

WHY

# Shutdown/Turnaround Planning and Execution Need to be **DIGITALLY DISRUPTED**

AN INFOGRAPHIC

**Shutdowns/turnarounds:** the cornerstone of any plant's maintenance strategy. But getting them right is tough.

The numbers paint a vivid picture of the **complexity**:

**tens of thousands** of separate jobs;

durations between **20** and **60** days for process plants;

**thousands** of contractors.



It's daunting to complete a large portfolio of maintenance tasks with potentially new contractors, planned downtime and its subsequent loss of production in a tight timeframe. And planning cycles can take years.

Yet, as important as they are to profitability, most turnaround projects **fail**. According to industry research from TA Cook and others:



82% of turnarounds do not satisfy performance expectations



1 in 4 turnarounds significantly under-perform in more than one success criteria



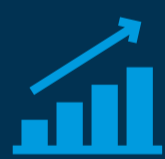
Pressure to shorten the TAR can increase operational risk



About half of all shutdown projects experience delays **> 20%**



About half of all work-related accidents at manufacturing plants occur during planned maintenance outages



Scope of work can often increase unexpectedly by up to **30%**



Front-end and Back-end Shoulder Losses are "part of the cost"



Turnaround organizations have no control over the plot plan



80% go over budget **>10%**

Where digitalization and the adoption of automation technologies based on the Industrial Internet of Things (IIoT) have allowed Oil & Gas and Petrochemical manufacturers to make strides in improving operational performance, Industry 4.0 developments are also changing the way operators plan and execute major shutdowns and turnarounds.

By connecting disparate data and business processes, digitalization can provide teams with a complete view of the risks and activities involved in the shutdown/turnaround scope so the trade-offs can be clearly understood and managed with proper care to ensure planned maintenance comes in safely as well as on time and on budget.