

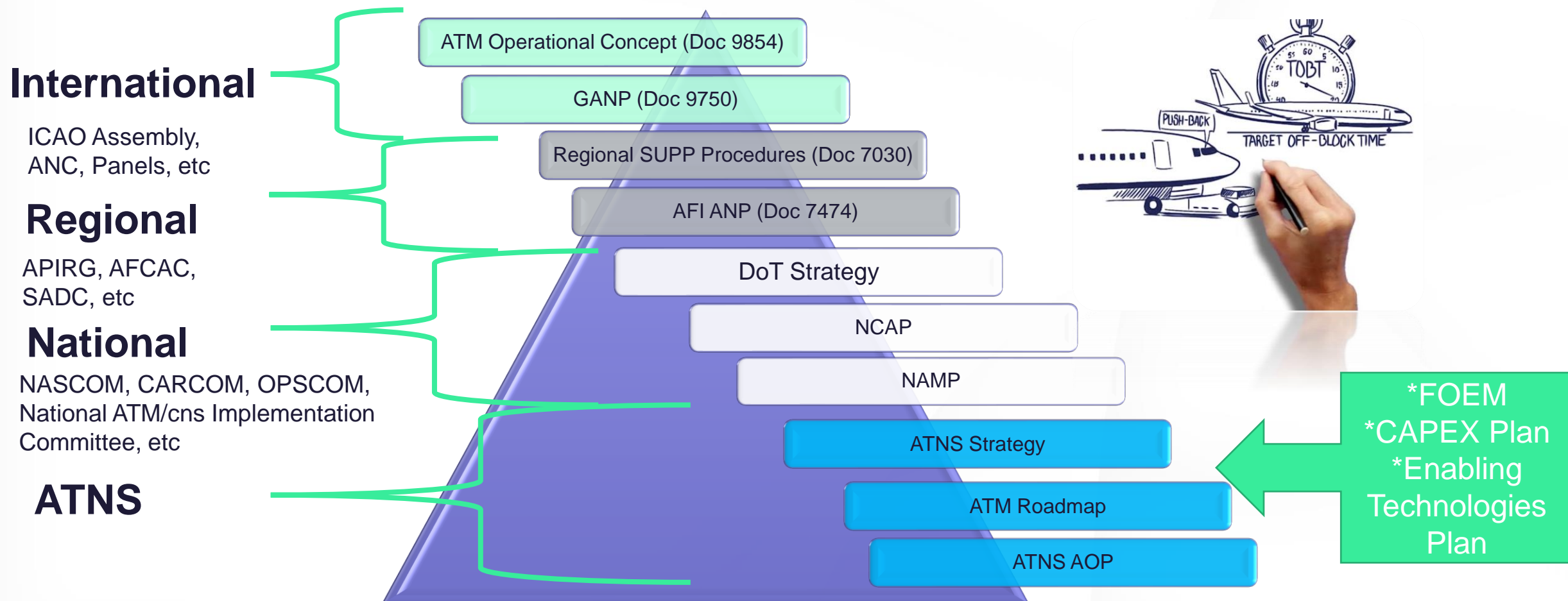
SWIM Implementation

Presented by Raoul Bester

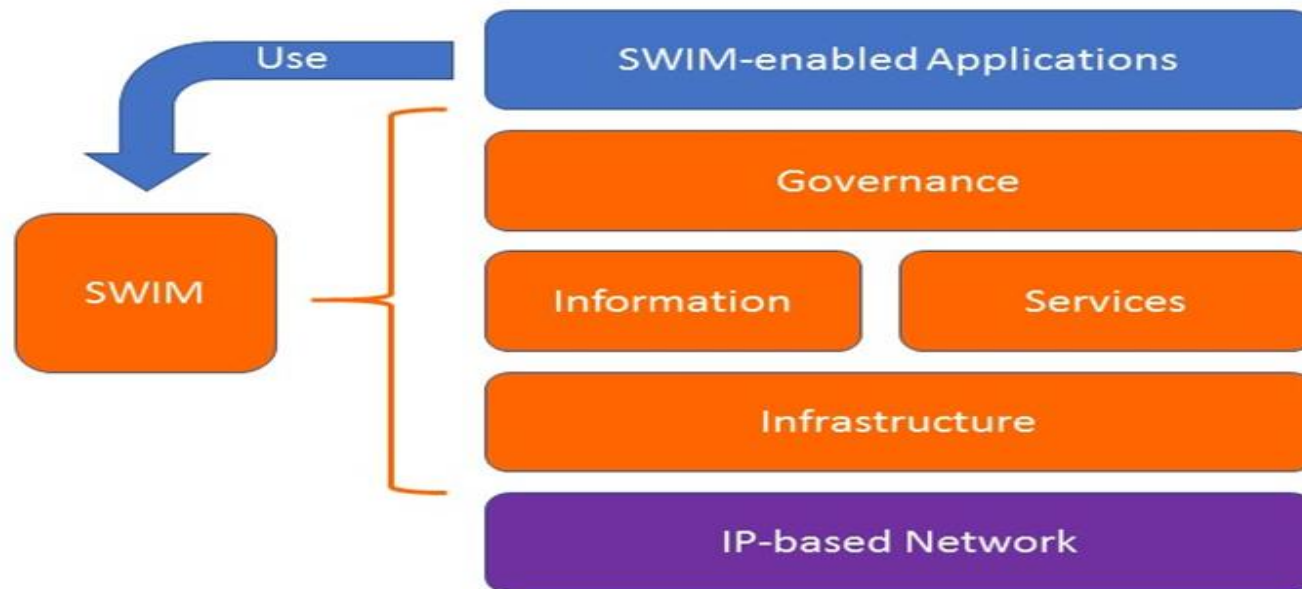
Agenda

- Planning Framework/Guiding Documents
- SWIM SCOPE
- SWIM Layers
- SWIM Service Orientated Architecture
- SWIM Benefits
- Focus Area's and Interdependencies
- GANP 6th Edition
- ATFM
- Exchange Models
- SWIM – South African Context
- Way Forward

Planning Framework/Guiding Documents



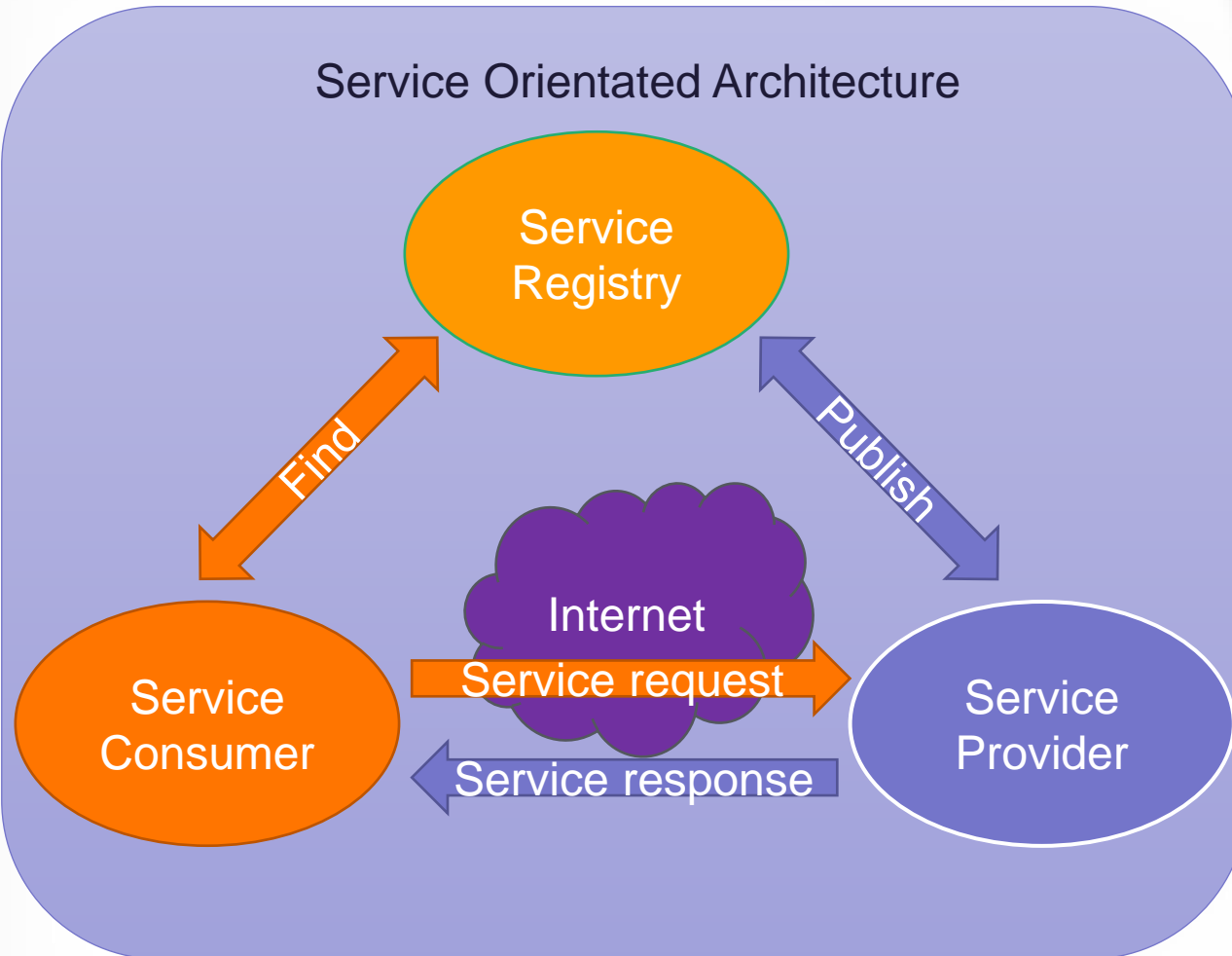
SWIM SCOPE



“SWIM was not developed to be a single database, a mechanism to replace existing communication infrastructure nor a single new application to encompass all existing user application. The aim of SWIM is to provide easy access to information by more system users which is transparent, relevant and mutually understood.”

SWIM - SOA

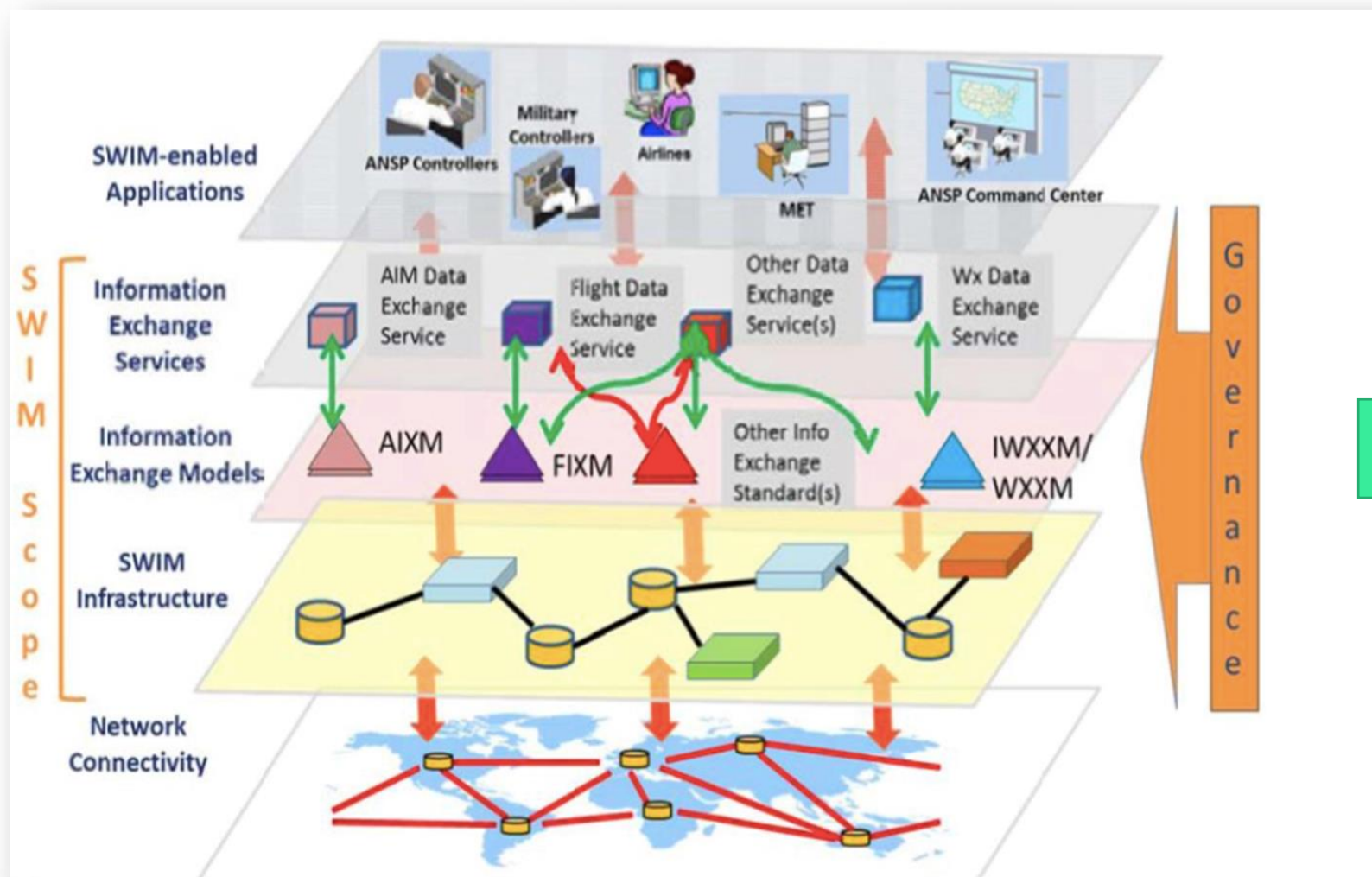
Service Orientated Architecture



- Information Exchange Models
- Information Services
- Technical Infrastructure
- Network Connectivity



SWIM LAYERS



- Standardised Exchange Models enabling use of modern interfaces.
- Service registry of available services
- Networks – upgrading of networks, availability of more data access points, variety of data products through single interface,
- Strengthened security requirements

SWIM Benefits

- Improved decision making by all stakeholders during all strategic and tactical phases of flight (pre-flight, in-flight and post-flight) through:
 - improved shared situational awareness; and
 - improved availability of quality data and information from authoritative sources;
- Increased operational and system performance;
- More flexible and cost-effective communications by the application of common standards for information exchange;
- Loose coupling which minimizes the impact of changes between information producers and consumers; and
- Support of ATM Service Delivery Management (SDM)



FOCUS AREA's INTERDEPENDENCIES

Air Traffic Flow
Management
(ATFM)

Flight and Flow of
Information for Collaborative
Environment (FF-ICE)

Airport –
Collaborative
Decision Making
(A-CDM)



System Wide Information
Management (SWIM)

Trajectory based
operations (TBO)

GANP 6th Edition - Amended ASBU Threads and Modules

Airport operations

APTA, WAKE, RSEQ,
SURF, ACDM, RATS

Globally interoperable systems and data

FICE, **DATM**, SWIM,
AMET

Optimum capacity and flexible flights

FRTO, NOPS, ASUR,
ASEP, OPFL, ACAS,
SNET

Efficient flight paths

CDO, TBO, **CGO**, **RPAS**



Information

AMET, **DAIM**, FICE, SWIM

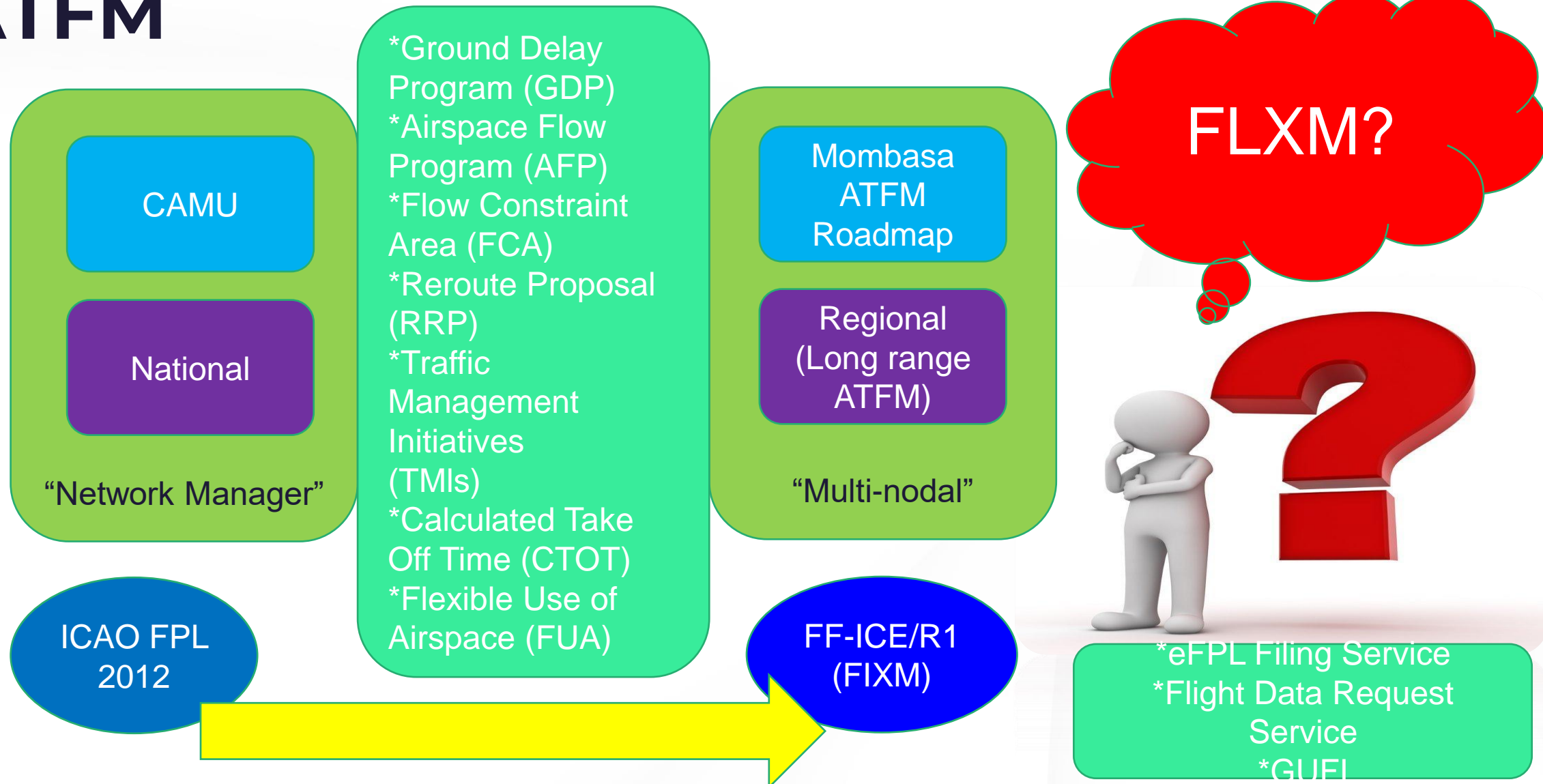
Operational

ACAS, ACDM, APTA,
CSEP, FRTO, **GADS**,
NOPS, OPFL, RATS,
RSEQ, SNET, SURF,
TBO, WAKE

Technology

ASUR, **COMI**, **COMS**,
NAVS

ATFM



EXCHANGE MODELS



ATC
(FDP)

- AIXM
- FIXM
- iWXXM
- **FLXM**

ATFM

- AIXM
- FIXM (eFPL,)
- iWXXM
- **FLXM**

AIM
(FPL Management)

- AIXM
- FIXM
- iWXXM
- **FLXM**

AIRM

SWIM – South Africa Context

- Updated Strategic documents (National Civil aviation Policy, National Airspace Masterplan, National Communication, Navigation and Surveillance Roadmaps, ATM Roadmap, etc)
- ATNS Developed SWIM Strategy in 2018
- All new CAPEX include SWIM requirements
- Upgrading of networks to support SWIM
- Strengthened security requirements

WHAT next?

- Develop SWIM CONCEPT of OPERATIONS
- Develop SWIM Governance
- Develop SWIM Registry of Services/Access points



Way Forward





THANK YOU

