

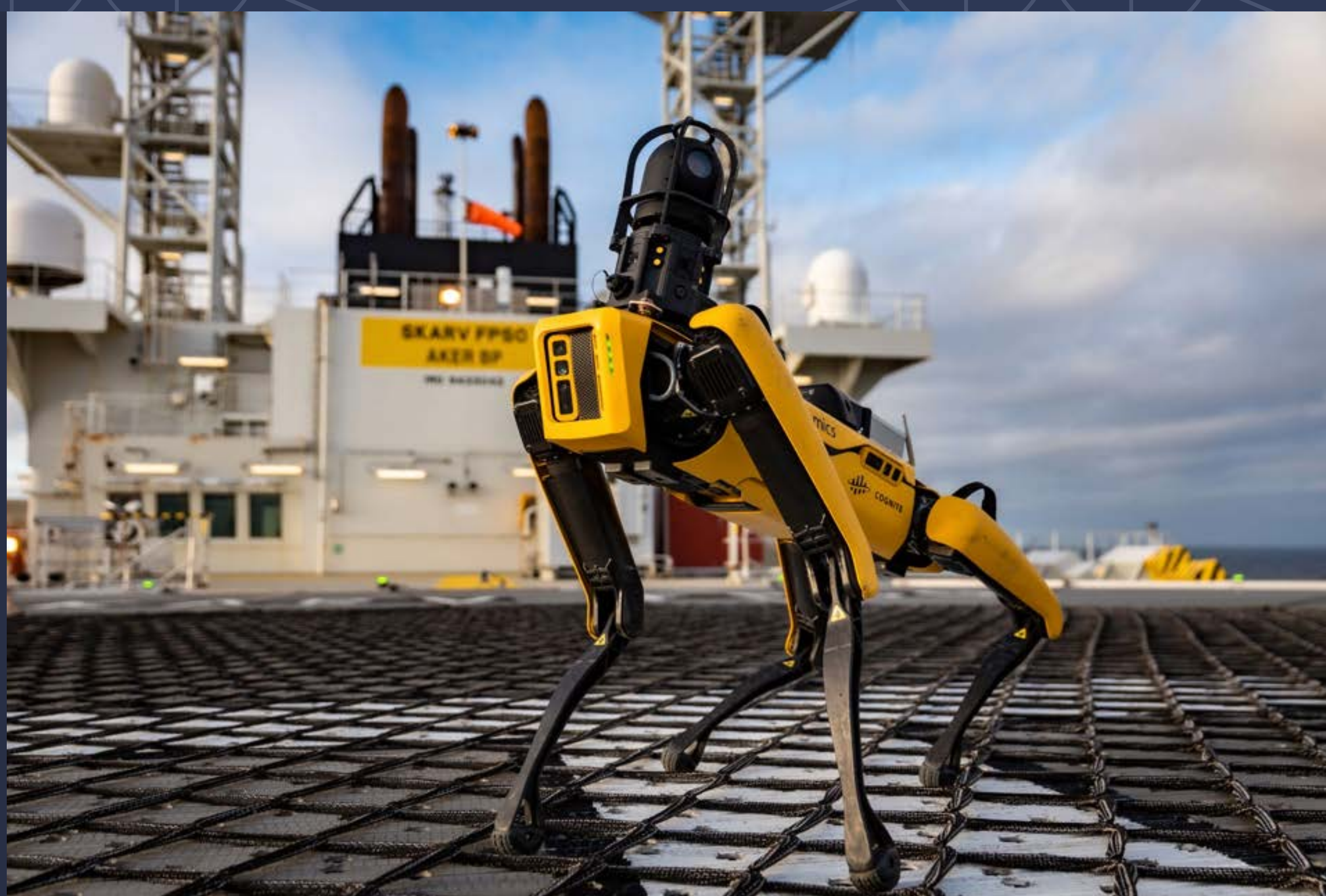
# Inspect offshore sites from 100's of miles away



How BP improved operational efficiency bringing data to the experts vs experts to the rig.

BP

Organizations with remote or dangerous sites can leverage robotics to conduct routine site inspections or investigate issues in a scalable and cost-effective way. Robots can collect a wider variety of metrics and feed the data, video, and sensor readings to a centralized location where experts can easily review the data from multiple sites. Formant allows organizations to optimize onsite and centralized resources while minimizing the costs associated with unnecessary onsite visits.



## Utilizing people's strengths and augmented with robotic capabilities

Optimizing the resources deployed to offshore sites and maximizing each site visit is key to improving operational efficiency and reducing the carbon footprint. To do this, BP needed to offload some of the mundane tasks of onsite employees and more effectively analyze data collected during inspections and investigations, ensuring that they were prepared with the parts and expertise needed when an onsite visit was required.

## Leverage remote operations to scale operations and centralizing the expertise

BP combined the mobility and dexterity of Boston Dynamics' Spot with Formant's command center software to centralize its operations and allow experts to monitor many remote sites cost effectively. Using Formant to remotely command and control Spot has provided BP a way to consistently collect more environmental data and identify failures earlier, resulting in increased employee efficiency, improved safety, and a reduced number of onsite visits required.

### The objectives:

- Free employees from dangerous tasks
- Identifying problems and abnormalities earlier
- Improve the efficiency of remote sites



# Formant robot command center

Using onsite robots to conduct routine investigations allowed BP to centralize the expertise to review and analyze the findings—improving efficiency and reducing operational costs.

## Teleoperations

Formant allowed BP to remove the need to have an employee directly operate Spot from just a few feet away. Formant remote operations provided BP with economies of scale, allowing one operator to inspect and manage robots in a number of locations. The operator can control the PTZ camera on Spot to zoom in and read gauges, inspect corrosion, and inspect and quantify potential leaks. Formant provided a comprehensive view of the environment and valuable contextual data to diagnose and remediate issues.

“ With the Formant platform, our employees can work together with the robots to collect and analyze sensor data, gaining real-time context of the facility. When deployed at scale, Formant teleoperation will allow us to inspect a number of sites from a centralized operations center, 100's of miles away.”

Yasser Bangash — *Robotics Technology Lead, BP*



## Centralized Review

BP improved operational efficiency by centralizing expertise required to review and act on site inspection data for a number of remote sites. All inspection data is collected, consolidated, and visualized in a single dashboard providing contextual insight across telemetry, video, audio, sensors, thermal, infrared, ultraviolet, and hyperspectral data. Viewing all data feeds together, in context, enables operators to compare data that would not normally be contained in a single location.

“ We have been impressed with Formant's ability to consolidate and analyze the sensor data collected during inspections. The Formant platform makes it easy for the operators and engineers to review the inspections, annotate data for anomalies, and address issues proactively.”

Adam Ballard — *Facility Technology Manager, BP*

## Remote Diagnostics

BP can remotely review inspection and investigation data collected to proactively diagnostics and root-cause issues and events. This empowers the operations team to be as prepared as possible, bringing any parts or expertise required to address the issues. By having this data before they initially deploy, they are eliminating steps, and possibly multiple onsite visits, that add to the costs and carbon footprint to maintaining these offshore sites.

“ The flexibility of the Formant platform allows our robotics team to monitor and overlay analytics to analyze the performance of the robot for maintenance purposes.”

Yasser Bangash — *Robotics Technology Lead, BP*



BP is driving operational efficiencies at remote sites. Now, with **Formant**, leverage onsite robots to conduct routine investigations and centralize the expertise needed to review and take action on findings.

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