

INTELLIGENT END-TO-END COMMUNICATIONS AND CONNECTIVITY SOLUTIONS FOR OIL AND GAS CONTINUOUS AND SAFE **UPSTREAM** OPERATION

OFFSHORE OPERATIONS CONTROL ROOM

APPLICATIONS

SMARTPTT PLUS | TRBONET PLUS

- Pressure, temperatures, corrosion and tide monitoring
- Paging, alarms and sirens systems interconnection
- Emergencies shutdown
- Safe workers with man down and lone worker features
- Video and analytics applications integration

SAFETY VIDEO WITH HIGH-RESOLUTION CAMERAS

Improper use of masks detection, social distancing

INTRINSICALLY SAFE HAZLOC COMMUNICATIONS

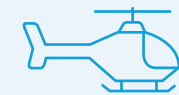
Great voice quality despite wind 

WORKERS ACCESS CONTROL

LOCAL PLATFORM COVERAGE WITH LTE BROADBAND

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 **INTEROPERABILITY WITH
OTHER NETWORKS AND
EMERGENCY AGENCIES**



AERO-MOBILE RADIO

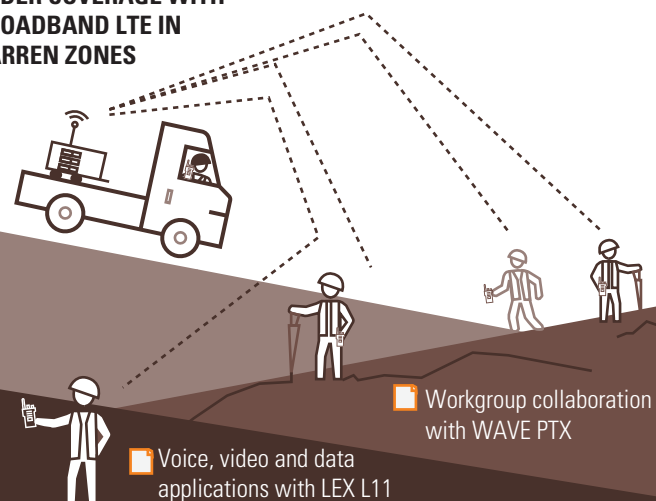
 **LOCAL SHIP
COVERAGE WITH
LTE BROADBAND**

MARINE RADIO


COAST GUARD

EXPLORATION

WIDER COVERAGE WITH BROADBAND LTE IN BARREN ZONES



 **Workgroup collaboration
with WAVE PTX**


 **Voice, video and data
applications with LEX L11**

ONSHORE AND OFFSHORE OPERATIONS CONTROL ROOM

SMARTPTT PLUS | TRBONET PLUS

- Pit head, engine coil temperature, pressure, temperature and vibration monitoring
- Non-conventional fields with tele-supervised pits
- Machines maintenance proactive alert
- Emergency shutdown
- Paging, alarms and sirens systems interconnection
- Access to field information to improve decision-making

INTRINSICALLY SAFE ATEX/INMETRO COMMUNICATIONS

- Worker safety with active/inactive radio report
- GPS real-time personnel location
- Industrial noise cancellation 

ARTIFICIAL INTELLIGENCE WITH ANALYTICS

- Detection of masks and unusual activity
- Appearance search

Information generated in field and transmitted to the control room using applications

PRODUCTION

PERIMETER SAFETY WITH EXPLOSION-PROOF CAMERAS

**PUBLIC
SAFETY AND
EMERGENCY
AGENCIES**

 **SCADA SYSTEMS
FOR TELEMETRY**

 **WIDER COVERAGE WITH
CAPACITY MAX SYSTEM**

 **ROBUST LTE SYSTEM FOR LARGE OIL FIELDS
THAT REQUIRE VOICE AND DATA**