



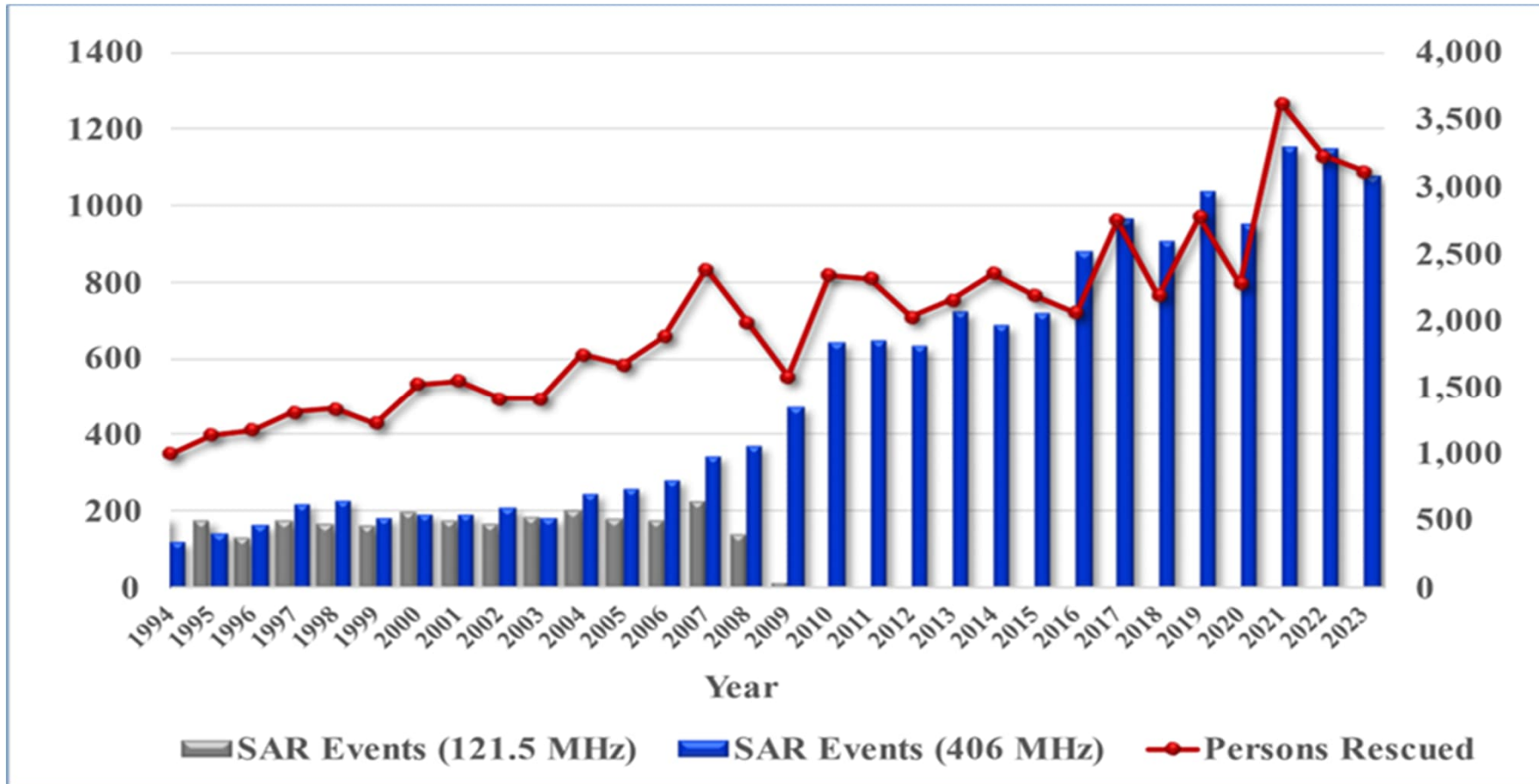
# STATUS OF THE COSPAS-SARSAT PROGRAMME

Arnaud Sindou  
Cospas-Sarsat Secretariat

ICAO EUR/APAC SEARCH AND RESCUE WORKSHOP 2024  
(Baku, 02 – 04 October 2024)



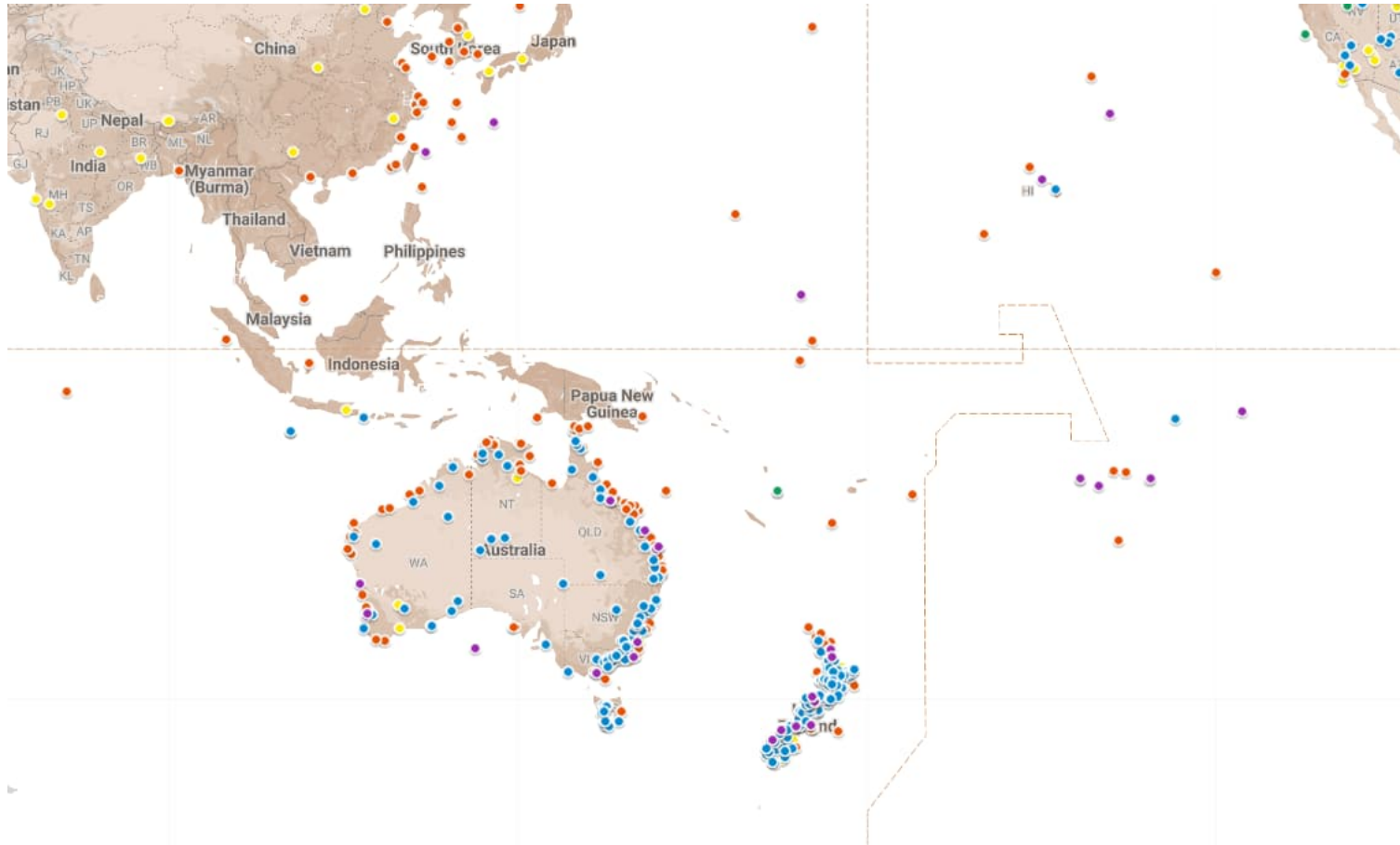
# System Operation



**Figure 1:** SAR Events with the Assistance of Cospas-Sarsat Data (Jan. 1994 - Dec. 2023)



# System Operation



**Figure 2: 2023 Geographic Distribution of SAR Events  
Asia-Pacific**

# System Operation

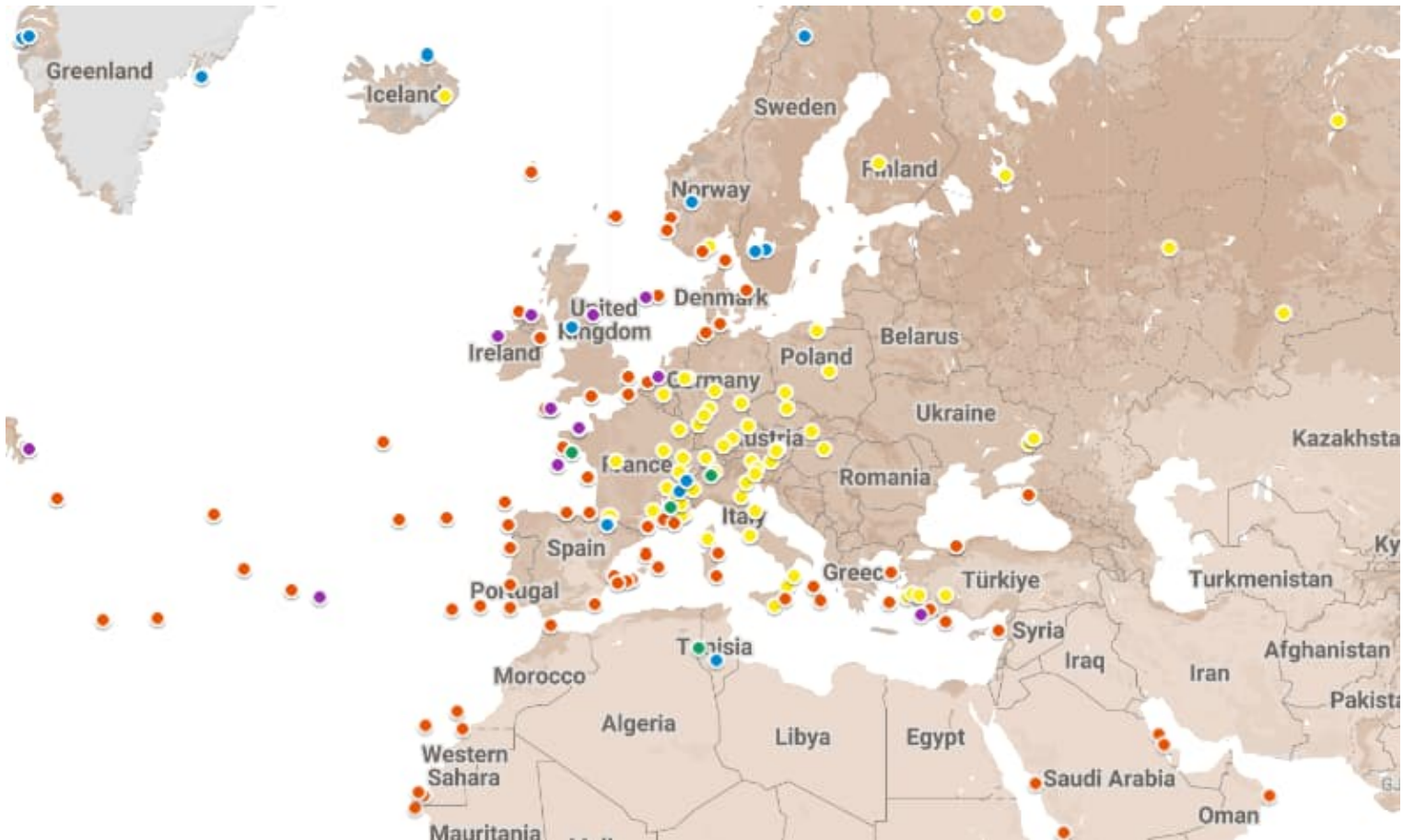


Figure 2: 2023 Geographic Distribution of SAR Events  
Europe

# 406 MHz Beacons

**3,170,000** beacons deployed (75% being GNSS capable) (2023)



# 406 MHz Beacons

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WELCOME TO  
THE  
INTERNATIONAL  
406MHZ BEACON  
REGISTRATION  
DATABASE

Registering a beacon for  
the first time?

Sign up for an account



To register a beacon in the IBRD, you  
must first create an IBRD profile  
account.

- 167 Administrations
- 113,000+ beacons

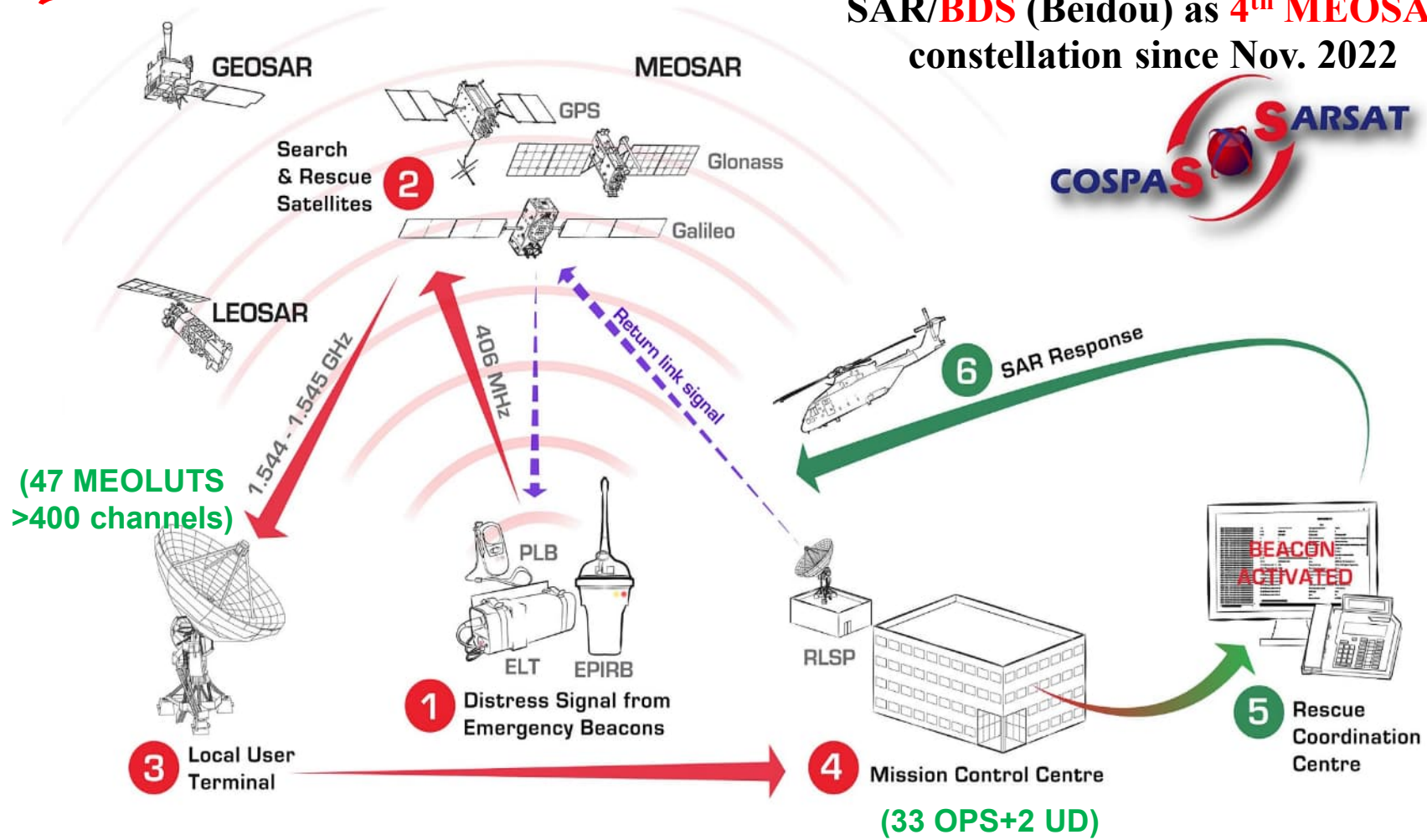
Allows:

All beacon types, including

- ELT(DT)s,
- RLS beacons,
- SGBs

# The System

SAR/BDS (Beidou) as 4<sup>th</sup> MEOSAR constellation since Nov. 2022



# SPOC Communication

	2019	2020	2021	2022	2023
Number of SPOCs tested by MCCs	161	166	171	171	161
Non-responsive SPOCs (no response to tests)	8.70%	7.23%	8.19%	5.26%	4.97%
Rarely responsive SPOCs (less than 20% successful tests)	5.59%	6.02%	3.51%	5.85%	4.97%
SPOCs with low success ratio (between 20 and 50% successful tests)	9.94%	7.23%	9.94%	8.19%	11.18%
<b>Insufficiently responsive SPOCs</b>	<b>24.23%</b>	<b>20.48%</b>	<b>21.64%</b>	<b>19.30%</b>	<b>21.12%</b>

# SPOC Communication



**Figure 3:** Map of Non-Responsive and Poorly Responsive SPOCs (2023)

# MCC-SPOC Agreements

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## MCC-SPOC Agreements signed and provided to the Cospas-Sarsat Secretariat

- Algerian MCC – Niger
- Chilean MCC – Paraguay
- French MCC – Austria (Austro-Control),
- French MCC – France, MRCC Antilles-Guy.
- French MCC – France, MRCC Gris-Nez
- French MCC – France, ARCC Lyon
- French MCC – France, MRCC La Réunion
- French MCC – France, JRCC Tahiti
- French MCC – Germany, ARCC Münster,
- French MCC – Morocco, ARCC Rabat
- French MCC – Switzerland
- French MCC – Tunisia (ACC Tunis)
- Indian MCC - Maldives
- Indian MCC – Nepal (CAA)
- Italian MCC – Albania
- **Italian MCC – Bosnia and Herzegovina**
- Italian MCC – Kenya
- Italian MCC – North Macedonia
- Italian MCC – San Marino
- Italian MCC – Serbia
- Italian MCC – Somalia
- Italian MCC – Sudan (CAA)
- Norwegian MCC – Sweden (Mar. Admin.)
- Saudi Arabian MCC - Bahrein

# MCC-SPOC Agreements

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## MCC-SPOC Agreements signed and provided to the Cospas-Sarsat Secretariat

- South African MCC – Angola
- South African MCC – Botswana
- South African MCC - Congo
- South African MCC – Eswatini
- South African MCC – Lesotho
- South African MCC – Malawi
- South African MCC – Mozambique
- South African MCC – Namibia
- South African MCC – St Helena
- South African MCC – Uganda
- South African MCC – Zambia
- South African MCC – Zimbabwe
- Spanish MCC – Benin
- Spanish MCC – Cameroon
- Spanish MCC – Gambia
- Spanish MCC – Ghana
- Spanish MCC - Togo
- UK MCC – Ireland (C. G.)
- USA MCC – Bermuda
- USA MCC – COCESNA
- USA MCC – Dominican Republic
- USA MCC – Netherland Antilles (C. G.)
- USA MCC – Ecuador
- USA MCC – Haiti
- USA MCC – Panama
- USA MCC – Trinidad and Tobago
- Vietnam MCC – Cambodia
- Vietnam MCC – Laos

# New SIT 185

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- **Grouped into 6 Paragraphs**
- **GNSS vs ENCODED**
- **MCC REFERENCE POSITION vs CONFIRMED POSITION**
- **Omitted vs “NIL” when allowed**

1. **DISTRESS** COSPAS-SARSAT INITIAL LOCATED ALERT

2. **MSG** NO 00741 AUMCC REF 3266E2019CFFBFF

3. **BEACON MESSAGE INFORMATION**

BEACON TYPE STANDARD LOCATION - ELT

AIRCRAFT 24 BIT ADDRESS 7100CE ASSIGNED TO SAUDI ARABIA

HEX ID 3266E2019CFFBFF

COUNTRY OF BEACON REGISTRATION 403/SAUDI

HOMING SIGNAL 121.5 MHZ

4. **ALERT POSITION INFORMATION**

**GNSS** – 32 49.6 N 081 55.5 E

**MCC REFERENCE** – 32 49.2 N 081 54.6 E

DETECTED AT 22 APR 07 0912 UTC BY LEOSAR SARSAT 10

DOPPLER A - 32 49.1 N 081 54.2 E PROB 69 PERCENT

DOPPLER B - 24 18.1 N 041 18.2 E PROB 31 PERCENT

5. **OTHER INFORMATION**

DETECTION FREQUENCY 406.0247 MHZ

LUT ID 4191

6. **REMARKS** NIL

END OF MESSAGE

# System Enhancements

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- **MEOSAR**  
Initial  
Operational  
Capability  
Apr. 2023



# System Enhancements

**F**ull  
**O**perational  
**C**apability  
for  
**ELT(DT)s**

**FGB**  
1 Jan 2023  
**SGB**  
1 Jan 2024



Scenario: ELT (DT) "Distress Tracking" 406 Beacon activates independently upon autonomous detection of in-flight aircraft emergency, signalling the distress to Cospas-Sarsat satellites



**Loss of  
121.5  
MHz**

# System Enhancement

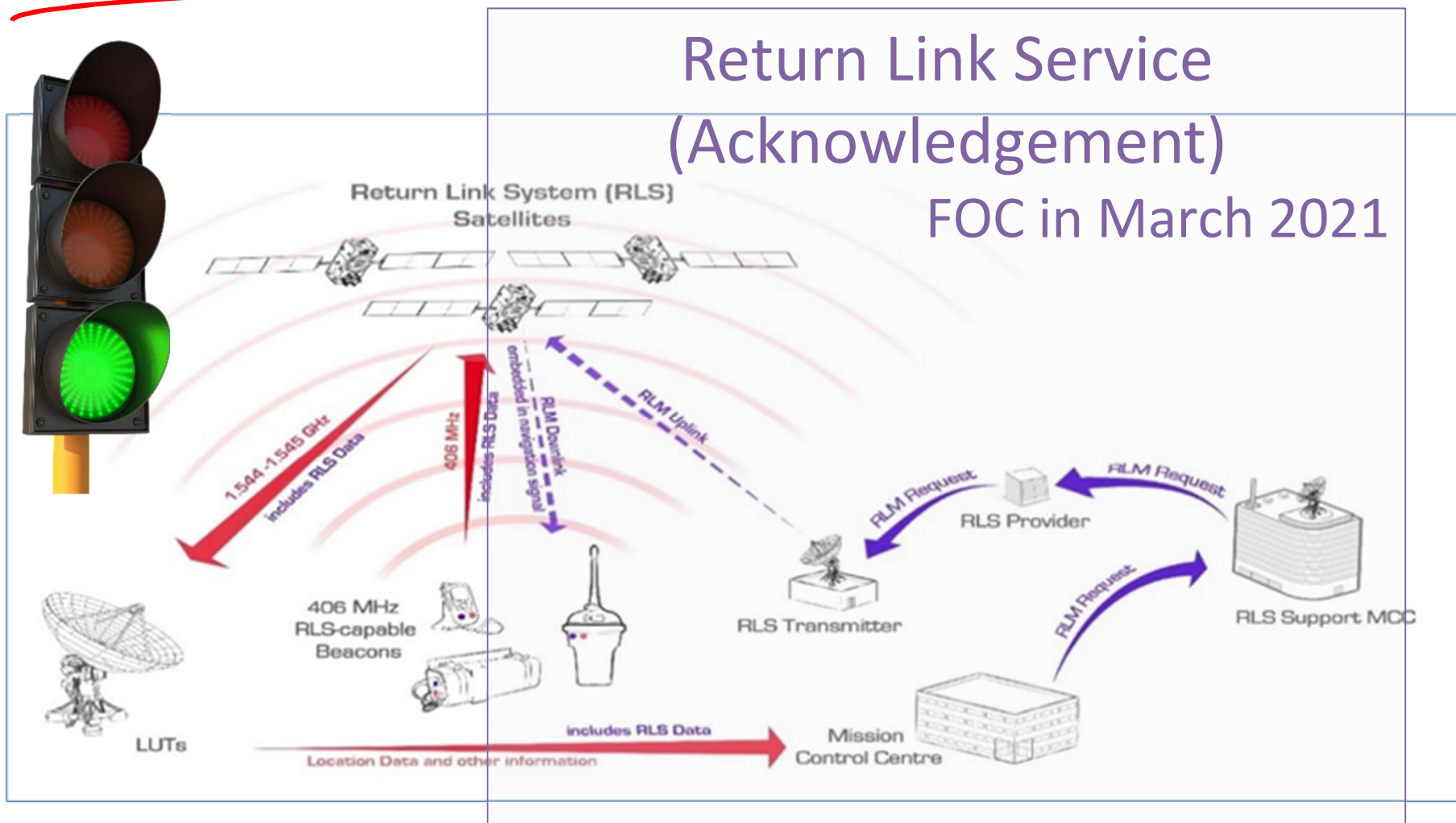
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## **SGBs**

- more info in MSGs
- Greater accuracy
- Improved Transmission Rate
- Expected from 2024



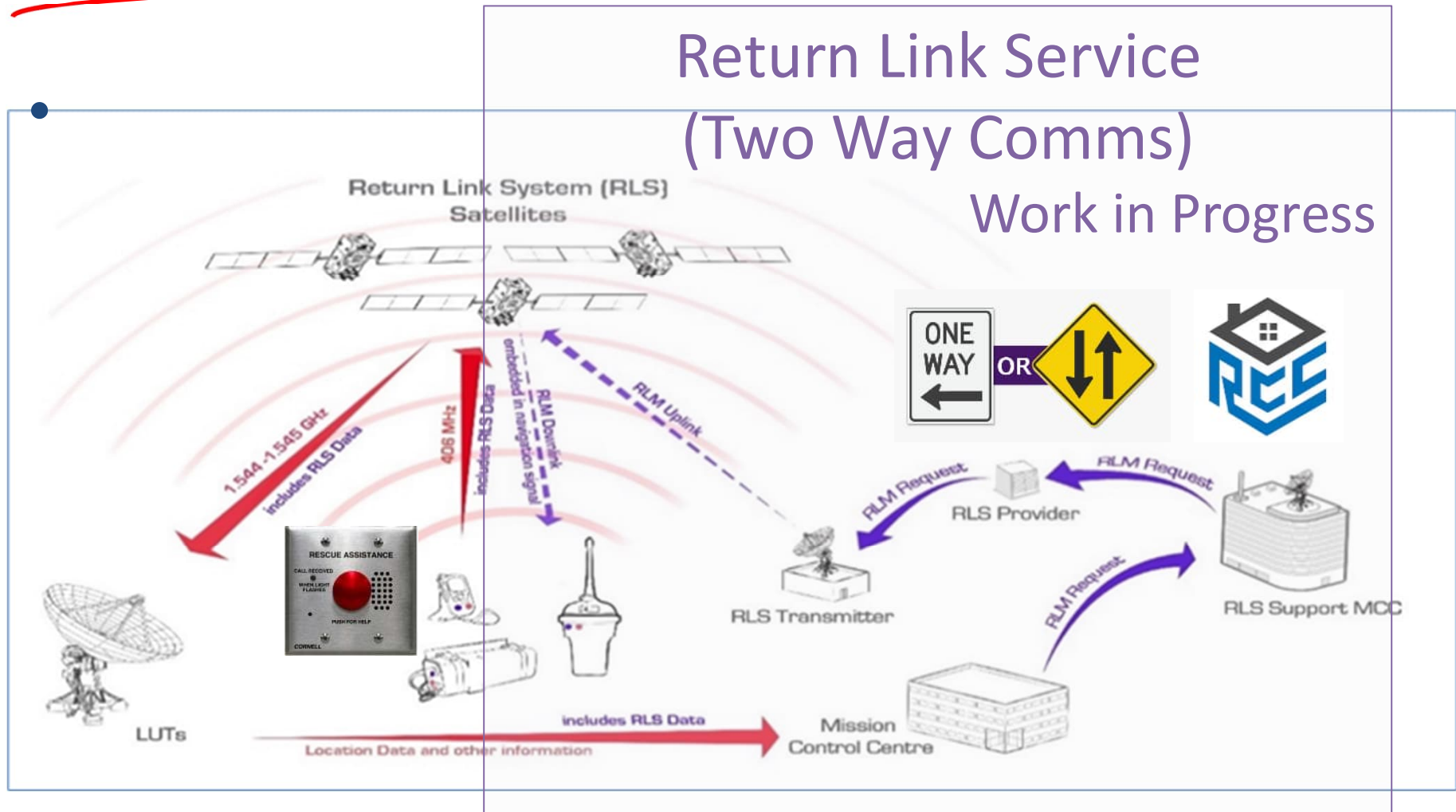
# System Enhancements



# System Enhancements

## Return Link Service (Two Way Comms)

Work in Progress



# Training Materials

- RCC  
Manual  
G.007
- Videos

moodle

**You  
Tube**



<https://www.cospas-sarsat.int/en/search-and-rescue/programme-videos-en>  
<https://moodle.406.org/>

# Questions ?

**COSPAS-SARSAT.INT**  
INTERNATIONAL SATELLITE SYSTEM FOR SEARCH AND RESCUE  
**406<sup>TH</sup> DISTRESS ALERTING SERVICE**

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COSPAS-SARSAT PROFESSIONALS ▶

BEACON OWNERSHIP ▾ SYSTEM OVERVIEW ▾ MEDIA GALLERY ▾ ABOUT US ▾

## COSPAS-SARSAT

**SEARCH AND RESCUE SATELLITES**  
LISTEN **WORLDWIDE** FOR DISTRESS CALLS

### Register Your Beacon

Ensure that Search and Rescue Authorities in an Emergency Can Retrieve Crucial Information About You, Your Aircraft or Vessel, and Your Emergency Contacts.

**REGISTER YOUR BEACON**

#### QUICK LINKS

▶ Videos About Us

[asindou@406.org](mailto:asindou@406.org)