



STATUS OF THE COSPAS-SARSAT PROGRAMME

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Cospas-Sarsat Secretariat

Ninth Meeting of the
ICAO Asia/Pacific Search and Rescue Working Group
(APSAR/WG/9) (Bangkok, 07 - 10 May 2024)



System Operation

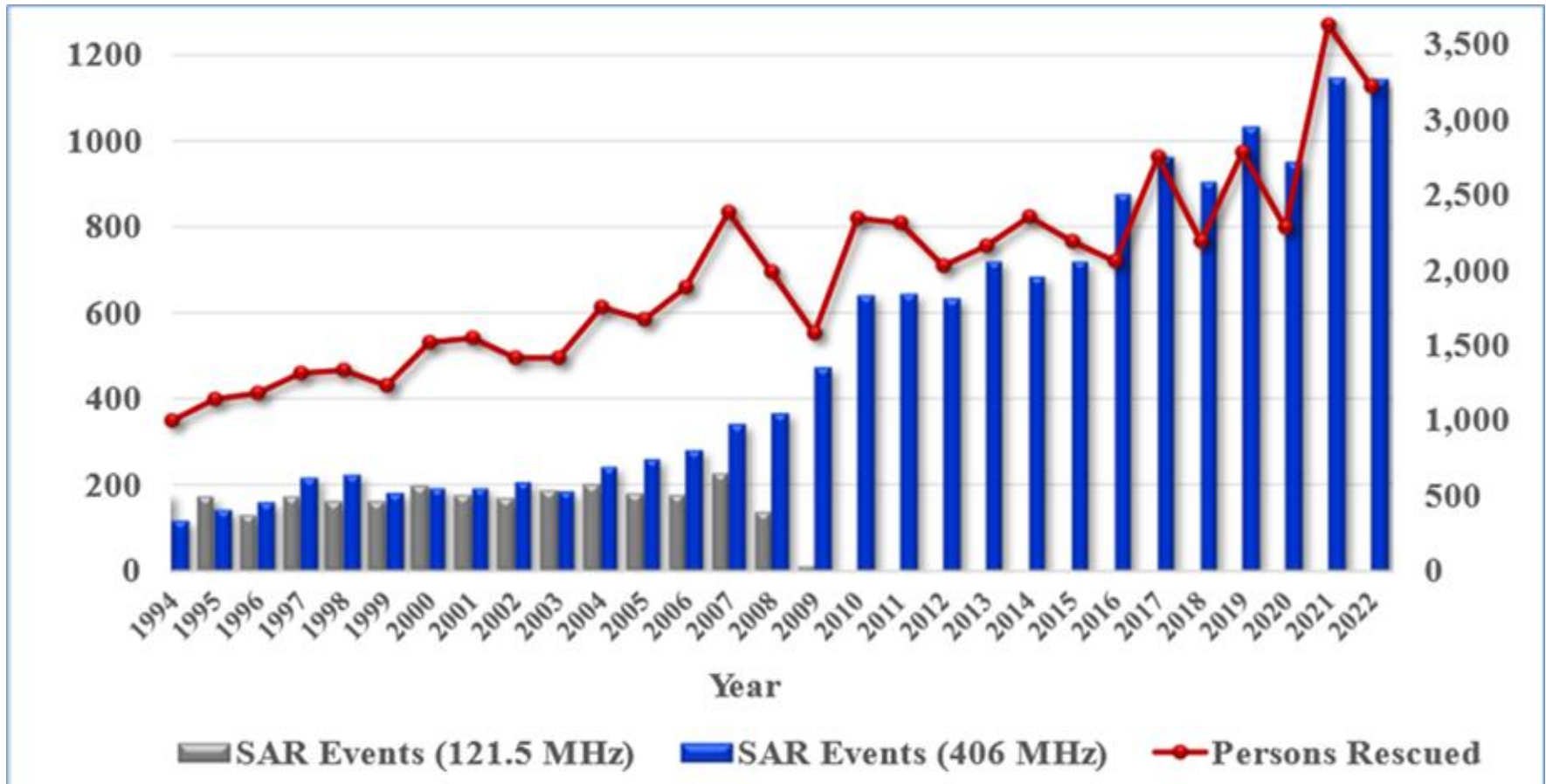


Figure 1: SAR Events with the Assistance of Cospas-Sarsat Data (Jan. 1994 - Dec. 2022)

System Operation

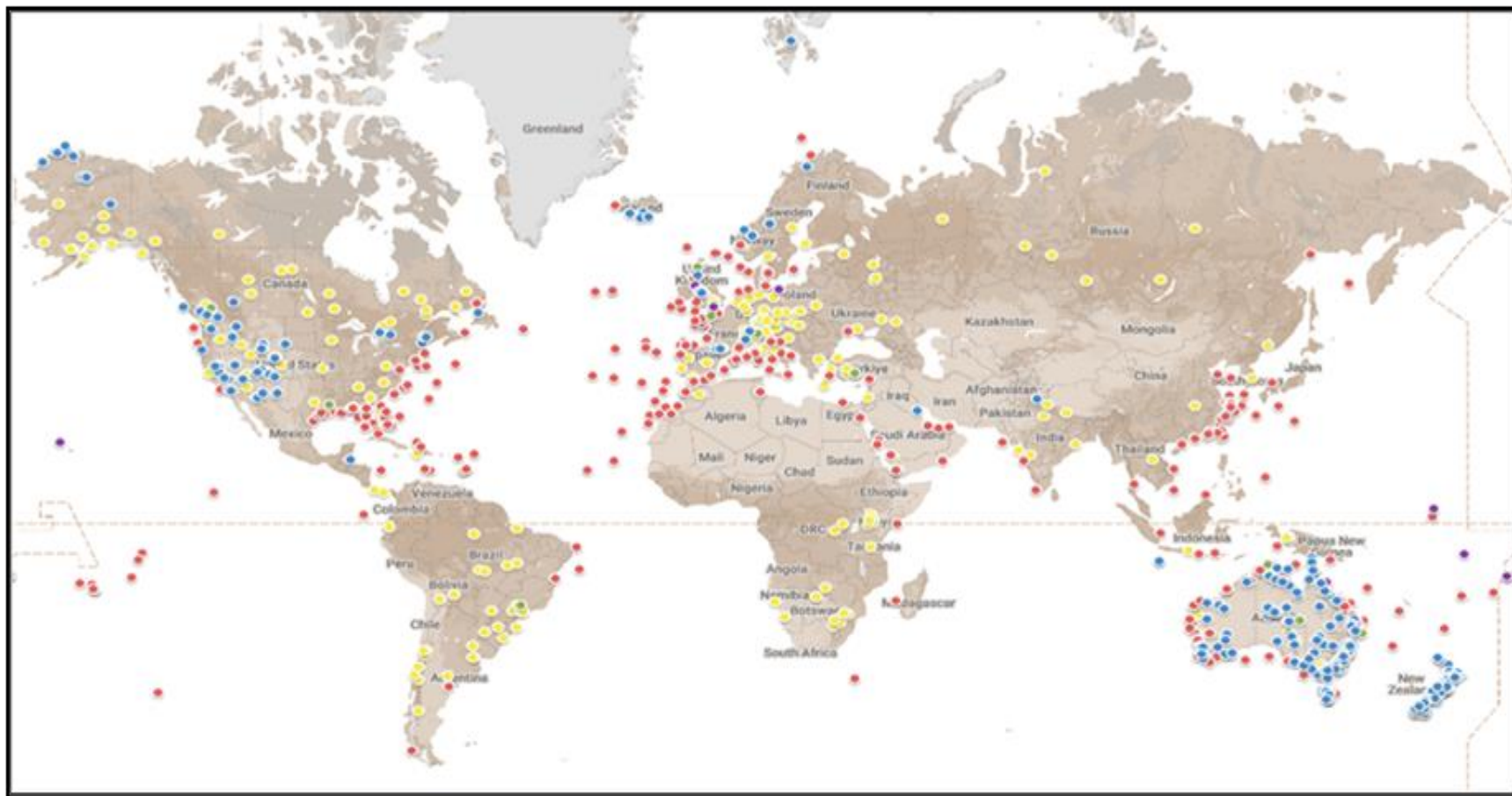
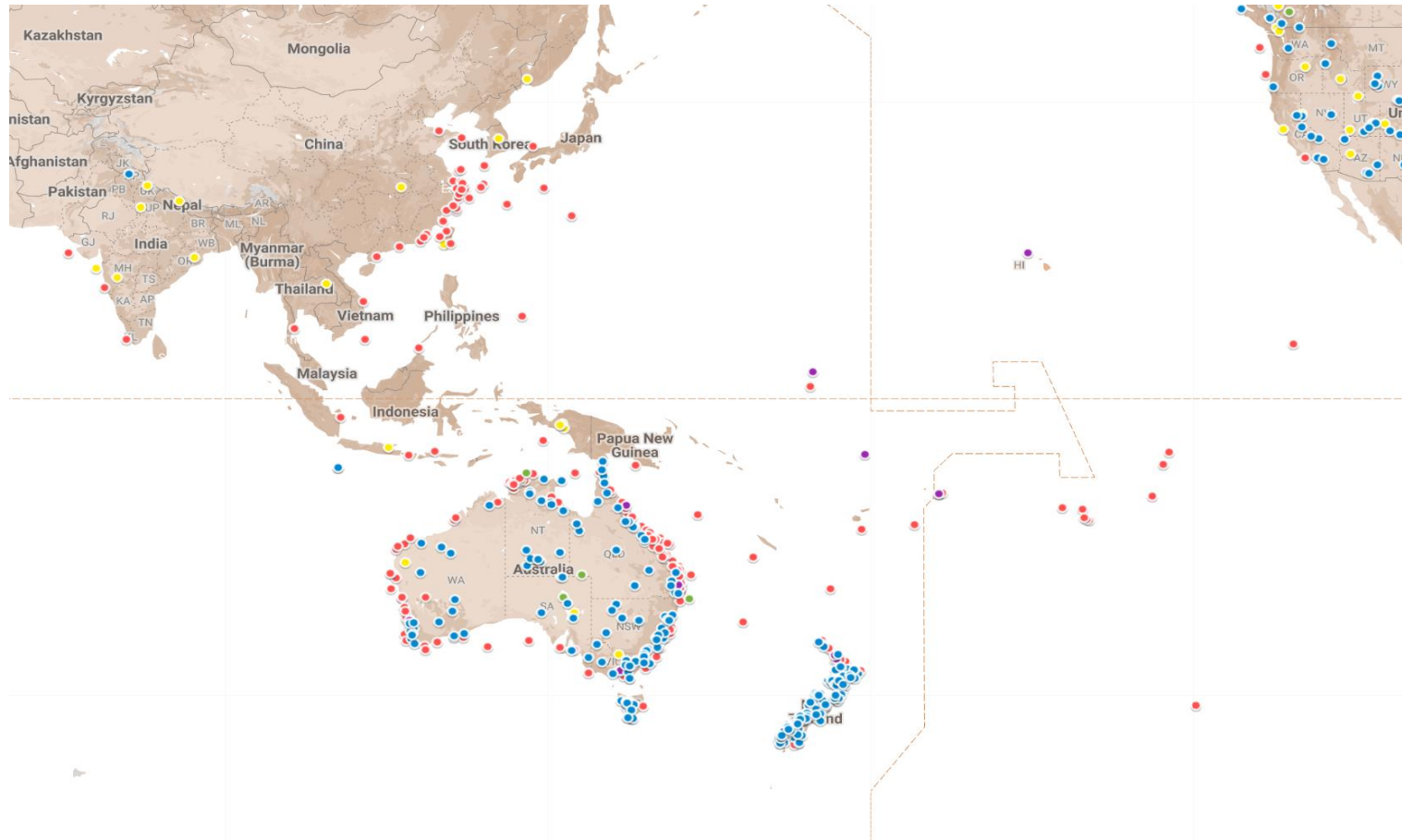


Figure 2: 2022 Geographic Distribution of SAR Events

System Operation



**Figure 2: 2022 Geographic Distribution of SAR Events
Asia-Pacific**

406 MHz Beacons

3,100,000 beacons deployed (75% being GNSS capable) (2022)



406 MHz Beacons



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
- 110,600+ beacons

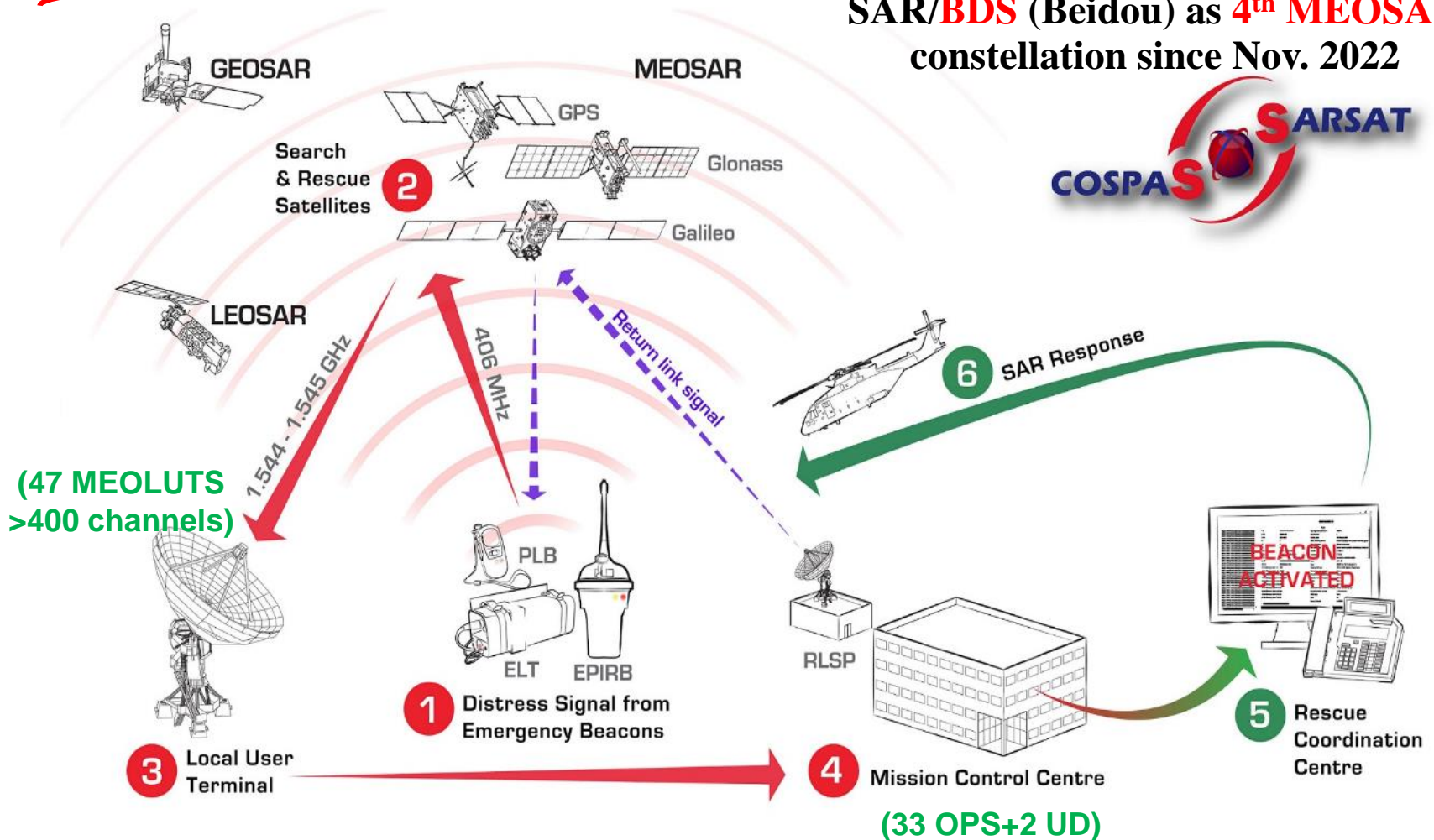
Allows:

All beacon types, including

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

The System

SAR/BDS (Beidou) as **4th MEOSAR**
constellation since Nov. 2022



SPOC Communication

	2018	2019	2020	2021	2022	2023
Number of SPOCs tested by MCCs	154	161	165	171	171	161
Non-responsive SPOCs (no response to tests)	8.44%	8.70%	7.23%	8.19%	5.85%	4.96%
Rarely responsive SPOCs (less than 20% successful tests)	6.49%	5.59%	6.02%	3.51%	5.85%	4.96%
SPOCs with low success ratio (between 20 and 50% successful tests)	10.39%	9.94%	7.23%	9.94%	7.0%	11.18%
Insufficiently responsive SPOCs	25.32%	24.22%	20.48%	21.44%	18.70%	21.11%

SPOC Communication



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

MCC-SPOC Agreements

MCC-SPOC Agreements in Indian Ocean and Asian-Pacific Areas

- French MCC – France, MRCC La Réunion
- French MCC – France, JRCC Tahiti
- Indian MCC – Maldives
- Indian MCC – Nepal (CAA)
- Italian MCC – Somalia
- Italian MCC – Sudan (CAA)
- Saudi Arabian MCC - Bahrain
- South African MCC – Mozambique
- Vietnam MCC – Cambodia
- Vietnam MCC – Laos

New SIT 185

- **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

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



System Enhancements

Full
Operational
Capability
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

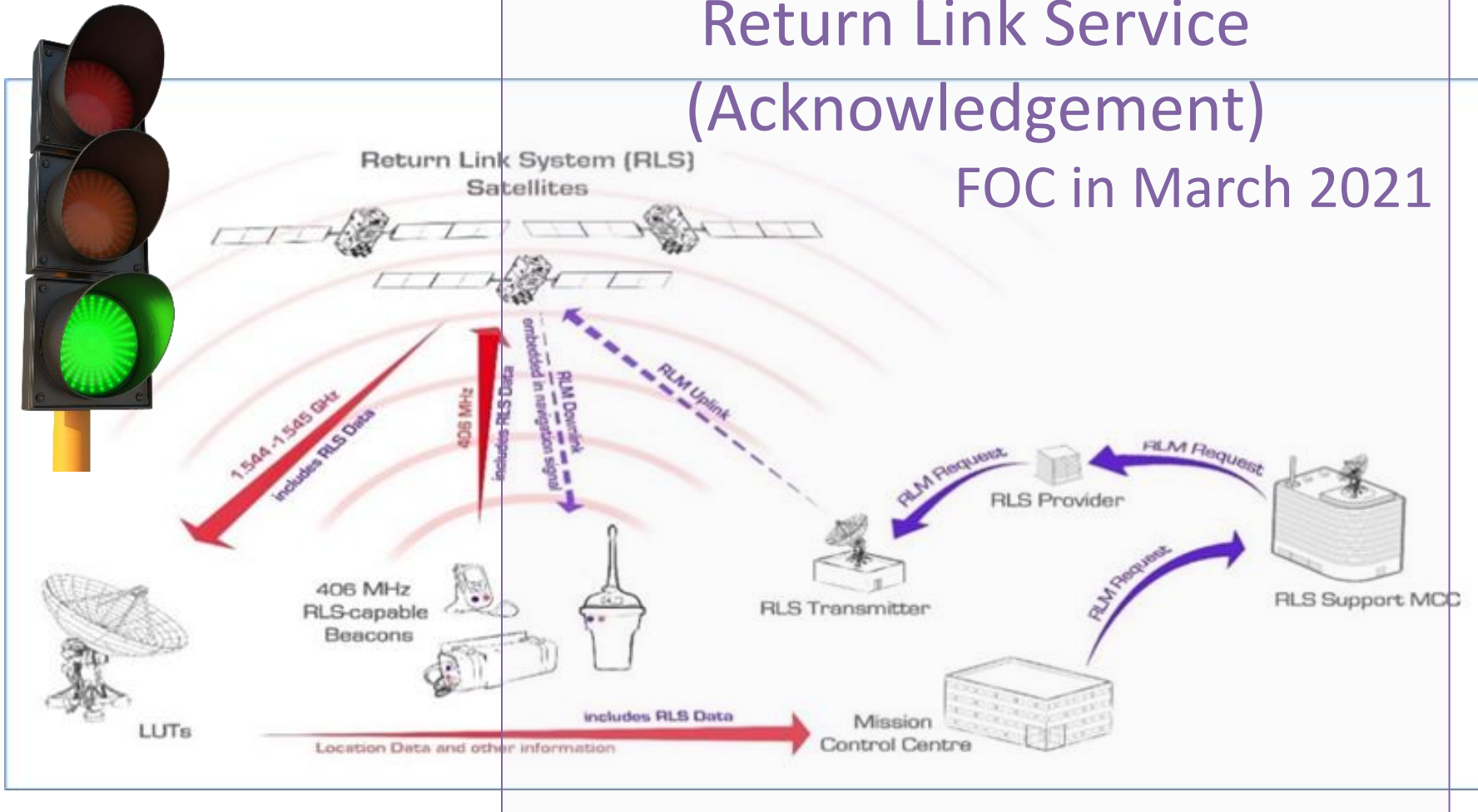
SGBs

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



System Enhancements

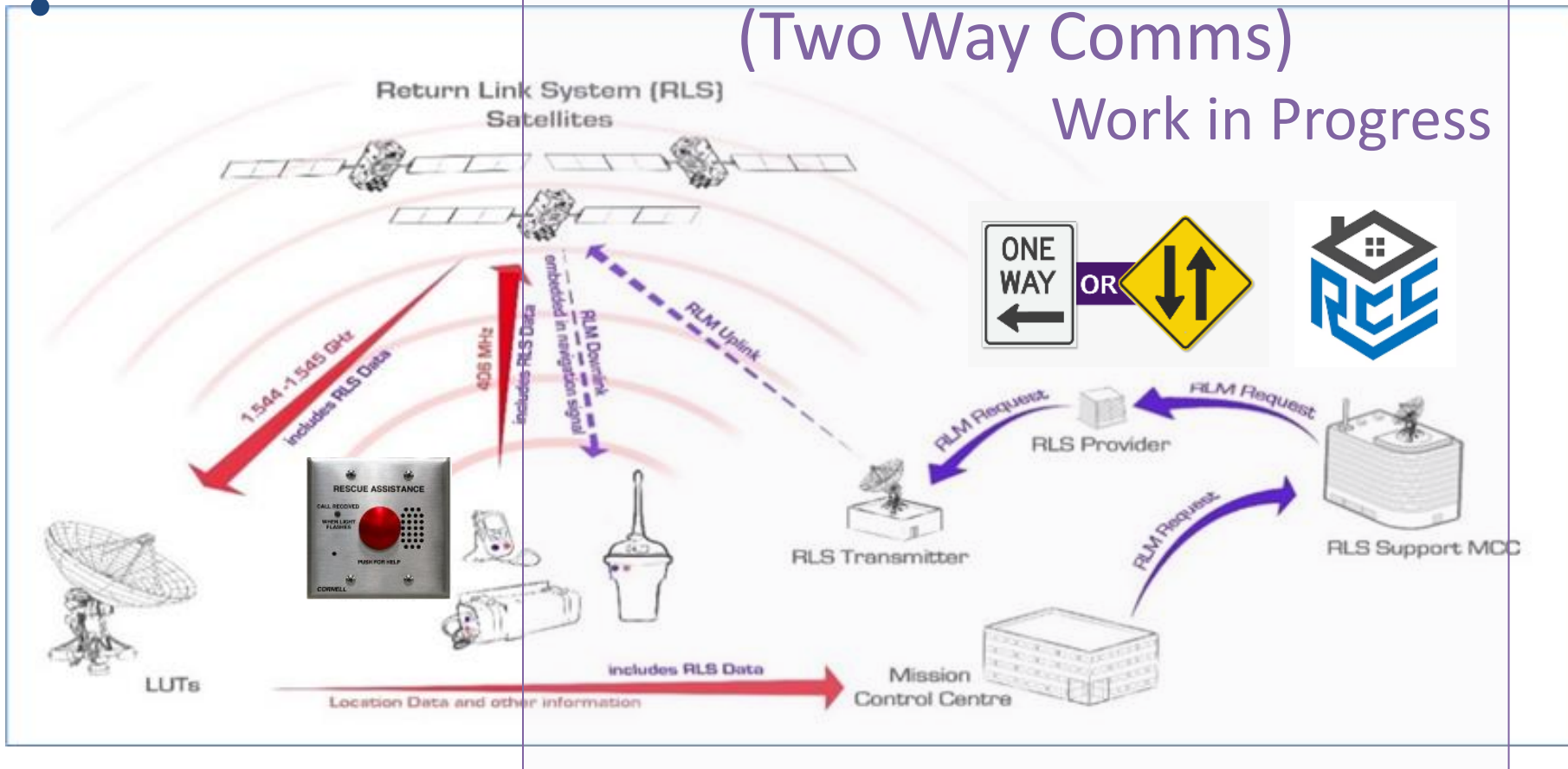
Return Link Service (Acknowledgement) FOC in March 2021



System Enhancements

Return Link Service (Two Way Comms)

Work in Progress



Training Materials

- RCC
Manual
G.007
- Videos



<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
406TM DISTRESS ALERTING SERVICE

COSPAS SARSAT

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f 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
- ▶ Rescue Stories
- ▶ Beacon Ownership
- ▶ Beacon FAQ
- ▶ Testing Your Beacon
- ▶ Inadvertent Alerts
- ▶ Information Bulletin