Data – the great untapped resource
Maintaining the flow of revenue for Oil & Gas

- Optimize operations
- Reduce plant downtime
- Achieve zero lost time accident records

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Operating costs reduced by 12–20%

Throughput improved by 6–12%

Unplanned shutdowns reduced by 15-20%

Plant efficiency increased by 8–12%

HSSE performance improved[1]

Scan the pages of any current oil industry report, and the same key words reappear: market volatility and sustainability. Small wonder then, that companies are looking for innovative ways to address these concerns in the long term.

There are also the everyday issues to be tackled. Along the entire length of the value chain, from the wellhead, upstream, through midstream piping projects to downstream processing facilities, there are vast, complex ecosystems to keep flowing, where plant downtime or system shutdowns mean critical revenue is turned off, too.

But while you don't need to be told that platforms, plants and refineries are expensive, complex networks of high-maintenance equipment, involving hundreds of piping and instrumentation diagrams (P&IDs) and a thousand health and safety requirements, it is worth mentioning there's one potential asset at your disposal that could make the future less of challenge. And it's something that's sitting there untapped, ready to help you. Your data.

The inexhaustible resource

From reducing project costs to shortening completion times. From eliminating onsite accidents to lessening environmental impact. All are outcomes made possible by adopting digital platforms and leveraging data. Perhaps the most obvious benefits are an increase in efficiency and decrease in downtime. Whether you're looking at a major new capital project or a minor plant upgrade, using methodologies such as Advanced Work Packaging (AWP) saves time, money, rework and waste.

AWP is a construction-driven process that involves sequential thinking with the end strongly in mind. Separate elements, such as time, materials, personnel and drawings, are integrated and the most efficient sequencing of work defined. The result is an increase in field productivity of up to 25% and a decrease in total installation costs of up to 10% (not to mention a significant reduction in downtime).

Importantly, the cost to human health is lessened too. Digitized safety procedures result in far fewer accidents and far better incident reporting. In fact, implementing AWP can result in zero lost time accident records.

Then there's the value to be gained from digitalizing P&IDs – possibly the most underestimated and important documents in a plant. While a 2D blueprint or scan merely shows a network of pipes, a fully digitalized P&ID enables easy collaboration with third parties, plus the data can be unlocked and leveraged for many other purposes, including asset management, safety analysis and simulation. It can even be used to predict future problems before they occur. With as many as 1000 P&IDs for a single plant, managing shutdowns or even locating and stopping a fire becomes simpler and less costly.

A digital partner with sustainable credentials

Obviously, digitization doesn't come at the flick of a switch. The best way forward is a structured approach. For example, you could begin by looking at your maintenance function. Next, digitally

connecting your supply chain. Then, maybe adopting smart Health, Safety, Security and Environment systems.

Autodesk can help – from looking at the bigger picture, to the everyday technical details. As well as being a valuable partner to the world's biggest architecture, engineering, construction and manufacturing firms, we also bring cross-industry learnings and experience to customers in a vast array of sectors, including energy, utilities and telecommunications. As one of our customers put it, "Joining Autodesk is being part of an engineering network of excellence."

We have open standards; DEXPI (Data Exchange in the Process Industry) is the standard in P&ID – and that gives you the ability to share data, collaborate between disciplines like design, engineering and operations, and democratize workflows.

We make AWP scalable, too, able to suit any size of greenfield or brownfield project – from small plant upgrades to large complex projects – on a unified platform.

You'll also be working with the world's fourth most sustainable company[2]. And, as one who has achieved net zero emissions, we can help you take more steps towards your own long-term sustainability goals.

If you'd like to discuss digitization further, we're happy to talk. And to help you find ways to ensure that a free flow of data equates to an uninterrupted flow of oil and gas.

[1] Construction Industry Institute® RT-319, Making the Case for Advanced Work Packaging as a Standard (Best) Practice
[2] Barron's 100 Most Sustainable Companies 2021

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