

**SINGAPORE ARMED FORCES
CHEMICAL BIOLOGICAL RADIOLOGICAL &
EXPLOSIVES DEFENCE GROUP**



COL HO KONG WAI
COMMANDER, CBRE DG

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PRESENTATION SCOPE

- Video & Introduction
- Vision and Mission
- Structure & Organization
- CBRE Operations in Singapore
- Enhancing CBRE DG Capabilities
- CBRE Ops-Tech Integration



GROWING TERRORIST THREATS

- Gulf War prompted the SAF to begin Individual Chemical Defence Training in 1991
- Tokyo Subway SARIN Gas Attack and Oklahoma City Bombing reinforced the need
- SAF developed limited chemical response capability in 1996 for WTO Meeting in Singapore





SAF – CBRE CAPABILITY BUILD UP

- National level Inter-Ministry Working Committee (IMWC) conceived in 2000
- Sep 11 & Anthrax attacks : Developed National Ops Capability to address CBRE terrorist threats
- CBRE Defence Group was formed in Oct 2002





CHALLENGES

- **Global city with a high population density**
- **Need to contain and minimize impact**
- **Enhance confidence in homeland security**
- **Prevent its use as an instrument of fear**
- **Paradigm shift from conventional to Terrorist Threat orientation**
- **New challenges in Improvised Explosive Devices containing CBR Payloads**
- **CBRE Operations shifted from Open terrain to Enclosed places**





OUR VISION

Be A World-Class Operationally Ready & Technologically Advanced CBRE Force

OUR MISSION

Provides Specialist CBRE Advice and Support throughout the Spectrum of Operations.

REACH

Deploy high readiness CBRE expertise to geographical locations in Singapore and the region

RIGHT PEOPLE

Tapping the expertise of the right people at the various levels

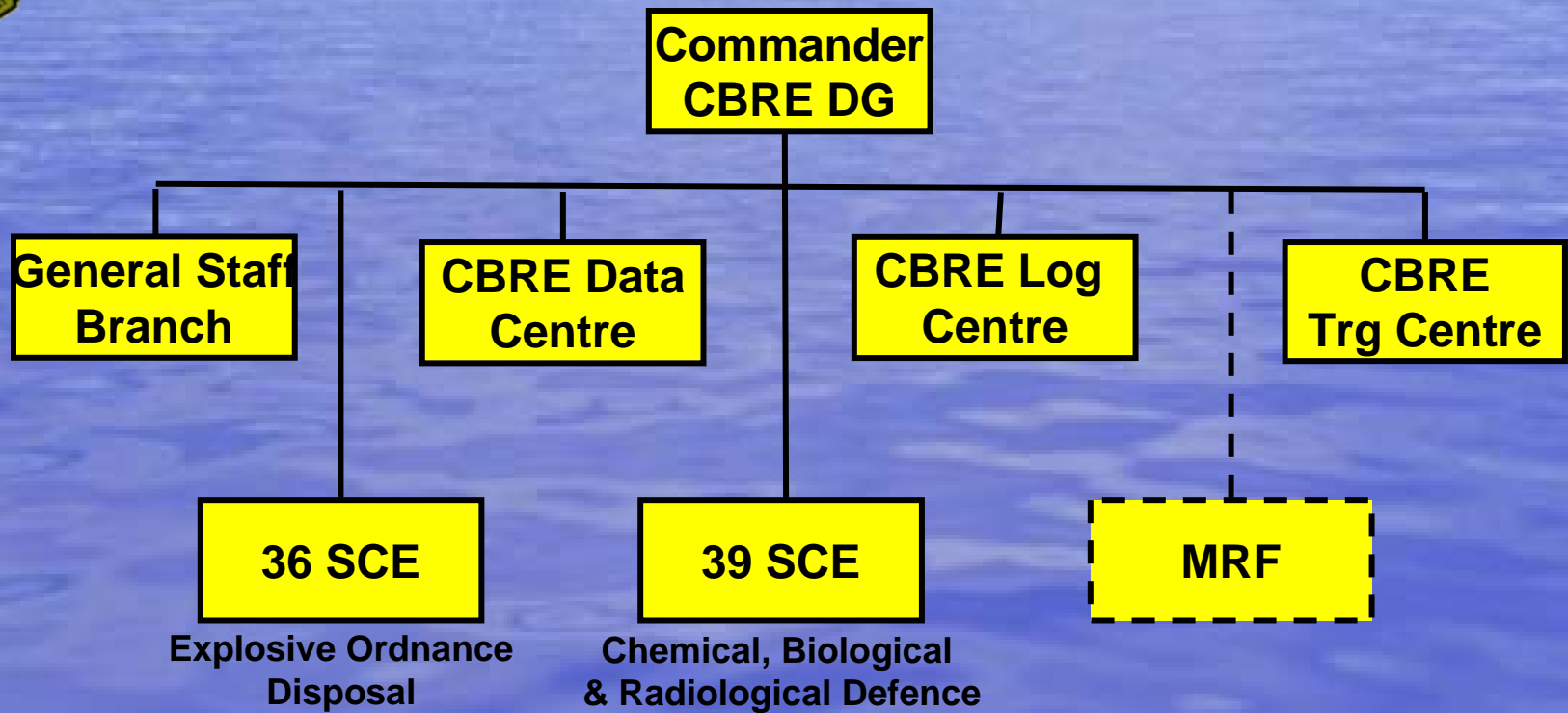
RICHNESS

CBRE professional knowledge, skills and application of advanced technology in operations.

Key
Success
Factors

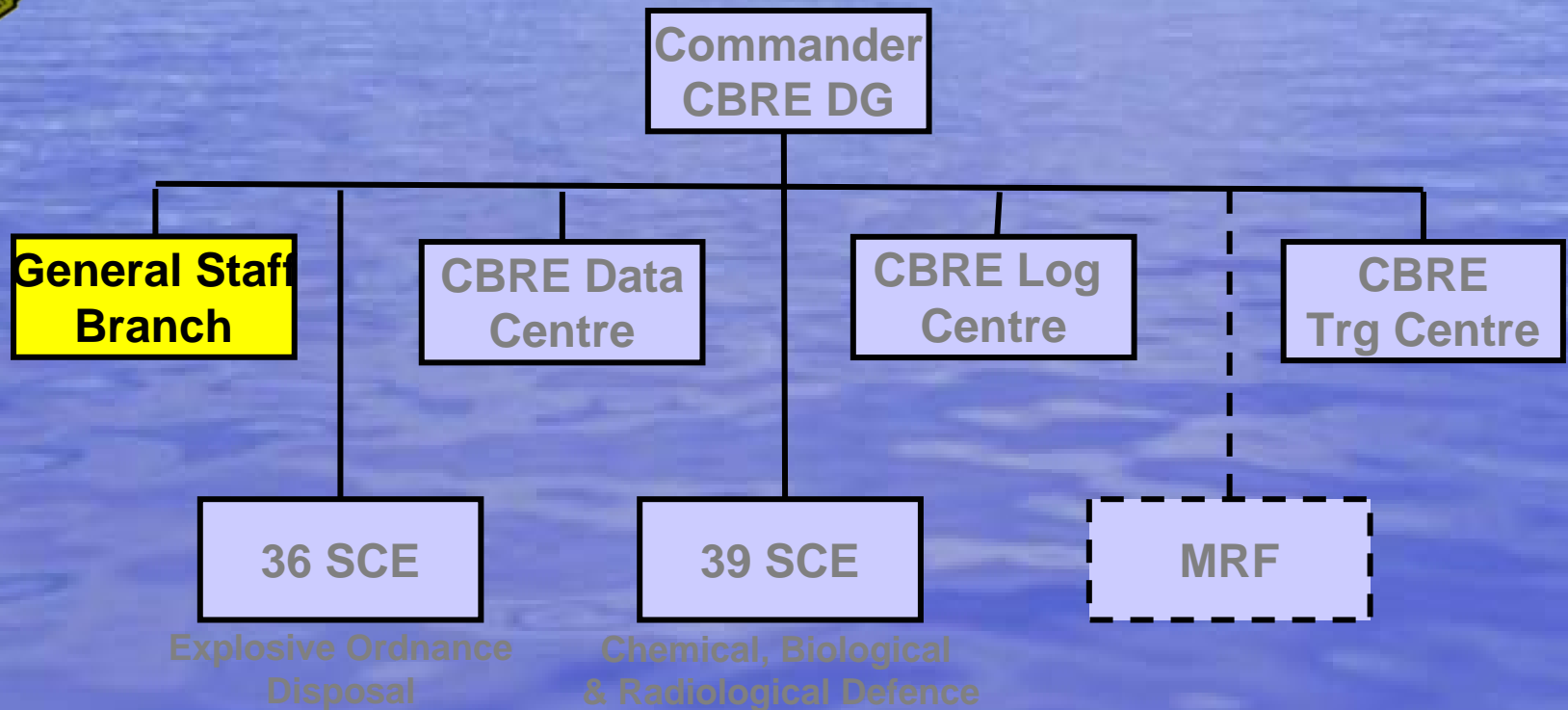


STRUCTURE & ORGANIZATION





STRUCTURE & ORGANIZATION

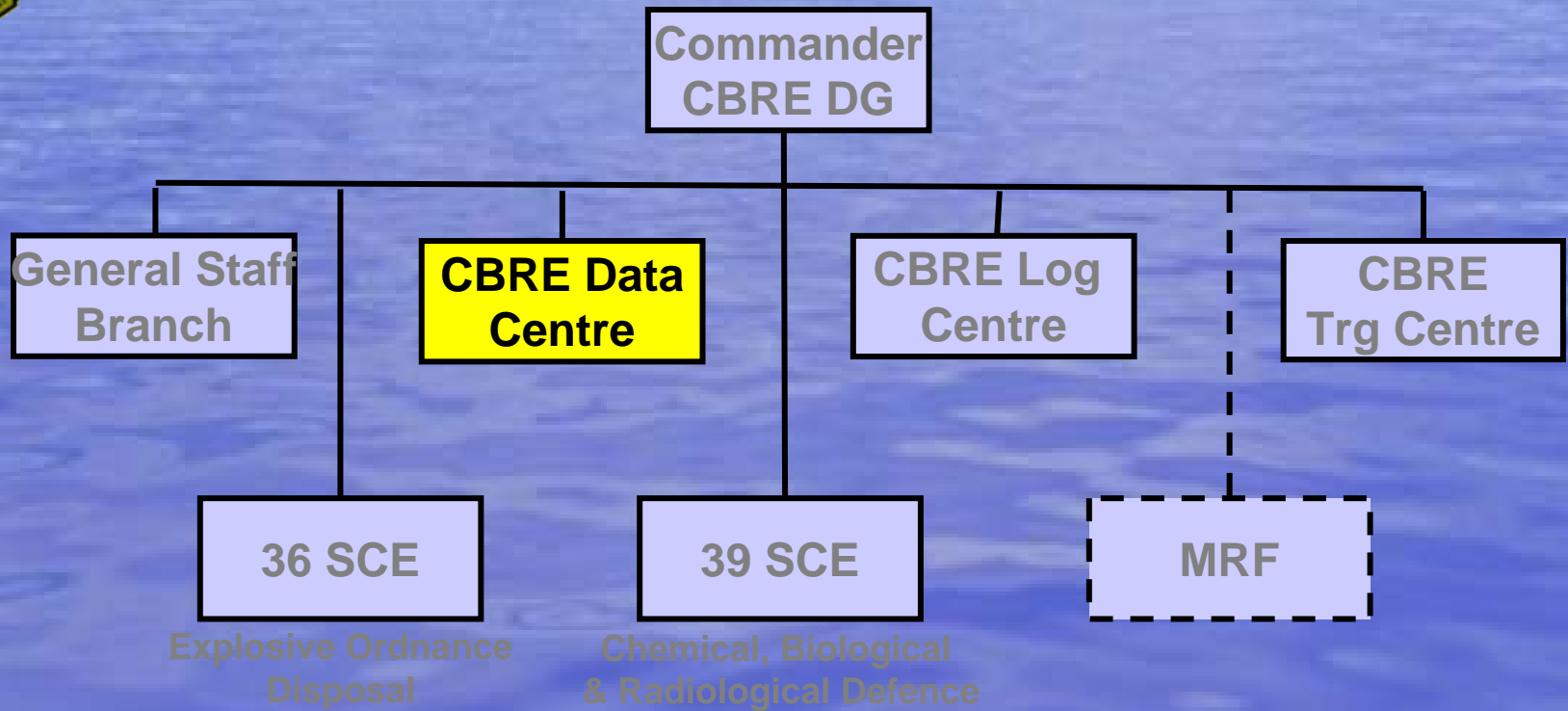


- Plan and manage CBRE operations in full spectrum of operations
- Develop CBRE doctrine and training
- Drive and manage CBRE Technology Acquisition / S70 Research & Development
- Manage MP ROA for all CBRE vocationalists





STRUCTURE & ORGANIZATION

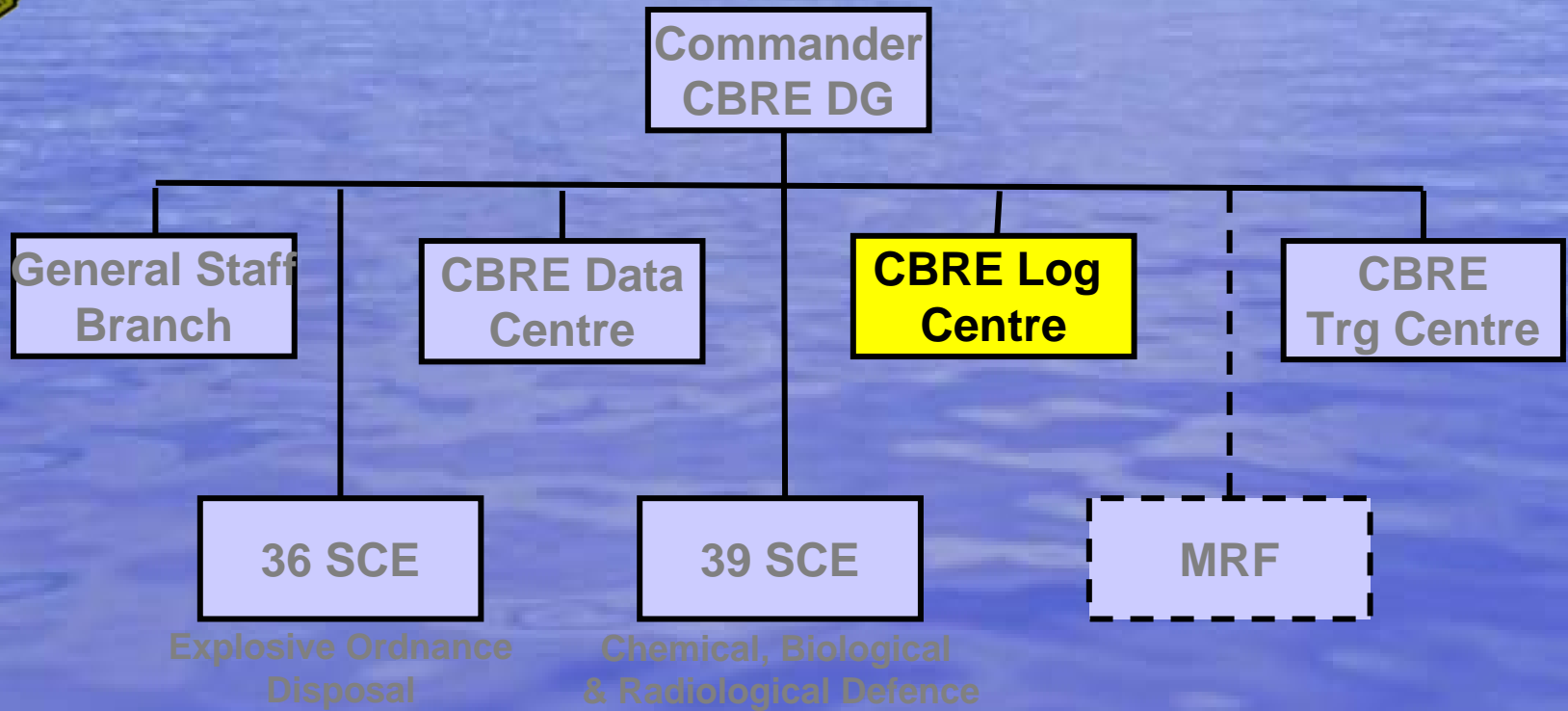


- Conduct intelligence and operational research for operational, doctrinal and capital development
- Provide both distant and on-scene CBRE intelligence support.
- Provide post CBRE incident investigation support





STRUCTURE & ORGANIZATION

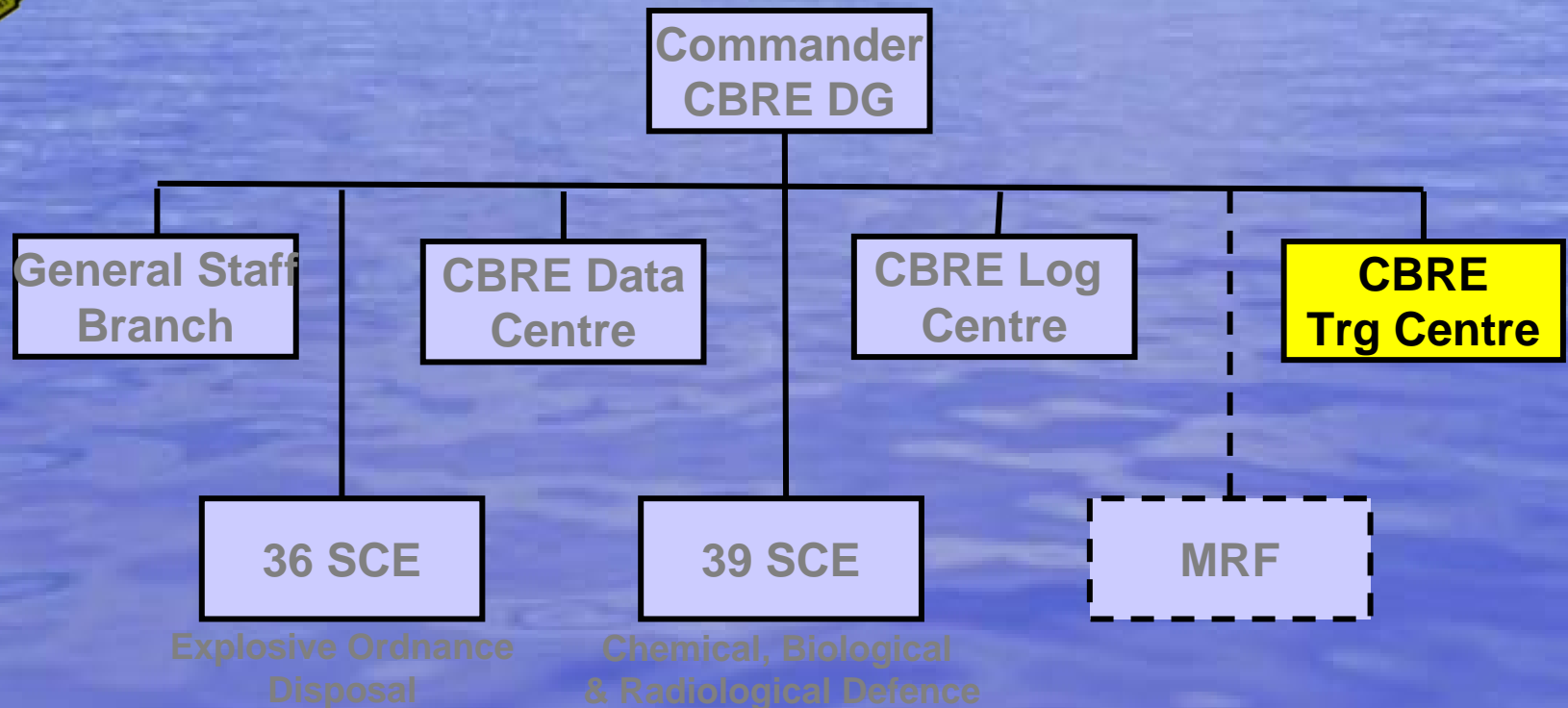


- Maintain high logistics readiness
- Oversee and manage the supply of centralised stores
- Provision of dedicated and unique maintenance for CBRE equipment
- Maintaining a 4-hr repair capability





STRUCTURE & ORGANIZATION

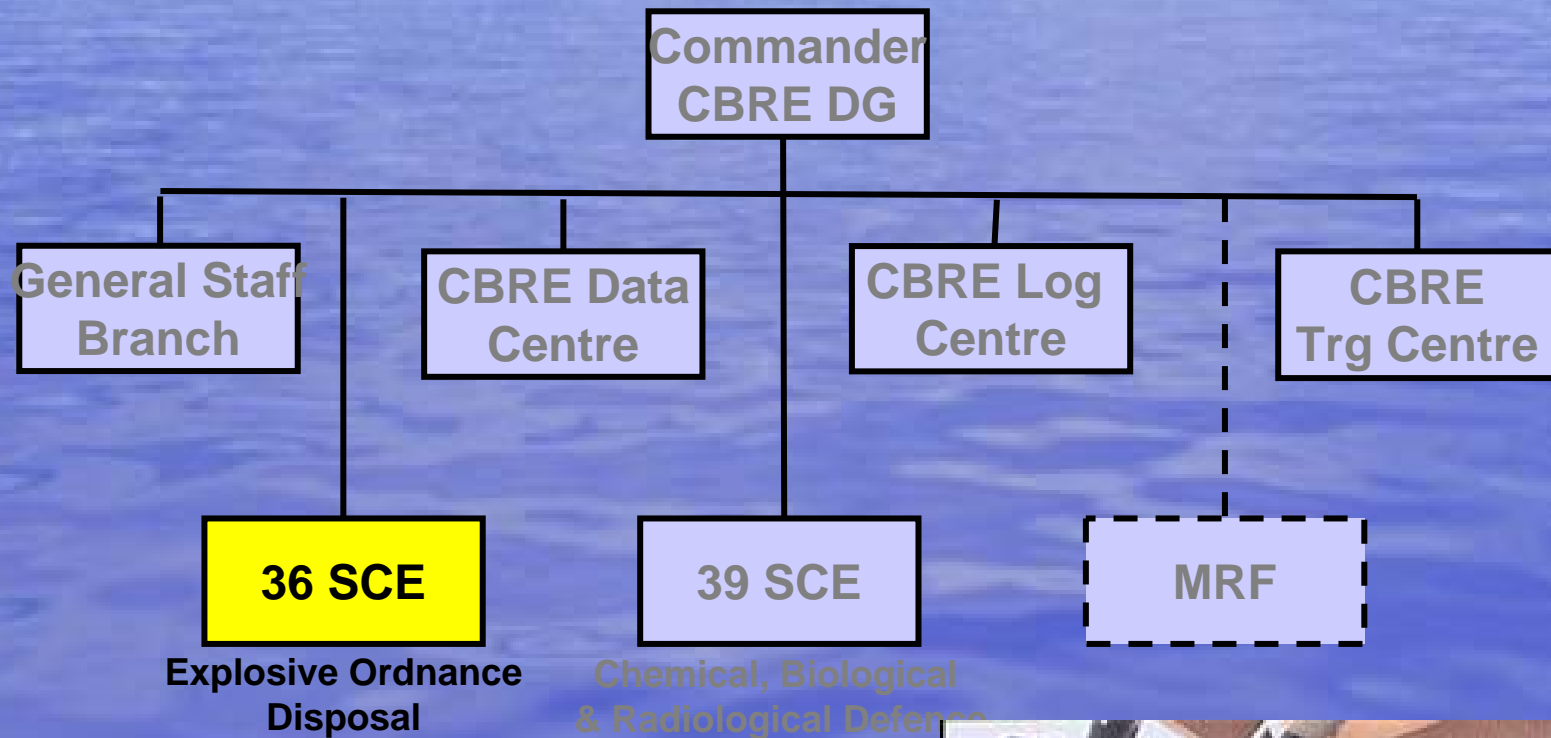


- Develop CBRE course syllabus and training packs
- Conduct CBRE vocational courses for Command
- Conduct of NS ICTs
- Evaluate Annual ETEPs
- Assist to conduct evaluation trials to enhance ops and training needs





STRUCTURE & ORGANIZATION

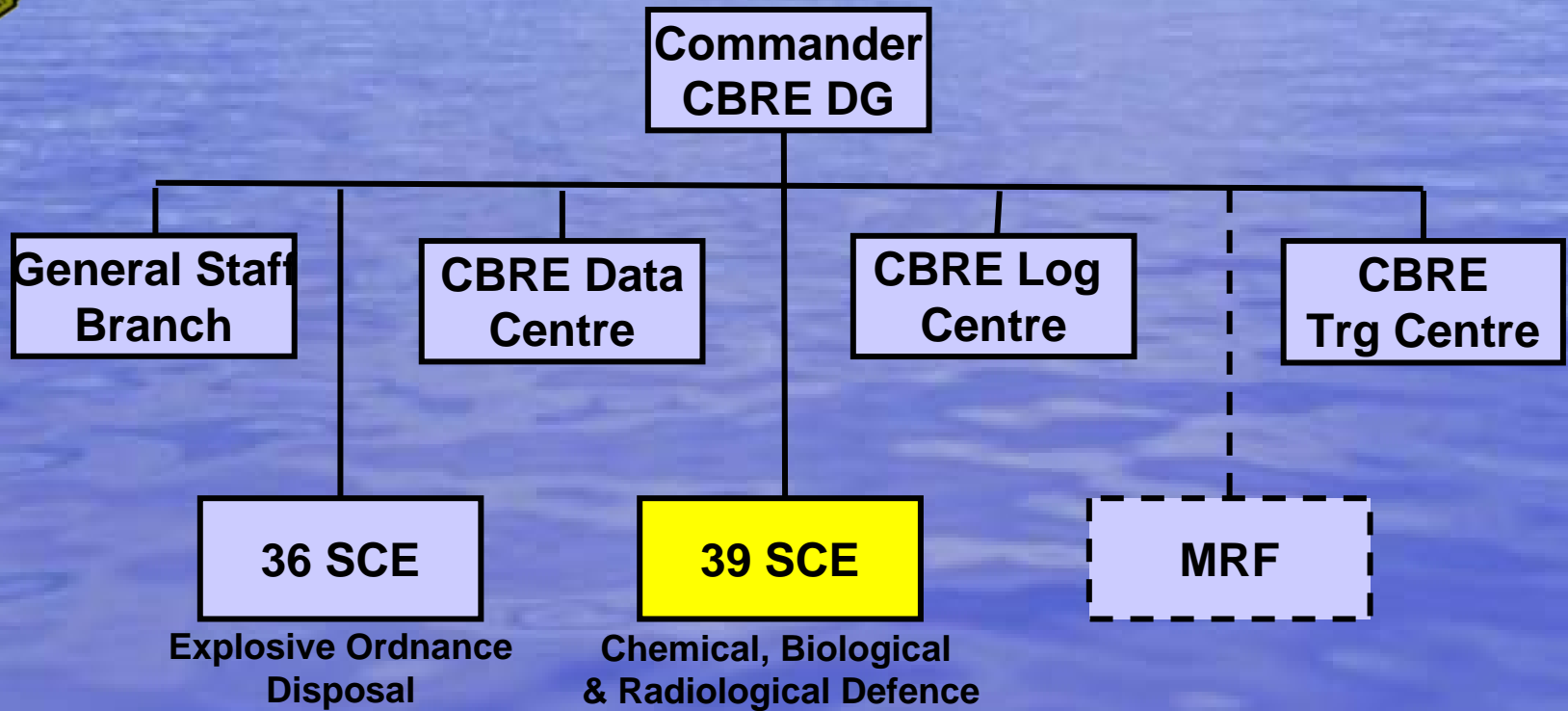


- Preventive Bomb Sweeps
- Conventional EOD Clearance
- IED Disposal Operations with CBR payloads
- Post Explosion Investigation





STRUCTURE & ORGANIZATION

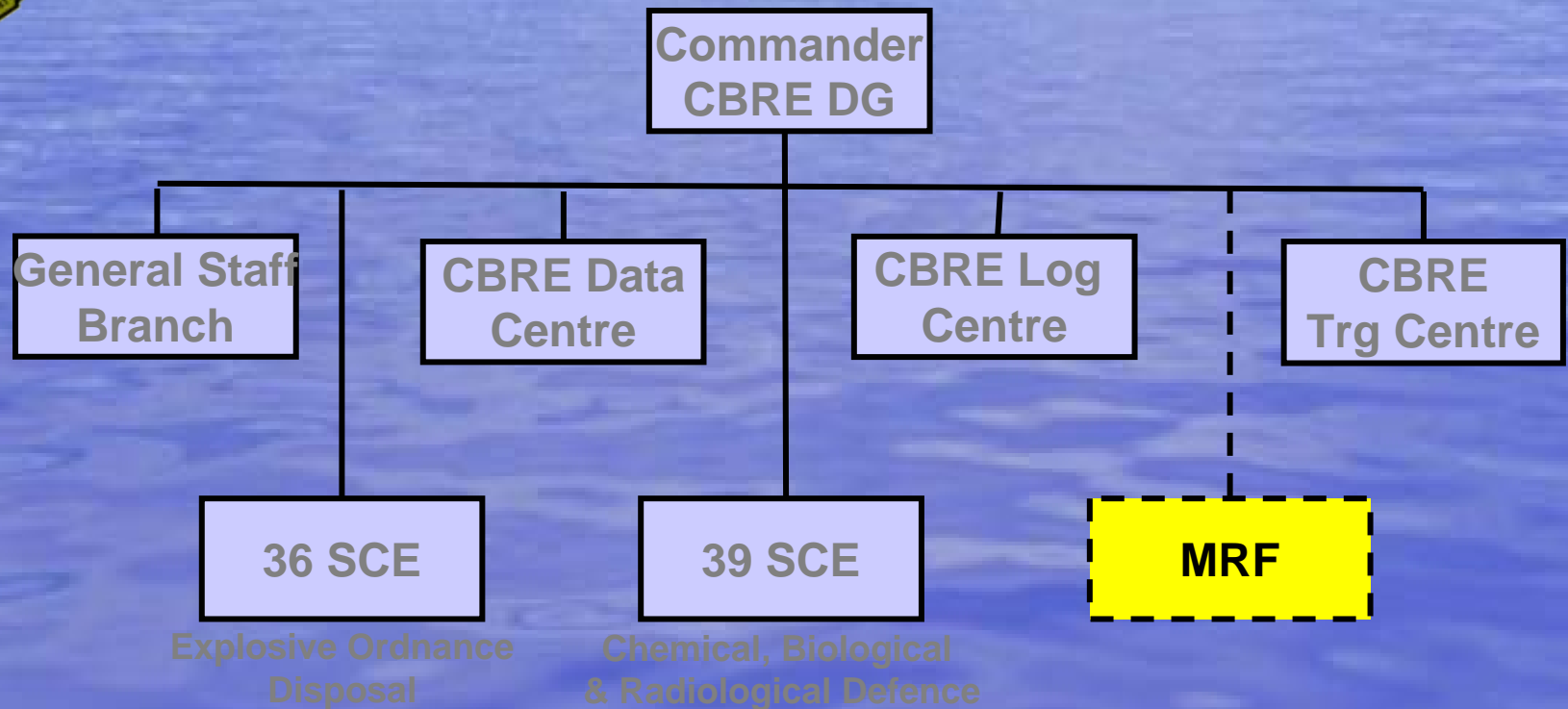


- Preventive CBR Sweeps
- Surveillance, Sampling, Detection & Identification of CBR Threats
- Decontamination Operations
- Post Incident Monitoring





STRUCTURE & ORGANIZATION



- Provide on-site medical treatment for chem - bio casualties
- Evacuate casualties to hospitals





CBRE OPERATIONS IN SINGAPORE

- Maintain ops response at 15min NTM
- Maintain a Step-up system if earlier section has been activated for response
- Additional assets to be placed on standby at higher THREATCON levels
- Command and Control *multiple* CBRE incidents





CBRE OPERATIONS IN SINGAPORE

Recent events

- Letter Bomb at Myanmar Embassy (Oct 02)
- SARS - MOH Ops Group (May 03)
- Ops FLYING EAGLE III (Jan 05)
- Chemical incident inside Changi Air Base (Apr 06)
- CBRE Search Ops onboard MV President Adams (May 06)





CBRE OPERATIONS IN SINGAPORE

Year 2005

- World Economic Forum (28 - 29 Apr 05)
- IISS Asia Security Summit - The Shangri-la Dialogue (3 - 5 Jun 05)
- International Olympic Committee (IOC) Session (2 - 9 Jul 05)
- National Day Parade (NDP) Preview & NDP (30 Jul & 9 Aug 05)

Year 2006

- Asian Aerospace (21 - 26 Feb 06)
- Singapore General Elections (27 Apr - 6 May)
- IISS Asia Security Summit - The Shangri-la Dialogue (2 - 4 Jun 06)
- NDP Preview (29 Jul 06)
- National Day Parade (6 - 9 Aug 06)
- IMF - World Bank Conference (Singapore 2006) (12 - 20 Sep 06)



Enhancing CBRE DG Capabilities

- Minimize risk exposure, integrate COTS Robots with
 - CBRE Detection
 - Mitigation
- Early warning, evaluate COTS stand-off detection and identification for CBRE threats
- Deal with 'Dirty Bombs'
 - Render-safe
 - Containment





Medical Bio-Defence

Physical
Countermeasures



Chemical, Biological & Radiological Defence (CBRD)

Defence Medical & Environment Research Institute (DMERI)

DEFENCE SCIENCE ORGANISATION

- NATIONAL LABORATORIES



Medical Countermeasures -
Chem

Detection &
Verification



THANK YOU