Oil and Gas INNOVATION.®

Autumn 2019

**HEALTH SAFETY
& ENVIRONMENT
AUTUMN SPECIAL**

**THE VYMPEL
PARTNERS
CONFERENCE**

**UNDERSTAND
AND CONTROL
VIBRATION, BEFORE
IT'S TOO LATE**

**SAFE WATER ON
BOARD OFFSHORE**

Bridging the Gap

OGI sits down and speak with Australian company, Inspectivity Pty Ltd, to learn more how they are paving a new way in relation to the inspection process for oil and gas company's major assets. What Inspectivity does is streamline work and connect teams with real-time data with a cloud based system that helps support a digital inspection environment. We discuss how this all works with the Inspectivity platform, and they can simultaneously save you money, improve service and save you time.

OGI: Could you start by explaining Inspectivity Pty Ltd's credentials and experience in terms of your products and services for the oil and gas sector? Could you tell our readers the breadth of your experience, how long the company has been active, and its reach?

Inspectivity: Inspectivity is an Australian technology company which commenced operations in 2012.

The company was born out of the idea that a major efficiency gap existed between field inspection teams and enterprise systems. The critical nature of oil and gas assets and the high capital cost of projects demanded a better way. Inspectivity provides this with a smart cloud and mobile platform to support digital inspection environments.

The Inspectivity Platform is used to connect global engineering teams and systems with real-time inspection condition data. We remove "paper" from the inspection process, improve the quality and integrity of data whilst introducing faster and smarter ways of working.

Our team has a deep understanding of engineering, inspection and software development. With this knowledge Inspectivity are able to support clients throughout the digital inspection transition, investing significant time in analysis, implementation and software engineering to integrate traditional processes with new mobile operating principles.

OGI: Could you explain what cloud-based software is, as it applies to industries like oil and gas?
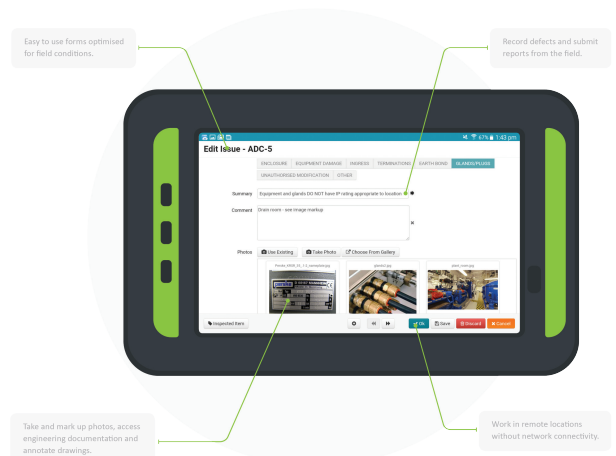
Inspectivity: The simplest way to think of cloud computing is on-demand delivery of computing power, storage, applications, and other IT resources via the Internet.

Cloud software delivery is important technology for the oil and gas sector because:

- Cost Savings: There are many benefits of "the cloud" to consider but perhaps the most significant is in terms of cost savings. By using a cloud service you save substantial capital costs with zero in-house infrastructure costs.

- Security: Security is the highest priority. Typically, major vendors provide data centres and architecture built for the most security-sensitive organizations.

Inspectivity is a strategic technology partner of AWS. AWS was recently named as a leader in Gartner's Infrastructure as a Service (IaaS) Magic Quadrant for the 9th Consecutive Year.

OGI: What are the benefits of the Inspectivity solution?

Easy to use forms optimised for field conditions.

Record defects and submit reports from the field.

Take and mark up photos, access engineering documentation and annotate drawings.

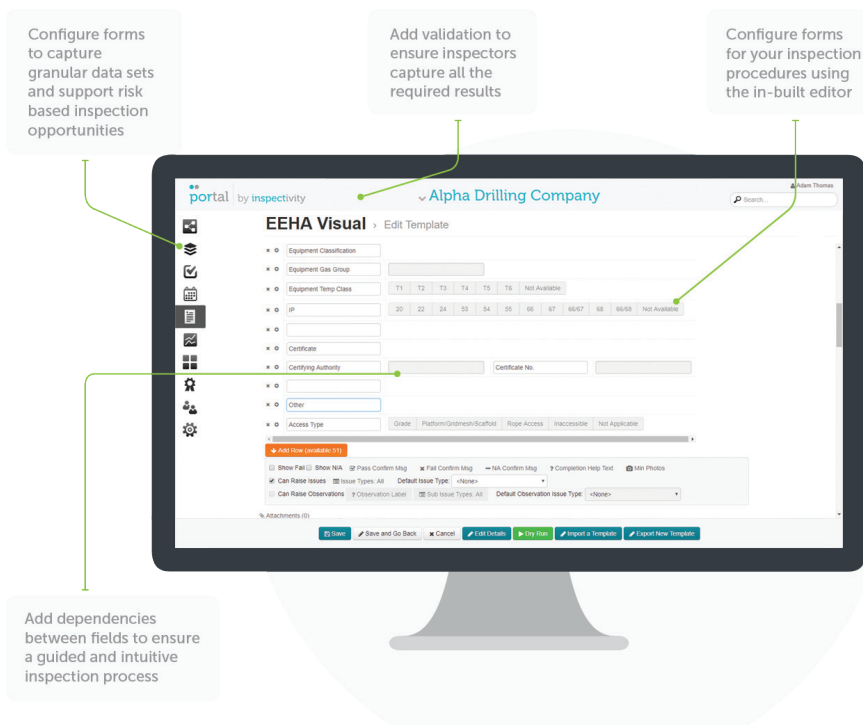Work in remote locations without network connectivity.

The Inspectivity mobile app for tablets.

Inspectivity: Why is digitizing important? Inspectivity's paperless, cloud-based inspection platform helps clients to accelerate responsiveness, improve service levels and reduce costs. We facilitate this in a range of ways:

- Automated reporting reduces inspector desk time and improves inspection throughput. Errors in data handling and translation are avoided, results are de-personalised and non- subjective ("report just the facts").

- Collaboration opportunity via the cloud allows your teams to work together on inspection activities regardless of location. Allowing reduced site headcount and faster decision making.

- High quality ("strongly typed") inspection data provides automation opportunity. Integrated with your ERP system, a digital inspection solution connects fieldwork with your global workforce.

- Improve transparency of status with real-time defect and condition data plus visibility of site works from disparate locations.

- Use a guided and intuitive process which can reduce the dependency on expensive and (often limited) senior resources.

OGI: Could you help readers understand what is meant by inspection intelligence?

Configure forms to capture granular data sets and support risk based inspection opportunities

Add validation to ensure inspectors capture all the required results

Configure forms for your inspection procedures using the in-built editor

Add dependencies between fields to ensure a guided and intuitive inspection process

Inspectivity: One of the key differences between a digital inspection process and a paper-based inspection process is the ability to access a consistent set of metrics recorded in the field which empower clients to make decisions as well as generate predictions.

By creating a seamless data environment through digital inspection, our customers can:

- Access real-time inspection data and quickly prioritize maintenance efforts based on the probability of failure
- Uncover opportunities for automation by integrating business-critical systems and engineering assessment, with rich asset condition information.
- Protect the investment in equipment and plant by digitizing inspection management, allowing for transparent oversight and knowledge of status at a fingertip.
- Collect critical data to keep track of KPIs and enable timely reactions to divergences.
- Collaborate on inspection activities in real-time, regardless of location.

These are the features of Inspectivity's digital process that bring Inspection Intelligence.

OGI: Inspection is key to maintaining the life of one's assets, but what is the difference when using an intelligent inspection platform?

Inspectivity: The purpose of an inspection is to gather information about the condition of your asset. This rich data is required to support fitness for purpose and safety assessment by your engineering teams and help to maintain or extend the life of your infrastructure.

By digitizing your inspection philosophy, you create a "live link" between the field and engineering with automatic reporting of de-personalised, granular and strongly typed data. Automatic reporting improves inspection throughput significantly and field teams can focus on quality and detail rather than double handling information.

Your live link between the site and remote teams facilitates greater collaboration, allowing real-time reviews, answering clarification, requesting rework and re-inspection. This also is an opportunity to reduce your site headcount whilst improving communication and decision making.

Making the move from a traditional to digital inspection process provides a significant upside in terms of efficiency, quality, safety and control for your business process. It will accelerate responsiveness, improve service levels and reduce costs.

OGI: Could you elaborate on how this all works in practice, for example, to like integration and reporting etc?

Inspectivity: The Inspectivity Platform combines a cloud server application and a mobile app for tablets.

The cloud server provides an intuitive user interface with powerful functionality for viewing your asset hierarchy, equipment details and associated engineering documentation. Create inspection activities based on your own configured form templates. Plan and schedule inspection campaigns as well as collaborating on the activities with enterprise workflows.

The mobile application allows inspectors to download inspection activities and work both on/off-line completing check sheets according to a client's own predefined templates. Inspectors can leverage tablet cameras for recording photos, view engineering documentation, manufacturer certificates and comprehensive asset data. The mobile app provides a range of other features including photo and PDF markup (annotation), video, geolocation plus 2D Barcode and RFID support.

The combination of mobile app, cloud server and an integrated API supports the "live link" between the field and your asset management infrastructure.

OGI: How would the transition work, from traditional to digital inspection?

Inspectivity: The transition from paper-based inspection to a digital variant has many important considerations impacting technical, cultural and process areas of an organization. To start with, assemble a team to champion your migration. Ensure the team is adequately resourced and familiar with your inspection and engineering process.

Avoid a waterfall approach, whilst a goal of digitizing all inspection use cases and integrating all systems makes absolute sense, it is difficult to achieve on a first pass. A more sensible approach is to select a single inspection use case, implement end to end and take learnings to future use case implementations. Start with digitizing inspection forms and modeling field activities. Make the use case operational before following up with systems integration. This ensures you have a sound understanding of digital inspections before introducing a tightly coupled infrastructure.

Analysis is the first step:

- Data sources/source of truth
- Asset hierarchy data
- How are defects recorded (type, location, damage mechanism, priority)
- Inspection form - recipe or record by exception
- Workflows and touchpoints for integration

Detailed analysis allows you to make an informed decision and final selection of cloud vendor and mobile devices which are fit for "your" purpose. The selected vendor and devices should include field trials which are an ideal way to find out about the software and the impact of mobility on your culture.

After testing your digital inspection use case, you can then move forward with a well-planned implementation.

Inspectivity not only provide the cloud and mobile infrastructure for digital inspections but we are also experts in the transition and can guide you through this process.

OGI: Finally, could you enlighten our readers of a case study where you helped a client with your solutions?

Inspectivity: Inspectivity support operators, EPCs and service providers across the globe with projects in North America, Europe, Africa, Middle East, Asia and Australia. These projects cover a wide scope of inspection disciplines:

- Operations and maintenance
- Electrical equipment / hazardous area
- Pressure piping and pressure vessel
- Corrosion, coating and structural
- Construction and commissioning
- Flange management
- Land rigs inspection
- Lifting and handling equipment
- Small-bore tubing
- Dropped object risk

Our website provides some excellent case study examples including our work with Worleys on one of the most advanced, integrated gas production systems in the world. Read more about it here: (https://inspectivity.com/case-studies/worleyparsons/).

OGI: Thank you for your time •

Web: http://www.inspectivity.com

Real time dashboard metrics

Dashboards can be customised to your requirements

Obtain snapshot preview of critical defect information

Detailed asset inspection history

Fully configurable asset hierarchy