

Innovation in GE Oil & Gas



GE imagination at work

GE Innovation for over 130 years



1879, Carbon Filament Incandescent Lamp – Edison invents the 1st

1895, World's largest Electric Locomotive – GE puts electricity to work



1910, 1st Hotpoint Range – improving life in the kitchen

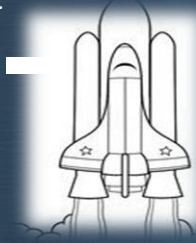


1920, Portable X-ray Machine – suitable for dental & portable use



1921, the Magnatron – key element for World War II radar systems

1941, entering the jet age – GE builds 1st US jet engine



1969, one step on the Moon – supplying technologies for 1st manned landing



1986, Lighting the Statue of Liberty – providing products & funding to relight national treasure

1998, Lightspeed™ CT Scanner – 1st capture multiple images simultaneously



2002, Wind Power – GE enters the wind power business

Coming to 21st century ...

2003, Evolution Locomotive – GE introduces **new fuel-efficient** locomotives

2010, WattStation™ Charging electric vehicles at home or on the road

2013, MultiOymx – Advanced cancer diagnostics to see & study cancer in **new ways**

2014, CFM-LEAP engine, with GE invented ceramic matrix composite & 3 printed metal parts – both jet engine **first**

2015, 9HA Gas turbine – the **largest & most efficient** gas turbine in the world

2009, Vscan™ – Handheld ultrasound technology extends the reach of healthcare

2012, Durathon™ Battery – Next-generation battery developed at Global Research

2013, Predix – GE's software platform for the industrial internet

2014, GE Evolution Series Tier 4 Locomotive – 1st Locomotive to meet US EPA's stringent Tier 4 emission standards



GE imagination at work

Major trends of the next industrial era

Industrial
Internet

Advanced
Manufacturing

Open innovation

Software

Domain
knowledge

Advanced
analytics

Software
Platform
(Pre dix)



Technology
Acceleration

Software

Design
innovation

Manufacturing
innovation

Materials
innovation

- ◆ Industrial data growing at 2x other data
- ◆ Most complex data sets

- ◆ Innovating with customers
- ◆ Collaboration ecosystems

- ◆ New paradigm = manufacturing technology + materials innovation
- ◆ Digital thread



GE imagination at work

HARNESSING THE INDUSTRIAL INTERNET TO DRIVE:

RELIABILITY

Increase availability
and longer asset life



COST REDUCTION

Lower operating costs
with greater efficiencies



RISK MITIGATION

Lower operations
and financial risk



PROFITABLE GROWTH

Greater operational control
yields greater profits



GE imagination at work



5-10%

DOWNTIME
faced in today's
oil & gas
industry



\$150MM

AVERAGE COST
OF DOWNTIME
in a mid-size
LNG facility



\$7MM

PER DAY IN
LOST REVENUE
for an offshore
well out of
commission



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6 – 8%

IMPROVED
PRODUCTION
with big data
analytics

35%

AVERAGE WORLD
OIL RECOVERY
today

3

YEARS OF GLOBAL
PRODUCTION
equivalent to 1%
improvement in recovery



GE imagination at work

Where GE is driving innovation

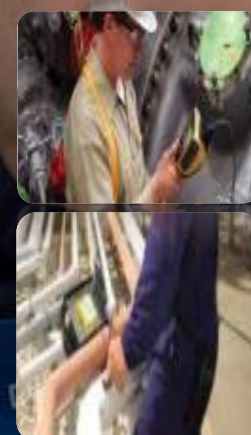
Reduced
Environmental
Impact

Efficient and
Optimized
Operations

Improved
Resource
Recovery

Monetization
and Network
Reliability

Partnering,
Collaboration,
and Policy



Diesel
Replacement

Water
Management

Fugitive
Emissions

Controls &
Inspection

Electrification



GE imagination at work

THE GE STORE

Driving Competitive Advantage Across Our Businesses

Governed by culture and simplification

Supported by GE Capital:

- Financing infrastructure investments



- Access GE - providing services & industry-specific expertise





OPERATIONAL EXCELLENCE TO MANAGE THE ERA OF COMPLEXITY



GE Oil & Gas is inventing the next industrial era in the oil and gas sector. In our labs and factories, and in the field, we constantly push the boundaries of technology to solve today's toughest operational & commercial challenges.

We have the skills, knowledge and technical expertise to bring together the physical and digital worlds to fuel the future.



GE imagination at work



TECHNOLOGY SOLUTIONS DESIGNED TO DRIVE LONG - TERM SUSTAINABILITY

We drive enterprise advantages that benefit the entire company, through what we call the “GE Store.” It means that every business in GE can share and access the same technology, markets, structure and intellect.



GE imagination at work



PARTNERING TO BE CLOSER TO YOU

We go where you go and operate side-by-side in 120 countries.

The closer we are to our customers, the quicker we can anticipate and solve their challenges.



GE imagination at work



SKILLS & CAPABILITIES FOR THE FUTURE



Fueling the future means fueling our people's futures. They are masters of what they do and their search for progress is relentless.

We invest in them and give them the responsibility to do what they do best.



GE imagination at work

GE's efforts to support the development of the industry at the end of the age of easy oil, while it faces the biggest talent shortage in its history, focus on two channels

Technology

- ORegen/UOR/EOR
- Subsea factory/BOP
- LNG/CNG/Shale
- Artificial Lift

People

- Developing local capabilities
- Oil & Gas University localized program
- Talent secondment program with partners

Supporting the growth of China



WE FUEL THE FUTURE.

We push the boundaries
of technology to bring
energy to the world.



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