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 Construction Solutions

Overcoming the Construction Pressure Cooker

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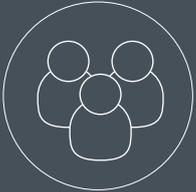
What is it?

The construction pressure cooker concept describes how traditional project delivery approaches can lead to increased safety risks as projects enter the completions phase. The pressure cooker concept is a culmination of the following critical factors:



Schedule Pressure

Schedule pressure occurs when projects realise the end dates are in jeopardy. Over reliance on contractor reported status without sufficient field validation limits the identification of problems until it is too late. Completions inspection regimes typically start around 65% complete, which provides a more granular level of detail of the state of the project. It is also around this stage that projects realise project status has been over reported, and the schedule pressure begins.



Increased Resources

The most common reaction to schedule pressure is to increase resources with the aim of accelerating the schedule. Increasing resources to the project creates congestion, and has a further negative impact on productivity. Often the increased resources are not familiar with the project safety culture, which in turn increases safety risk and the likelihood of incident.



Stored Energy

Around 65% construction complete initiates high volumes of completions-based activities, which creates an additional risk in relation to stored energy. In hydro and gas testing, along with energisation of cables, an environment with additional barriers, exclusion zones and heightened risks is created.



Increased Safety Risk

- People working under schedule pressure are more likely to cut corners
- Increasing resources creates congestion around critical work areas
- Safety risk increases with the introduction of high volumes of more dangerous activities

Why Does it Occur?

The pressure cooker typically occurs as a reaction to a slip in the project schedule. A combination of lack of visibility, over reliance upon contractor reported status, and the late start to completions activities are key contributors.

How Can It Be Avoided?

Enabling visibility through 3D models provides a greater understanding of project status, which goes beyond project controls based reporting. Establishing a robust, progressive inspection process that validates contractor reported status ensures accuracy and confidence in reported status. From this, contractor over reporting is identified significantly earlier and can therefore be rectified. This enables the completions process and brings forward activities relating to stored energy. This significantly reduces the volume during peak resourcing. Capitalising on completions opportunities earlier also provides greater confidence in contractor reported status, and validates the quality of build process. Data captured from the inspection regime creates predictability in schedules and significantly reduces the likelihood of resource spikes occurring.