

# Digital Ecosystem Delivers Safe, Efficient, and Continuously Sustainable Wellsite Operations During Pandemic

Performance Live service ensures operational control of wells across the globe with reduced footprint at the wellsite

Operators engage with Performance Live\* digitally connected service to enable continuing operations as the global pandemic persists. These jobs span all geographies and operating environments from ultradeepwater to arctic platforms, and jungle land rigs to swamp barges, and everything in-between. One operator in Thailand implemented this service in four rigs to continuously reduce the wellsite footprint by 50% for directional drilling operations. Results were not only about crew reduction but also higher levels of performance by improving ROP 15% while drilling more than 1,200 ft per day.

## Continue operations amid severe travel restrictions and logistics disruption

Prior to COVID-19 pandemic, our directional drilling experts comprised more than 5,000 people operating on hundreds of rigs daily. Many commuted either domestically or internationally to wellsites (or work). The pandemic disrupted this travel-intensive workflow with worldwide travel bans, quarantine requirements, and shelter-in-place orders—instantly breaking global supply chains and personnel logistics. Consequently, the standard operating model quickly ceased to function, and staffing wellsites with crew and engineers became difficult or even impossible in some locations.

## Use digital ecosystem to sustain continuing operations

Schlumberger was deploying Performance Live service in a phased approach prior to the onset of COVID-19. At the start of 2020, nearly 50% of global rigs across 84 countries operated with some level of service implementation. In fact, up to 250 engineers were already trained to deliver Performance Live services and in one of 18 centers ready to meet the challenge. Hence, Schlumberger proposed fully implementing the model for many customers.

Performance Live service decouples analytical and manual tasks and enables the former to be conducted anywhere in the world through robust and advanced connectivity and software. This reduces wellsite crew sizes and enables performing the most analytical tasks from an office environment. While a fully manned rig can have engineer crews of more than 10 people, a wellsite using Performance Live service operates near autonomously with crews of 2 or less, depending on the deployed technology.

## Operators avoid operational disruptions while reducing wellsite headcount

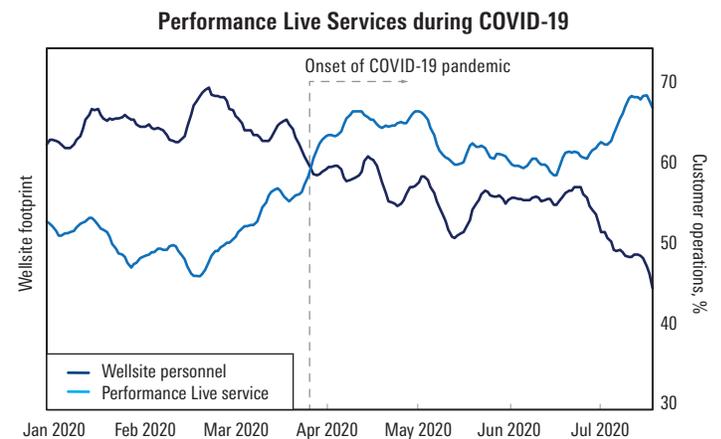
Schlumberger expanded worldwide use of Performance Live services by 25%, and by July of 2020 the service covered nearly 65% of global operations. During a single month of the pandemic, Performance Live service engineers covered more than 10,000 shifts—avoiding travel to wellsites by more than 600 people.

## Performance Live operation centers

- 18 centers covering 65% of Schlumberger jobs
- Ruggedized IT and power configurations with multiple redundancies
- Central hubs in Houston, Aberdeen, Villahermosa, Tyumen, Mumbai, Chengdu, and Dhahran
- Houston center holds 55 domain experts

## Technology

- Fit-for-purpose software mirrors wellsite environment in town without moving data
- Global infrastructure of scalable hardware solutions enables rapid deployment
- Radio communications over proprietary encryption network to any rig floor



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