constructsteel
Monthly update for the construction industry
October 2020
Construction market trends

**United States**  
Residential output supported by low interest rates & demand but prospects for private non-residential output remain weak.

After increasing 0.1% m-o-m in June, the downward trend in private non residential output continued in July and by -1% m-o-m (-4.3% y-o-y). The Architectural Billings Index (ABI) remained at 40 (<50= contraction) for the third month in August.

**Non residential output vs. ABI**  
*Source: US Census, McKinsey & Company*

**Europe**  
Leading indicators point to continued weak activity in coming months.

Construction output in EU27 remained at June levels in July but -4% below July 2019 levels. The IHS Markit Eurozone Construction PMI dropped to 47.8 in August from 48.9 in July (<50= contraction), indicating weak prospects in coming months.

**EU27 construction vs. PMI**  
*Source: Eurostat, IHS Markit, McKinsey & Company*

**China**  
Construction activity remains buoyant.

Newly started floor space remained supportive in July, with the 3 month moving average y-o-y growth up 7.7% . At the same time, floor space sold was up 7.5%.

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

**India**  
Favourable monsoon supports agriculture but rains temporarily arrest construction. Gradual pickup of activity expected.

The pickup of eight core industries was temporarily halted in August. The y-o-y pickup in coal and fertilisers was offset by declines in crude oil, refinery and cement. The weighted average decline widened to -8.5% y-o-y from -8% in July.

**Weighted average of eight core industries industrial production (2017=100)**  
*Source: INSDAG*
According to the UN 2019 Global Status Report for Buildings and Construction Sector, the buildings and construction sector accounted for 36% of final energy use and 39% of energy and process-related CO₂ emissions in 2018 – 11% of which resulted from manufacturing building materials and products such as steel, cement and glass. In 2018, global emissions from buildings increased 2% for the second consecutive year to 9.7 GtCO₂, driven by strong floor space and population expansions.

The construction ecosystem also has a significant impact on other environmental aspects – construction and demolition waste, water consumption etc. For example, 570 million tonnes of construction waste was generated in the US during 2017, comprising steel, wood products, drywall and plaster, brick and clay tile, asphalt shingles and concrete, which is more than twice the amount of the residential waste generated. About 200 litres of water are required for production of each m³ of concrete, leading to an annual consumption of approximately 17 km³ of water for global concrete production – equivalent to meeting the domestic water consumption of Russia.

Tackling this represents both challenges as well as substantial opportunities for construction sector stakeholders, from owners to developers to engineering and construction companies as well as building materials and components manufacturers and software providers.

The sector has recently seen multiple examples of moves across company types and processes from building materials production to construction site operations across the following areas: material innovation, waste reduction/logistics, recycling, business model innovations. On the next page are some interesting company and initiatives references across the opportunities.
1. Construction material innovations to address macro-trends of environmental sustainability and labour optimisation

As part of its partnership with Solidia Technologies, LafargeHolcim has developed a reduced CO\textsubscript{2} cement that together with a proprietary concrete mix design, and a specialised curing process utilising CO\textsubscript{2} creates a concrete with up to 70\% lower carbon footprint than traditional Ordinary Portland Cement systems. US-based Carbon Cure developed technology that introduces recycled CO\textsubscript{2} into fresh concrete, reducing carbon footprint and driving process efficiency.

The glass sector has seen a number of innovations e.g. switchable glass technologies: electrochromic glass, which switches based on changes in optical properties in response to electrical voltage (provided, for example, by US-based View and iGlass), and thermochromic glass, which switches based on change in optical properties in response to heat, provided by Pleotint.

Grohe, a leading global brand for complete bathroom solutions and kitchen fittings based in Germany, has developed a line of smart water-saving technologies that use less water. The company has several times made it into the top rankings as one of Germany’s most sustainable large brands in the past couple of years.

2. Software solutions to construction challenges leverage analytics to optimise work scheduling / streamline materials management

ALICE is a construction planning software platform built on artificial intelligence. It uses artificial intelligence and known inputs to find optimal construction plans, reducing costs, material, and time waste along the construction process.

Pype offers a suite of construction software solutions that leverage machine-learning algorithms to improve project management on the construction site, reducing costs and improving timeliness overall.

3. National, state, and local efforts have built platforms that connect buyers and sellers of landfill-dominated building materials

The Materials Marketplace software solution was developed by the US Business Council for Sustainable Development to provide an online platform for businesses and other organisations to reuse and recycle waste/by-product materials. The effort is intended to drive traffic for industrial waste reuse and recycling to a common platform that can match customer needs with available product supply to enable the shift to a circular, closed-loop economy. Simultaneously, the Marketplace encourages cost savings, energy savings, and job creation.

PlantReuse is an online platform that connects buyers of used building materials to sellers with the intent to reuse those materials. Contractors can also request specific materials and be contacted when they become available.

4. Enhanced techniques are revolutionising construction by harnessing the end-to-end building process to reduce inefficiencies

US-based off-site construction company Katerra has raised $1.2 billion to integrate and control activities across the construction value chain (primarily design and engineering, component supply, and off-site manufacturing). A Katerra-designed and -developed, end-to-end integrated digital platform serves as the backbone from project initiation to delivery - as a result, Katerra’s modular component factories can work in tandem with the company’s automated precast-concrete factories.

Autodesk and hsbsOFT have developed integrated solution that covers the whole design process from planning to manufacture of the prefab structures that helps dramatically reduce material waste and the labor required to construct new buildings.

Several companies like CBot, TyBot have introduced robots for repetitive and labor intensive tasks (e.g., tying steel reinforcement bars, applying insulation, electrical, studding, plumbing, automated tiling).
Construction steel news headlines

Construction market and regulations

The French government has announced a €100 billion ‘France Reboot’ stimulus package to bolster its ailing economy in the face of a spike in coronavirus numbers. Approximately €30 billion of the package will be spent on environmentally friendly energy policies, with €2 billion in additional funding set for the construction development of a hydrogen infrastructure, including hydrogen-powered rolling stock for the country’s rail network. Link.

South Africa’s construction sector contracted by 33.4% in the second quarter of 2020 as a result of the Covid-19 pandemic. This is a decline of 76% on an annualised basis for construction. Link.

Construction industry analyst Barbour ABI has reported a 21.2% increase in the value of contract awards in the UK in August 2020, based on a three-month rolling average with the total value of construction contract awards for the month totalling £4.4 billion. Link. However, the IHS Markit/CIPS construction purchasing managers’ index hit a reading of 58.3 expected.

The current CPR to contribute to the standardisation system in the Federation, Construction Products Regulation (CPR) Ahead of the Construction Industry Federation Technical Stakeholders’ revision Technical Stakeholders’ potential revision. Link. India has successfully achieved 717 billion square feet of ‘Green Building Footprint’, according to the recent data by the Indian Green Building Council (IGBC). To date, there are almost 6,000 green projects and over 5.77 lakh acres of large development projects in the county, which have helped to achieve 75% of the green building footprint target two years earlier than the actual target. Link.

The European Investment Bank has announced its Construction & Industrial – its Construction & Industrial – its Construction & Industrial – construction sector players potential revision. Link.

India’s National High Speed Rail Corporation has opened the technical bids for construction of a section of the Mumbai-Ahmedabad High-Speed Rail corridor. A total of three bidders involving two consortiums and Larsen & Toubro have reportedly expressed interest in the high-speed rail project. Link.

The European Investment Bank (EIB) has agreed to its largest-ever loan to fund a new high-speed rail link between Naples and Bari in southern Italy. The organisation

Construction materials

The market of construction materials in Egypt has been facing recession over the past few months due to the government’s decision to suspend construction, which coincided with a general downturn over the outbreak of COVID-19. The sales of factories and manufacturers have been affected by a drop in demand, with the price of construction materials, including steel, cement and bricks, have declined by more than 70% and they are not operating at full capacity. Link.

Tera Novo, an Israeli-based innovative technological & scientific decontamination solutions startup, has signed an exclusive strategic cooperation agreement with Tamburg, one of Israel’s leading paint and construction material manufacturers, to produce and market products containing Tera Novo’s patented antibacterial additive that neutralises viral compounds such as the coronavirus. The companies intend to market the antibacterial products to hospitals, clinics and health centers for wall painting and treatment. Link.

Biobird® has launched its new high-tech construction materials bidding application. Using an advanced internet bidding system, guided by auction theory, buyers place online orders and receive multiple blind bids preventing collusion and providing many buyers the best price. The bid deadlines are set by the participating buyer on weekly intervals. Link.

Iron ore, nickel, copper and other metal prices are rising as China (which consumes roughly half of the world’s industrial metals) restarts construction after the outbreak of the COVID-19 pandemic. Since late March, prices of iron ore — the key ingredient in steel — have risen more than 40%. Nickel, needed for stainless steel, and zinc, used to galvanise metal, are up more than 25%. Link.

Stronger-than-expected demand for Brazilian steel following the peak of the coronavirus pandemic, along with a slower-than-expected supply response in the domestic market, has prompted steel producers to produce, totalling about 20% since June. Even though the automotive sector remains in slow motion, the quick reactivation of other industries — construction, wind and solar energy, white goods, road and agricultural equipment — has boosted demand for steel. Link.

Russian demand for steel is gradually returning as COVID-19-related restrictions ease and construction activity picks up; a series of interest rate cuts by Russia’s central bank and consequently falling mortgage rates have benefited the local real estate sector. Overall, world steel numbers. According to multiple press reports, Hyundai Heavy Industries Holdings has submitted a non-binding bid for a controlling stake in Doosan Infracore. Earlier this year, Doosan group was looking to sell its stake in construction equipment manufacturer. Doosan Infracore to raise funds to repay loans. Link.

A remote part of Lincolnshire in the UK is hosting the world’s first hydrogen fuel cell-powered construction site, according to Siemens Energy, lead contractor on the National Grid’s Viking Link interconnector project. Siemens Energy says the site will not have access to a grid connection for six to eight months, so it has moved ahead with the installation of a hydrogen fuel cell system, which will provide heat and power to the entire construction village in the interim period, negating the need for any diesel generators. Link.

Brussels-based construction company BESIX has reported a standalone backlog of $5.4bn in H1 2020, and solid liquidity position, while it posted a net loss of $18.5m in H1 2020. According to the company, majority of the contract award in Q2 2020 were secured for projects in Europe. Link.

Canadian Aeon Group reported a record high work backlog of $7.17 billion at the end of the third quarter of 2020, up from $6.4 billion at the end of Q2 2020, and a record high work backlog of $2 billion higher than

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Steel is the most recycled material in the world, easy and affordable to recover from almost any waste stream.

LafargeHolcim has now joined forces with IBM to further develop its building material platform ORIS which optimizes road construction through intelligent planning and helps cut costs and reduce the carbon footprint. Link.

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