# Croatia Control Ltd.

***Croatian Air Navigation Services Provider***
*(abbreviations: CCL / HKZP)*

Owned by the State 100%

Limited Company: since January 2000

*www.crocontrol.hr*

# CCL Services and functions

- *Air traffic services (ATS), including air traffic control (ATC)*
- *Communication, Navigation, Surveillance (CNS)*
- *Aeronautical information services (AIS)*
- *Aeronautical meteorological services (MET)*

*as well as*

- *Airspace management (ASM)*
- *Air traffic flow management (ATFM)*
- *Flight procedures design (FPD)*

# AoR and Organisational Units
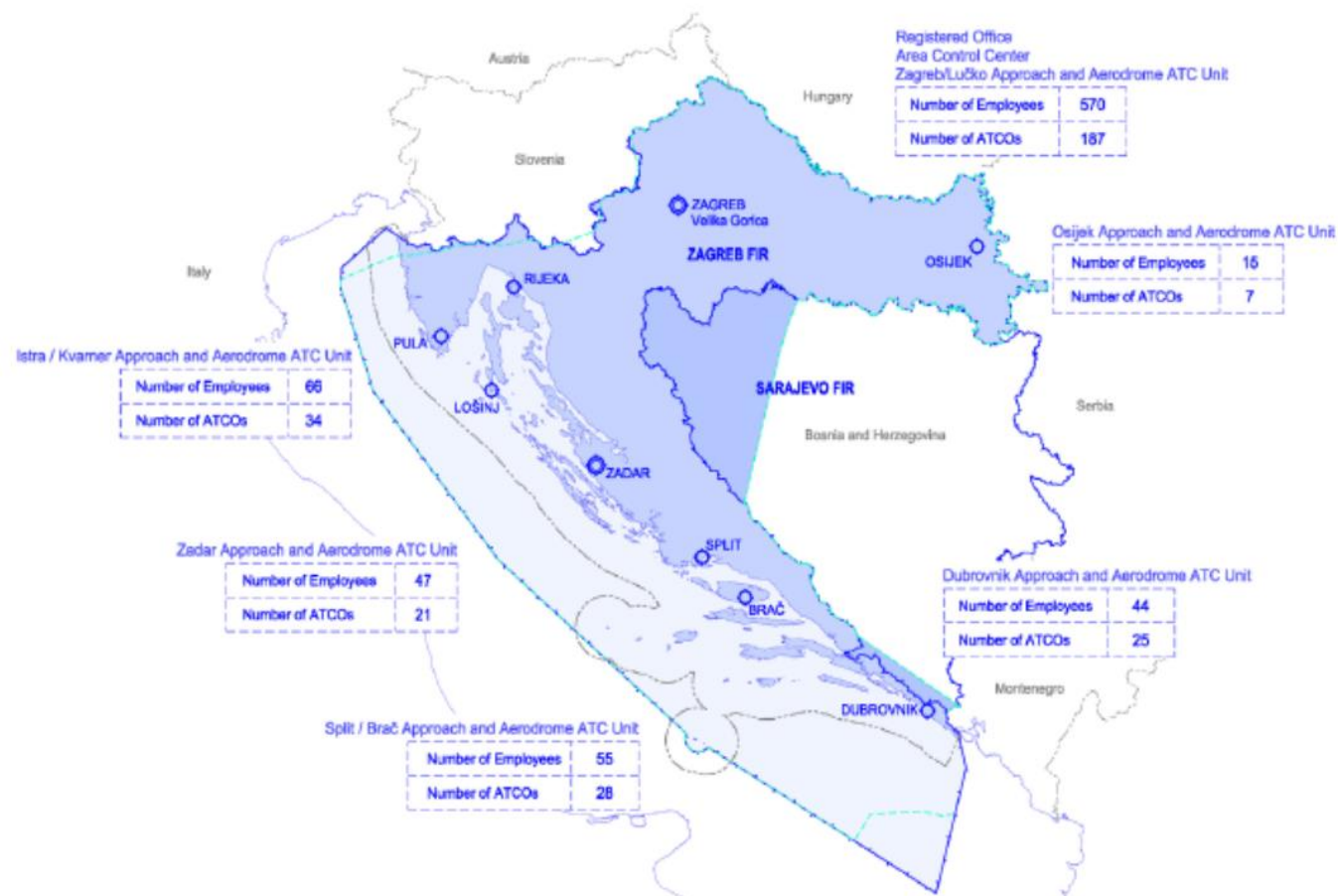
# Safety – real thing or point of perspective?

- *Usually, first tools for evaluating investment are C/B and TOWS analysis. In ATC risk analysis is critical for continuation of the project.*
- *Three interconnected pillars of ATC*
  - *People*
  - *Procedures*
  - *Equipment*
- *Safety assessments are standard tool for reviewing and mitigating risks in air traffic industry*
- *<u>Safety – most important driver in air traffic industry</u>*
- *Air Traffic industry implements multi-layered safety nets trying to catch and mitigate all reasonable risks*
  - *In 2023 fatalities related to traffic accidents in Europe:*
    - *Air – 128*
    - *Road – 20.200*

# SWIM – System Wide Information Management

- *SWIM is the answer to achieving global interoperability and service orientation in air traffic management*
- *Four key concepts:*
  - *Information services are the means by which organisations make their information available. This includes capabilities to allow a service consumer to interact efficiently with a service provider.*
  - *Information - Interoperable information exchange between all ATM stakeholders is essential in the evolving ATM network.*
  - *Technical infrastructure – The SWIM technical infrastructure (TI) allows the implementation of interfaces between systems, providing technical capabilities for the secure, high-performance and reliable exchange of information.*
  - *SWIM service registries are directories of information which support the discovery of SWIM services.*
- *SWIM website: https://reference.swim.aero/index.html*
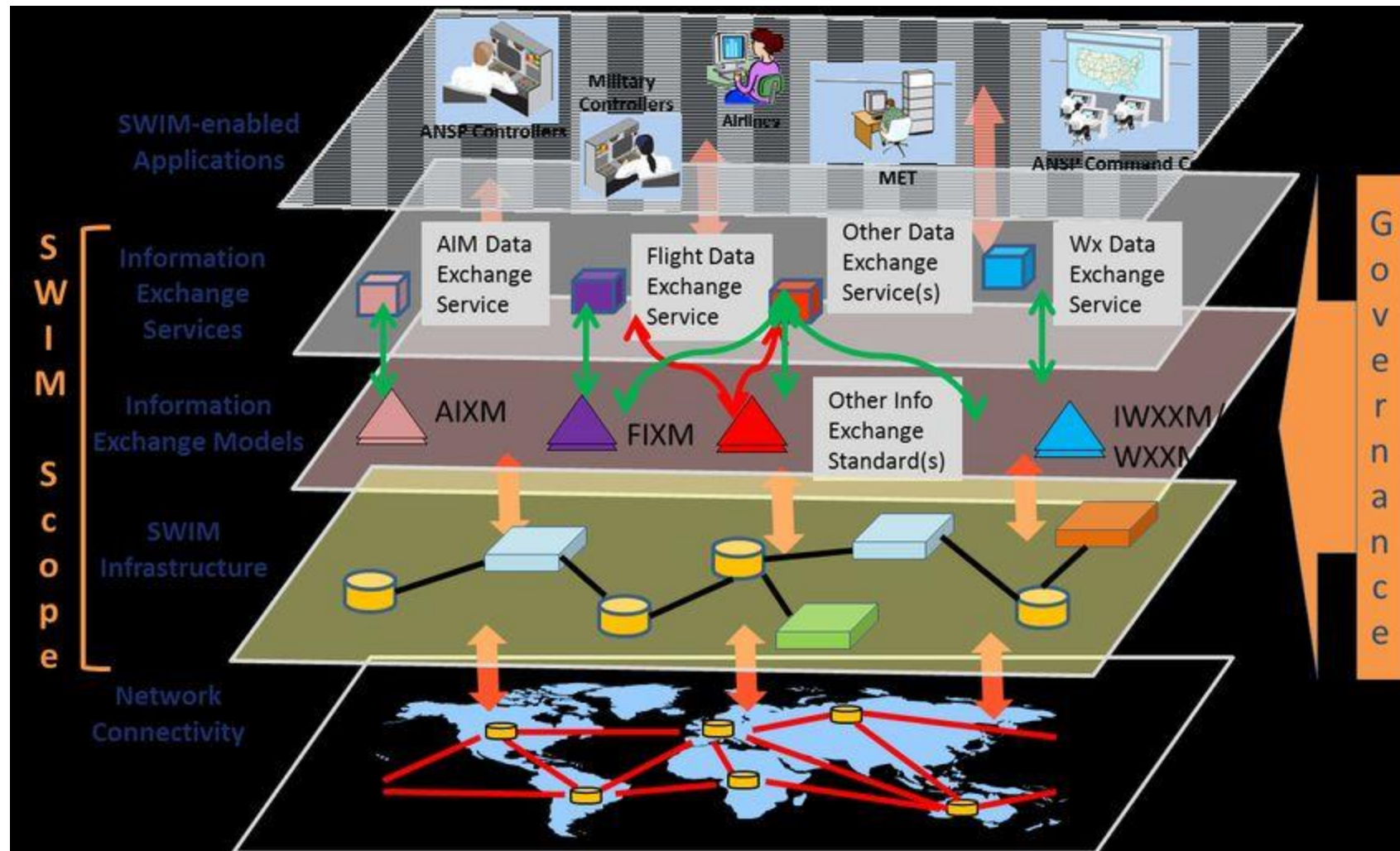
# How does this look in reality? Good, bad and ugly…



*ATC is in proprietary lockdown – not owning its own data.*
*Interoperability will improve with stabilization of required protocols and data formats.*

*ATC does not changes technologies easily.*
*We are pushed to use technologies not natively used in ATC.*
*Regulator created specification which is not completely „clear" (i.e. volcanic ash issue).*

*Help from industry is needed and appreciated.*

nimium

Red Hat

# Nimium

We achieved Red Hat partner status in 2003, and have been a Red Hat partner ever since. We became the first Croatian "Red Hat Premier Business Partner", and have been awarded as the "Red Hat Most Certified Partner" in the region.

Design, implementation and maintenance of IT solutions based on open source technologies.

- Hardware
- Network
- Power distribution

- Red Hat OpenShift
- Red Hat Advanced Cluster Management
- Automation
- CI/CD + GitOps
- Backup

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