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CHARGÉ
DES TRANSPORTS

Liberté
Égalité
Fraternité

dgac direction générale de l'Aviation civile

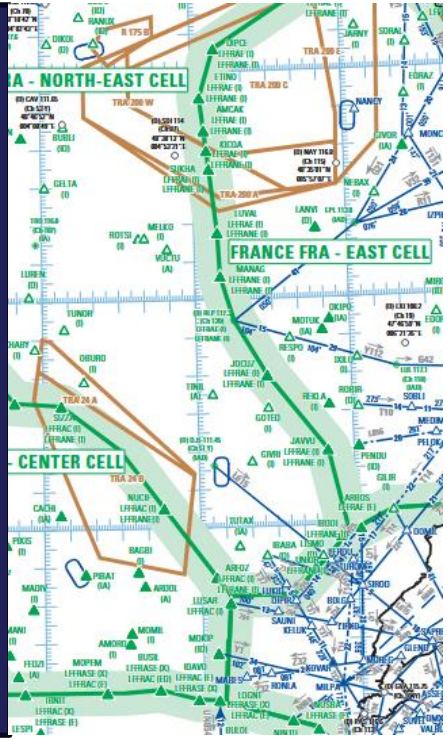
FREE ROUTE AIRSPACE IMPLEMENTATION WORKSHOP

BEIJING, CHINA, 17-18 NOV 2026

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Free & Flexible



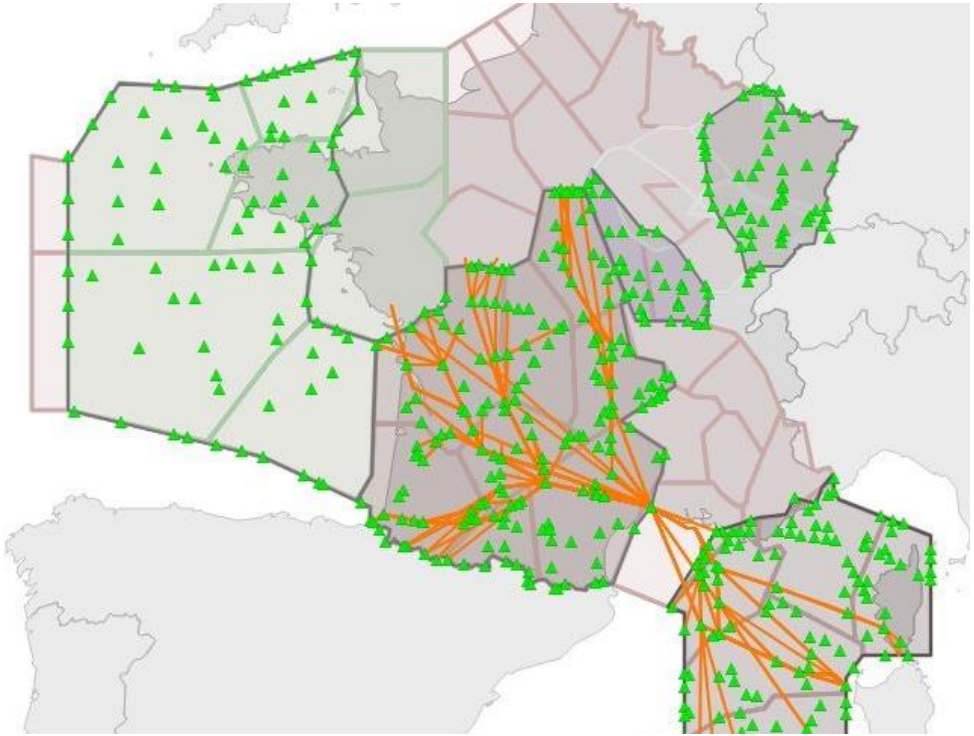
FLEXIBILITY

- DESIGN
- PLANNING
- USAGE

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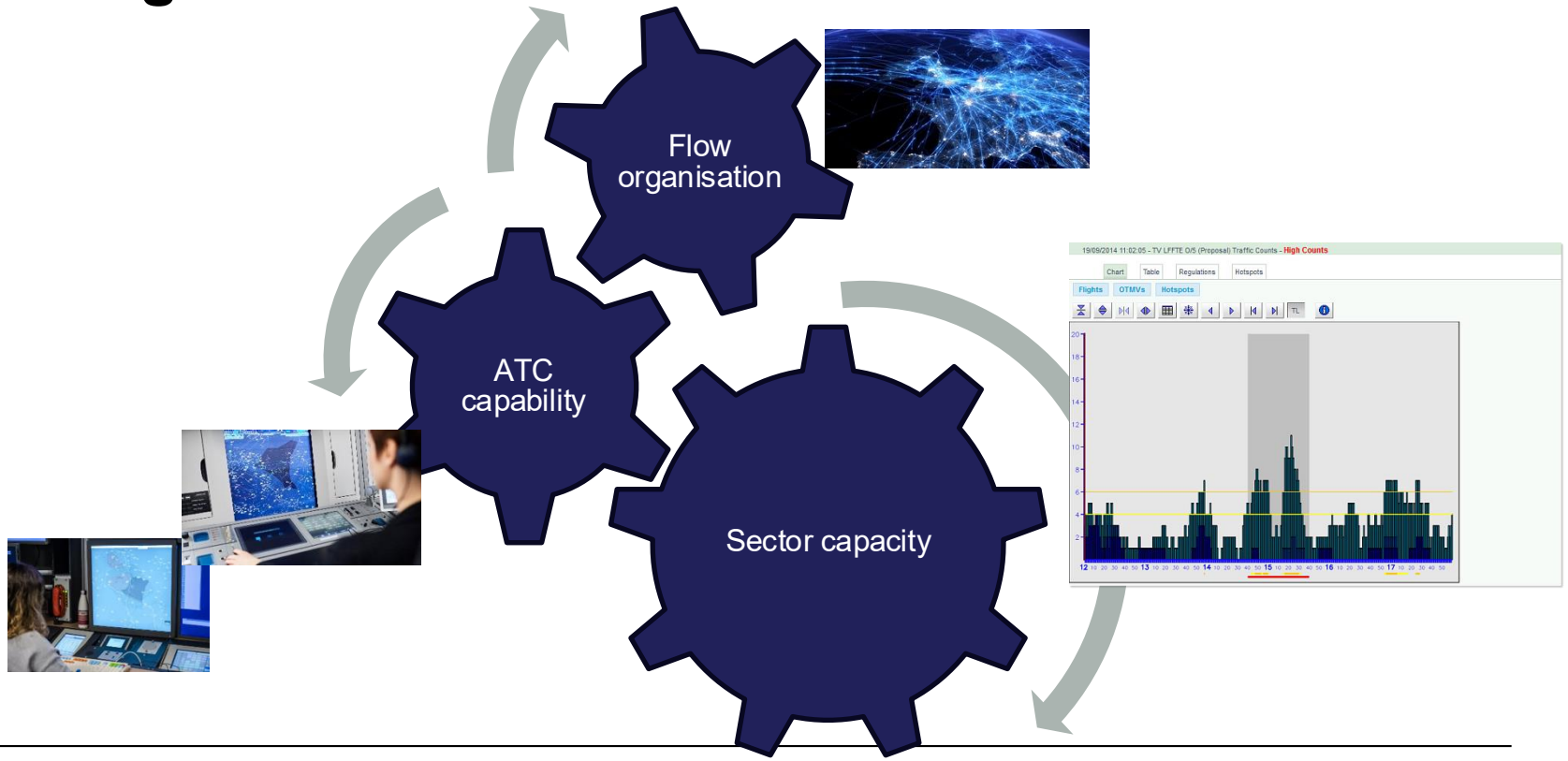
Setting the stage



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Integrating FRA in the ATM CONOPS



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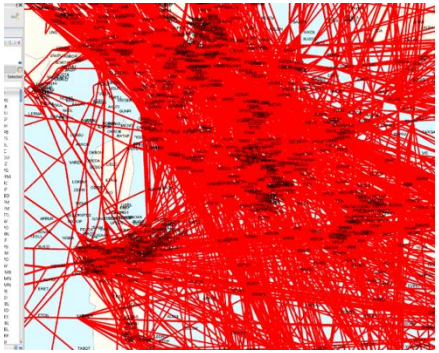
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Defining a FRA Conops

Striking the right balance between capacity and flight efficiency



Flows of free routes



Free route

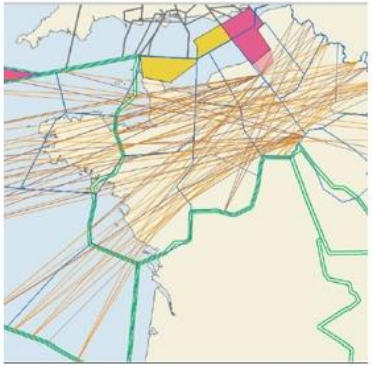


Free flight

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French Experience

Liberty vs Efficiency

Liberty 30%

Overall efficiency 70%

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Advanced Planning

End game : ATC not noticing it

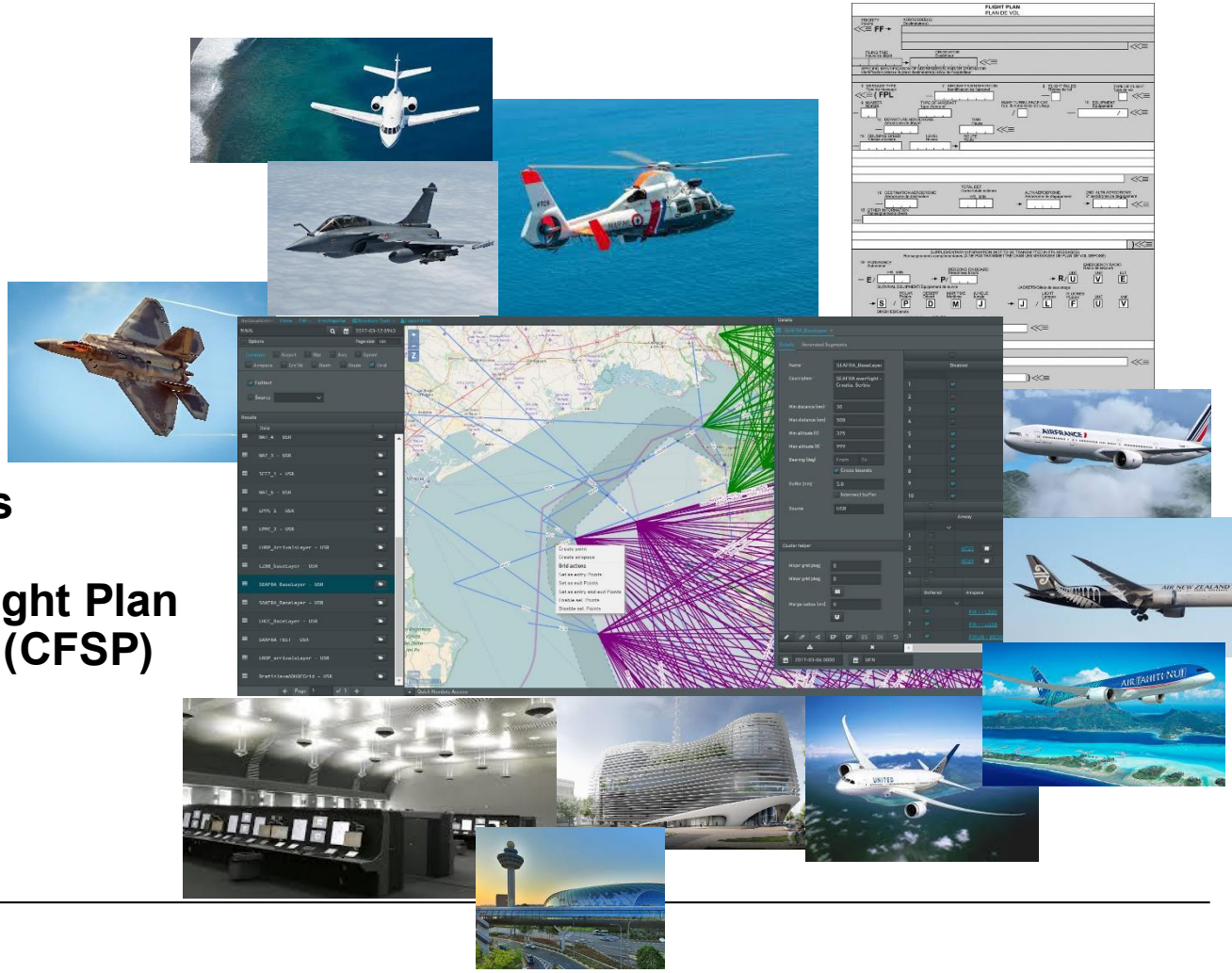


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Stakeholders

- Airlines
- Military operators
- Other ANSP's
- Computerized Flight Plan Service Provider (CFSP)



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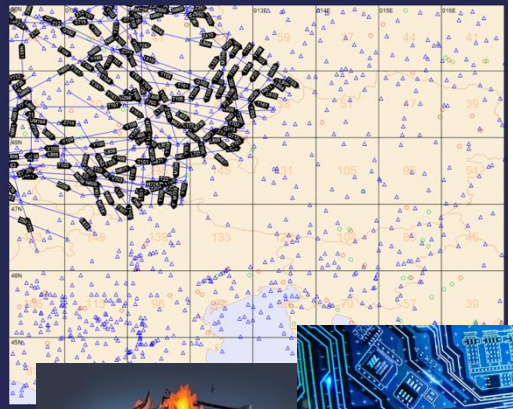
CFSP's

The route finder

AIR SUPPORT BAE SYSTEMS BOEING CAE FL/GHTKEYS SPACEKEYS SKYKEYS

FRA PATHFINDING

- ATS environment
  - connections are finite
- In FRA environment,
  - connections are exponentially less finite
- More connection points causes complexity
- Short DCTs are the most optimal



ForeFlight A Boeing Company Lufthansa Systems



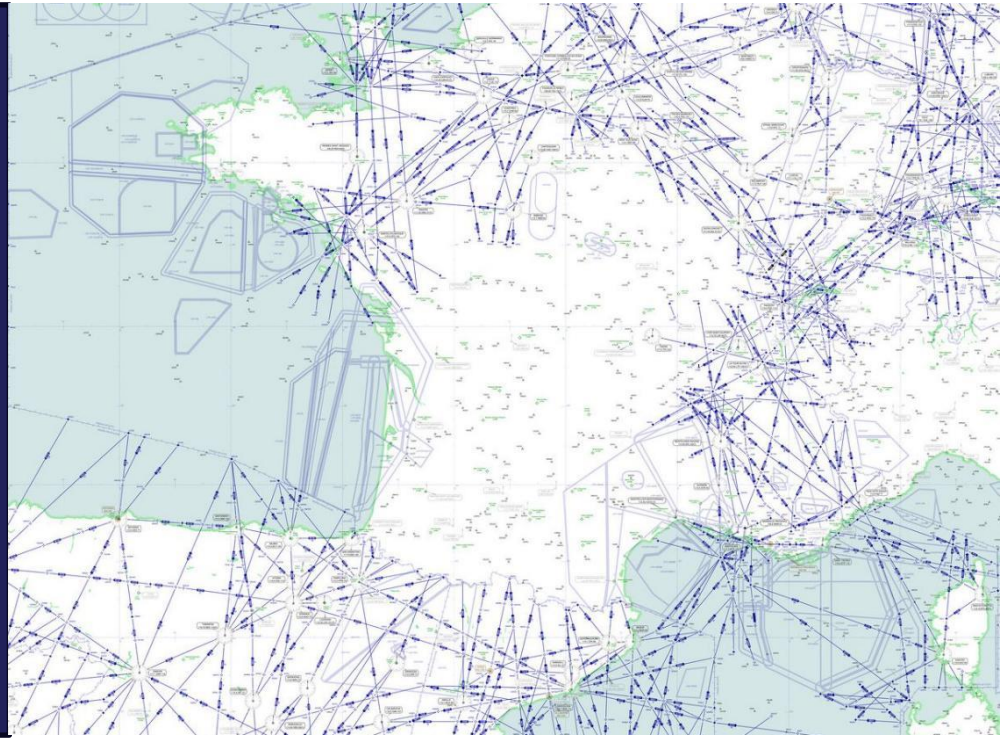


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Plus and Minus

What went well
What did not



FRA implementation - Lessons learnt from French implementation



- Transparency and advanced coordination
- Advanced operational knowledge acquisition in the operational units
- Increased acceptability of operational flexibility for operational staff
- Enhanced coordination with armed forces
- Coordination with neighboring States

- Limited flexibility overall
- Delayed implementation because of systems upgrade
- Local low usage of enhanced trajectory planning options
- Limited implementation of cross border free route airspace operations

