 14<sup>th</sup>  
EUROCONTROL Brussels

## THE SYSTEM WIDE INFORMATION MANAGEMENT

The Intranet  
for Air Traffic  
Management



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*“**SWIM** consists of **standards**, **infrastructure** and **governance** enabling the management of ATM information and its exchange between qualified parties via **interoperable services**.”*

## THE SYSTEM WIDE INFORMATION MANAGEMENT

### The Intranet for Air Traffic Management

**Standards** = AIRM, ISRM, Technology Standards

**Infrastructure** = SWIM nodes, SWIM capabilities (messaging, recording, supervision ...) & federated capabilities (including Registry, Security, Supervision ...)

**Governance** = trust, policies, validation, security, management, service life cycle ...



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## **SWIM is Information Management**

### **Information Management functions (Governance)**

- General Principles, Rules and Recommendations regarding ATM Information

### **AIRM - ATM Information Reference Model**

- Information Modelling Conventions and common meaning

### **ISRM - Information Services Reference Model**

- Information Services Specifications

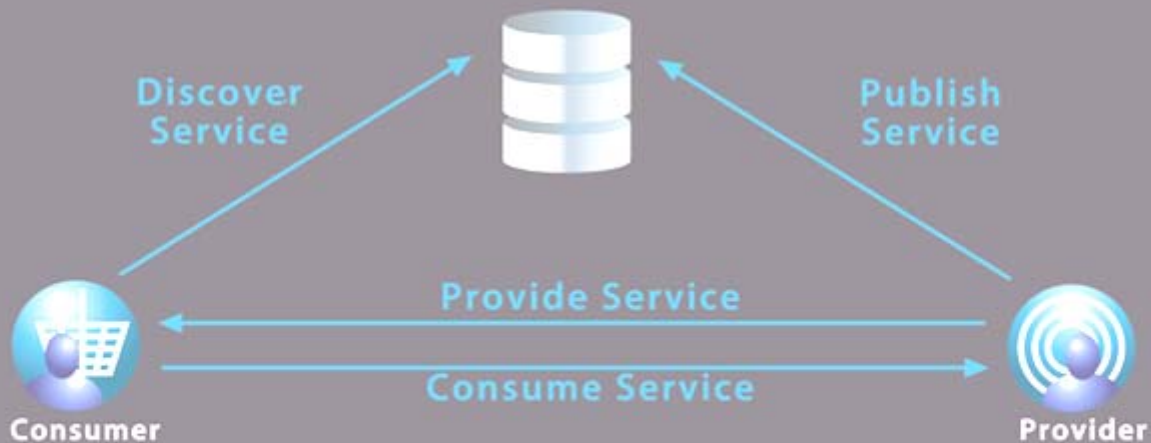
# Information understood by all

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SWIM is SOA

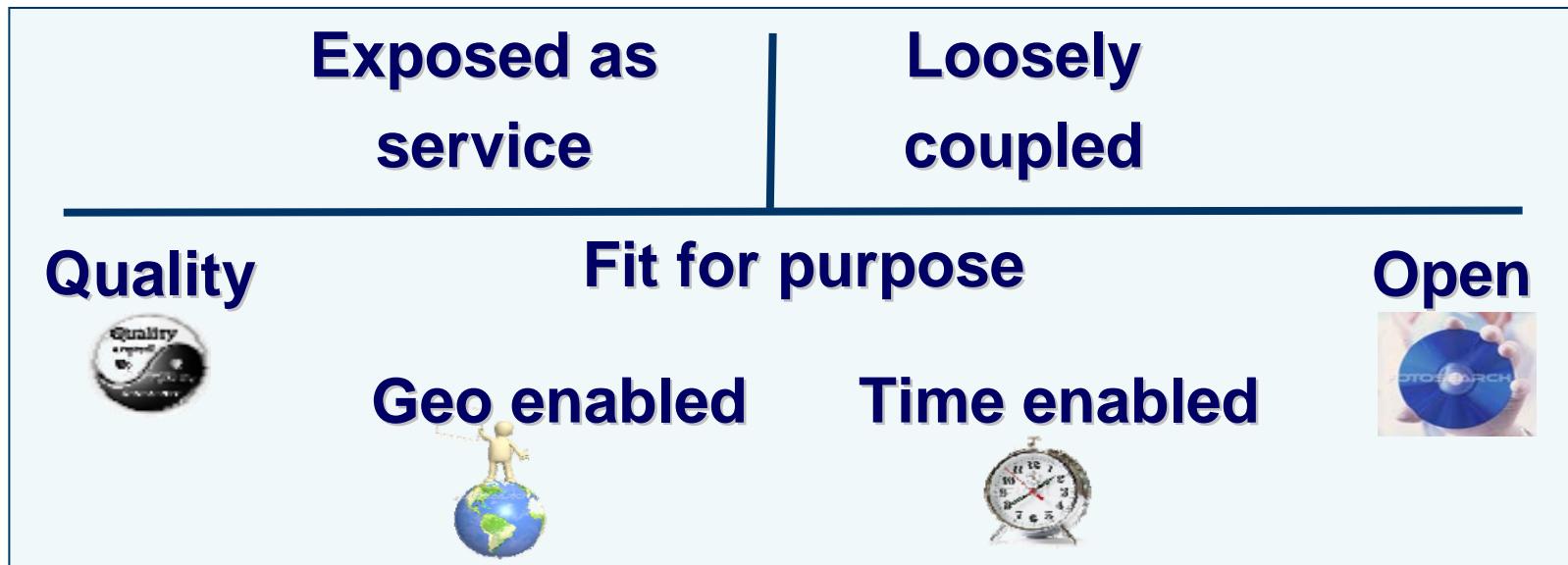
- Sharing Information via Providing/Consuming Service(s)



## Information discoverable by all

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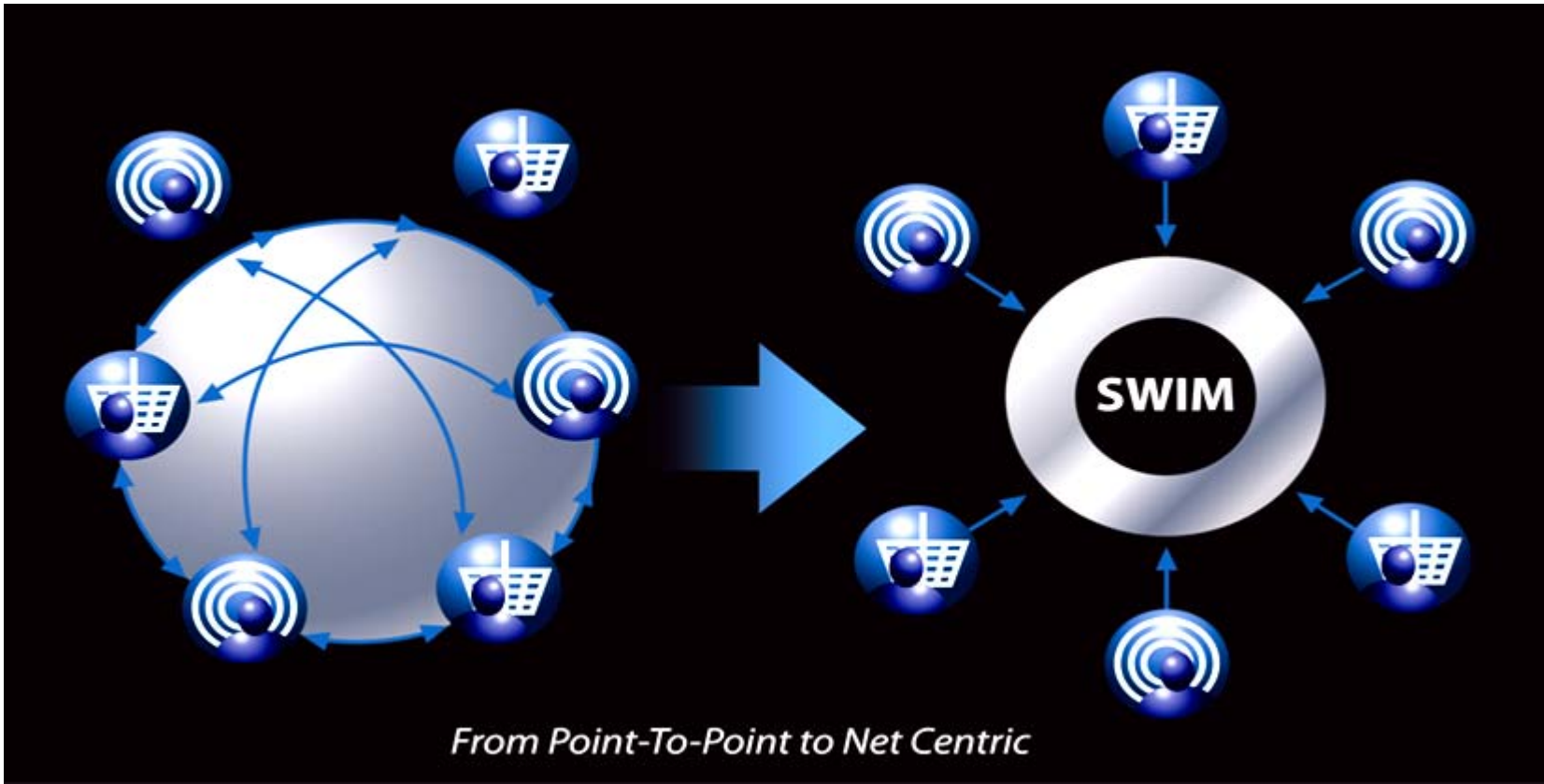


- **Interoperability**
- **Secured Seamless** access & exchange
- information exchange over **open Standards**

## Information easy to use

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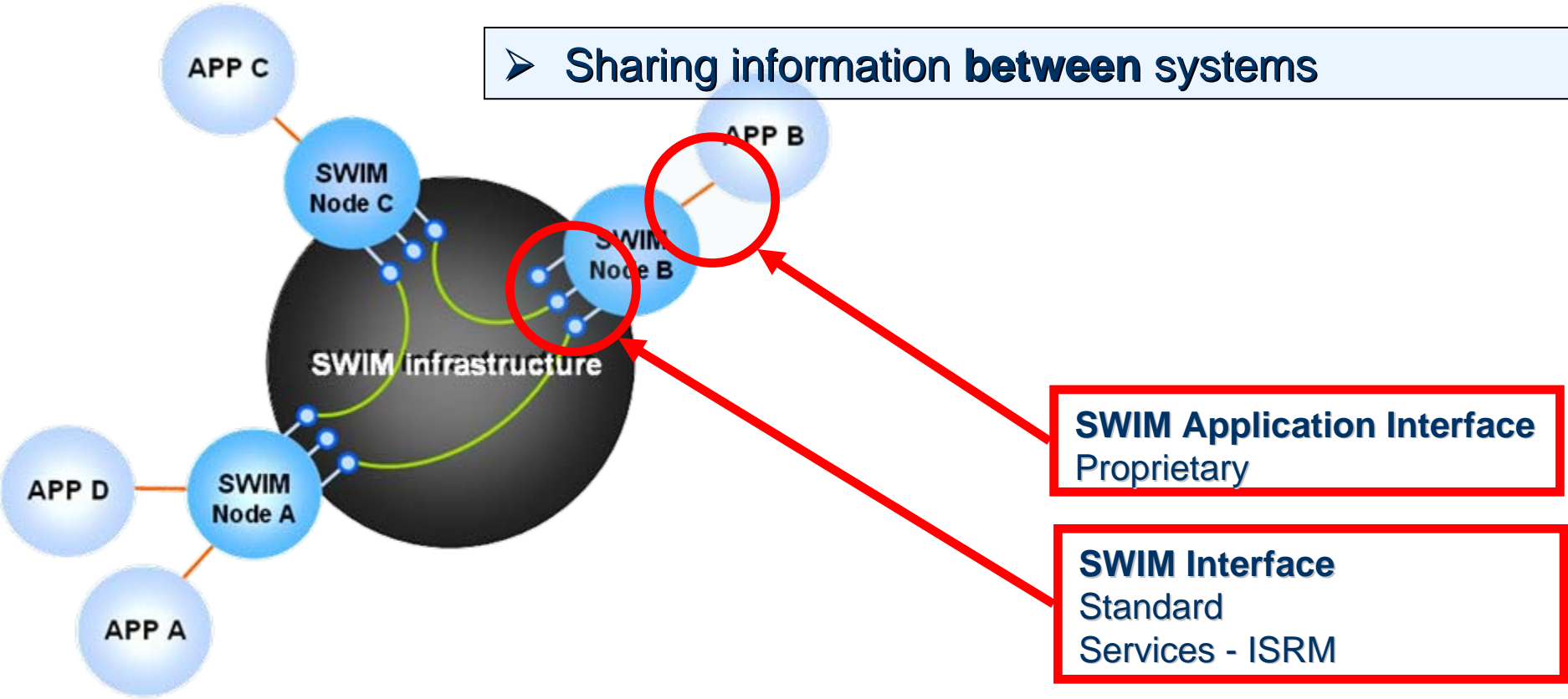


## Net (data) centric

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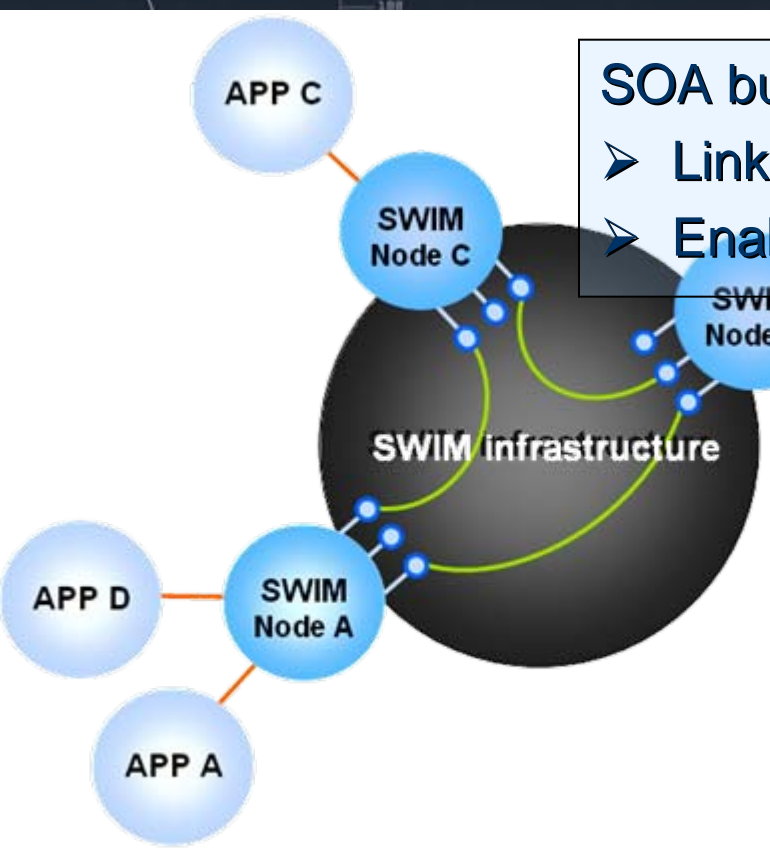
➤ Sharing information **between** systems



## System to System

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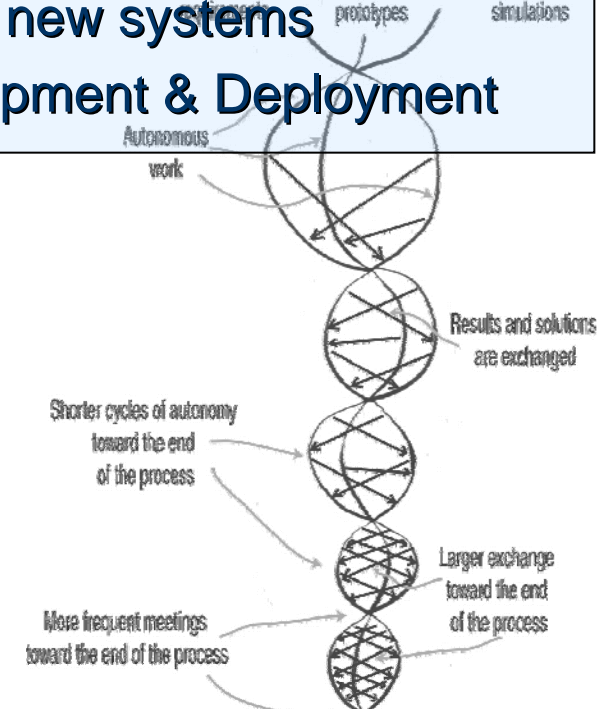


## SOA but ...

- Linking existing (legacy) & new systems
- Enabling stepwise Development & Deployment

USER DRIVEN:      TECHNOLOGY DRIVEN:      DESIGN DRIVEN:

needs	demos	proposals
observation	specifications	solutions
interpretation	prototypes	envisions
		simulations

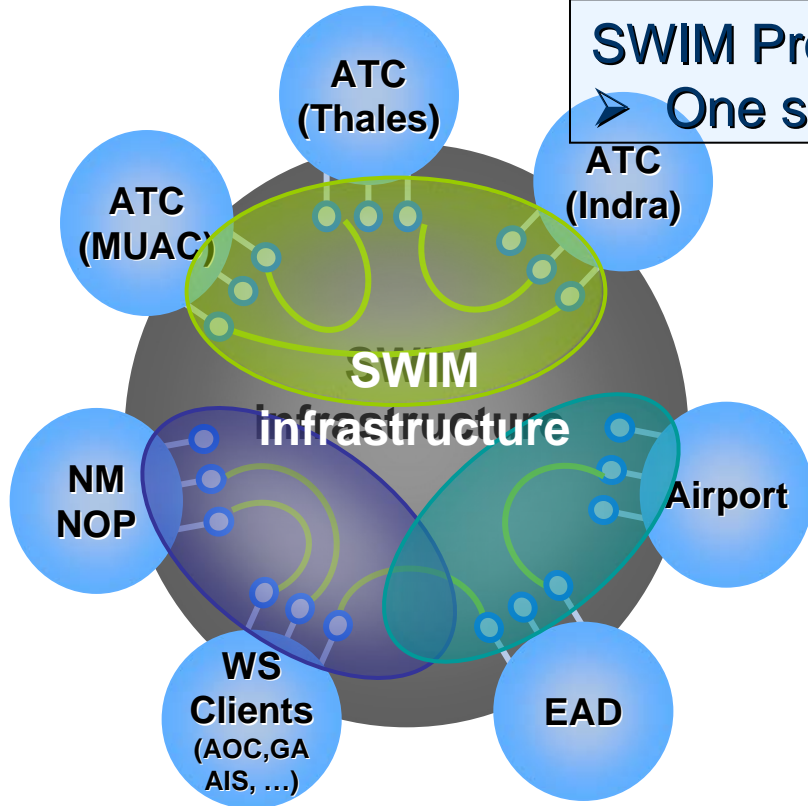


# An Evolution – Not a Revolution



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## SWIM Profiles

➤ One solution does not fit all

- Different types of SWIM usage / needs
- Map SWIM needs with potential set of supporting technologies & services options

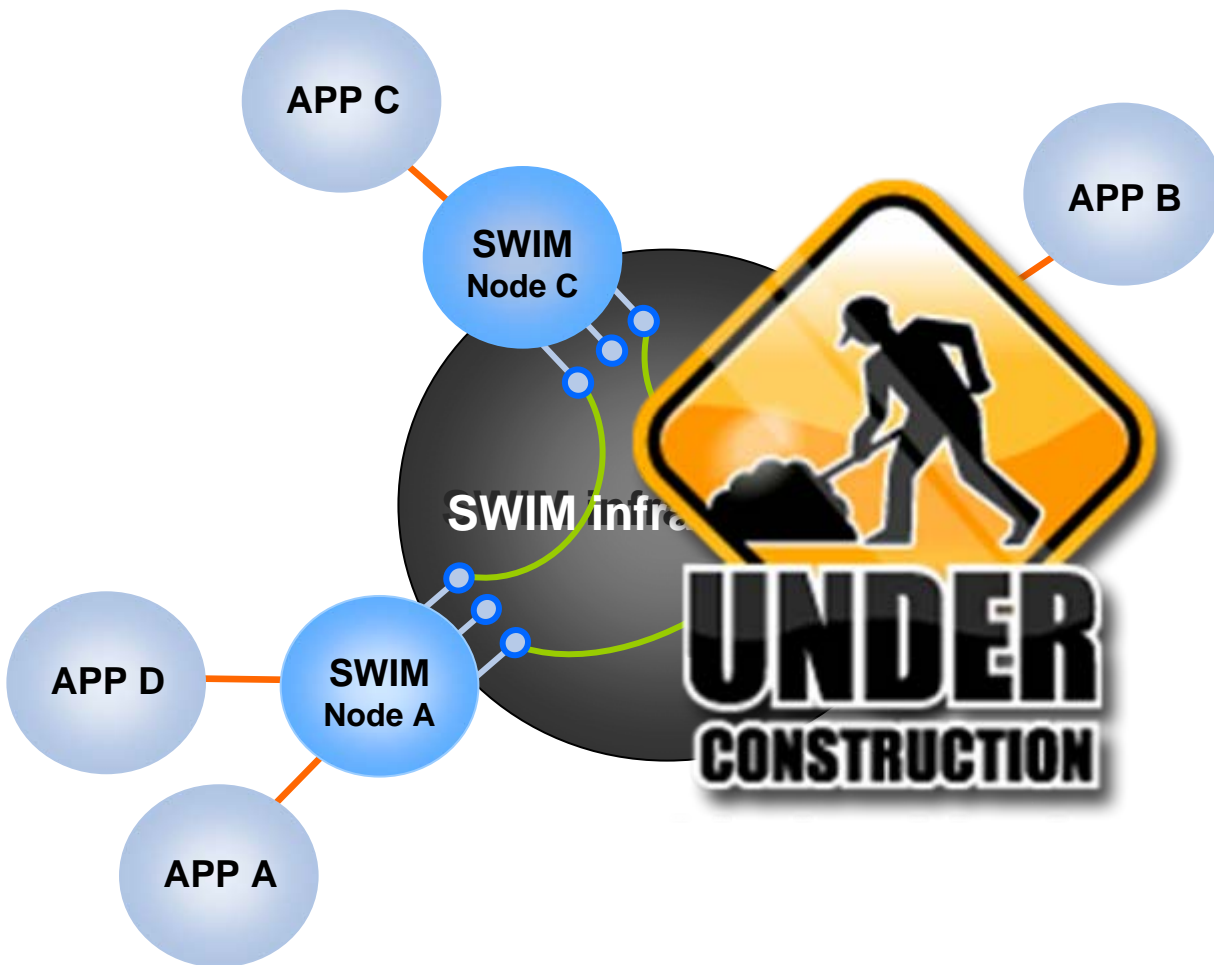
### SWIM Step1 profiles

- FO/IOP Profile
- NOP/B2B Profile
- EAD/B2B Profile

# Multi Technologies

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## SWIM Node Capabilities

- Messaging
- Security
- (opt) Recording
- Loc. Supervision
- (opt) High availability
- Interface management

## SWIM Core Capabilities

- Supervision
- Security
- Registry

Max. use of Commercial  
Of-The-Shelf (COTS)  
products

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## - SWIM Building Blocks -

1. **AIRM** - ATM information model representing the standard definition of all ATM information, through harmonized conceptual & logical models.
2. **ISRM** - ATM services model representing the logical breakdown of required information services and their behavioral patterns.
3. **Information management functions** (including governance) - user identity management, discoverability of resources, security aspects such as authentication, encryption and authorization, notification services and registration need to be defined to support information sharing.
4. **SWIM Technical Infrastructure** (ground/ground and air/ground) - via which ATM data and services are distributed, shared and consumed. The SWIM-TI is a set of software components distributed over any IP based network infrastructure (such as for example, PENS or Internet) providing capabilities enabling collaboration among ATM systems - a set of SWIM nodes & federated capabilities.
5. **SWIM-enabled applications.**

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## - Think SWIM -

- Listen to SESAR
  - Go and see the SWIM folder at S-JU website  
<http://www.sesarju.eu/programme/workpackages/swim-connecting-atm-world-652>

- Register SWIM Linked-in group at  
<http://www.linkedin.com/>



**SWIM subgroup**

**LinkedIn**

Subgroup within the SESAR Group which provides a discussion- and feedback forum to all SWIM stakeholders.

- Implement AIRM (AIXM as initial input)
- Be SOA - **Publish / Consume service** (Pub/Sub, Req/Rep ...)

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# Thank you



## THE SYSTEM WIDE INFORMATION MANAGEMENT

### The Intranet for Air Traffic Management

