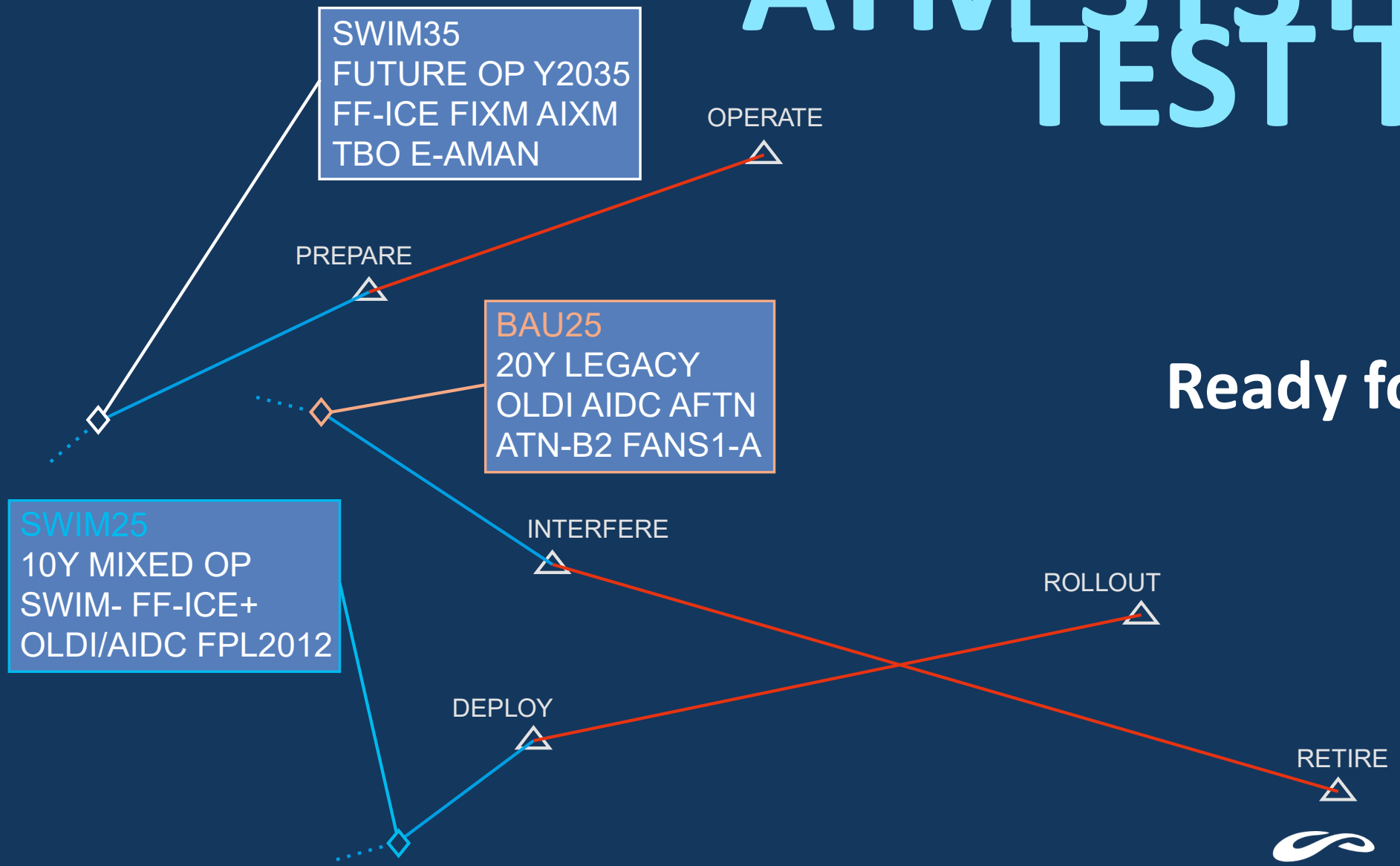
ATM SYSTEM TEST TOOL



Ready for 2030?

PROOFIT

HungaroControl

THE TEAM

HungaroControl

100+ years experience
in ATM

The ANSP
for Hungary
and the upper airspace
of KFOR sector

Innovations in:

Free route,
Remote sector,
Remote tower

Record Traffic in 2024:

1,3 million+
movements

PROOFIT

20+ years experience
in TEST AUTOMATION

The test automation
expert company for
safety critical
industries.

Innovations in:

Hybrid test automaton,
Performance testing,
Domain specific languages

Record Test Executions in 2024:

8 million+
test verification steps

BEST OF BOTH WORLDs

COMMON PROBLEM

- Few experts
- Time pressure
- Change frequency
- Functional changes
- Regulatory changes
- Increasing traffic

- **Management**
- **ANS concerns**
- **Technical**

UNIFIED SOLUTION

- **Human**
  - Empower team
  - Knowledge to infra
- **System**
  - Vendor agnostic
  - Portable testware
- **Procedure**
  - Traceability

CHALLENGES:

MANAGING ACCELERATED CHANGES IN ATM

RESOURCES:

RELYING ON SAFETY CULTURE

ASPECTS

360 DEGREE CONTROL

as ATCOs:

Observe and manipulate
all lists and tracklabels
Multi CWP, Multi Role

as SVs:

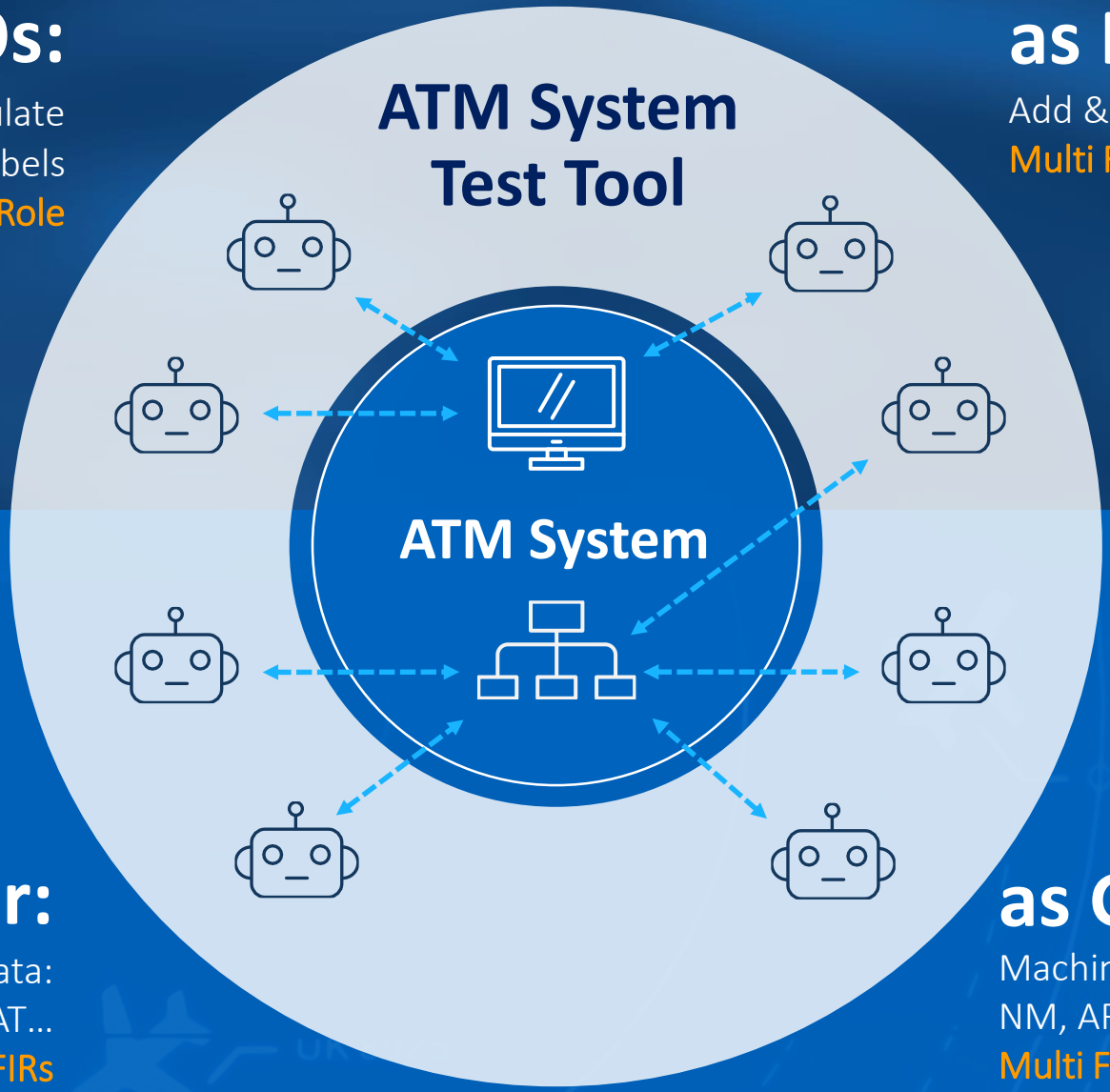
Role & sectorization
Multi sector

as FDs:

Add & change flight data
Multi Role

as Admins:

Operations: stop, start
Config & dataset changes
Multi ATM Vendor



as Orchestrator:

Signal, Synch, Join,
timestamp, CallSign
Multi systems

as Air-Ground:

Interfaces for datalink:
CPDLC, ADS-C (ATN-B2, FANS1-A)
Multi ICAO regions

as Stimulator:

Real-time surveillance data:
PSR, SSR, ADS-B, MLAT…
Multi FIRs

as Ground-Ground:

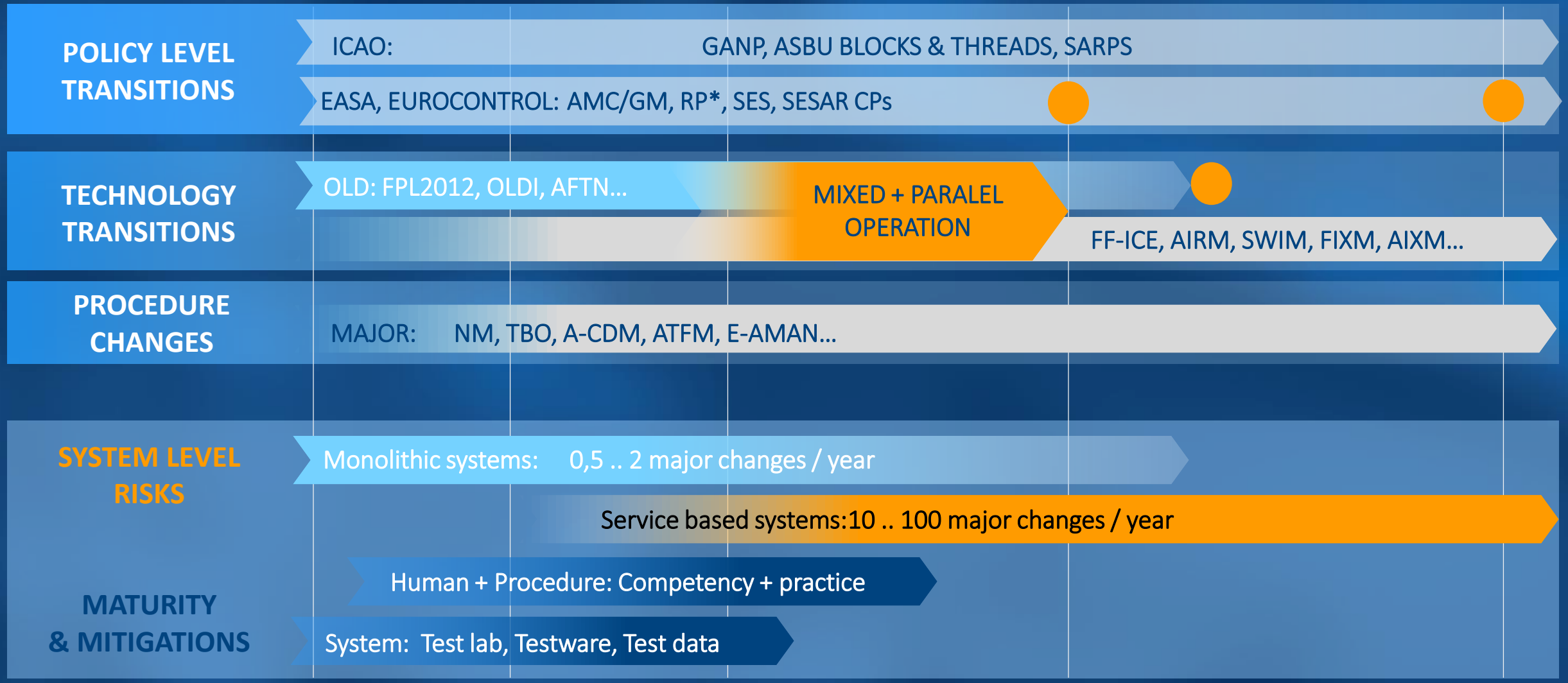
Machine interfaces for
NM, AFTN, OLDI, AIDC, SWIM/FF-ICE…
Multi FIRs

VALUES FOR STAKEHOLDERS

	ANSP	ATM VENDOR	INTEGRATOR
Strategic	▪ Lead the changes ▪ CAPEX in the future ▪ Expert engagement	▪ Build trust ▪ Focus on core activity ▪ Shorter time2market	▪ Build competence ▪ Higher added value ▪ Long term support
Tactical	▪ Measured risk mitigation ▪ Reduced incident nr. ▪ HR peak load distributed	▪ Build confidence ▪ Reduced ticket nr. ▪ Reduce SAT duration	▪ On-demand capability ▪ Globally valid testware ▪ Knowledge to infra
Operative	▪ Overnight feedback ▪ No night shifts ▪ Auditable test results	▪ Fully automated ▪ CI/CD integration ▪ Hour scale regression	▪ Stronger SLA ▪ Shorter response time ▪ Increased coverage

COMMON ROADMAP

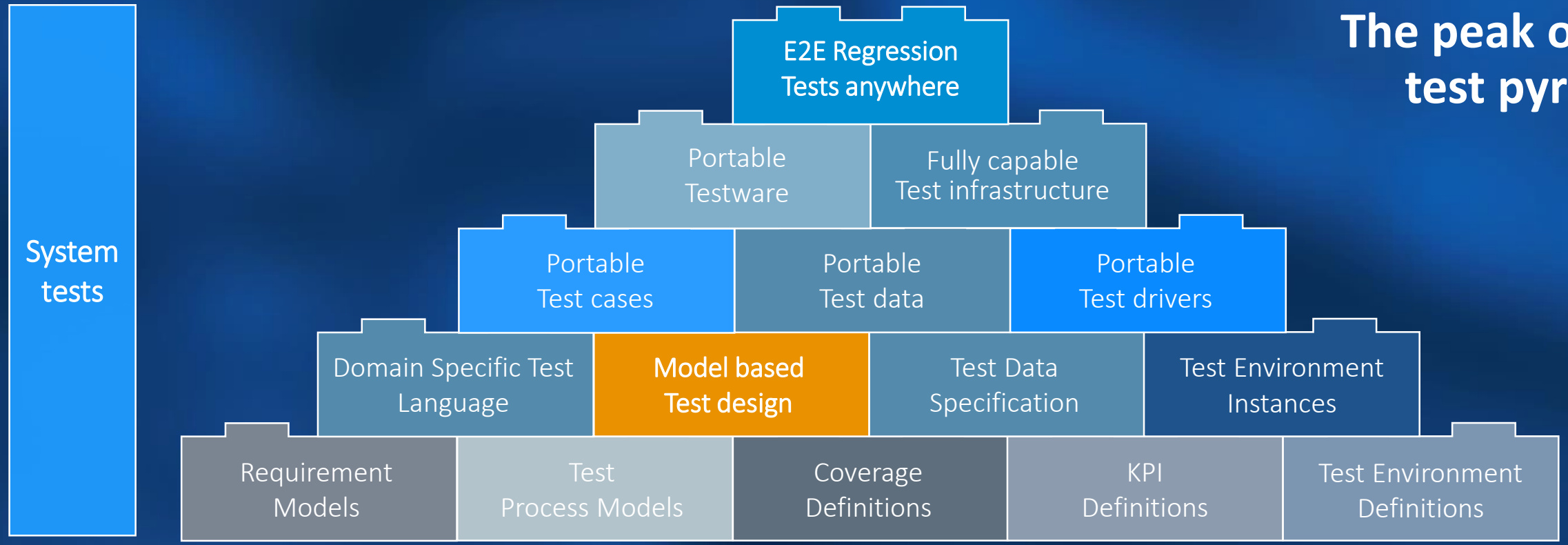
ALIGNMENT TO THE CHANGES



DREAM TO REALITY

WE ALL LOVE CHANGES, IF WE ARE PREPARED

The peak of the test pyramid



Unit tests	For developers: code, toolchain, definitions, maintenance

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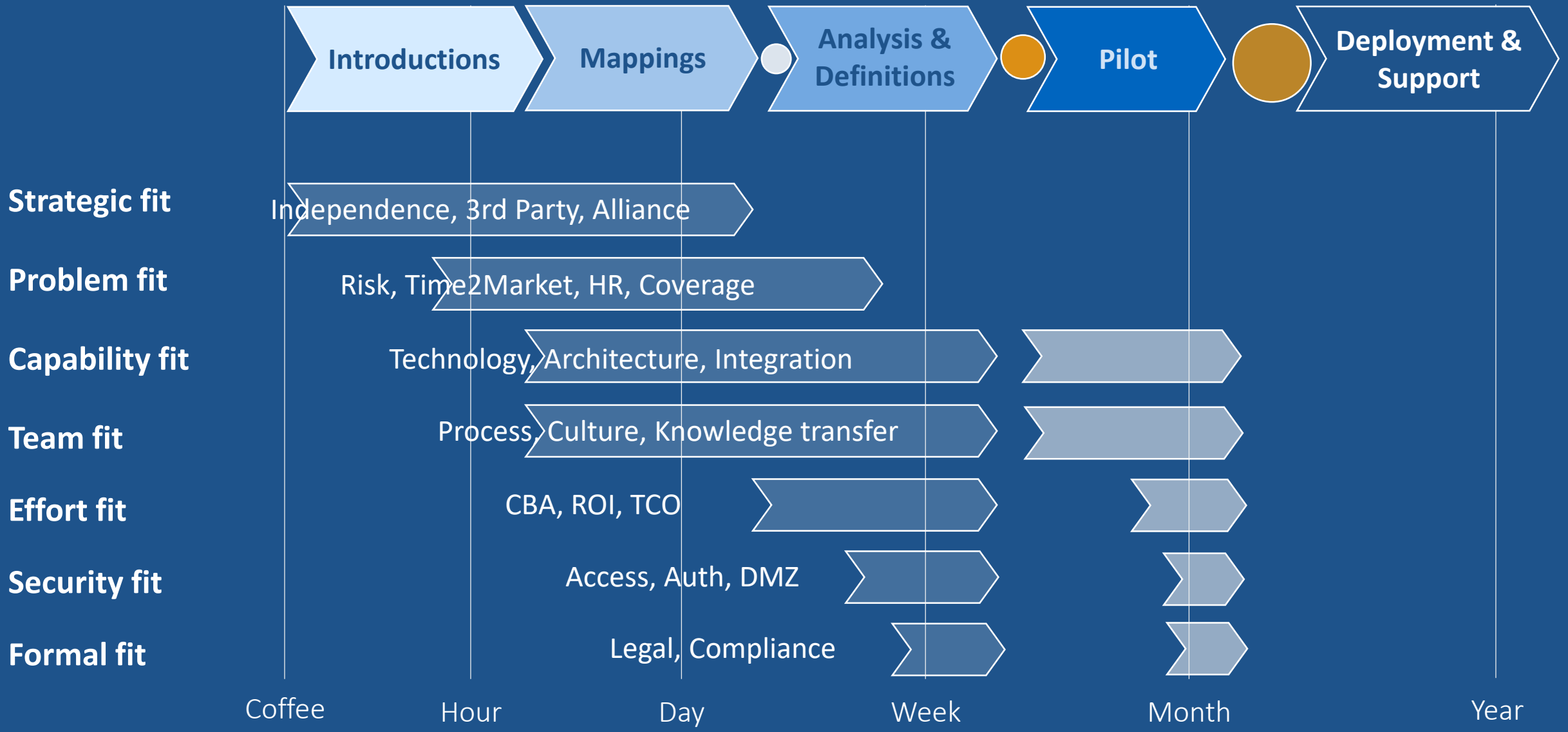
APPLICABILITY ASSESSMENT

EFFORTS TO PROCEED

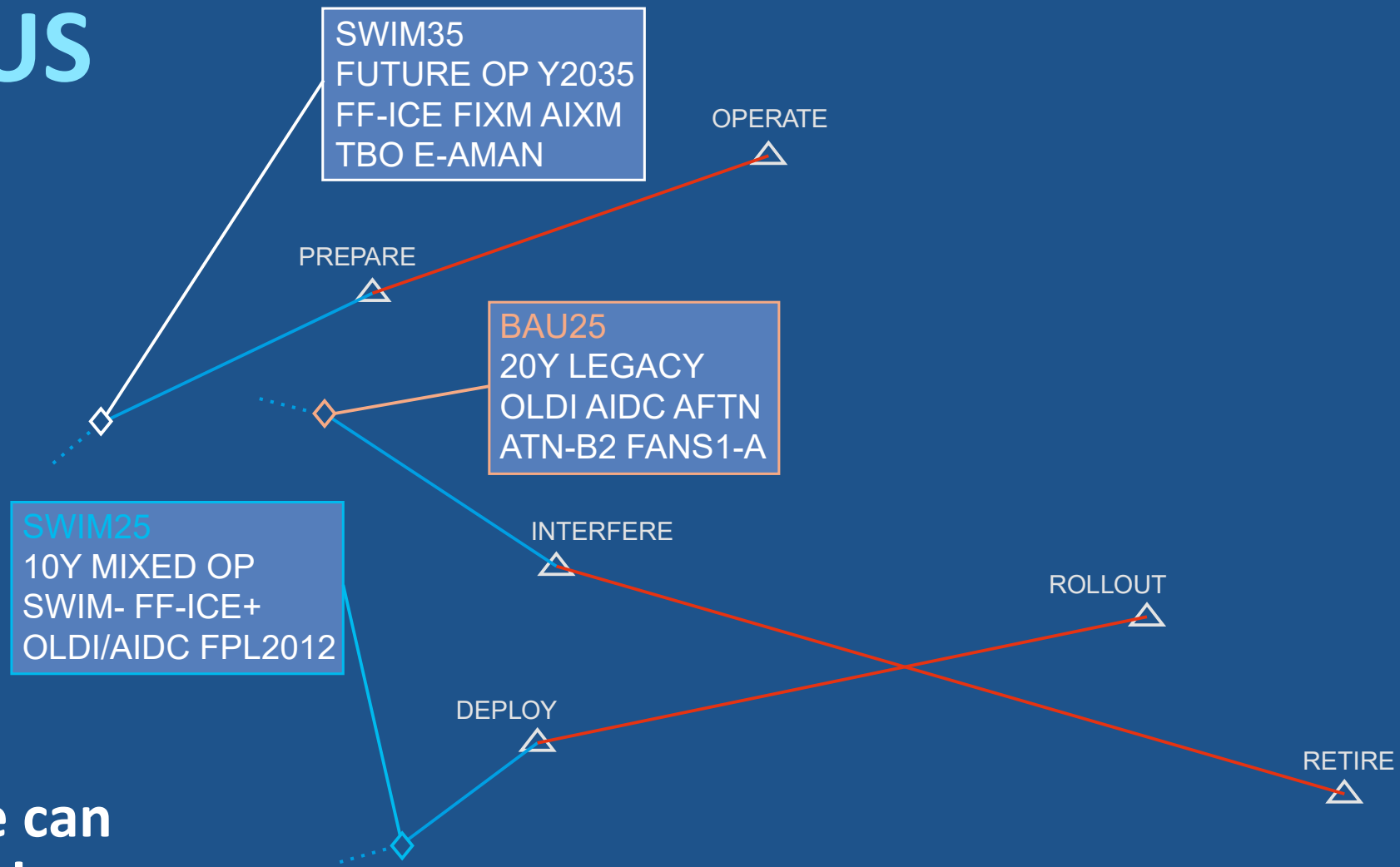


TRAVEL WITH US

We have already all taken off

Shaky turbulence and conflicts ahead

Together with you we can mitigate and resolve them



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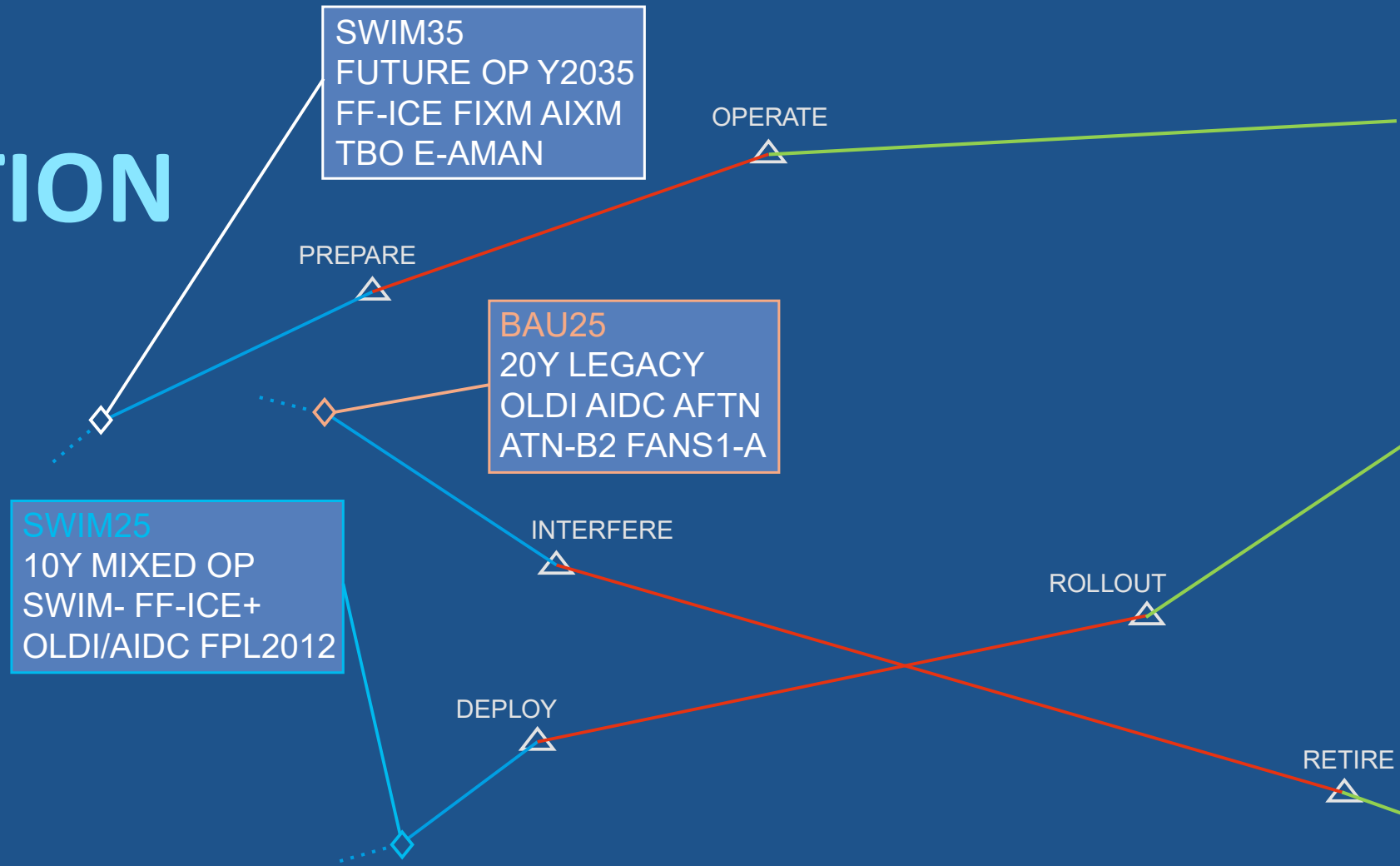
THANK YOU FOR YOUR ATTENTION



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