

# ADS-B Implementation VHF extension in Tahiti FIR French Polynesia



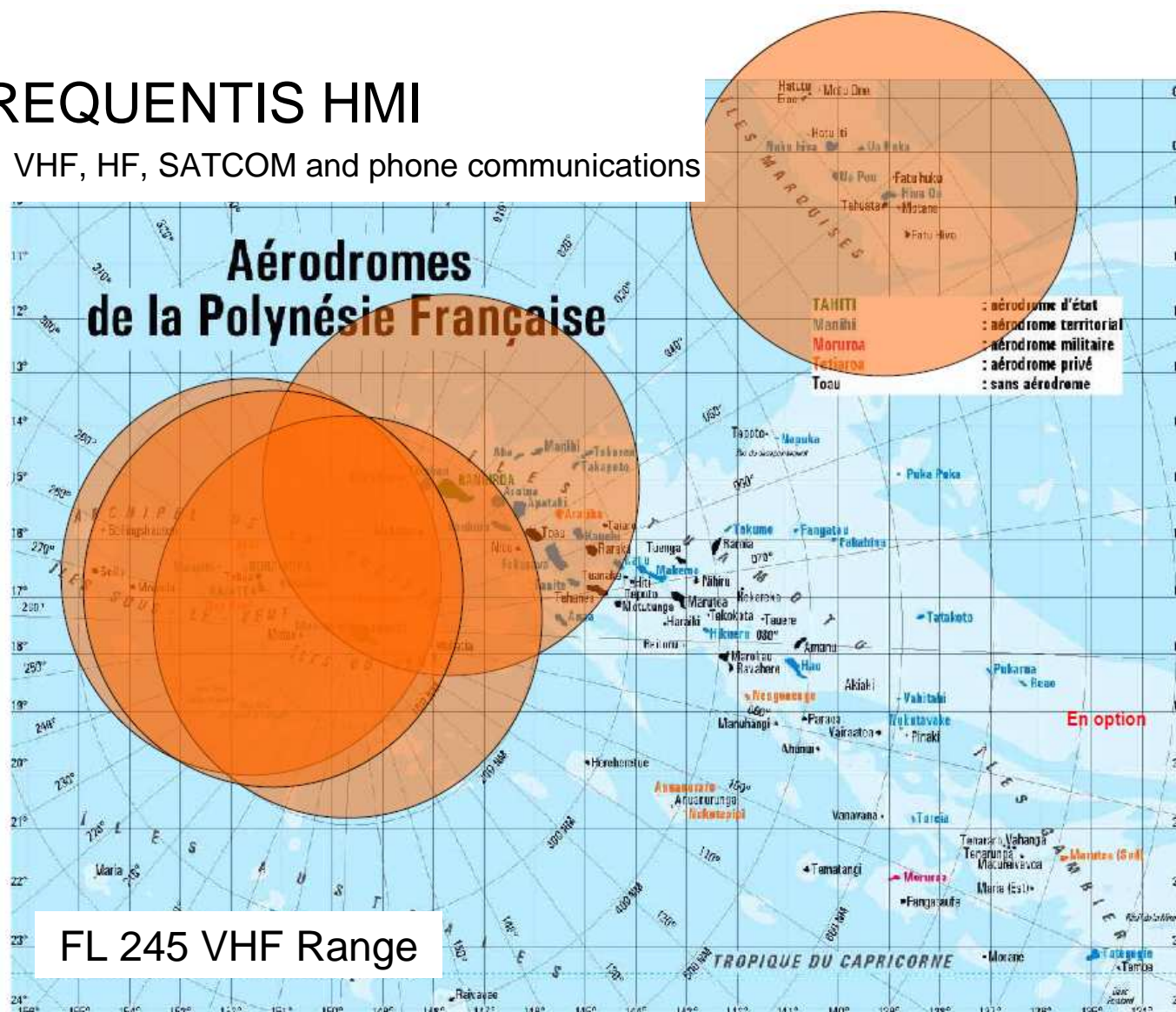
# Surveillance means in Tahiti FIR

- **SSR located on Tahiti island**
  - 5 Nm separation, theoretical coverage of 250 Nm, automatically displayed on ATM system
- **ADS-C**
  - 50 Nm/10mn separation, position report every 14 mn, automatically displayed on ATM system
- **Flight plan**
  - 100 Nm/15 min separation, position report every 30mn via HF or VHF, manually displayed by the controller

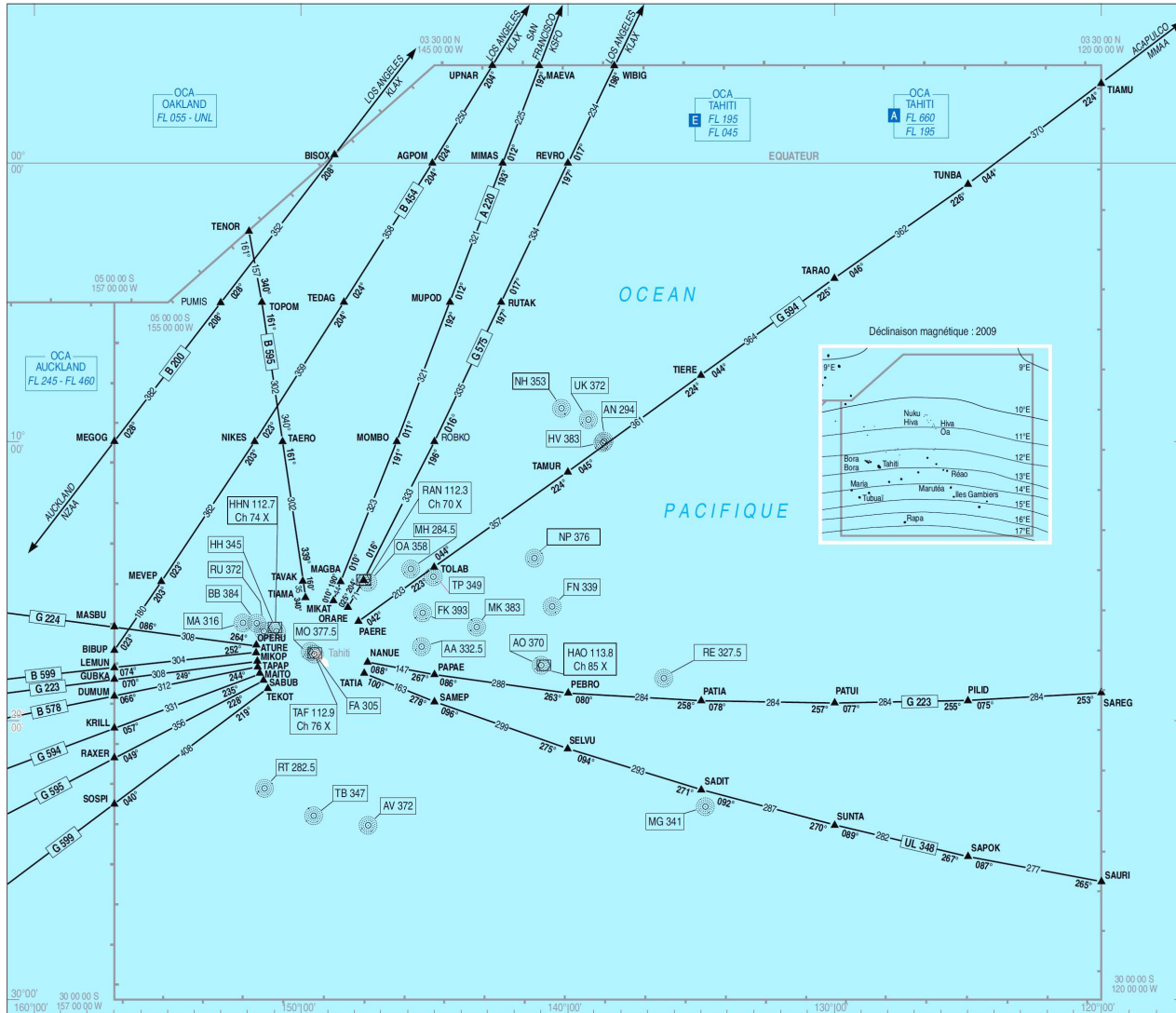
# Communication means in Tahiti FIR

## ➤ FREQUENTIS HMI

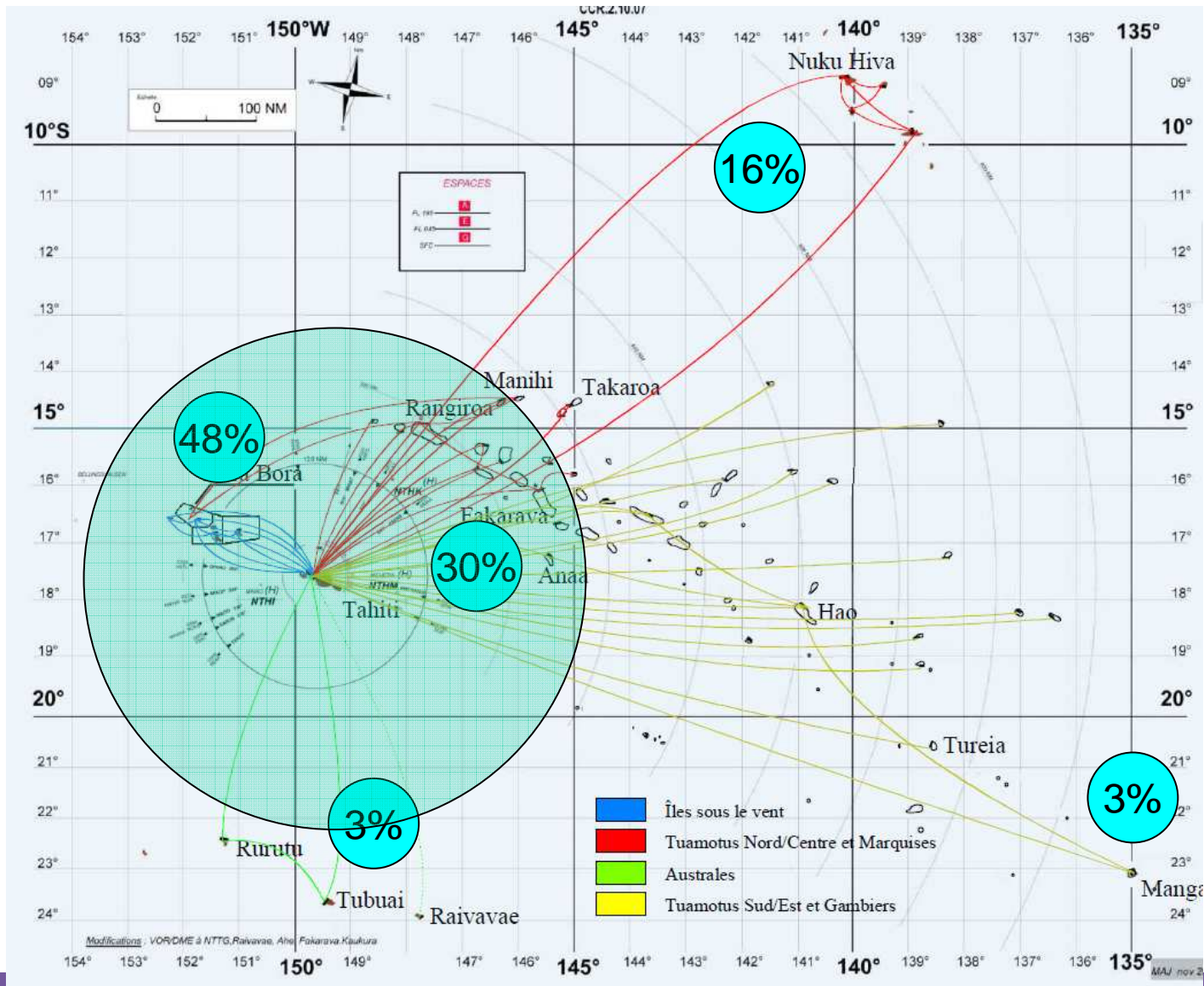
- VHF, HF, SATCOM and phone communications



# International traffic flows



# Domestic traffic flows



# *Initial need : VHF coverage extension*

## ➤ Pros

- Communication quality improvement
- Possible frequencies consolidation
- Methods harmonization and simplification
- Decrease of emergency phases activation
- Non dependence on solar radiation (HF)
- GNSS separations

## ➤ Cons

- Limited range compared to HF, involving more frequencies changes

## *Other need: surveillance extension*

- Safety enhancement
- “ Radar-like” separation ability
  - Airspace capacity improvement
  - Flight profiles optimization
  - Delays decreasing
- SSR spare to face
  - Maintenance program
  - Failure
  - End of life expected in 2030
- Search And Rescue Service improvement



# *How many receivers? Which sites?*

- 9 ADS-B receivers (2 in 2014, 3 in 2015 et 4 in 2016)
- Start on existing VHF sites : easy spreading at low cost
- Other criteria
  - Fit to main domestic flows
  - Fit to experimentation (ATM system interoperability)

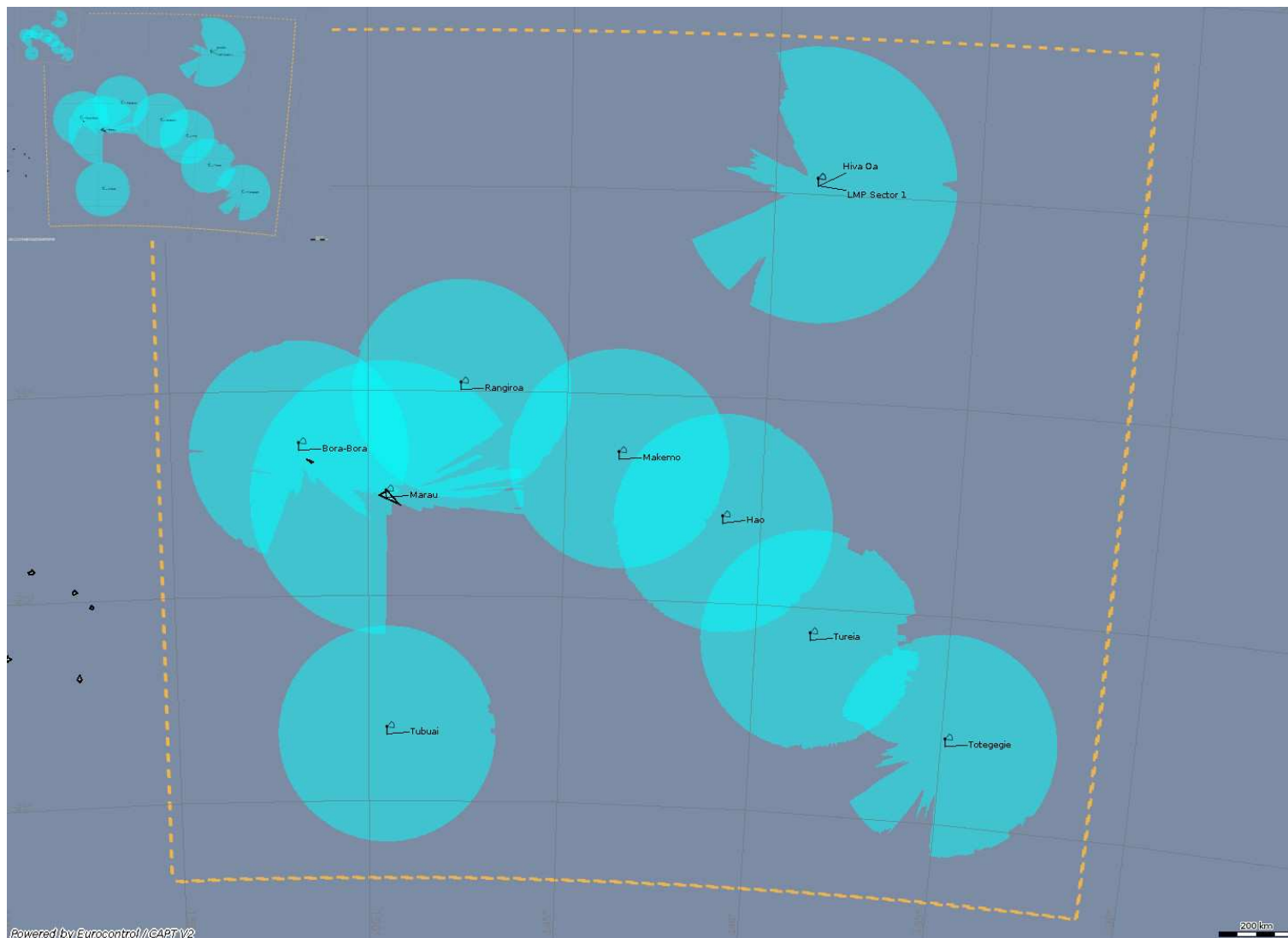


## *Sites on study*

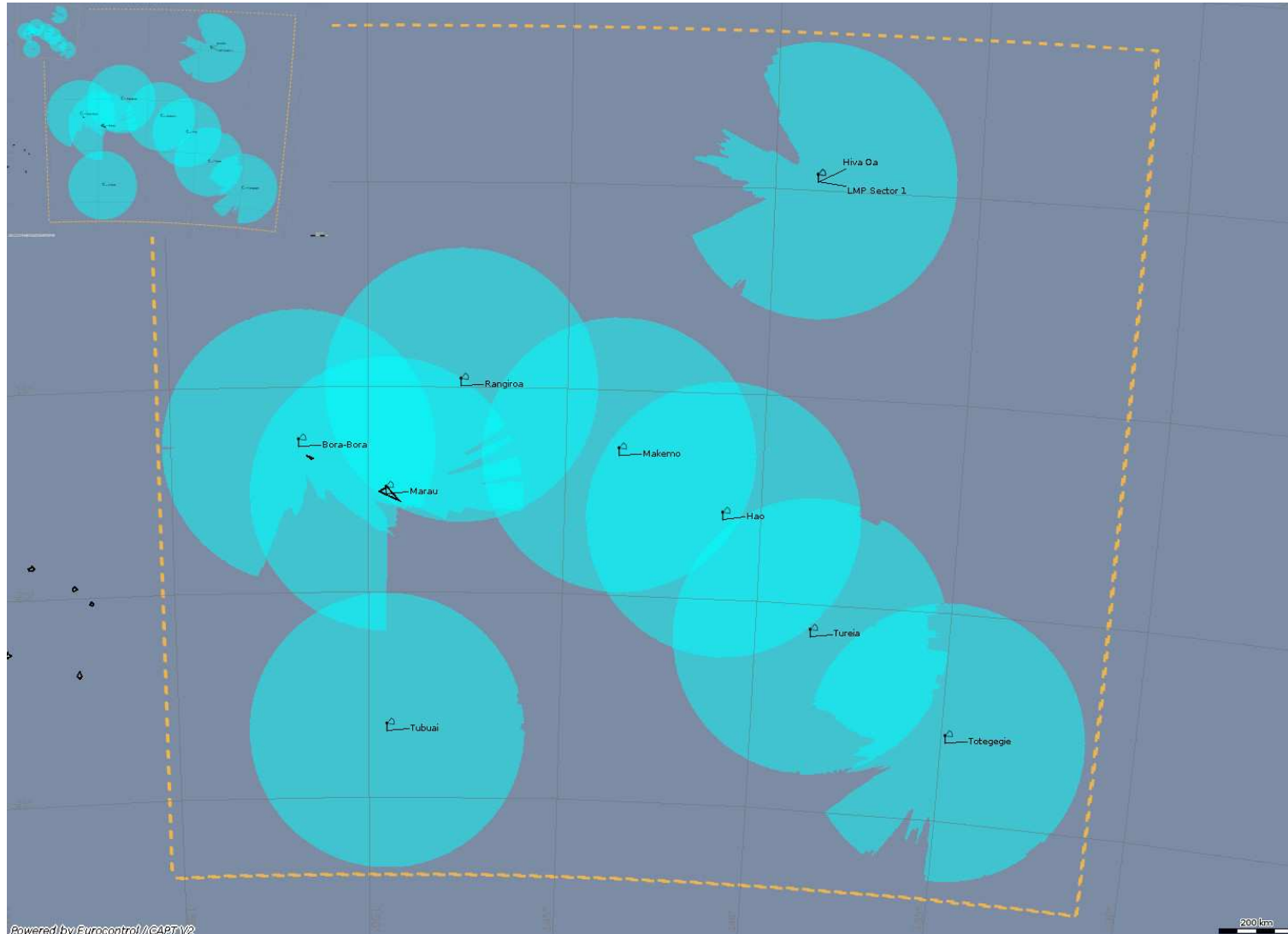
- Tahiti : Marau or Mahaena or Papara
- Leeward : Bora Bora or Raiatea
- Rangiroa }  
➤ Makemo } Tuamotu  
➤ Hao }  
➤ Tureia }
- Totegegie (Gambiers)
- Hiva Oa (Marquesas)
- Tubuai (Australes)



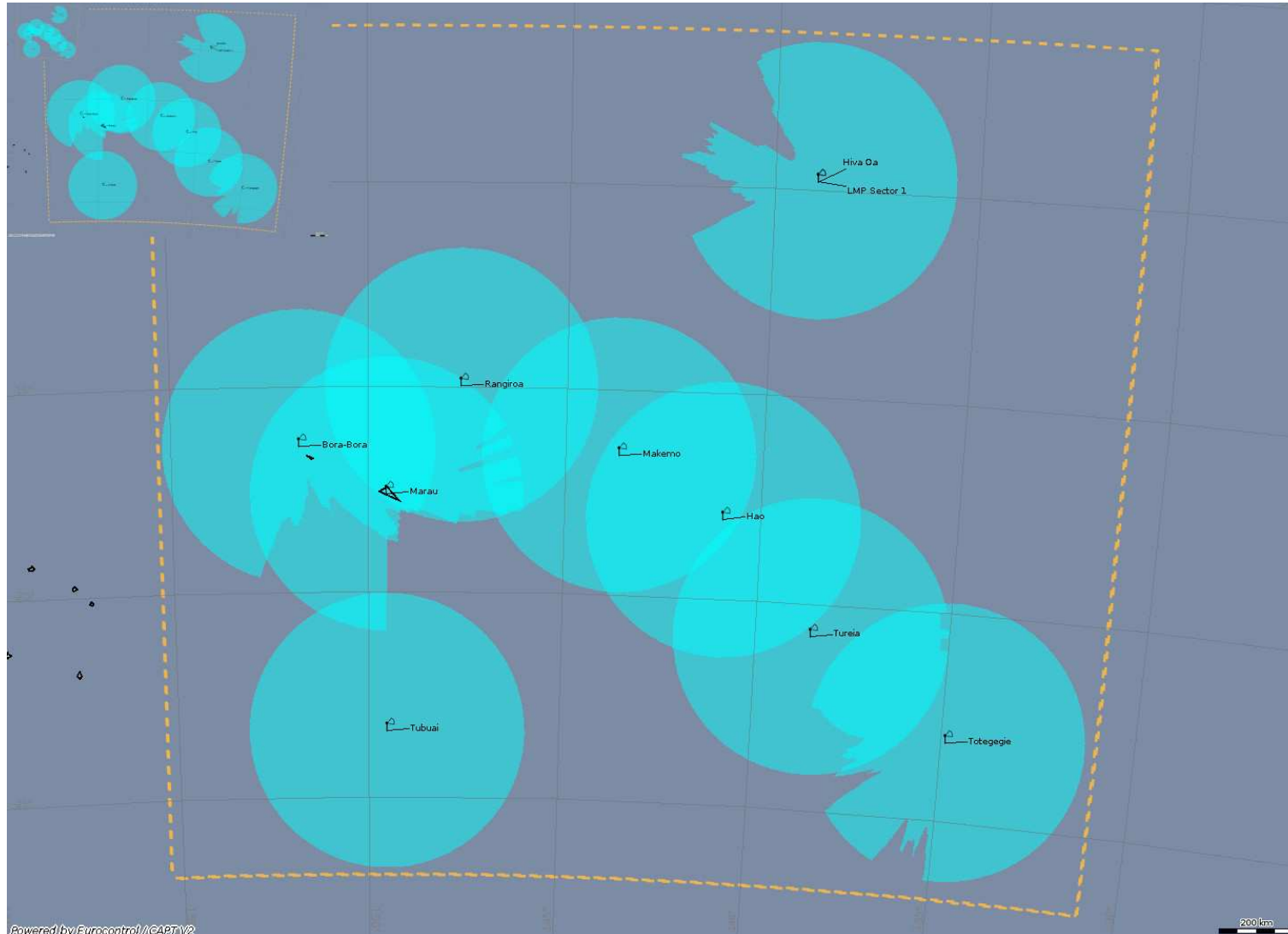
# ADS-B range at 15.000 ft



# ADS-B range at 25.000 ft



# ADS-B range at 30.000 ft



# Project management

- Tahiti ANS steering committee
- Working groups
- Concept/design/implementation planning
  - 5 years 2015/2020 program
  - considering every stakeholders
- Communication
  - Local : intranet implementation
  - National & international (ADS-B SITF)
  - Regular presentations to technicians and ATCOs
  - Newsletter



# Questions?

