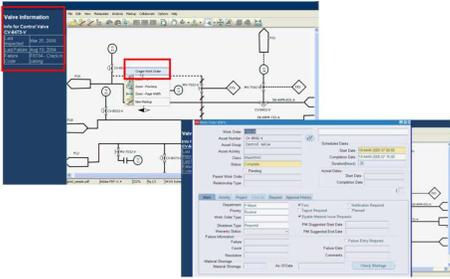# Enhance Capital Projects & Optimize Asset Performance and Reliability in Oil & Gas with AutoVue Enterprise Visualization and Augmented Business Visualization

Dynamically display information from ALM systems and trigger actions in ALM or other enterprise systems directly within documents

Rising exploration and production costs, aging infrastructures, and a shrinking skilled workforce are just some of the challenges facing oil & gas companies today. With these challenges comes the need to better collaborate and share information across the value chain to reduce risks, costs and drive higher return on assets, while complying with growing regulatory and reporting requirements. Oil & Gas companies can benefit from solutions that provide teams with greater visibility into engineering and asset information, driving operational efficiency, increasing accountability and optimizing asset value.

Customer Success

- A leading Italian turnkey contractor that provides engineering, construction, and project management services in the Oil and Gas industry uses AutoVue visualization solutions during capital construction projects to improve design review productivity and reduce approval cycles across global project teams and outsourced partners.

Prolong Asset Life and Maximize the Efficiency of Upstream and Downstream Assets

Oil and gas companies, whether in upstream exploration & production or downstream activities, operate in low margin environments that require them to cut costs, optimize asset efficiency and accommodate new environmental regulatory and safety requirements. To optimize maintenance operations, oil and gas companies require a 360° view into all engineering and asset data, documents, and information that exists in enterprise systems, such as Asset Lifecycle or Inventory Management. However, today, unstructured engineering or asset documents, such as equipment diagrams are disconnected from structured data, such as parts information or asset history in enterprise applications. Through Augmented Business Visualization (ABV), AutoVue eliminates barriers between these two data types and enables oil & gas companies to elevate the value of enterprise-wide data by connecting portions of unstructured documents back to structured business data in enterprise systems.

ABV delivers a one stop shop for all asset information and provides an in-context, fully exploitable environment for optimal O&M decision making. Planners can, for example, access ERP data, such as parts information directly in the context of asset documents and use this information to create visual color-coded "dashboards" which provide in-context asset information to users. Actions such as "create work order" or "order parts" can also be triggered in the ALM system directly from within documents. By exposing asset information in documents, maintenance planning is improved allowing planners to visually identify underperforming assets and failure trends and take necessary corrective actions.

An asset undergoes many repairs and changes during its lifetime, making it imperative to track and ensure that its physical representation is accurately reflected in documents. Failure to do so can result in downtime, costly re-work, dramatic safety issues and diminished asset life. AutoVue adds value to change management processes by enabling technicians to view digital files of assets being repaired and capture onsite work within the appropriate context with digital annotations. Capturing repair work and

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Benefits:

- Drive greater return on assets
- Maximize asset reliability and utilization
- Improve operational efficiency and minimize downtime
- Expedite capital projects and enhance commissioning and handover processes
- Improve accountability and minimize project risk
- Prolong asset life and optimize repair decisions
- Improve compliance and reporting

Capabilities:

- Connect unstructured documents to enterprise structured data
- Trigger actions in ERP from within documents
- Create color-coded visual dashboards from ALM data
- Capture and communicate as-maintained status of assets with digital annotations
- Access asset information on mobile devices in the field
- Automate printing of work orders, including work order forms and supporting attachments.
- Integrate with non-Oracle and Oracle solutions: ERP, ALM, PPM, etc.

changes in configuration in a visual manner improves safety and helps teams keep track of the delta between as-built and as-maintained assets. This delivers an accurate visual audit trail of repair history and ensures that technicians are working on drawings that reflect the reality of physical assets.

Mobile ALM solutions can be enhanced with visualization to provide field workers with digital access to the information needed to make intelligent operational decisions directly on tablet PCs. With AutoVue technicians can submit updates on a work order indicating what was changed or any issues encountered, and include annotations on existing drawings and even photographs taken on site. Technicians can perform effective repair work safely and capture the audit trail necessary to comply with DOT, OSHA, EPA, FERC or other regulations. Field updates can then be synced to enterprise systems when back in the office.

Deliver Projects with Superior Returns and Improve Value Chain Collaboration

Capital projects and turnaround operations are complex, expensive and under tremendous pressure to be delivered on time and within budget as delays and sub-optimal planning generate revenue shortfalls. Sharing information and collaborating with global teams and outsourced partners across the value chain is complex and requires a systematic and integrated approach to drive project success. Project progress must also be tracked for better accountability throughout the complex oil and gas value chain. AutoVue can effectively view all project documents and improve communication and collaboration amongst dispersed stakeholders. Leveraging the power of ABV, teams get a complete view of project data by visually displaying Primavera, ERP and ALM attributes and information directly while navigating asset and project documents. This allows for better planning, fewer errors, and shorter project lead times. Through annotations teams can also digitally capture instructions and lessons learned allowing oil & gas companies to re-use this critical information in the appropriate context during future projects.

When assets like refineries or offshore platforms are near completion, contractors and owners begin the critical process of inspecting them and documenting outstanding work for a clear understanding of open items. Mismanagement of this process can increase operational, financial and compliance risks. AutoVue can be leveraged to view digital asset or equipment drawings on tablet PCs and add in-context digital annotations highlighting defects or incomplete tasks directly on documents. A digital "punch list" can be generated from the annotations and used by contractors to ensure that work is completed correctly. During the final review ABV can create a visual dashboard showing open punch list items.

Capital project delays are often the result of failing to hand over asset documents in a timely manner. As part of the handover process, operating instructions, as-built designs, maintenance plans and manuals are provided from the EPC to the owner for review. Relying on effective solutions to expedite the handover process is key to success. AutoVue digital annotations can be leveraged to communicate updates and missing information allowing annotated documents to be rolled out to maintenance workers. ABV can also be leveraged to link drawings of equipment and facilities to associated manuals.

About Oracle's AutoVue Enterprise Visualization Solutions

AutoVue delivers best-in-class document visualization and collaboration capabilities and provides extended teams with greater visibility into engineering and asset information. AutoVue's unique ability to reconcile information contained in documents with enterprise business data, and render this visually in a variety of processes presents oil & gas customers with endless opportunities for operational excellence in their O&M and capital project processes and improves compliance & reporting practices.

For more information about AutoVue or Augmented Business Visualization solutions, call 1-514-905-8400 to speak to an AutoVue representative, or visit http://www.oracle.com/us/products/applications/autovue/index.htm

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