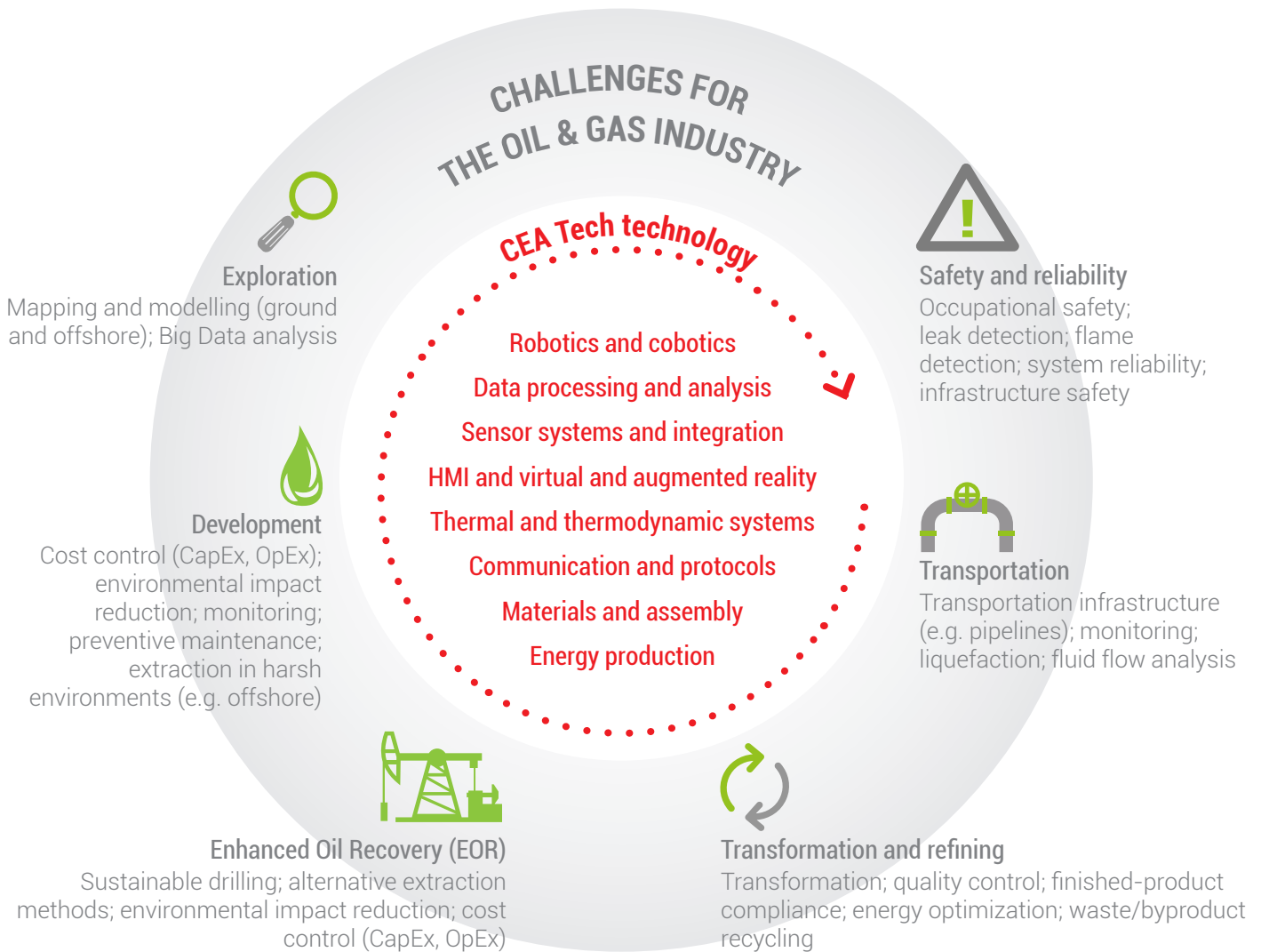


FROM RESEARCH TO INDUSTRY

cea tech

CEA TECH SERVICES FOR THE OIL & GAS INDUSTRY

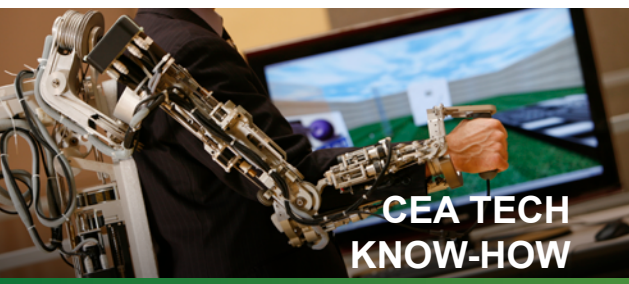
Technology for oil & gas industry challenges:



CEA Tech can help the following businesses:

- Companies in the oil & gas industry
- Equipment manufacturers and suppliers
- Certification organizations and regulatory authorities

Here are some of the ways CEA Tech can support your development:



Sensor systems and integration

Monitoring in harsh environments (high temperature or pressure, corrosive, etc.); ground exploration; continuous pipeline monitoring; leak detection and gas identification; ground quality control

Energy (batteries, fuel cells, photovoltaic) and energy harvesting

Energy supply for off-grid sites; submarine and drone motorization systems; resistance to high temperatures; self-powered sensors

Big Data and data analysis

Exploration data processing

Materials (surface treatment, deposition, nanomaterials)

Consumables reliability; temperature-, pressure-, and corrosion-resistance of drilling equipment

Assembly (powder injection molding, sintering)

Assembly of complex structures; elimination of machining to reduce costs; structures with heterogeneous properties

Communication and protocols (RFID, Wi-Fi, Ultra Wide Band, ZigBee)

Reliability of wireless communication in demanding environments

Non-destructive testing

Characterization of composite materials and welds; predictive maintenance (temperature, deformation, etc.)

Thermal and thermodynamic systems

Flow and extraction analysis and modelling; waste heat recovery

Robotics and cobotics

Automated pipeline control; operator assistance

HMI and virtual and augmented reality

Operator training; maintenance and operations assistance; remote robot control

Vision systems (IR, THz)

Leak detection; worker safety; human presence detection; embedded systems for control robots

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