

Reliable Innovation

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GE imagination at work

Industry needs “reliable innovation”



**Deeper
water**



**Eliminate
surface facilities**

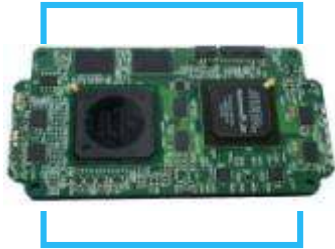


**High temperature /
higher pressure reservoirs**

How to solve the paradox?



Reliable innovation ... Case study



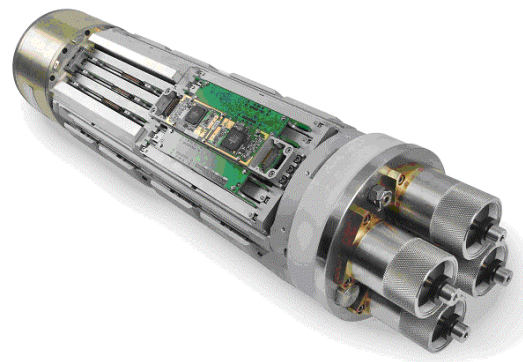
Validated Technology

Single board computer utilized in similar harsh environments



Remote Monitoring, Diagnostics & Control

Harsh environment proven designs



SemStar 5 Subsea Control
Open architecture ... RM&D-ready



Proven Design Process

Rigorous technology development process ... Accelerated life testing, validated models



Structured Product Philosophy

Combining product flexibility with change management. Voice of the customer.

Stepping toward a sea bed power plant

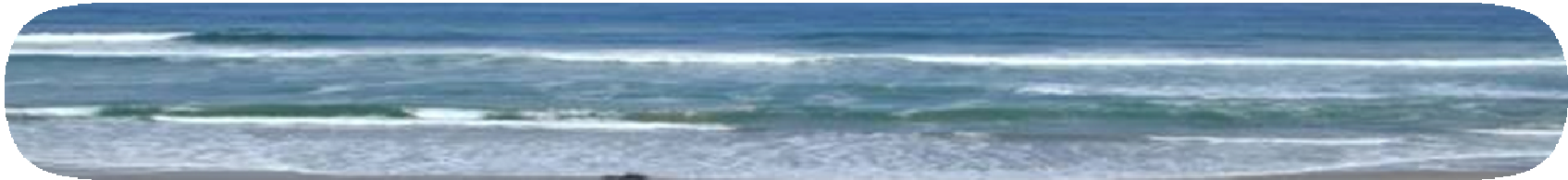


Validated Technology

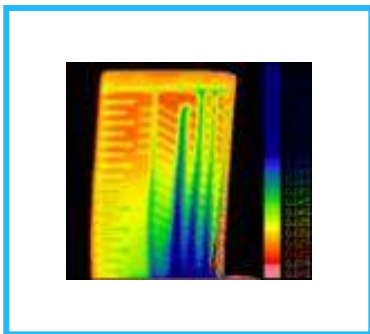
Erosion resistance,
anti-fouling coatings ...
Leverage billions of
investments

Remote Monitoring, Diagnostics & Control

Field proven
capabilities
monitoring turbo-
machinery
worldwide



Eliminating Surface Facilities Subsea Processing



Predictive System Modeling

Computer models &
simulation to predict
behavior ... optimum design,
improved operations

Incubate with Operators

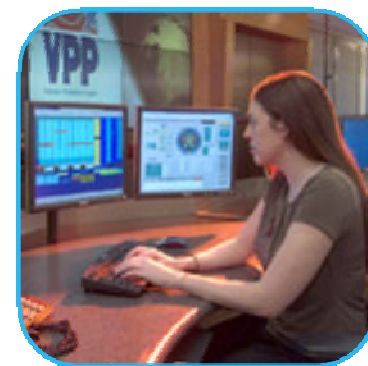
RPSEA forums,
GE session T's



Separation Simulator ... RPSEA 1901



- Plug and play system model
- State-of-the-Art modeling: Multi-phase, multi-physics → unlock innovations
- Rigorous experimental validation in 2010 → Validated reliable designs
- Ability to fuse sensor data ... online predictive & optimization model → Reliable operations



Pre-requisites for “reliable innovation”

- Understand physics
- Involve operators
- Leverage proven technology
- Use physics and technology to optimize operations

