Completions Enablement Overview
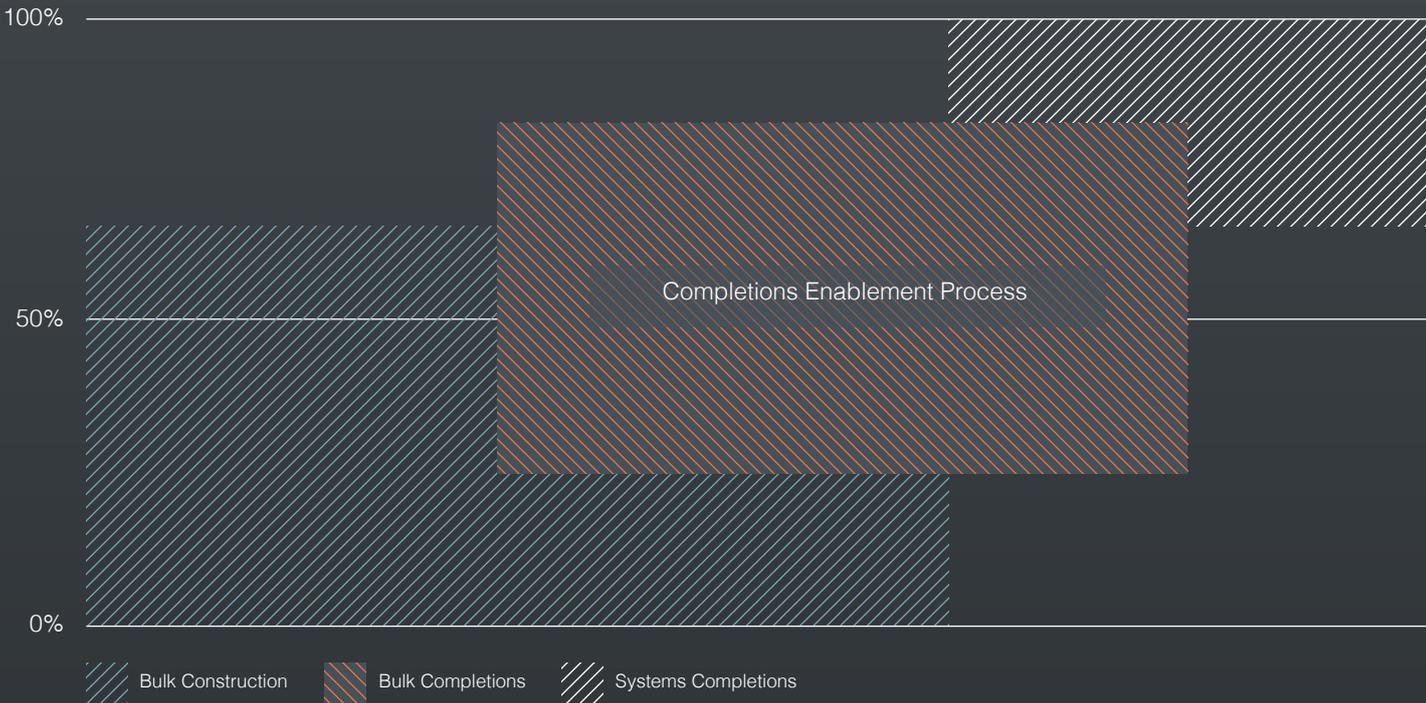
Introducing Asset55 Completions Enablement

Industry Challenges

The past 15 years has seen a decline in oil and gas project delivery performance in terms of cost escalation, schedule extensions and assets under performing upon start-up. During the same period, we have seen exponential growth in new technologies aimed at addressing industry challenges and improving project delivery performance. Despite this, very few projects have realised the benefits. Our industry is at a crossroads with an obvious need to improve delivery performance combined with a reluctance to embrace new technology.
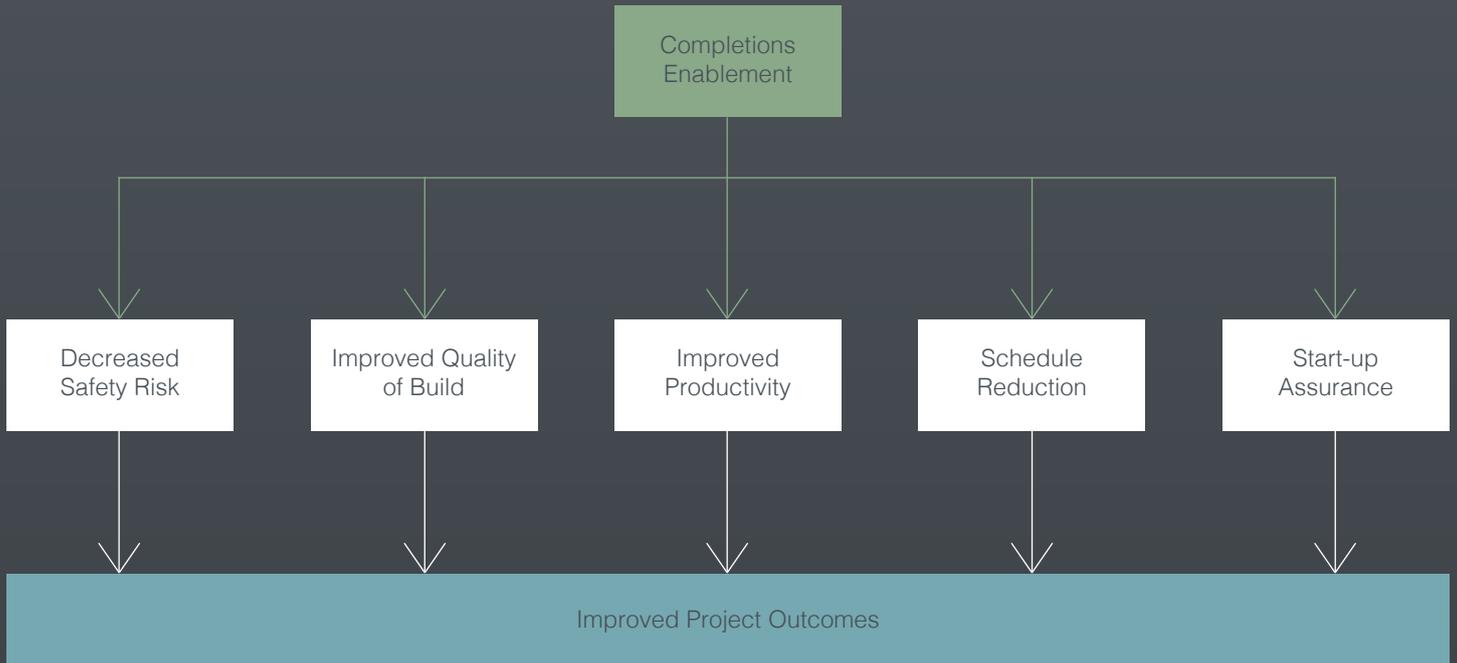
Our approach is to develop solutions that enable processes proven to significantly improve project delivery outcomes. This is achieved using a simple and intuitive user interface, making them accessible to all project participants.

Completions Enablement Overview

Completions enablement is a process that identifies completions-based opportunities in real time, allowing the focused inspection regime to begin at around 25% complete. Traditional delivery approaches begin with a bulk construction and transition to a systems-based completion focus when a project is around 65% complete. The change in focus to prioritised completion often has a negative impact on field productivity. Completions enablement focuses on capitalising on completions opportunities irrespective of system prioritisation. This can be seen as a "bulk completions" phase which does not impact construction productivity, but rather opens downstream work fronts sooner which improves construction opportunities.

100%

50%

0%

Completions Enablement Process

Bulk Construction   Bulk Completions   Systems Completions

Completions Enablement Value Proposition

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                         │   Completions   │
                         │   Enablement    │
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| Decreased Safety Risk | Improved Quality of Build | Improved Productivity | Schedule Reduction | Start-up Assurance |

Improved Project Outcomes

Through improved quality-of-build focus, completions enablement facilitates much earlier inspection regimes than traditional approaches. This supports the identification of problems and challenges much earlier, which in turn improves the opportunity for contractor collaboration to drive behavioural change. Furthermore, this significantly reduces the risk of the negative impact on project schedules and transition scopes caused by late discovery work.

Completions enablement performance is measured by tracking the time taken to transition between interface points. An example of this is from a test pack being made available for walkdown to when the pack is actually walked down. Reducing the time between each transition gate creates schedule predictability whilst improving management decision making on critical focus areas.

Completions enablement has been proven to significantly improve construction productivity. An example is enabling cables in common tray systems to be pulled together by mapping them first.

Capitalising on completions opportunities opens downstream work fronts earlier, creating the opportunity for all disciplines to be successful. This decreases resource peaks, which in turn decreases safety risks.

Completions enablement has been proven to significantly reduce project schedules, whilst improving the quality of build and enabling effective commissioning & efficiencies at start-up.

Features

Opportunity & Constraint Analysis

At the core of completions enablement is the automation of opportunity and constraint analysis (O&CA). This identifies completions based opportunities and constraints in real time. Automation is driven via artificial intelligence, using updated status information to automate the identification of new opportunities and constraints by understanding downstream activities and system priorities. O&CA has been proven to significantly improve productivity in areas of cable pulling, terminations and check sheet closeout. These are all critical for enabling the commissioning process.

Visualisation

To improve the communication of opportunities and constraints, we provide context to the user by linking the analytics through our model viewer. Opportunities and constraints are grouped by discipline and type, and delivered via automated updates to the selection trees. This provides immediate access and an improved understanding. Visuals and supporting data are easily extracted for effective communication with the field.

Benefits

Decreased Safety Risk

Traditional approaches lead to increased safety risk as projects enter the completions phase. This is usually a culmination of schedule pressure and increased resources (congestion), which occur in parallel with high activity volume relating to stored energy (testing & energisation).

Completions enablement reduces schedule pressure and the volume of stored energy activities. This is achieved by capitalising on them earlier in the construction cycle and reducing resource peaks. This leads to reduced safety risks as projects near completion.

Reduced Schedule Pressure

Schedule pressure is created when projects recognise contractor reporting is overstated or project end dates are in jeopardy. This is typically a reaction that occurs too late for effective corrective action. Completions enablement inspection provides reliable confirmation of status and build quality, enabling proactive owner intervention to occur much earlier. The result is a decrease in the likelihood of schedule pressure as projects near completion.

Improved Quality

Completions activities initiate the quality inspection regime and documentation that confirms build quality to design specification. Bringing this forward creates the opportunity to identify problem areas before they become systemic. It also significantly reduces the negative impact on schedule caused by late discovery work.

Improved Decision Making

Visualisation of contractor status provides greater transparency for field verification and enables identification of problem areas requiring action.

Schedule Reduction

Schedule reduction is achieved by capitalising on completions opportunities as early as possible. Capitalisation provides insights to increase schedule predictability, reduce peak manning, and improve field productivity. The completions enablement process has been proven to reduce schedules by up to 3 months, even when implemented reactively around 65% complete.

Improved Communication & Collaboration

Completions enablement automation provides real time access and insights in visual form, which improves communication and collaboration across disciplines, contractors and language barriers.

Start-up Assurance

Creating an early focus on quality of build improves assurance that the project is being completed to the right standards. Enabling earlier commissioning involvement creates more time for problems to be resolved and increases the likelihood of startup efficiency.

asset55™
the software behind oil & gas

The global leader in Construction Solutions technology, targeted towards completions enablement and model enrichment. Get in touch today to schedule a demonstration of our software.

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