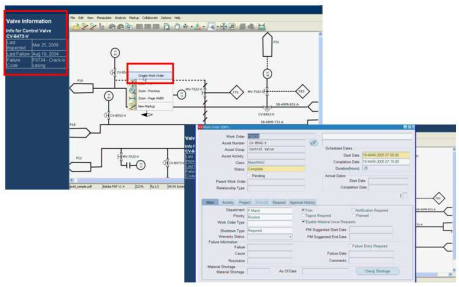
Hardware and Software
Engineered to Work Together

Enhance Capital Projects & Optimize Asset Performance and Reliability with AutoVue Enterprise Visualization and Augmented Business Visualization Solutions



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

Growing demand for electricity, aging infrastructures, and a diminishing workforce are just some of the challenges facing utilities today. To succeed, utilities look for ways to increase long-term lifecycle and reliability of electrical generators, and improve operational efficiency while complying with increasingly complex regulatory requirements. Utilities can benefit from visualization solutions that provide extended teams with greater visibility into engineering and asset information in a variety of business processes, driving operational excellence, reducing project risks and increasing power plant availability and performance.

Customer Success

- A large utility in Pennsylvania uses AutoVue in their plant configuration control system, and captures changes in plant configuration or corrections identified during field activities with digital annotations. Necessary changes to designs can be turned around in one day, allowing field personnel to more quickly begin constructing or servicing a power plant.

- Ringhals, a Swedish nuclear power plant, (division of the Vattenfall Group) has significantly increased the efficiency of their plant optimization and plant modification processes with AutoVue and estimates the total value of work saved to be around $500K annually.

Prolong Asset Life and Optimize Repair Decisions with Access to Accurate Information

During complex plant turnarounds and routine maintenance activities, operations & maintenance is critical to maximize asset utilization, enhance plant reliability and minimize forced outages, which can have a devastating impact on production capacity, power plant availability and the overall bottom line. To optimize maintenance planning and execution operations, maintenance planners require a 360° view into all asset data, documents, and information that exists in enterprise systems, such as Asset Lifecycle 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 utilities to elevate the value of enterprise-wide data by connecting portions of unstructured documents back to structured business data in enterprise applications.

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" can also be triggered in the ALM system directly from documents. By exposing asset information in documents, maintenance planning is improved allowing maintenance and reliability managers to visually identify underperforming assets and failure trends and take 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

Benefits:

- Drive greater return on assets
- Optimize plant operations and reliability management
- 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
- 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 information needed to perform onsite work 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. Field updates can be synced to enterprise systems when back in the office. For utilities still relying on paper, AutoVue Document Print Services can automate the printing of work orders, including WO forms and supporting attachments.

Accelerate Capital Project Delivery and Improve Stakeholder Collaboration

Capital projects are complex, expensive and under tremendous pressure to be delivered on time and within budget. Delays and sub-optimal planning wreak havoc on budgets and shareholder value. During capital project planning and execution, effective communication of information amongst stakeholders is key to project success. Project planners and extended teams need to be able to access, view, and review hundreds of documents to successfully plan and deliver on capital projects. AutoVue can be used to 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 digitally capture instructions and lessons learned allowing utilities to re-use this critical information in the appropriate context during future turnarounds & scheduled outages.

Once a greenfield project is near completion, contractors and owners begin the critical process of inspecting the building and documenting outstanding work for a clear understanding of items still to be completed. 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 and drawings 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 in a much faster manner. 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 utility customers with endless opportunities for operational excellence in their O&M and capital project processes and improves their compliance and 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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