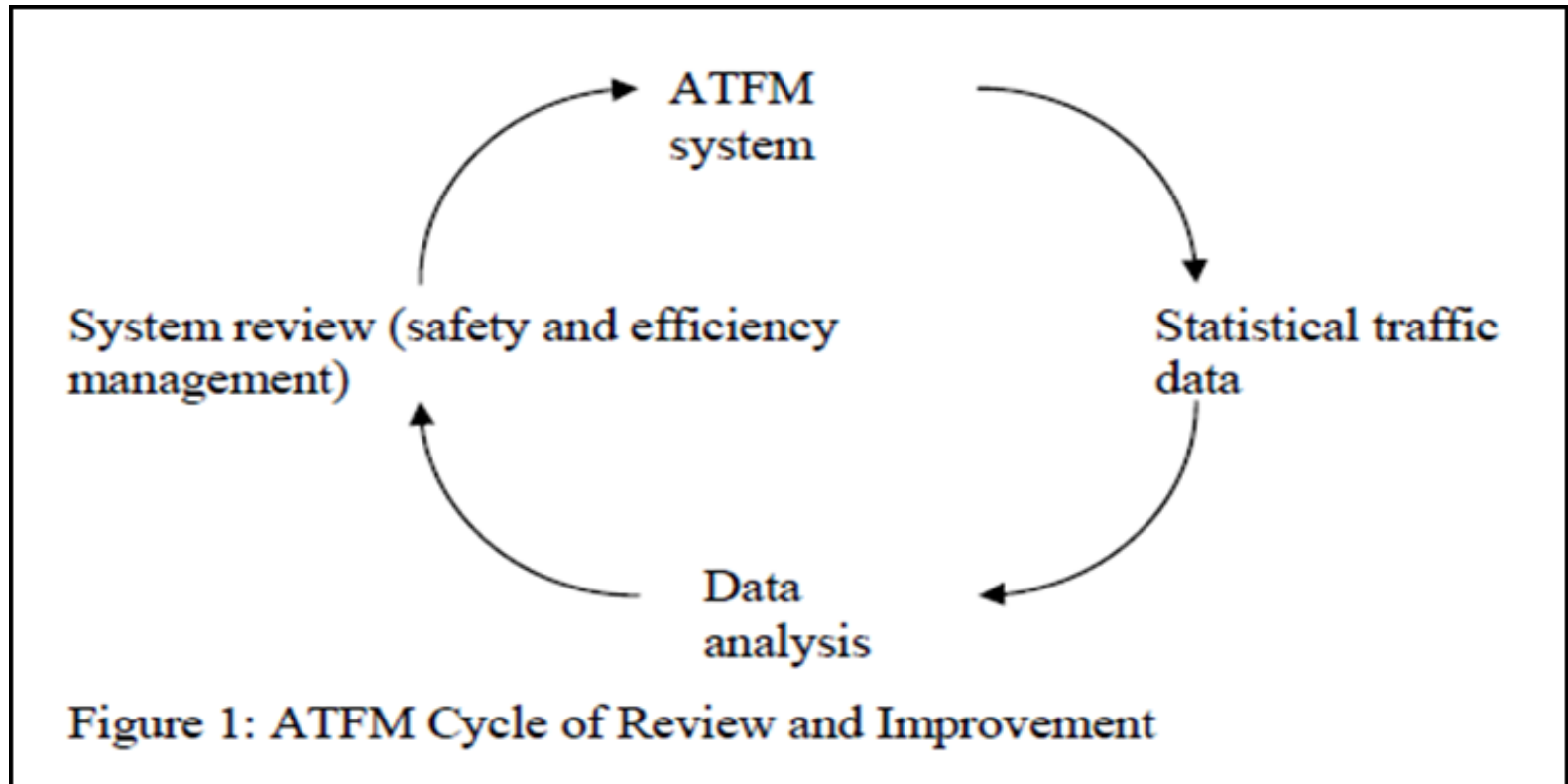


SIGMA:

- ATFM is evolutionary in nature...**
- ...a system that is constantly reviewed in terms of:**
 - airspace, ATS routes, Aerodromes; and**
 - ATFM system effectiveness**
- Major traffic flows X regional basis**

APAC ATFM ConOps:



Tailored system >>

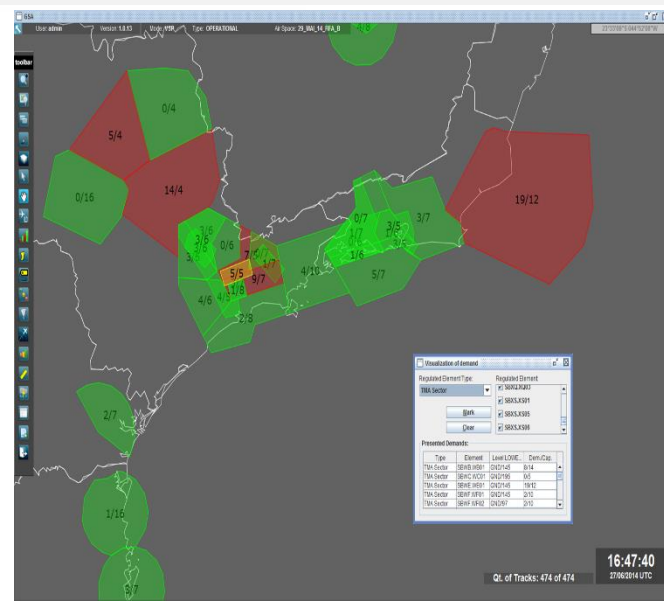


Multi-nodal model

Evolution (Phase1):

366 new Requirements for the SIGMA automated ATFM System including, *inter alia*:

- Improved capacity modeling
- Added system users (slot opr, ARO/AIS, ...)
- Dynamic scenario analysis
- Improved STAT data
- Refined HMI
- New systems Interfaces (e.g. SILOMS, CONFAC)
- Improved handling of ACFT equipment/capabilities and other FPL data
- AISWEB integration



Special emphasis on the

Requirement for ATFM Systems Integration:

via Web Services

- SIGMA ATFM Conceptual Model**
- SIGMA Application Schema Mapping (XML)**
 - ATFM Features (Identification & Reference)**
 - XML Messaging**
 - SkyFlow Viewer**

Example:

- **ATFM Data Model & Entities (e.g.):**
 - **Tb_Airspace (based on AIXM 5.1)**
 - **Tb_Flight_Intention**
 - **Tb_Route**
 - **Tb_SUA_Activation**
 - **Tb_SUA_Registry_Impact**
 - **Tb_Impacted_Element**

ATFM Data Model & Entities (cont.):

- **Tb_Slot_Allocation**
- **Tb_Slot_Monitoring**
- **Tb_Departure_Taxi_Time**
- **Tb_Test_Capacity_Sector**
- **Tb_Wind_Zone**
- **Tb_Grid_Level**
- **Tb_Forecast_Wind**

- ❑ **ATFM Data Model & Entities (cont.):**
 - **Tb_Flight_Deviation_Airway**
 - **Tb_Contingency_Parameters; etc.**

- ❑ **Total in SIGMA System:**
 - **Classes: 346**
 - **FIXM/WIXM: 166**
 - **System parameters: 83**
 - + users, interfaces, Log, Audit, Anaysis, etc.**

SIGMA evolution, including ATFM Systems

Integration via Web Services, based on the

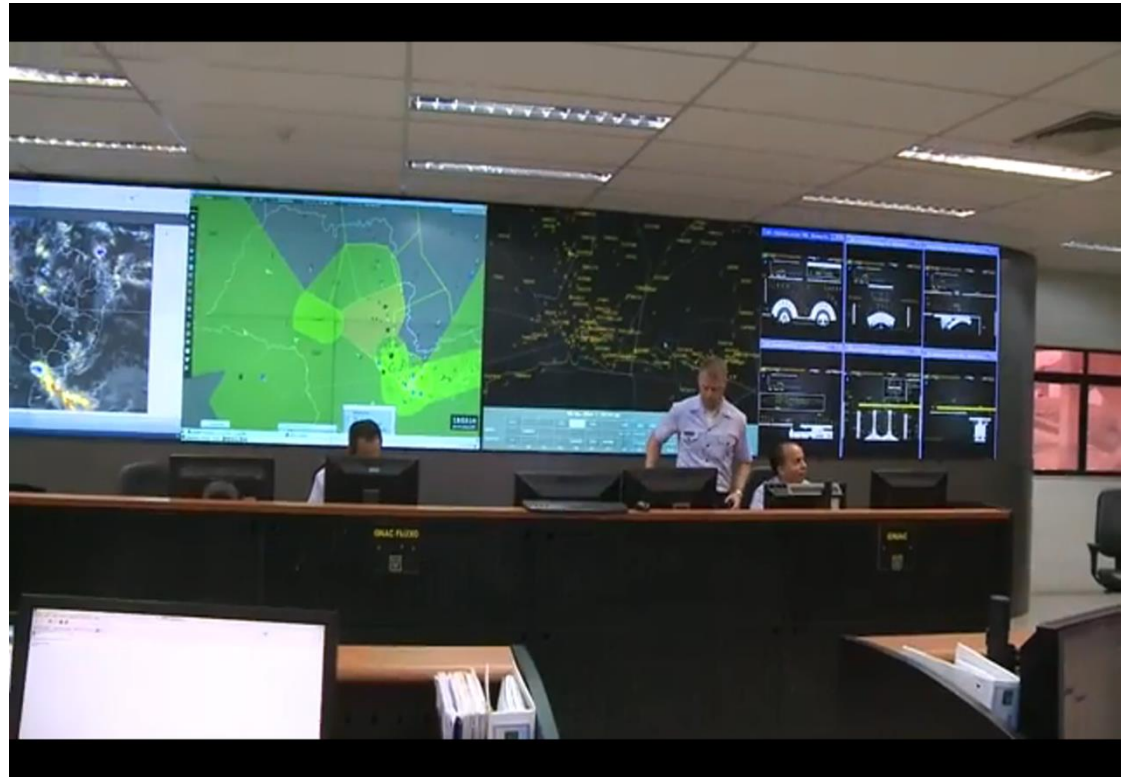
- ❑ ATFM Conceptual Model; and**
- ❑ ATFM Application Schema Mapping (XML)**

provides a secure and **effective means of**

****integrating multiple ATFM systems** as**

envisaged, for example, in the Asia/Pacific Multi-nodal ATFM model.

Q & A



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