At the end of 2019, we produced our 2020 outlook for the engineering and construction industry. Given the disruption and impact caused by COVID-19, we’ve evaluated the key trends, challenges, and opportunities that may affect your business and influence your strategy for the remainder of 2020. Check out our midyear trends:
Engineering and construction firms discovering bright spots in uncertain times

The US engineering and construction (E&C) industry began 2020 on a positive note after experiencing zero percent growth during 2019. Total construction spend in the first quarter of 2020 grew nearly five percent above the same period in 2019. However, as companies started to gauge the impact of COVID-19 on the industry toward the end of Q1, confidence among US construction industry leaders plummeted, and other indicators have followed suit in recent weeks. The Associated Builders and Contractors’ Construction Confidence Index was below the threshold of 50 in March 2020, which is the level that symbolizes the divide between expansion and contraction.

As we indicated in our previous outlook, most engineering and construction companies are facing sustained cost pressures and ongoing labor shortages, negatively affecting industry momentum. In April 2020, the labor picture shifted due to the COVID-19 pandemic, and industry employment dipped nearly 13 percent year over year. Employment in construction fell by 975,000 in April 2020 to its lowest level since January 2016. Apart from labor-related challenges, the E&C industry is likely to face several other short-term challenges amid the pandemic, such as delays or projects being put on hold, difficulty obtaining permits for projects, a rise in project cancellations, an increase in claims and litigation, and difficulty in procuring materials and equipment such as structural steel and glass from Asia. The path forward includes a focus on several bright spots in certain end markets and approaches like prefabrication and modularization, dialing up digital to ensure a safe and productive job site, and reinforcing ecosystems to build resilience.
Industry recovery

As recovery in the aftermath of the pandemic begins, it will likely reflect the “next” normal

While global industries saw disruption to their supply chains in early 2020, E&C was one of the few sectors that saw a relatively low impact. In the first quarter of 2020, both residential and nonresidential construction spend grew by nearly 8 percent and 3 percent year over year, respectively. As the impact of the pandemic continues to play out, it is likely that spending growth in 2020 will be led by public institutional and infrastructure investments. The coronavirus outbreak might have reshaped the types of projects that will be built for many years to come—hospitality, retail, and entertainment projects could be less attractive, while public utility, transportation, and health care–related projects could see more activity.

The current pandemic has affected the timelines of projects, and many firms are experiencing extended schedules and delayed commitments. The coronavirus crisis seems to be putting a spotlight on contract clauses and testing the sanctity of contracts—a cornerstone of a market economy—like no other event. E&C companies are likely to take steps to protect themselves by restructuring and renegotiating contracts.

An enhanced focus on worker safety could bring substantial change to current job sites and help accelerate the industry’s move to off-site construction methods. The coronavirus has cast a spotlight on the importance of worker health and safety, and companies are responding by implementing new job site policies, such as staggered shifts, employee temperature checks, and top-to-bottom disinfections of job sites, tools, and machinery. Virtual meetings will likely be a new normal, as E&C firms are developing new tools to streamline large client meetings, a crucial component in the process of creating commercial projects. In addition, the coronavirus pandemic will likely nudge firms toward modularization and prefabrication of components. Assembly line efficiency and the controlled environment of a construction “factory floor” can bring cost savings with higher efficiencies in labor productivity and shortened project schedules.
Altered job site processes and digital technologies could help E&C companies

Digital technologies have played an important role in the growth of the E&C industry. From connected job sites to digital supply chain, firms are calibrating various technologies that can transform their workplace and bring greater efficiencies. Digital technologies can help increase visibility, improve workflow, and streamline scheduling. Artificial intelligence–based solutions offered by technology firms are helping many E&C companies create a safe working environment. This is often accomplished by tracking workers’ behavior and preventing accidents in real time.  

A digital supply network (DSN) is increasingly becoming a must-have for E&C firms. With expected construction delays in the current pandemic, the efficient use of resources, both human and material, can be essential. A connected DSN has the potential to help firms improve supplied material quality and availability, adjust costs with subcontractors and suppliers, and meet new project timelines.

Automation at construction sites is another digital opportunity. Robots are helping many firms decrease their dependence on construction workers by automating repetitive steps like bricklaying. The pandemic is pushing construction companies to increasingly use drones for remote surveillance and inspection of construction projects and to mitigate disruption in certain construction activities. The extent of digital adoption by E&C firms is likely to play a pivotal role in their ability to recover and thrive in the coming months; and, increasingly, an ecosystem approach is one way of accelerating the adoption.
Ecosystem partnerships

Leaning into the network effect can help E&C firms

A significant impact that the COVID-19 crisis has had on most companies is the need to build resilience through the response and recovery phases of the pandemic. One way to build resilience is by adopting an ecosystem approach. For E&C firms, this ecosystem can be a key enabler to adjust to new market realities, including the need to quickly incorporate digital capabilities to facilitate safe design, engineering, and build environments. Take, for instance, the need to outfit the construction workforce with health and safety “tools” as it comes into close contact on a job site. E&C firms can turn to their existing technology vendors and service providers to quickly identify, procure, and implement new software and wearables to protect workers. Additionally, many of the relationships that E&C firms have with their technology vendors are becoming more like partnerships, where the vendors help firms pull in key enabling technologies like building information modeling (BIM), augmented and virtual reality (AR/VR), and artificial intelligence to drive broader digital transformation.

Some E&C firms are developing technology ecosystems in-house through incubator programs to surface and support emerging technologies that could be instrumental across a variety of use cases, from building up virtual capabilities for site evaluation and similar activities to creating engagement platforms to work virtually with clients during different phases of design and build. And, while M&A activity in the E&C industry has softened recently, decreasing by more than 7 percent in the first quarter of 2020 compared with the prior year, there may be opportunities in the coming months for companies to add new technologies or offerings through this channel.
Midyear 2020 engineering and construction industry outlook

Helping engineering and construction firms build a growth story in the second half of 2020

Despite the grim outlook, E&C firms are poised to take advantage of bright spots emerging for the industry that could facilitate recovery in the remaining months of 2020. Infrastructure and public utility projects have maintained their momentum to some extent relative to private construction, and once local economic activity picks up, residential housing starts are expected to gradually rebound. To remain competitive, E&C firms should accelerate their digital transformation to accommodate many of the workplace changes brought on by COVID-19. Increasing the use of prefabrication and modularization could also be a way forward for many firms. And, while the pandemic is likely to affect growth in 2020, it has highlighted the need for building a strong ecosystem for E&C firms to emerge stronger from these uncertain times.
Let’s talk

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Endnotes


8. Ibid.


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