



Doing More With Offshore Engineering Data – Aberdeen 2nd June 2014

Design Data Integration over E2E Asset Lifecycle and use in Joint Ventures



CGI is a Global IT and Business Process Services Leader

High-end business
and IT consulting

68,000 professionals

10,000 clients across
the globe

System integration, IT
and business process
outsourcing

400 offices,
40 countries around
the world

Client satisfaction:
9.1/10

100+ mission-critical
IP-based solutions

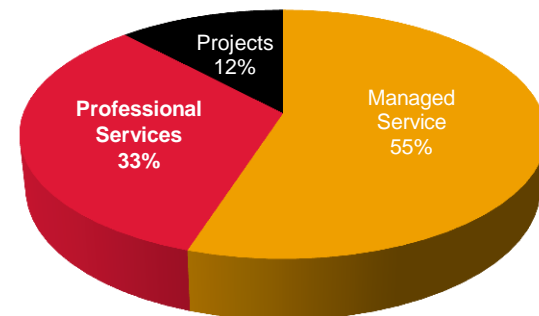
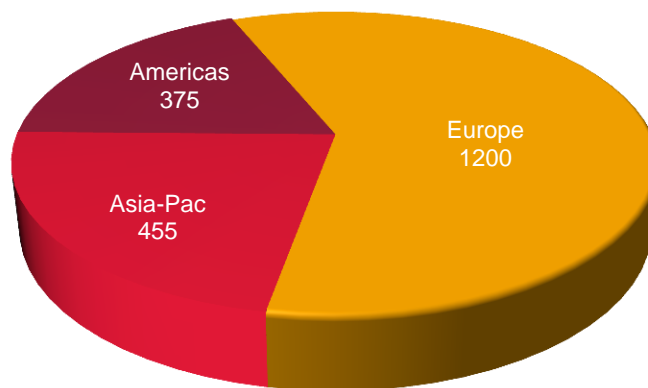
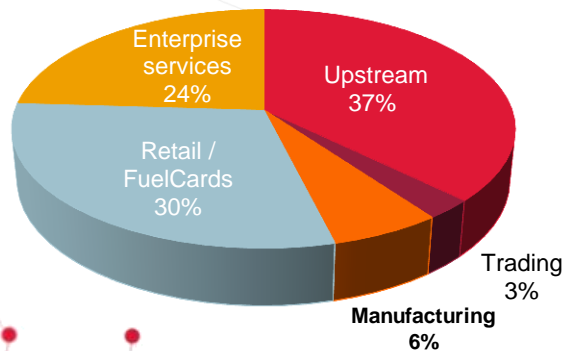
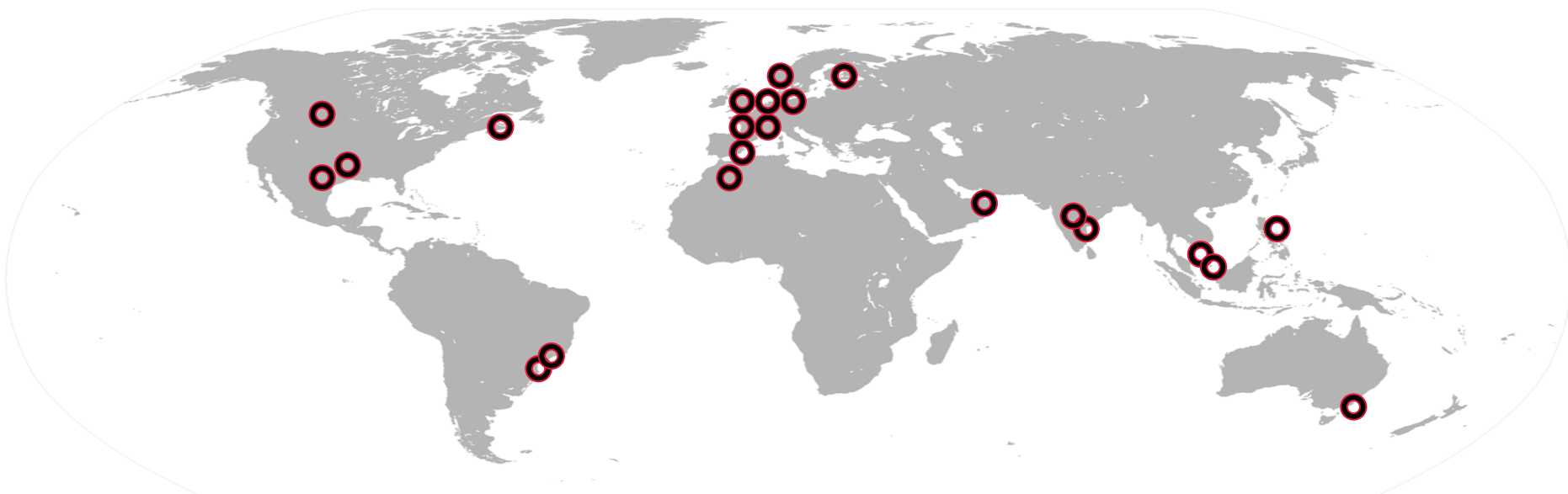
\$10.1B annualized
revenue



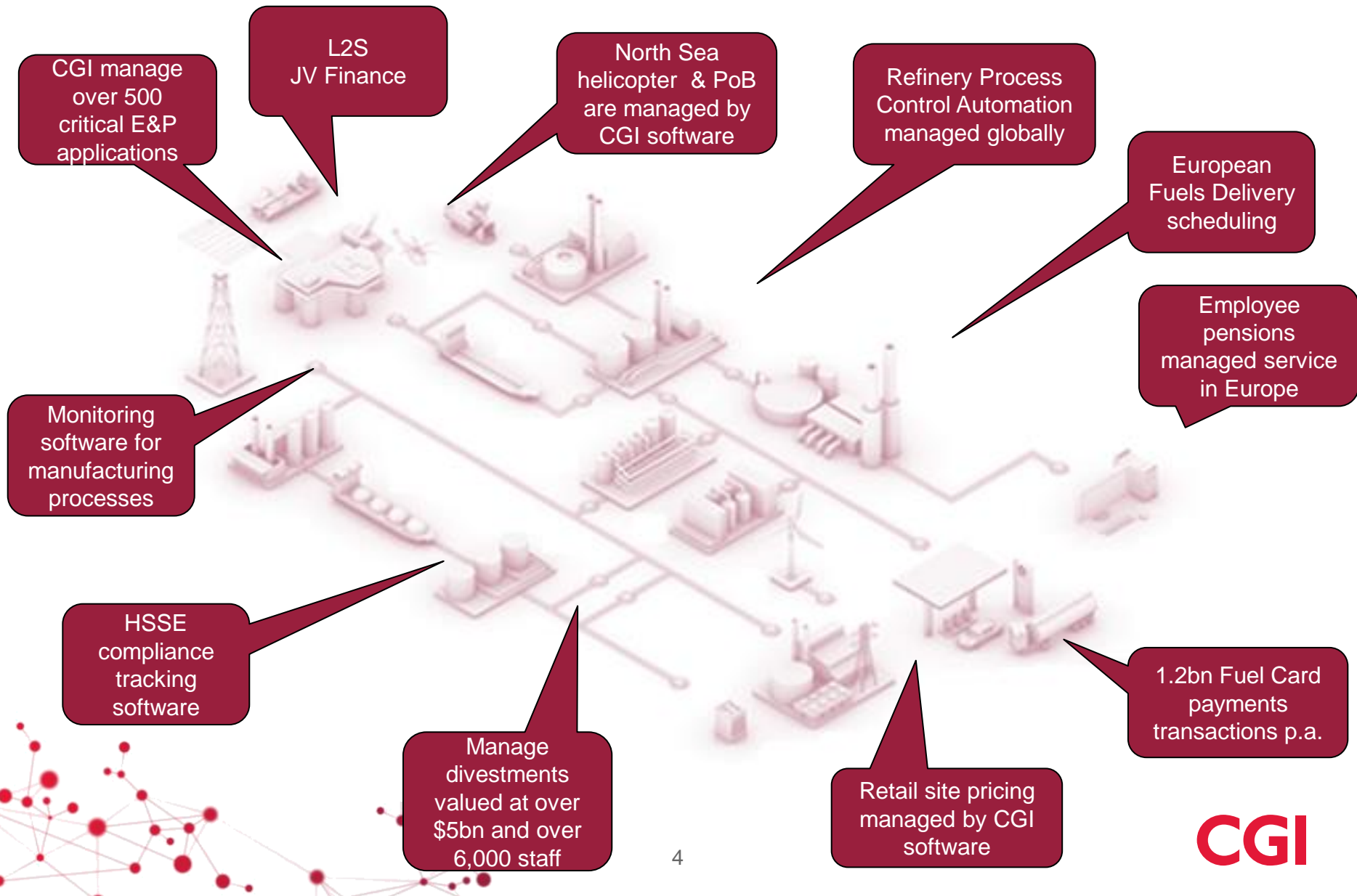
World's 5th largest independent IT and BPS firm



(over 2000 professionals from 24 locations)



Some of what we do for our partners ...



Design Data Integration over E2E Asset Lifecycle



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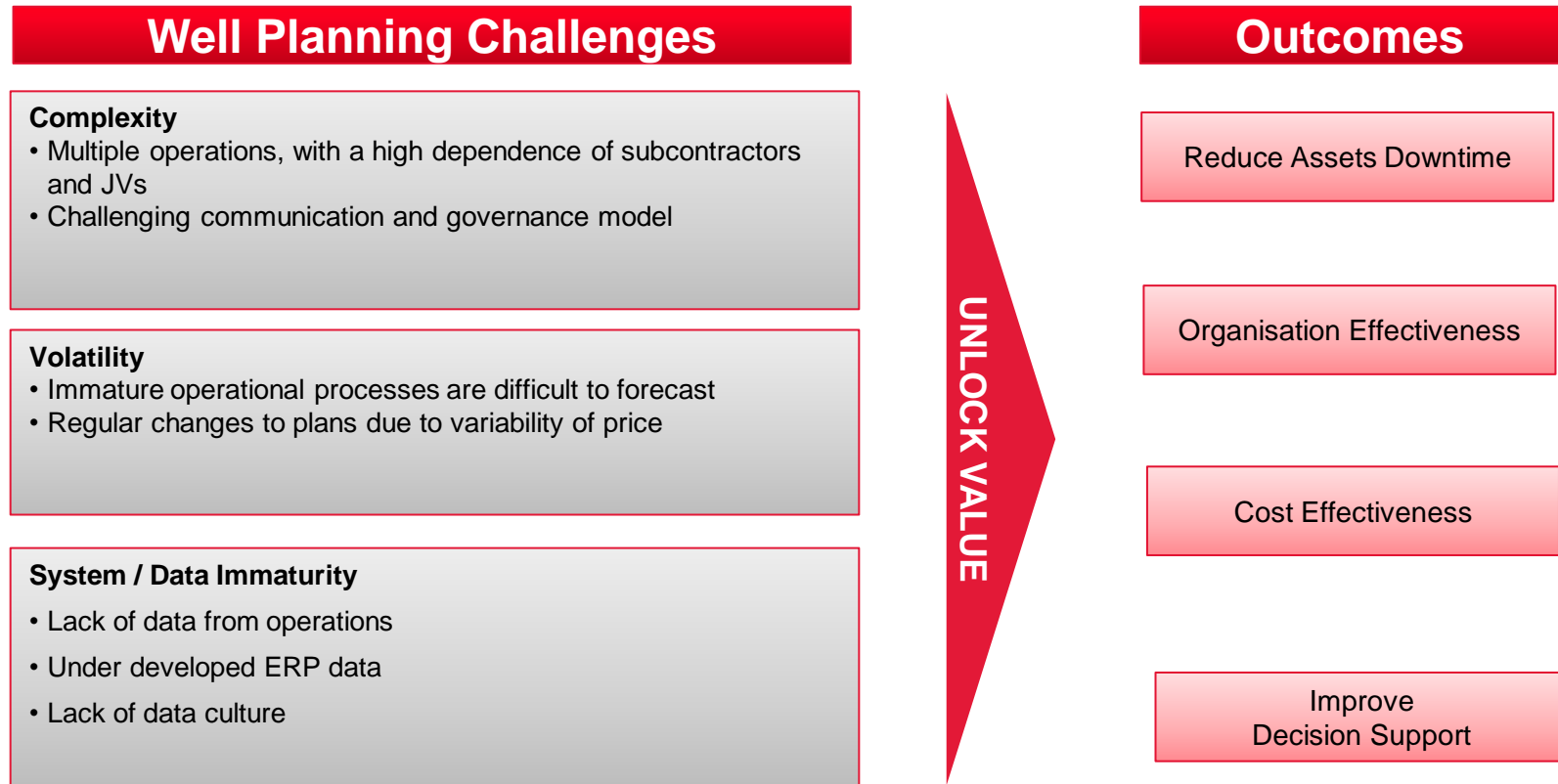
Fragmented Engineering Data & Documentation Accessibility Challenges

Organisations today face multiple challenges in abstracting the maximum value from their data management systems:

- Data is scattered over the enterprise, not only among different
 - applications, but also in different formats and among different line of business
- Multi-layered systems landscape and peripheral applications make it difficult for data to flow smoothly
- Plurality of applications, data sources, and business processes (including third parties networks) make the decision making process less dynamic and demand a robust governance model to ensure all components are effectively integrated
- Keep data safe and secure while requiring collaboration and information sharing across organisations add to the growing complexity



Our Approach in Responding to those Challenges – An Integrated Life Cycle Management Framework



Concrete, base lined, and agile methods to deploy CGI solutions in a scalable and cost effective ecosystem



Voice of the Assets – A Value Based Framework

Assets are able to talk to each other, and adapt and self heal based on intelligent data transmission, life cycle responsiveness and service levels compliance

Smart Assets

Listen to your assets: using sensor technology and mobility channels, they will transmit data on their condition, exchange intelligence, so you can address issues before they arise

Insight and Value

Maximise the value from your assets and workforce, pinpointing areas of focus and providing the right information to make effective decisions

Real Time Processing & Integration

Maximise the value from your assets and workforce, pinpointing areas of focus and providing the right information to make effective decisions

With the convergence of new generation apps and business management systems, we jointly work towards:

- Optimising your operations
- Managing risks
- Achieve concrete results without compromise



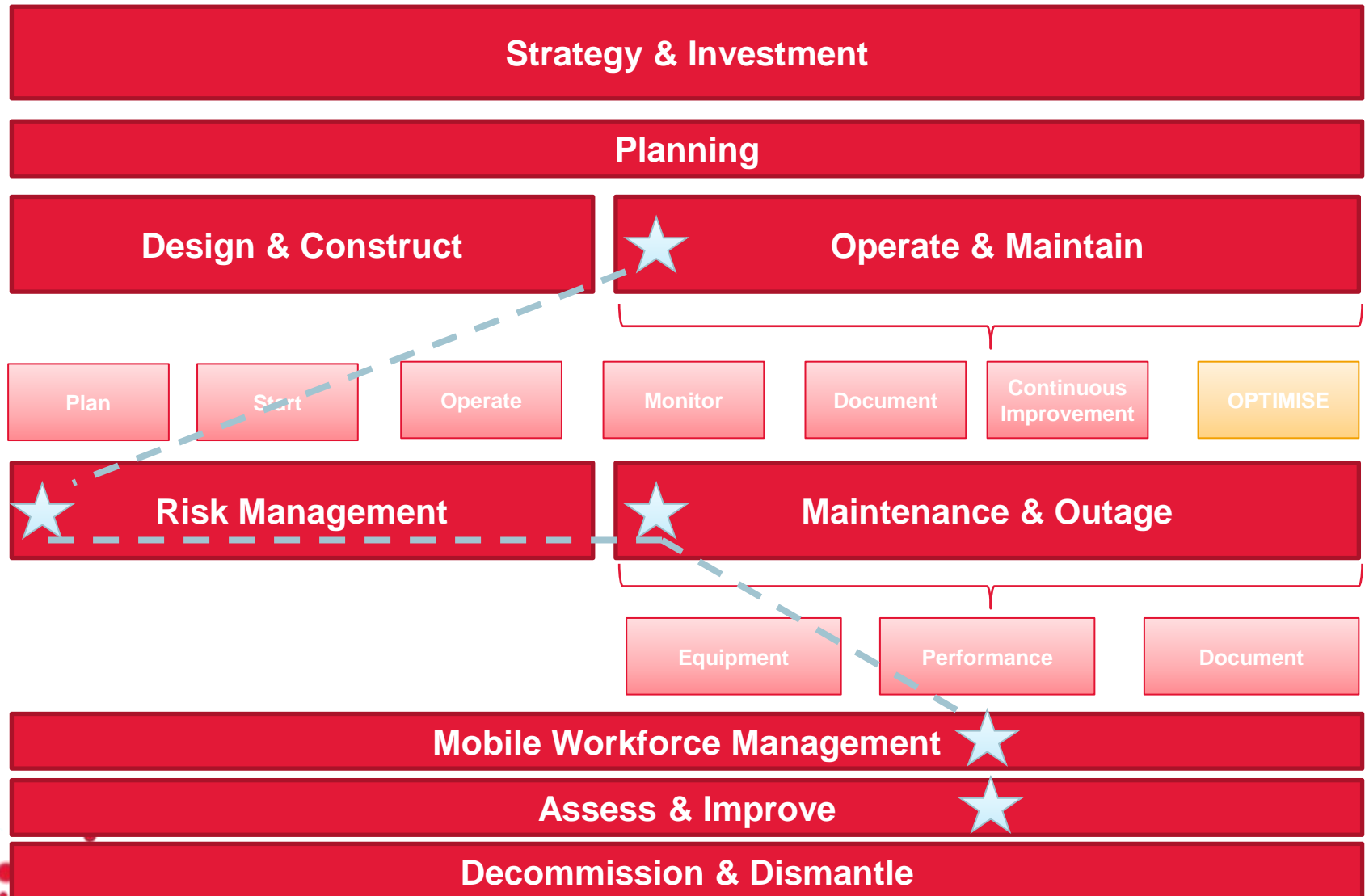
Smart Offering - Digital & Mobility

By extending enterprise asset management to mobile devices, we help leading organizations in the energy sector to realizing significant benefits across upstream, oil-field service, and downstream operations:

Domain	Scope	Services & Solutions
Asset Management	<ul style="list-style-type: none">• Drill rig and well maintenance• Work order management,• Assets and inventory management• Engineering data management	<ul style="list-style-type: none">• Offshore and onshore assets maintenance• Work order management,• Assets and inventory management• Engineering data management
Inspections, Monitoring, and Assessment	<ul style="list-style-type: none">• Fire, safety, and security inspections• Remote digital document access• Platform turnarounds	<ul style="list-style-type: none">• Real-time data surveillance (OSI Pi), for example, production optimization• GPS. geographic information system (GIS) , radio-frequency identification (RFID) – vehicle, asset, and personnel tracking
Regulatory Compliance	<ul style="list-style-type: none">• Environmental Assessment• Capacity extensions and retooling• Partner collaboration• Data privacy and neutrality	<ul style="list-style-type: none">• GPS; GIS; vehicle, asset, and personnel tracking• Life safety systems• Mobile training solutions
Materials Management	<ul style="list-style-type: none">• Procurement, reordering, and stock transfer orders• collection and quality assurance and quality control inspections• Stocking; and issuing	<ul style="list-style-type: none">• Ruggedized mobile devices to collect, update, and synchronize (in real time or batch) to back-end ERP and EAM systems• Mobile apps for supply and rental inventory management



CGI Enterprise Asset Management Framework



Asset Availability & Performance

Condition Monitoring

Supervision of the asset in Real Time data



Condition Reporting Tool

Detailed Report Providing the Operator with:

- What/Where is the problem?
- What is the type/severity of the problem?
- How did the problem occur? (Root cause)
- Who is the correct operator/role type to fix the issue?

Notify

Monitoring

Symptom

Symptom

Symptom

Symptom

**SAP
/Maximo**

Asset Optimisation Benefits

The Voice of the Asset A Value Based Framework

Smart Assets
“Listen”

Insight & Value
\$\$\$ + Resources

Real Time
Processing &
Integration

Asset Optimisation
for a single
Interface for
operations,
maintenance,
engineering &
asset
availability/uti-
lization

**Time & Cost
Reduction**
through
reduced time
to repair & fix
via optimised
and lean
workflows &
processes

**Automatic
Monitoring of
Maintenance
Conditions**
via real time
monitoring &
KPIs

**Asset wide
adoption of
predictive &
Proactive
Maintenance
Strategies**

**Consistent
Reporting of
Asset Health**

**Regulatory
Compliance
Embedded
within
Framework**

For other CGI Materials and Information ...

<http://www.cgi-group.co.uk/oil-and-gas/upstream/enterprise-asset-management>



A trusted platform to share information securely between stakeholders during the life cycle of oil and gas licenses bringing down costs, better governance and flexibility in regards to compliance and local legislation.

THE CHALLENGE

The UK oil and gas industry is undergoing a major shift. From large fields and large operators in the early days to smaller new discoveries, many marginal fields and greater interdependence in exploration, development and production. There is a need for operators to focus on maximising economic recovery for the UK as well as pursuing their individual commercial objectives. Asset stewardship is crucial in achieving this, and to minimise costs and maximise revenues, a greater constructive collaboration between operators, partners and regulators is needed.

Technology is a catalyst for this increased collaboration, but operators have rightly been cautious and need to protect sensitive information that provides competitive advantage. Much like the allied armed forces, the oil and gas industry demands high integrity, high security systems that allow you to share information only on a need-to-know basis.

To add further complexity, all parties involved have different processes, tools, technologies and reporting methods, making it much harder to retrieve the right version of information and to act or report.

OUR SOLUTION

To meet this demand, CGI has created a secure cloud service called License2Share, which allows users to access solutions that are tailored to the specific information sharing requirement they face.

License2Share is designed to enable license(s) sharing in a joint venture during its life cycle. Content is kept during the life cycle of the system and will not get lost. The flexible data management structure enables users to retrieve information in a fast and accurate way, while being flexible enough to deal easily with differences between joint ventures. This is crucial for reducing risks, efficient handling of disputes and staying compliant with local authorities. The handling of information and easy retrieval of it means that from the first line of usage cost savings are made which otherwise the business would have incurred.

The system uses role-based dashboards to allow joint venture administrators to maintain the licenses and workflow to operate and ensure they are compliant throughout the lifecycle of a joint venture.



- Secure platform to share information with joint venture parties during the license lifecycle
- Collaboration on workflows, events, compliance and legal document sharing, data management
- Increased visibility and efficiency of information processes within a joint venture
- Content management of different document types throughout their lifecycle
- Better governance and flexibility with regard to compliance and local legislation
- More than 50% savings in IT costs, to expensive IT investment
- More than 50% savings in document handling costs

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Companies are under increasing pressure to maximise return on their fixed assets, by reducing maintenance costs, improving reliability and maintaining asset availability. Harnessing the power of all your asset data will ensure ultimate efficiency.

With a standards aligned EAM framework, being quality award winners for Enterprise Asset Management (EAM) and having delivered EAM to numerous clients globally, CGI are best placed to help you:

- Optimise your asset related cost and risk
- Achieve ultimate asset performance to support business goals
- View assets holistically with near real-time visibility of health, condition and performance information

THE CHALLENGE

All those working in asset intensive industries across public and private sectors will be aware that constantly reacting to failures and breakdowns costs you money, loses you revenue and interrupts service to your customers. Conversely, over-maintenance can lead to efficiency losses without improved reliability.

The diagram to the left shows the optimum zone that companies are under ever-increasing pressure to achieve.

Implementing a traditional preventative maintenance strategy is essential, but limits to use the abundance of data available from controls, maintenance and telemetry systems to influence these strategies. It's key that organisations harness this information to achieve the right asset strategies for each of their assets.

THE ANSWER

CGI advocates moving to an integrated and holistic EAM solution which will help achieve the asset performance required to support your business goals. Utilising CGI's widespread knowledge of the key EAM components will support you in achieving this:



FACT SHEET

Why CGI for EAM?

- Quality Award winner
- Our team of experts talk your language and understand asset management
- We have the expertise to be able to integrate core EAM offerings to best of breed and joint solutions
- Our framework includes proven templates that accelerate your adoption of best practice, so your project takes less time and gives you a better result
- Supports organisations on route to achieve ISO 55000, ISO 14224, ISO 14221 and ISO 18001



THOUGHT LEADERSHIP: See Implementing Enterprise Asset Management for Dummies

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<http://www.cgi-group.co.uk/article/the-institute-of-asset-management-iso55000-launch>

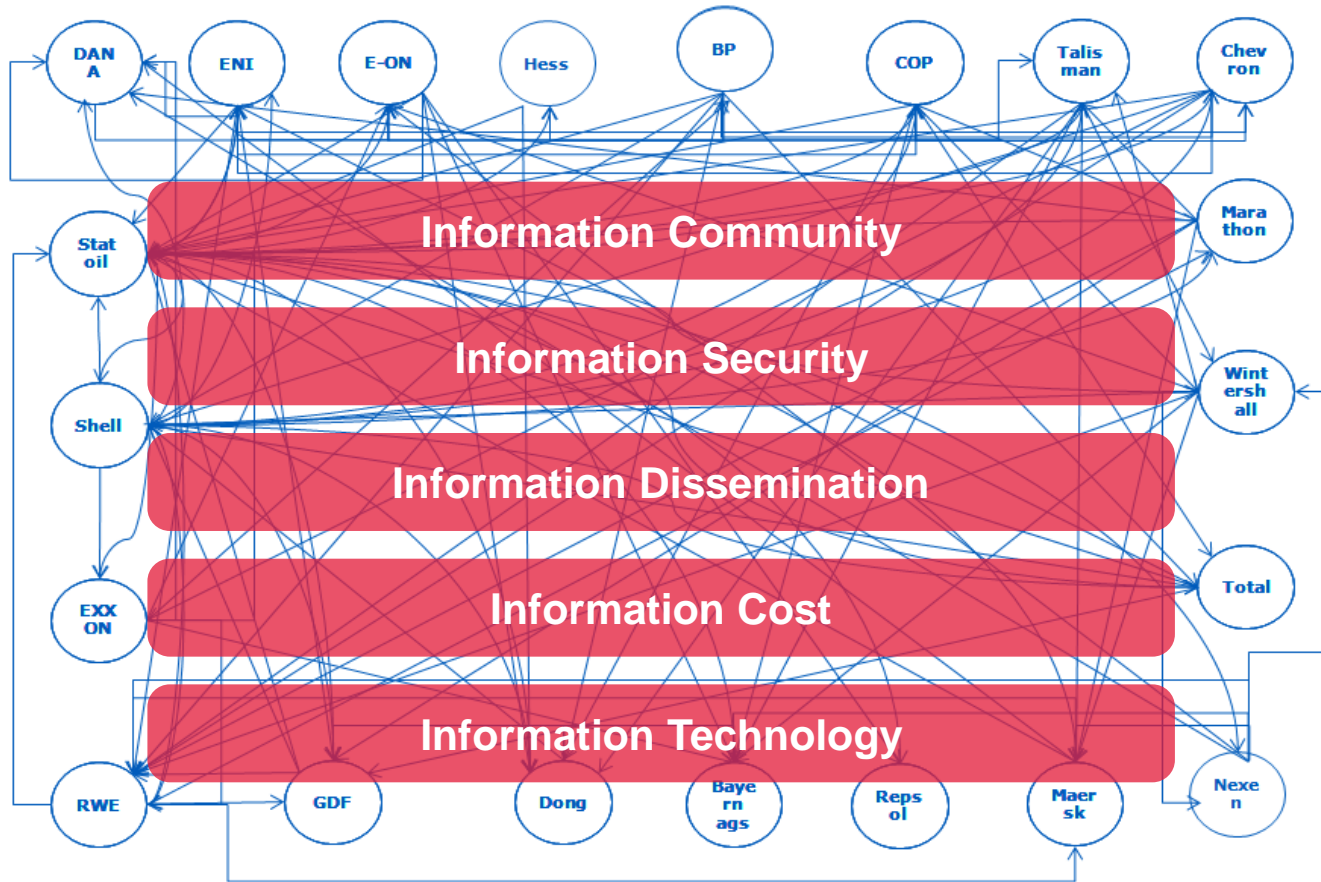
Sharing engineering data across Joint Ventures



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Coordination & collaboration challenges for Joint Venture Management

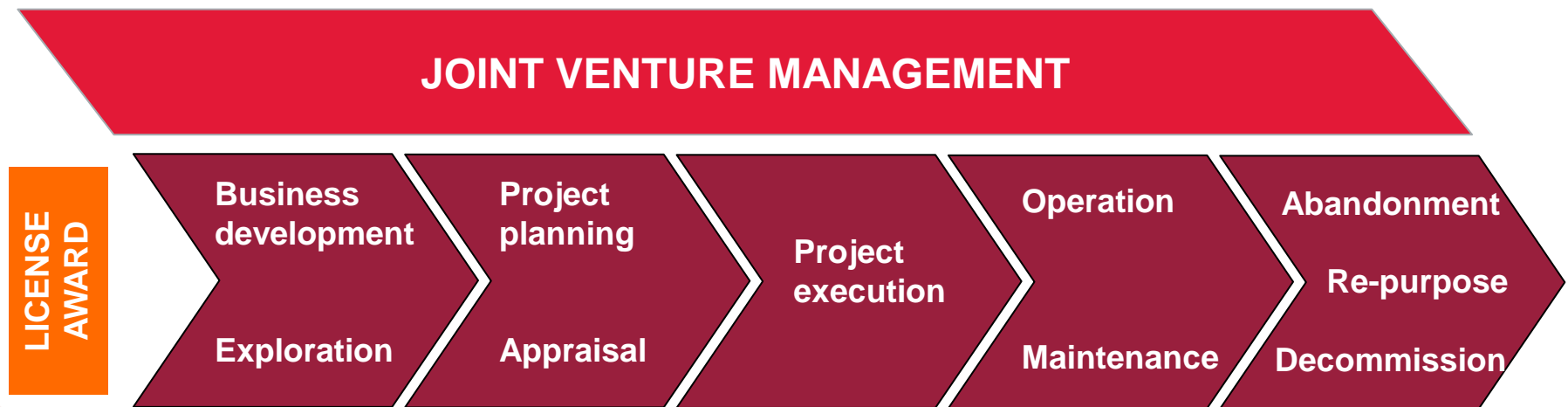


Licence2Share (L2S) based in the cloud safely and securely simplifies access to and integration of common data sets, using industry led practise and process.

Joint Venture Management - Overview

Joint venture management is one of the largest administrative processing areas within the upstream oil and gas industry

- Affects the full life cycle of a field, and all parts of the organisation
- Essential for effective management of producing assets
- It is a separate process area with its own unique requirements

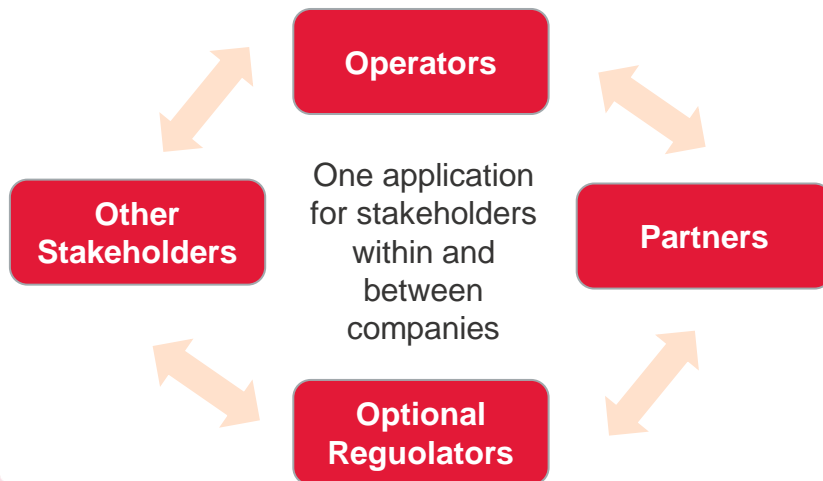


JV Management & Collaboration Solution



An industry solution used to maintain information and provide workflows to ensure compliance throughout the lifecycle of a joint venture

Enables collaboration and content sharing...



...as a best practise that...

- Improves information quality and flow
- Lowers costs for each individual operator
- Introduces best practise processes in licences/permits life cycle information management

...without...

- Impacting competition between companies or joint ventures
- Reducing Information Security

Enabling governance and trust

Transparency through holistic collaboration and data sharing

Functionalities

License management

Data management

Document management

Integrated calendar/email

Voting Mechanism



Any type of information can be shared between two or more parties

Contract data

Production data

Drilling data

Incident data

HSE data

Other relevant governance data to manage compliance process

JV participants decide level and type of information to be shared

Created by the industry for the industry

Some key drivers for establishing a collaborative Oil and Gas arena for Joint Ventures in the UK

**LEGISLATION AND
REGULATION
IMPOSED THROUGH
AUTHORITIES AND
ENTERPRISES**

**STANDARDISATION
OF WORK
PROCESSES**

**MANAGED AND
SHARED COST OF
SOLUTION
DEVELOPMENT**

Ensuring compliance
with (and reporting
with confidence on)
laws and regulations,
wider stakeholder
management

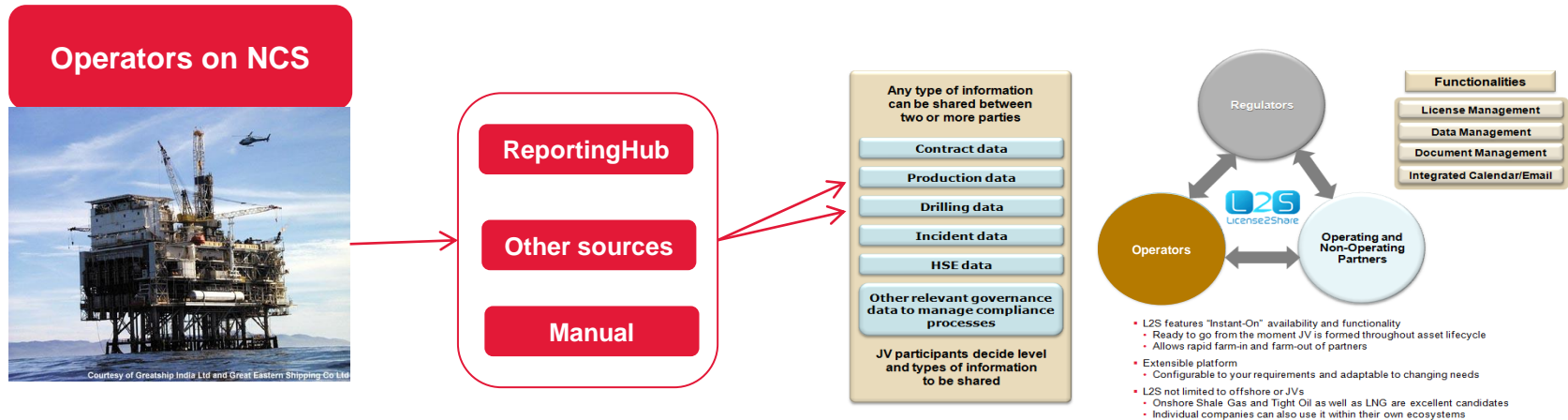
Delivering processing
efficiencies,
maintaining
governance and
controls for managing
the full life cycle

Preventing re-
invention, collaborative
industry approach and
shared long term
investment for the
future

This collaborative approach reduces business risks



Engineering Data in License2Share



Content

- Design Documents tracking changes through life
- Operational & Maintenance Reports
- Inspections, Monitoring, and Assessment Records
- Regulatory Compliance Reports

Advantages

- Archived during live cycle of Joint Venture (> 10 years), findability
- Secured reporting area for partners and authorities, audit trail
- Supports M&A, Divestments, Decommissioning : DataRoom
- Manages governance around production reporting

Examples other Content

- Project Information
- Drawings
- HSE
- Financials
- Contracting
- General Meeting Records

By The Industry, for The Industry



- EPIM – Exploration & Production Information Management, owned by 40 oil companies/operators
- Worldwide 80 companies and over 7,5000 users work with the services delivered by EPIM
 - 8 countries
 - 4 continents
 - >14000 meetings
 - > 3M documents
 - >750 leases (JVs)
- Licence2share is a cloud service, available today



Benefits

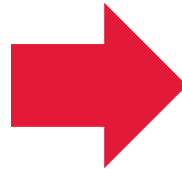
Issues

Multiple applications for different information needs – silos of data

Secure, easy to access, content management

Stakeholder collaboration
Cost effective and time efficient intra-JV reporting

Individual solutions are costly to develop, maintain and enhance



Benefits

One Application

Complete coverage of content

Support information sharing between stakeholders

Cost and time savings efficiency

Cost effective platform



For more information

<http://www.cgi-group.co.uk/case-study/license2share>

<http://www.license2share.com/>

<http://www.epim.no/license2share>



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License2Share

A trusted platform to share information between stakeholders during the life cycle of Oil and Gas licenses

The Oil & Gas industry in partnership with CGI has developed, maintained and operated the cloud-based solution License2Share (L2S). Created by the industry for the industry this solution provides operators, partners, engineering companies and governments with common IT tools to use in their day-to-day work. License2Share is used by 40 Oil & Gas companies for more than 750 Licenses in 8 countries and 4 continents.

THE CHALLENGE
The Oil & Gas industry cannot function without collaboration and companies within the industry have always employed joint venturing strategies to protect and grow their business. As a result, a high integrity, high security solution was required that shared information only on a need-to-know basis. To add to the complexity, all parties involved used different processes and tools throughout the lifecycle of a license, making it much harder to retrieve the correct versions of documents and act swiftly on a report - the solution had to alleviate this issue and create a secure, up-to-date and trusted source of information.

THE SOLUTION
CGI in partnership with the Oil and Gas industry created the cloud service License2Share (L2S), allowing users to access solutions that are completely tailored to the specific information sharing requirements that they face when co-operating in joint venture initiatives. CGI was appointed as lead integrator working alongside Contoso and OpenText. Following a Prince 2 approach, CGI developed specifications in a series of customer workshops to define the functionality required by the clients. After getting the initial design approved CGI implemented the solution, including creation of environments, configuration, customisation and the integration required to support document transfer between participants and also calendars and scheduling. In addition CGI, helped train users and super users in the new system. Customisations in the core system were kept to a minimum in order to keep the maintenance costs at a low level. As a result a future proof system was created.

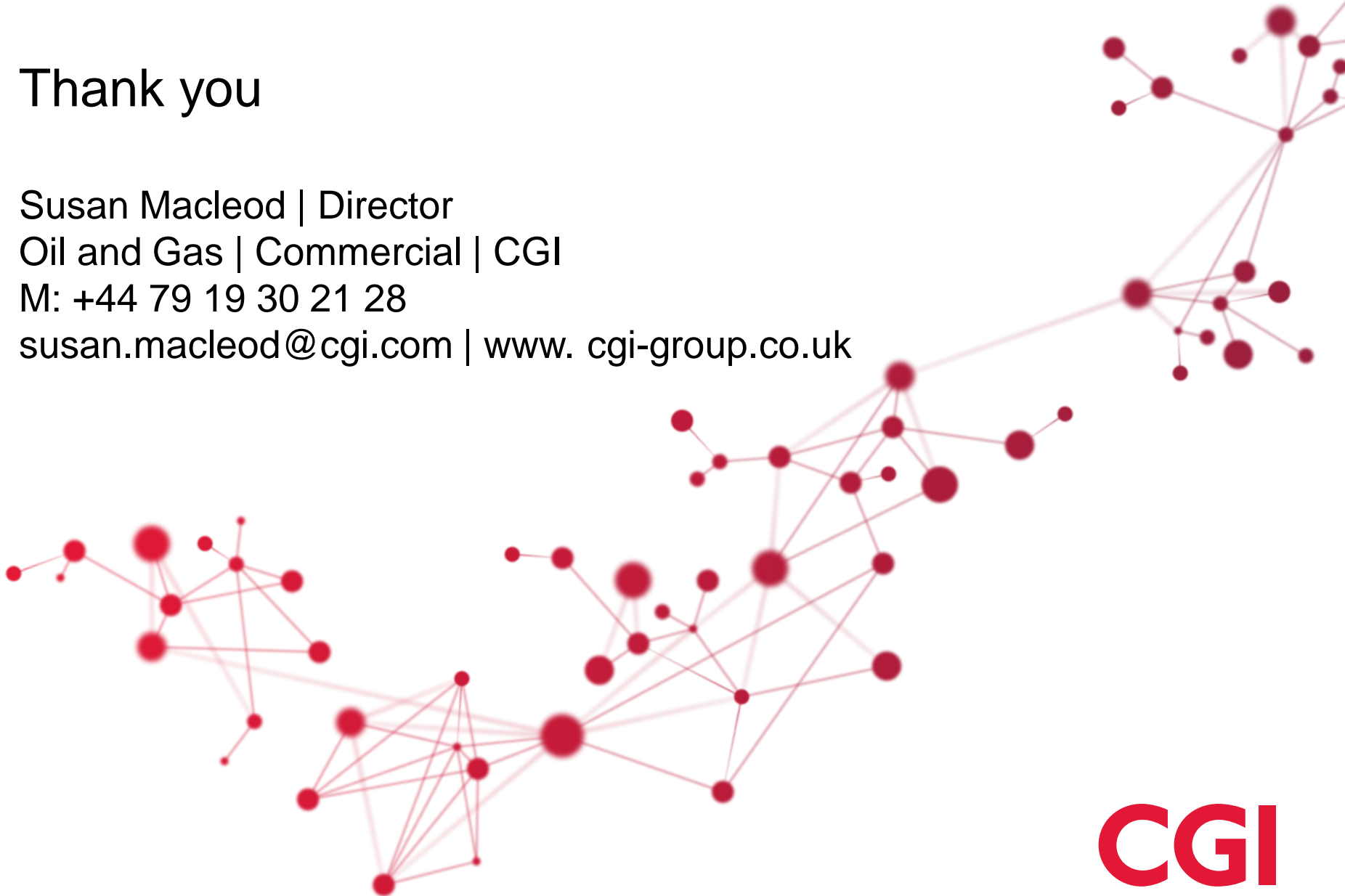
THE RESULT
L2S uses role-based dashboards allowing joint venture administrators to maintain their licenses and workflows to operate and ensure that they are compliant throughout the complete lifecycle of a joint venture. The role-

CASE STUDY
OIL & GAS
Norwegian Continental Shelf
Exploration and Production Information Management Association (EPIM) is owned and managed by the operators on the Norwegian Continental Shelf (NCS). EPIM provides IT solutions that facilitate the best possible flow of information between all of its users, these being authorities and licensees in exploration, production and transport licenses on the NCS. Worldwide 80 companies and over 7,000 users work with the services delivered by EPIM.

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Thank you

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