

# SMART DATA TECHNOLOGIES

IDEAS FOR GETTING VALUE FROM OIL & GAS DATA



[www.rgu.ac.uk/digitechresearch](http://www.rgu.ac.uk/digitechresearch)

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**IDEAS  
RESEARCH  
INSTITUTE**

Innovation, DDesign And Sustainability



**ROBERT GORDON  
UNIVERSITY ABERDEEN**

The Centre for Smart Data Technologies focuses on collaborative R&D in the field of Big Data Analytics for the Oil & Gas sector. Big Data are typically characterised by the "three Vs": Volume, routinely in the Tera/Petabyte range; Velocity, generated very rapidly from streaming sensors; Variety from combining highly heterogeneous data from different sources.

The Oil & Gas industry has identified a strong business need to make use of the vast data generated by exploration and production operations. The collection of data on each rig and through each pipeline provides terabytes of data daily. The Centre is an internationally recognised R&D hub developing leading-edge intelligent analytics technologies for big data generated by subsea installations that supports high-value decision-making and enables knowledge retention in offshore exploration and production. It provides opportunities to grow close working relationships with leading operators and contractors to solve key technical challenges in the monitoring and management of subsea fields.

#### WE SPECIALISE IN LEADING-EDGE ANALYTICS TECHNOLOGIES FOR:

- Enhanced efficiency in subsea installations
- High-value decision-making
- Knowledge retention

#### SPECIALISED R&D HUB BUILDING ON RESEARCH STRENGTHS IN:

- Data modelling & optimisation
- Smart information systems
- Data/text mining
- Situation-aware decision support

#### SOLVING KEY TECHNICAL CHALLENGES IN:

- Predictive monitoring
  - Sensor data
  - Data modelling-decision support
  - Minimise down-time
- Incident management
  - Reports
  - Text mining-information retrieval
  - Lessons learned once
- Workflow planning
  - Plans
  - Knowledge extraction-retrieve & reuse
  - Mitigates risk
- Predictive monitoring
  - Incident management
  - Workflow planning
  - Health & safety