



## **Resilience: The New Normal in the E&C (Engineering & Construction) Industry**

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# Agenda

Moderator



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Construction Market short-term challenges and  
industry outlook



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Responding to disruption with emerging technology



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Long-term opportunities for E&C companies



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# The construction industry has proved its resiliency in the past and continues to be successful during trying times



Construction activity has been largely exempted since it's categorized as an 'essential business'. However, construction companies are required to be extremely cautious with the health and safety of on-site workers who are working during the pandemic.

Construction organizations are required to manage, monitor, and report social distancing practices to keep jobsites open and workers safe and healthy. Below are key areas to confirm the health of their workforces while maintaining stricter safety norms as a priority:



EPCs are leveraging new/advanced technologies. For e.g., a leading national construction company has deployed a **custom-designed wearable IoT tag\*** to remind workers to maintain social distancing and provide contact-tracing information for jobsites



Some companies are using **social distancing automation**, which includes automatic detection and notification to workers of crowding with patterned vibration and visual message if a cluster of X people are too close



EPCs are monitoring on-site workers for COVID-19 and other symptoms – **conduct regular temperature checks** and prohibit workers who may be ill from working



Companies are **virtually and remotely monitoring on-site workers** to confirm they are complying with the safety standards, such as, maintaining social distancing and personal hygiene, frequently disinfecting, wearing PPE etc.



EPCs are conducting **regular risk assessments of construction sites** to confirm they comply with the health and safety guidelines laid down by the government

# Poll Question #1

# Owners and EPCs are focusing on leveraging digital technologies as one of the key strategies to respond and recover from ongoing project challenges

**This can act as a catalyst for organizations to accelerate the adoption of digital technologies**

## Increased use of robots on-site as skilled labor levels decline



- Construction companies are leveraging robots and autonomous rovers to reduce the need for humans to conduct site inspections. This helps address the entire industry's challenge of maintaining (or even increasing) skilled craft labor forces required to meet current demands.

- Construction projects are increasingly using drones for remote surveillance and inspection of construction projects.
- This will help allow drones to complement connected construction, as well as reducing onsite labor and overhead costs.



## Leveraging drones for remote site monitoring and inspection

## Using digital building twins, 5D BIM, and AR/VR during the project life cycle



- Digital building twins, 5D BIM, and AR/VR technologies are supporting in seamless planning and designing of construction projects without being physically present at job sites, mitigating the disruption in construction.
- These technologies will help reduce costs incurred throughout the project lifecycle.

- Organizations are gradually increasing the use of cloud technology as well as digital collaboration tools to confirm construction sites are connected, which makes remote management and collaboration easier.
- IoT is enabling intelligent asset management including inventory management and equipment monitoring and repair.

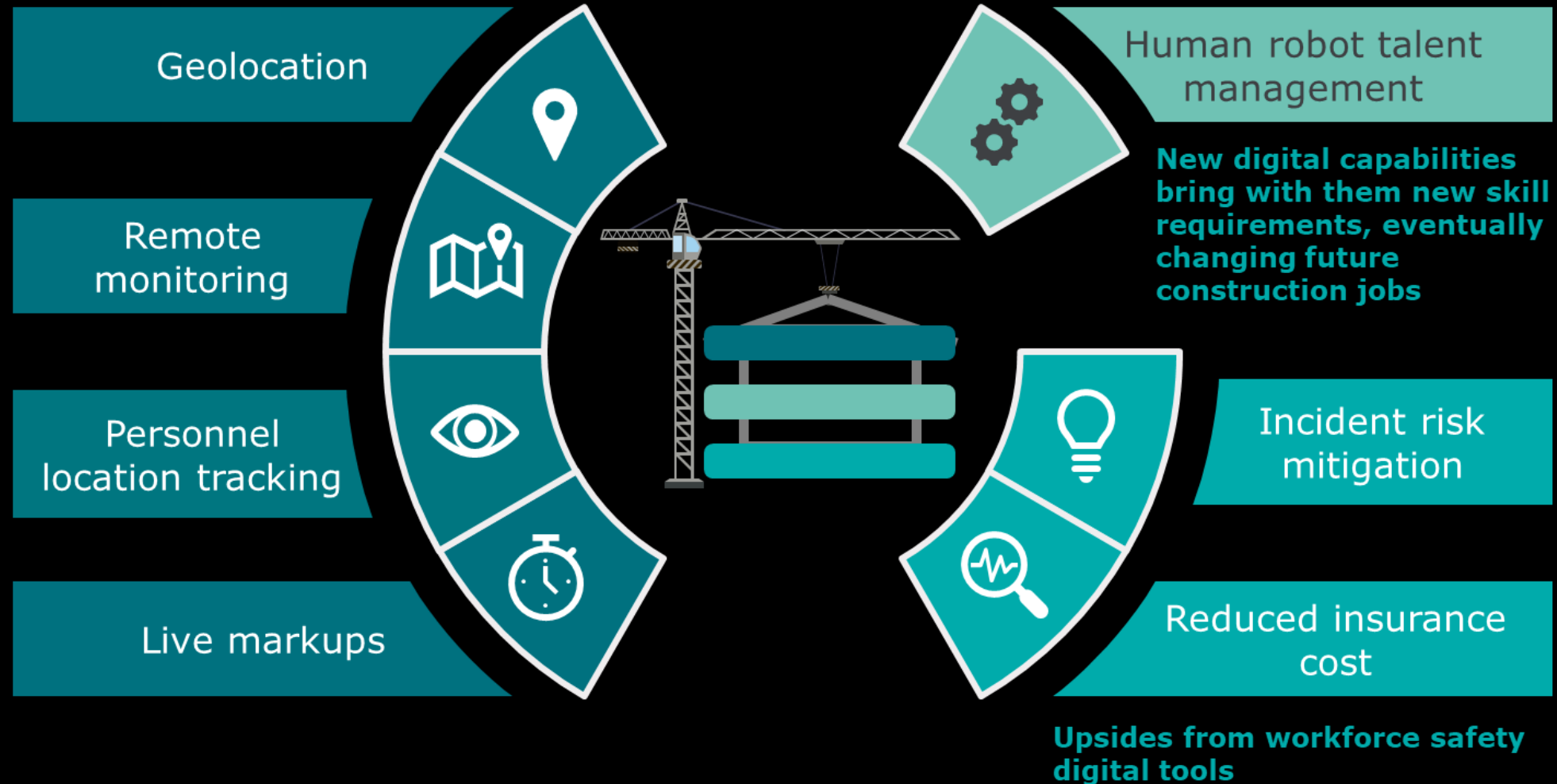


## Enabling remote management using connected construction sites

## Poll Question #2

# Digital technologies will continue to aid construction cost and schedule KPI's for current and future **construction work**

***Advanced technologies are having an unprecedented impact in transforming how the sector firms operate***

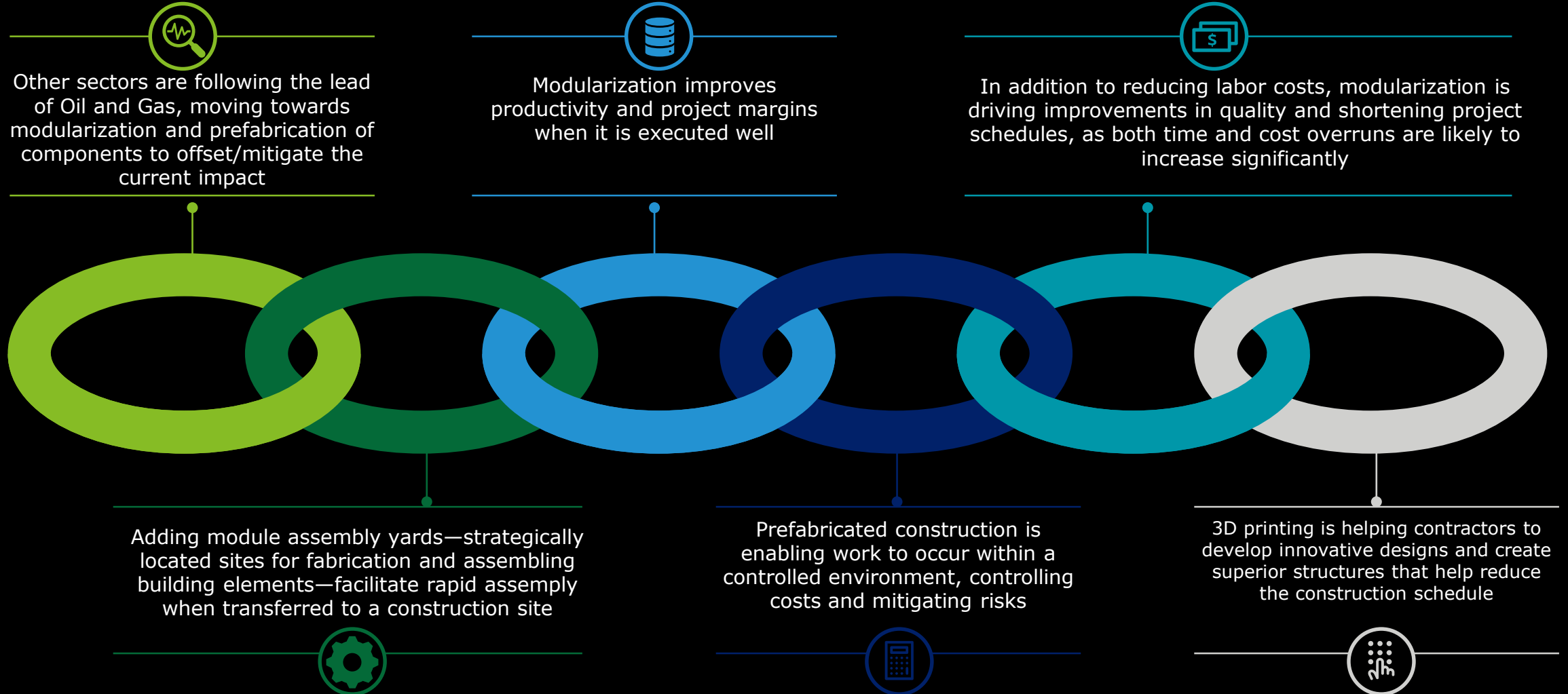


# Poll Question #3



# Poll Question #4

# Owners and EPCs are leveraging modularization and prefabrication to drive efficiencies and overcome schedule overruns



# E&C companies have significant opportunities in the medium- and long-term

## Availability of skilled labor



- Shortage of skilled labor has been an ongoing industry challenge
- The pandemic shook up the labor market: 40M jobless claims and a real unemployment rate of 23.8%\*
- As the sector recovers, hiring may be accelerated once certainty is achieved

**OPPORTUNITY:** *Attract untraditional skillsets to accelerate adoption of technology and efficiencies*

## Merger and Acquisition (M&A) for long-term value creation



- Many companies will divest non-core or underperforming assets during the COVID-19 slowdown
- Companies with robust balance sheets can scout for acquisition targets
- Create long-term value using M&A during depressed valuations

**OPPORTUNITY:** *Consider creative collaboration in current and future capital projects*

## Reduction in costs to drive profitability



- Contractors are seeing cheaper cost of capital for financing projects owing to a conducive monetary policy
- Many E&C companies now plan to reduce overhead costs moving forward
- Decreased pricing of key commodities can reduce planned project expenses

**OPPORTUNITY:** *Evaluate traditional cost centers and expenses to improve profitability long-term*

## Workforce, digital technologies, cost management: Key areas business leaders should focus on for short-term and long-term resiliency

1. Work closely with subcontractors and governments to plan and execute measures for **worker safety**, while **keeping the projects running**
2. Consider if the crisis can be used as a catalyst to **rethink how work is done** and to **accelerate adoption of digital capabilities**
3. Review how **cash flows and profitability** can support ongoing operations in light of diminished and relocated activity and consider **contingency planning** scenarios



# Questions?

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