

constructsteel

Monthly update for the construction industry

December 2020



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Construction market trends

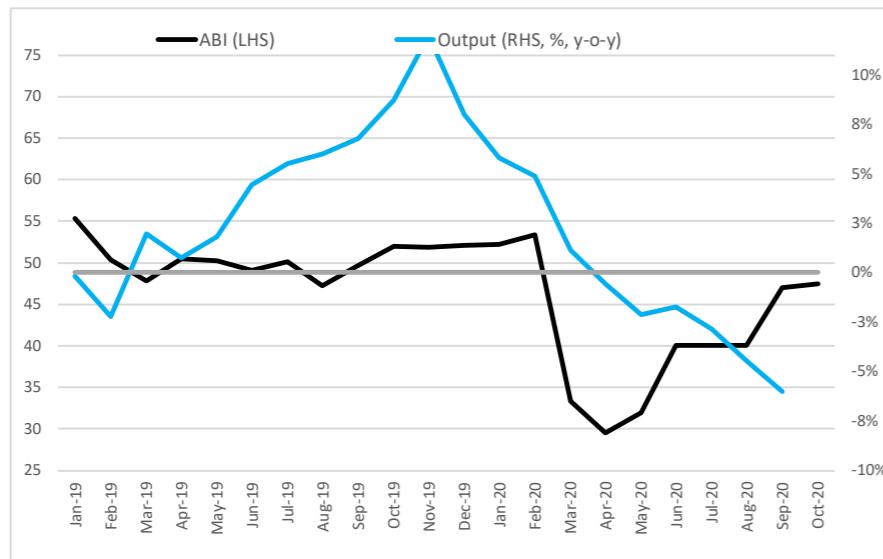
United States

Continued uncertainty negatively weighs on private non-residential output. Private residential output strong.

Private residential output up 2.8% m-o-m and 10% y-o-y in September; building permits flat m-o-m but up 3% y-o-y. Private non-residential output sees largest decline since April 2020 and by -1.5% m-o-m (-6% y-o-y). Architectural Billings Index (ABI) increased slightly to 47.5 (<50 = contraction) in October, indicating continued weak activity in private non-residential output.

Private non-residential output vs Architectural Billings Index

Source: US Census, McKinsey & Company



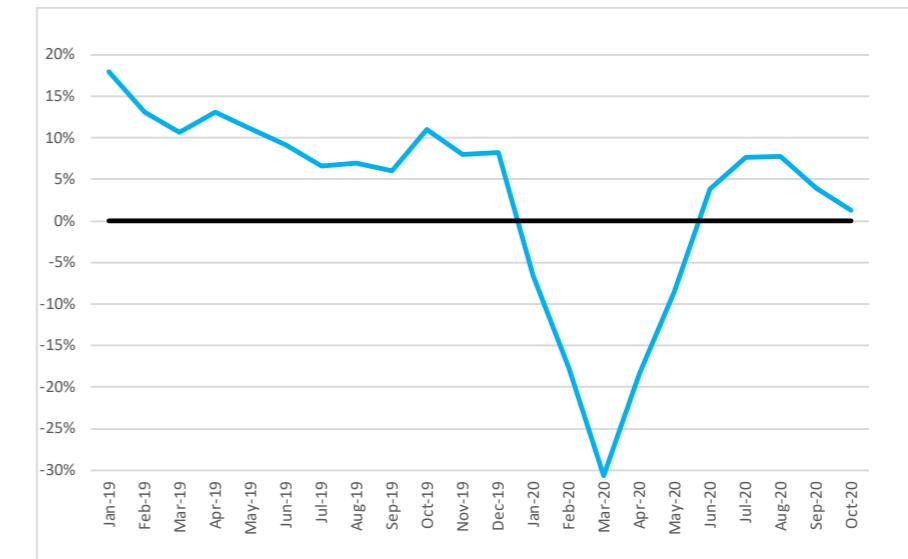
China

Construction conditions favourable but growth in floor space slowing.

The 3 month moving average y-o-y growth in newly started floor space slowed to 1.3% in October (Q3: 4%). Strong growth in floor space sold continued and by 12% in October (Q3: 9.8%). Road and railway continued to support infrastructure, while civil aviation remained in decline.

Residential floor space started (3 month moving average, % y-o-y)

Source: National Bureau Statistics of China, McKinsey & Company



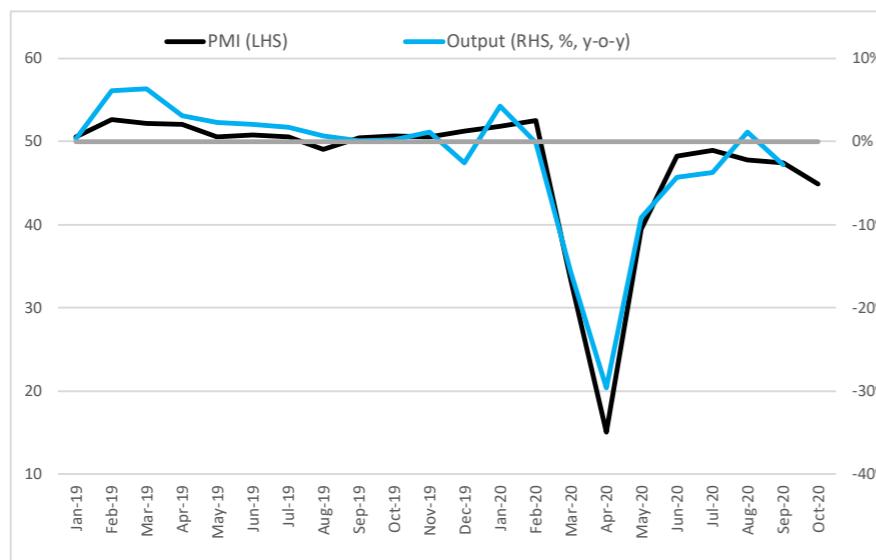
Europe

Renewed decline in confidence and output during the second half of 2020, but vaccine hopes positive for confidence in first half of 2021.

After increasing 3.9% m-o-m in August, Eurozone output fell -2.9% m-o-m in September (-2.8% y-o-y) with both building construction and civil works declining. The IHS Markit Eurozone Construction PMI continued its contraction in October to 44.9 (<50 = contraction).

EU27 construction vs. PMI

Source: Eurostat, IHS Markit, McKinsey & Company



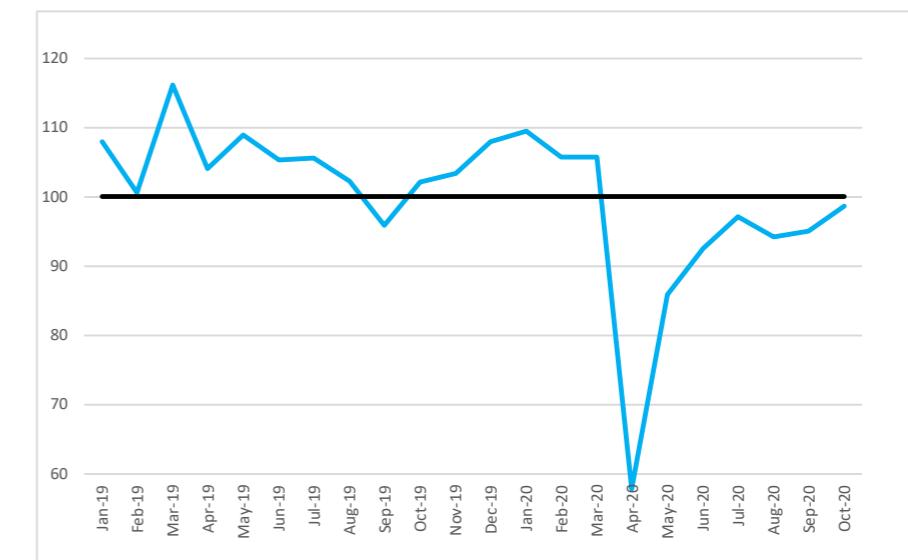
India

Industrial recovery continues to remain generally weak.

The weighted average of eight core industries output declined by -2.5% y-o-y in October and for the eighth straight month. Output of crude oil, natural gas, refinery products and steel declined, while coal, cement and electricity grew.

Weighted average of eight core industries industrial production

Source: INSDAG



Knowledge partner:

McKinsey
& Company

Sector innovation: The next chapter in construction technology

It has been a decade since construction sector players began embracing digital solutions, however, the industry has traditionally been lagging in levels of digitisation compared to other sectors.

The COVID-19 pandemic has resulted in construction sites closure, disrupted supply chains and operational restrictions. Beyond the short-term impact of an economic downturn on construction demand, the crisis is also expected to hit long-term supply and demand. At the same time we see that organisations across the industry are shifting to remote ways of working. Integrated digital-twin solutions are being developed to be used end to end, from project concept to commissioning. And contractors are looking to online channels for monitoring their employees' well-being through apps, ordering construction materials, managing scarce resources more accurately, and maintaining cash flow.

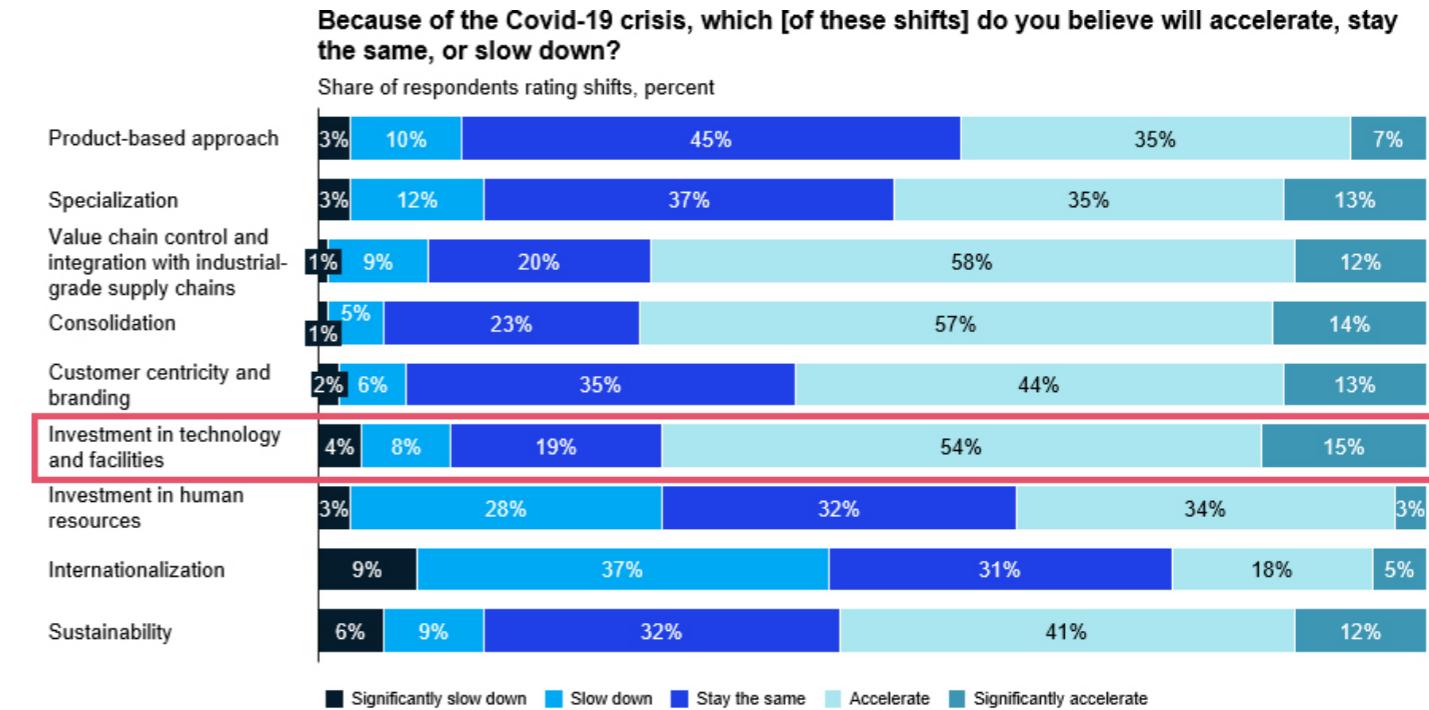
We expect that the continuing COVID-19 pandemic will drive a net acceleration in the use of technology and the construction industry will continue its transformation from a highly complex, fragmented, and project-based industry to a more standardised, consolidated, and integrated one. McKinsey Survey of 100 industry CxOs has shown that nearly 70% of respondents believe the COVID-19 crisis will accelerate investment in technology and facilities – about 60% of respondents' have already boosted the tech investments (Exhibit 1).

In the early- to mid-2010s, thousands of new market entrants in the construction technology space offered point solutions that served existing use cases or, in some instances, created new ones. The first widely adopted construction point solutions addressed basic needs; for example, improving design capabilities or digitising paper-based information. By the second half of the decade, industry players—spurred by end-customer feedback about their difficulty integrating point solutions—began expanding their product portfolios to create suites of integrated solutions.

Recent McKinsey analysis, presented in the "Rise of the platform era: The next chapter in construction technology" ([link](#)) aimed at mapping the global construction technology industry ecosystem has indicated that the largest clusters of use cases include 3-D printing, modularisation, and robotics; digital-twin technology; artificial intelligence (AI) and analytics; and supply-chain optimisation and marketplaces (Exhibit 2).

The industry has continued to grow briskly with venture-capital (VC) activity rising to several billion dollars at the end of 2019 from low levels a decade ago – overall, VC investment in construction tech outpaced the overall VC industry 15-fold through 2019, with clear indicators for continued momentum. Despite this continuing influx of VC-funded participants, the industry has seen significant consolidation over the past five years. From 2014 to 2019, investors poured \$25 billion into engineering and construction (E&C) technology, up from \$8 billion over the previous five years.

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N = 100 - whereof 54% real estate, 23% infrastructure, 23% industrial | 52% North America, 38% Europe, 4% APAC, 5% Middle East and Africa, 1% Latin America

Source: Survey of 100 industry CxOs, May 2020

Exhibit 1

Construction technology is a rich and growing interconnected ecosystem of hardware and software solutions

Construction technology industry map¹

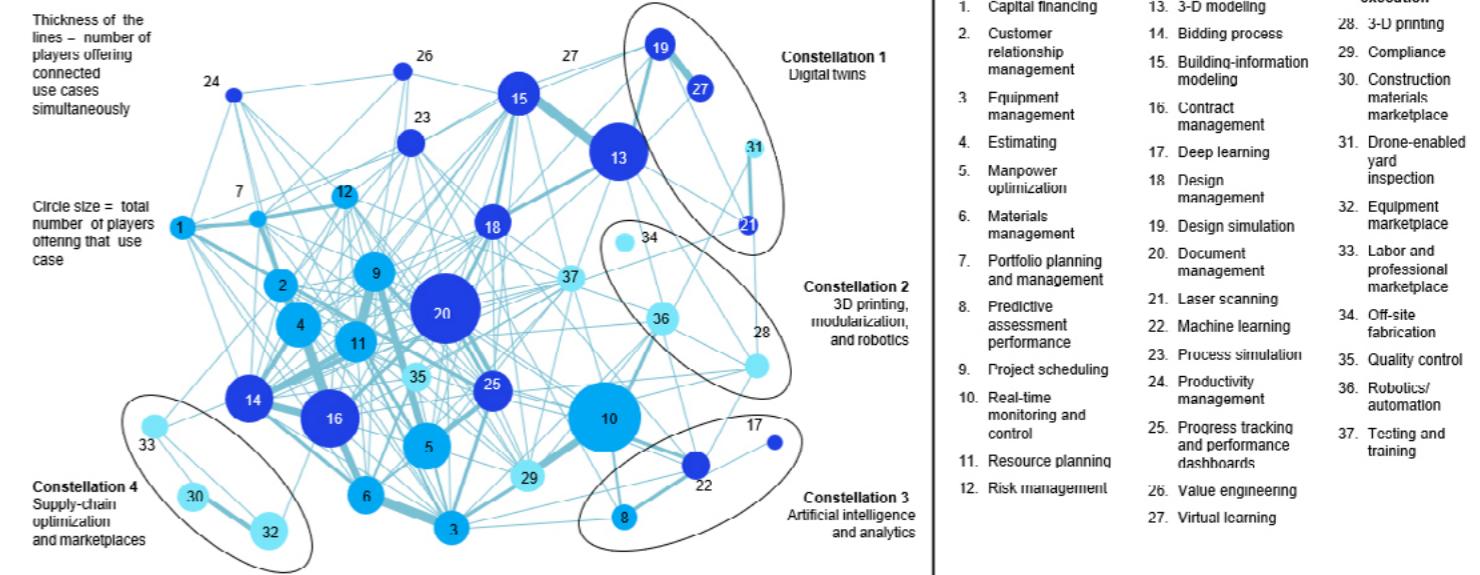


Exhibit 2



Exhibit 3

Project phases reveal a focus on field productivity, engineering-design tools, planning and scheduling, and facility management and improvement solutions.



Source: McKinsey analysis

Construction technology is still a heavily fragmented, point-solutions-driven market with ample opportunity for integration plays that create either new platforms or attractive component acquisition targets for growing incumbent platforms. This fragmentation is more evident when analysing construction tech offerings across the project life cycle. The construction and commissioning phase continues to be the most active, with twice the investment activity and more active players than other phases. Preconstruction and “overarching technologies,” which include advanced technological applications such as AI, robotics, and advanced visualisation, were the next largest.

Digging deeper to use cases within these project phases reveals a significant focus on field productivity, engineering-design tools, planning and scheduling, and facility management and improvement-focused solutions (Exhibit 3). Interestingly, however, 49 percent of companies addressing these use cases were involved in a transaction between 2014 and 2019, and roughly 14 percent of companies were founded in the past five years. Use cases based on AI and advanced analytics experienced the highest proportionate share of activity, with nearly 80 percent of companies involved in investment or transaction activity. This segment also has the highest portion of new companies, a trend that we anticipate will develop and continue. Given the current shift toward platforms and the large population of young companies, multiple opportunities exist for either strategic or financial investors to build value through roll-ups and other integration plays.

The mandate for change and technological adoption in construction has never been stronger, and financial and strategic investors continue to fuel a rapid expansion of the construction technology industry. The COVID-19 pandemic has only served to provide additional urgency to the pre-existing productivity and data-visibility issues facing construction companies. While this next phase of platform growth and adoption will better equip construction industry leaders to effectively plan and manage projects, construction technology is still a rapidly growing, highly dynamic space. Further efficiencies will be unlocked with deeper integration of technology solutions directly on the job site and with predictive analytics leveraging data from connected teams and equipment. In the end, the “platform era” will simply create the platform upon which these emerging technologies are built.

Construction steel news headlines

construction market and regulations

Dodge Data & Analytics 2021 Construction Outlook predicts that total U.S. construction starts will increase by 4% next year, to 771 billion USD. In 2020 so far, construction starts have slipped an estimated 14% to 738 billion USD. Dodge also predicted the dollar value of non-residential buildings will be up 3%, while nonbuilding construction will improve by 7%. [Link](#).

From infrastructure spending and union support to immigration, taxes and regulations, the U.S. construction industry will face a new set of challenges and opportunities under a Biden administration. [Link](#).

China's acceleration of its 'new infrastructure' plan will support the government's beneficiation ambition in the metals industry, boosting production of high-end metals as opposed to primary metals. New infrastructure projects including 5G networks, data centres and artificial intelligence systems, together with transport and energy infrastructure, namely ultra-high-voltage technology, charging stations and high-speed rail, require a substantial amount of metals in their construction, especially lighter and more advanced metals. [Link](#).

Overall sales volume for real estate inventory in India are expected to dip by 40-60% this year due to COVID-19. The spend on ongoing projects is expected to reduce by around 30% in 2021 on account of the pandemic. [Link](#).

According to the latest Euroconstruct forecasts, the construction volume in Europe is expected to slump by 7.8% in 2020. A growth of 4.1% is expected in 2021, followed by a 3.4% and 2.4% increase in 2022 and 2023 respectively. Until 2023 total construction output is likely to reach 1.7 trillion EUR and to exceed the pre-corona level of 2019 by 28 billion EUR or 1.7%. [Link](#).

The Russian government is eyeing a plan for a 15.2 billion EUR rail project in the south of the country. The scope of the project, known as the Southern Cluster, includes moving the railway system around the southern city of Sochi away from the coast and constructing a new branch of the network. [Link](#).

construction materials

Steel demand in India is likely to fall by record 20% in the financial year 2021. India consumed 100 million tonnes of steel during the financial year ended March 2020. [Link](#). At the same time, cement demand is likely to decline by 22-25% in FY 2021 given the prolonged nationwide lockdown and subsequent state/city specific restrictions disrupting construction activities. [Link](#).

China's actual finished steel demand may grow 5% on year for 2020. China's steel demand declined by 30% on year in the first quarter of 2020 because of the pandemic, as activities in the construction and manufacturing slowed down substantially. [Link](#).

construction sector players

Infrastructure engineering software company Bentley Systems has announced 100 million USD of venture funding to accelerate the development of infrastructure digital twins. Bentley iTwin Ventures will invest in promising technology companies addressing the emerging opportunity for infrastructure digital twin solutions for roadways, railways, waterways, bridges, utilities, industrial facilities, and other infrastructure assets. [Link](#).

Hilti has introduced a semi-autonomous mobile ceiling-drilling robot to help mechanical, electrical and plumbing (MEP) contractors increase productivity and safety. Reported to be Hilti's first robot, Jailbot executes its tasks based on building information modelling (BIM) data. Jailbot is designed to assist tradespeople in physically demanding, repetitive installation tasks such as drilling numerous holes overhead for many mechanical, electrical or plumbing installations. [Link](#).

US-based construction and engineering giant AECOM beat Wall Street earnings and revenue estimates for its fiscal fourth quarter, even though both profits and sales were lower than a year ago – the company reported 3.6 billion USD revenue versus 5.1 billion USD over the same period last year. [Link](#). Another leading US contractor Tutor Perini reported its third quarter 2020 financial results, posting 1.4 billion USD of revenue, which is the company's highest quarterly result in more than a decade and an increase of 21% since the same quarter last year. [Link](#). Jacobs Engineering recorded a 6.5% increase in revenues compared to the Q3 2019 numbers – the company also mentioned the plans for a

30% reduction in physical office space during the next few years as it shifts to a more "flexible and virtual workforce." [Link](#).

Swedish construction giant Skanska reported a smaller decline in profits than expected during 2020's third quarter, helped by its residential division even as commercial construction continued to lag and it lowered expectations for its U.S. non-residential work. [Link](#).

Steelmaker BlueScope says demand from Australia's construction and manufacturing sectors has rebounded faster than expected and government policies to stimulate the economy should ensure robust demand into the future. Demand was particularly strong in Australia for painted and coated products which typically go into household construction for roofing. BlueScope now expects first-half earnings to be 40% higher than initially expected. [Link](#).

Top Australian building materials maker Boral said it was selling out of its plasterboard business to Germany-based co-owner Gebr Knauf KG, ending an arrangement that started in 2013 and which gave it presence in the segment in Asia and the Middle East as well as Australia. Boral also said it was considering exiting the United States by selling the assets. [Link](#).

Formwork specialist Doka has partnered with US-based scaffolding manufacturer AT-PAC to expand into the global scaffolding market. Doka has invested in AT-PAC's shares and will supply its scaffold products worldwide, offering both sales and rental services. [Link](#).



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