constructsteel

Monthly update for the construction industry
September 2022

Construction market trends

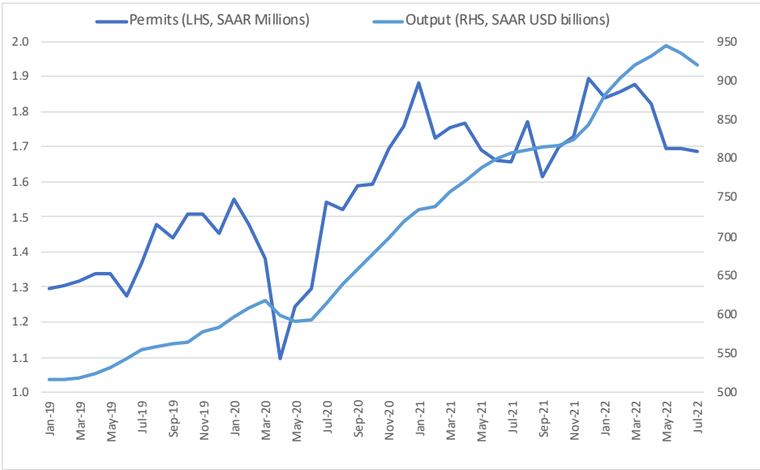
United States

U.S. homebuilding in July dropped to the lowest level in 18 months on rising interest rates and prices of construction materials.

Private residential output down -1.5% m-o-m (14% y-o-y); building permits down -0.6% m-o-m (1.8% y-o-y). Private non-residential output up 0.4% m-o-m (3.1% y-o-y); Architecture Billings Index (ABI) fell to 51 in July from 53.2 in June (>50, expansion) with the lowest reading since January.

Private residential permits vs output

Source: US Census, American Institute of Architects



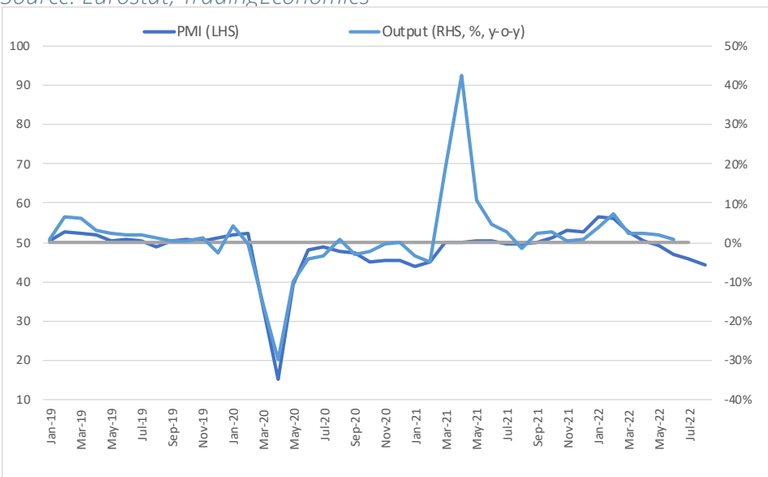
Europe

Eurozone construction remains burdened by scarcity of labour and material shortages.

Eurozone construction fell -1.3% m-o-m (0.6% y-o-y); Buildings down -1.2% m-o-m (0.6% y-o-y); Civil works down -1.3% m-o-m (0.3% y-o-y). In June, the IHS Markit Eurozone Construction PMI dropped to 44.2 in August from 45.7 in July (<50, contraction).

Eurozone construction output vs PMI

Source: Eurostat, TradingEconomics



Knowledge partner:
McKinsey & Company

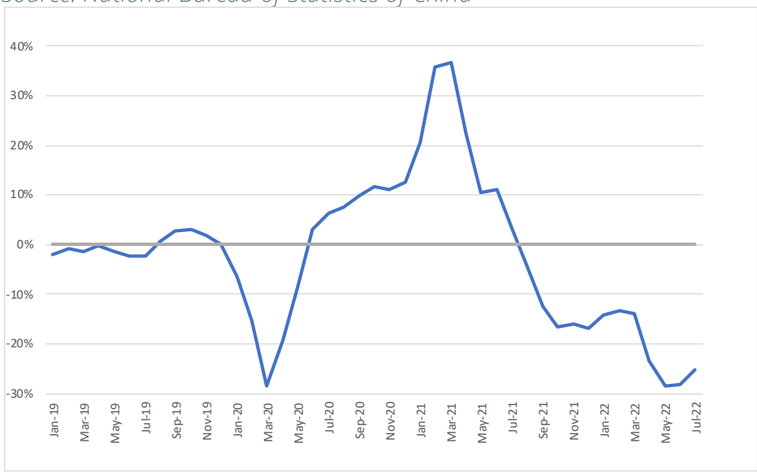
China

Residential sector remains under pressure due to government crackdown on property industry excesses and zero-covid policy. Recent loosening of restrictions aiding property sales.

The 3 month moving average y-o-y growth in floor space fell -44% in July; floor space sold fell -25% y-o-y.

Floor space sold (3 month moving average, %, y-o-y)

Source: National Bureau of Statistics of China



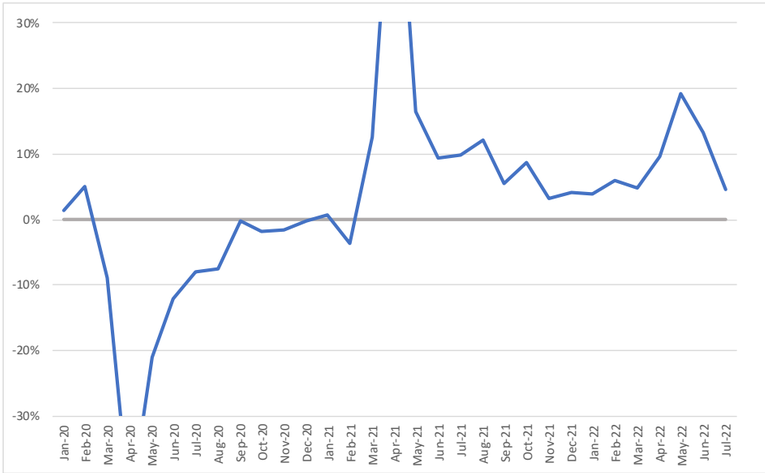
India

New investment projects and government capital expenditure to continue supporting construction.

Weighted average of eight core industries output upy 4.5% y-o-y in July; production of steel up 5.7%, cement up 2.2% y-o-y.

Weighted average of eight core industries industrial production (%, y-o-y)

Source: Ministry of Commerce & Industy, India



Special topic:
constructsteel 2022 annual conference in New Delhi, India
Reinforcing the future of steel in construction

constructsteel held its fourth annual constructsteel conference in New Delhi, India on 07 September, with "Reinforcing the future of steel in construction" as its theme. Our agenda included a full day of content, as well as various networking opportunities.

The event brought together over 250 participants from the steel construction value chain to hear expert views on topics related to buildings and infrastructure. Experts discussed the advantages and competitiveness of steel in various construction segments, including speed of construction, reusability and recyclability. Experts also discussed the need for greater engagement by the steel industry to promote the use of steel in the academic sphere to ensure that the next generation of designers are versed in using steel.

We thank all participants for attending our 2022 annual conference, and especially our supporters and speakers for their valuable insight and for making this event possible.

Technical trends:

Building products in the digital age: It's hard to 'get smart'

June 6, 2022 – For full article, see Link

Opportunity or threat? Innovation is perceived as a double-edged sword in the building products sector, but the winners will be those who dare to take risks.

The building products market forms the very foundation of our economies yet remains one of the most fragmented—and least digitised—industries in the world. Thousands of product categories span raw materials such as cement, steel, and glass, along with finished items like windows, doors, and air conditioners—as well as everything in between. Adding to this complexity, a plethora of market participants includes large manufacturers, niche players, and one-step and two-step distributors, as well as the hundreds of thousands of dealers and contractors that manage the sale and installation of these products. Many of these players continue to rely on handshakes and fax machines to do business.

Meanwhile, the recent pandemic has fundamentally reset the short-term supply-and-demand relationship for the entire building products industry. Supply chain disruptions, raw-materials price volatility, and labour shortages have exposed cracks in companies' operations. Although the market has been able to paper over these cracks with multiple price increases, when the price environment normalises, many companies may find that recent outperformance of their long-range plans turns out to be a mirage. As such, the sector is ripe for innovation.

It's perhaps no surprise, then, that executives in the industry are responding to the current dynamic with a renewed focus on innovation and digital transformation. More surprising is the degree of unanimity in this regard observed in McKinsey's 2022 global survey of over 500 executives in the building products sector.[1] Validating many of the themes McKinsey discusses with their clients, they heard:

- Some 70 percent of executives are planning to increase their investment in innovation and R&D.
- The top three ranked trends are digital or tech-oriented in nature, as are six of the top ten—this is significant in such a stubbornly analogue industry (Exhibit 1).
- Distributors are feeling this pressure on multiple fronts and see significant disruption on the horizon, including through further consolidation. Exhibit 1

Accordingly, McKinsey decided to dive a little deeper into the views and future plans of two of the key industry groups: building products manufacturers and distributors.

Building products players are looking to 'get smart'

When McKinsey drills further into the responses to this question, the following numbers were observed, which are equally compelling.

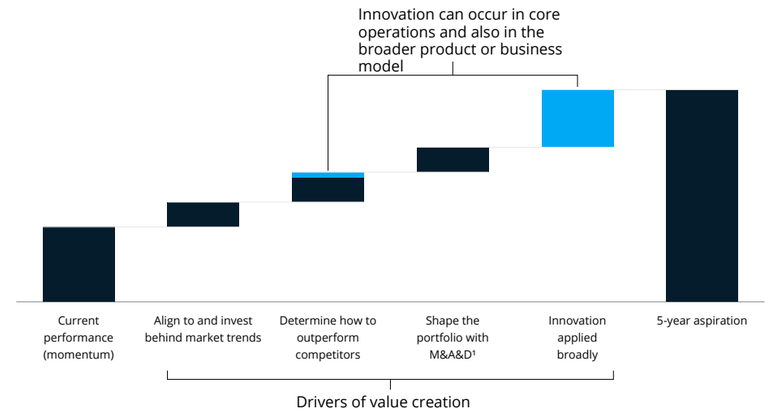
- Of respondents who ranked "get smart" in their top two choices, 73 percent of manufacturers and 64 percent of contractors reported this is a leading concern.
- A significant portion of all respondents, 40 percent, in North America "strongly agree" that this is important, well ahead of any other option.
- Building products manufacturers had the greatest degree of alignment with the "get smart" notion: 37 percent of executives strongly agreed with the sentiment versus 18 percent of distributors.

McKinsey sees a number of areas where executives would be well advised to invest and make changes over the next five years in order to stay competitive, and business model innovation is high on the list. In fact, faced with seven choices in the survey, including "going lean" to achieve productivity gains, "doubling down" on core markets, or "looking wide" to find growth in adjacent

[1] The survey covered 547 executives worldwide.

Drivers of value creation can be categorized by routine interventions and more ambitious moves like M&A and innovation.

Illustrative chart of how value-creation drivers can increase a company's value, $



¹Mergers, acquisitions, and divestitures.
Source: McKinsey analysis

McKinsey

markets, executives were clear: building products players are looking to "get smart" by increasing their investments in innovation and R&D (Exhibit 2).

Moreover, when McKinsey asked executives to rank how important certain changes were perceived to be by their organisation, 70 percent ranked "get smart" as one of their top two choices—more than any other option.

Digital and innovation-linked trends are at the forefront of many industries, and frequently rise to the top of our building products CEOs' agendas. Indeed, themes including digital design tools such as building information modelling (BIM), software solutions such as job-site management, and automation even outranked sustainability trends in our survey. It's clear that many people see opportunity in innovation, with executives from every category choosing digital manufacturing as the biggest such opportunity: improvements to tools, processes, and efficiency can boost quality, lower costs, and increase customisation—all changes that benefit the entire value chain, and further threaten those that refuse to adapt.

The growing threat of digital disruption: Distributors in the crosshairs

Another particularly interesting finding of McKinsey's survey is that despite market perception of the need for innovation, executives still see digital as more of a threat than an opportunity. Making radical changes to traditional ways of working requires taking uncomfortable risks. Across all four categories of respondent (buyer/contractor, designer/specifier, manufacturer, and distributor) two-thirds of digital trends were scored as net threats, with the biggest threats seen as being those from supply chain transparency and distribution efficiency (Exhibit 3).

The effects of these transparency and efficiency trends will be felt most acutely by distributors, whose role in delivery and fulfilment is important, but whose margin is acutely under pressure as routes to market condense. In fact, the only group of respondents not to select innovation and R&D as their top priorities were building products distributors; rather, their preferred option is to "reinvent" themselves, with strategic and operating-model implications.

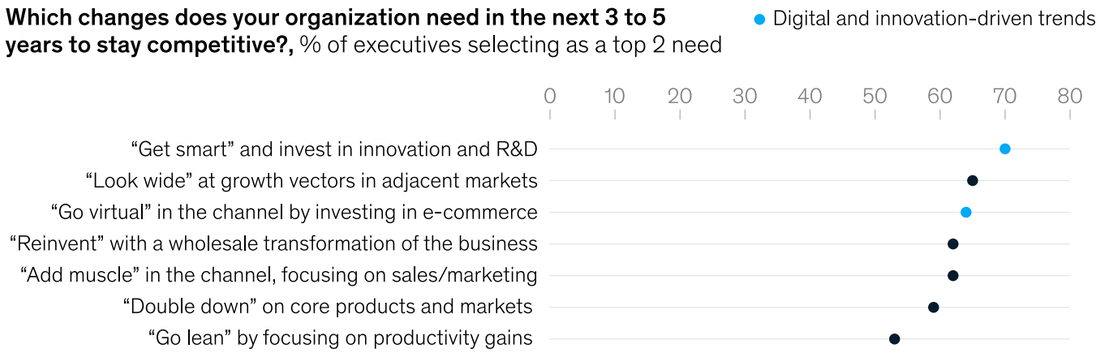
The reasons for the need to reinvent seem clear: competitive threats from all sides, including new platforms and direct-to-consumer sales channels, a looming shift to modular, and the expectation of continued consolidation in the industry. Specifically, however, the number-one digital threat distributors recognise is supply-chain transparency, and especially price discovery. Unsurprisingly, those with the most to lose from price transparency see the biggest threat: contractors, who can capture a higher margin when product and labour are bundled, and distributors, whose ability to dynamically set prices is essential. Indeed, there are many disruptors seeking their share of the billions at stake in this market: one industry venture capital investor recently said that they see "a new procurement platform every week" seeking capital to scale their solution.

However, McKinsey believes the bigger challenge will actually be in channel management for manufacturers. As both buyers and distributors adjust to new ways of working, manufacturers will need to maintain downstream access and adapt to changing routes to market without letting unavoidable channel conflict impair their business in the near term. In fact, the market agrees—this was the highest-scoring digital threat across all categories (–13 percent net threat). This transition will require bold

**Views expressed in this article are those of the authors and do not necessarily represent the views of constructsteel and worldsteel*

Executives identified digital and innovation-driven trends as among the main changes needed to stay competitive.

Which changes does your organization need in the next 3 to 5 years to stay competitive?, % of executives selecting as a top 2 need



Source: McKinsey Building Products Survey, 2022 (n = 547)

actions, and involve real risks, to stake out the next winning position.

Three ways for building products players to 'get smart'

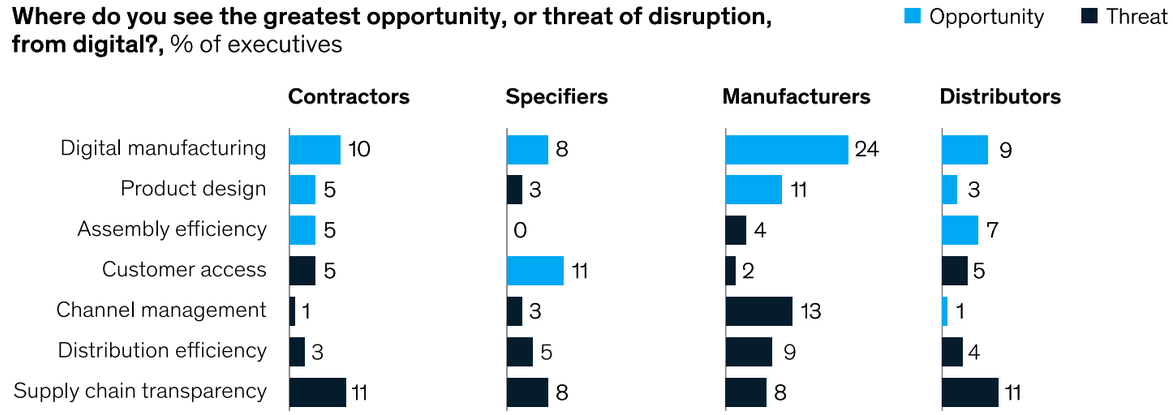
What then are the options for executives to adapt to this impending disruption? McKinsey sees the following three ways.

- Set a clear (and bold) North Star aspiration. It's hard to innovate in a vacuum and, without a clear innovation target, leaders often won't shift resources to pursue the big moves that create change. To make progress it's important to articulate the objectives for innovation with a bold but plausible aspiration. Such objectives can range from delivering net new growth, improving customer experiences, or operational and value-chain improvements. One of McKinsey's clients set an aspiration to deliver top-quintile total shareholder returns (TSR) over five years, but then realised that this would imply expanding the performance of its largest division beyond anything ever achieved by any player in the industry. The gap between what is realistically achievable through routine interventions (cost programmes, marketing and sales initiatives, and so on) and the bold aspiration is what McKinsey calls the "green box" (Exhibit 4): this identifies and sizes a clear target for innovative and disruptive growth.
- Stay focused downstream. Great innovation concepts come from the intersection of three lenses: customers, technology/capability, and business model. At the end of the day, they must serve a clear downstream customer need. For manufacturers, this means understanding use-case applications and developing solutions that can alleviate contractors' main pain points (such as qualified labour challenges or price volatility). A roofing manufacturer could, for instance, choose between investing in a different granule technology or developing an easier-to-nail shingle design. While both directly improve the product, one is likely to have far higher impact for contractors, and therefore ultimately create more value in the ecosystem. For distributors, this means understanding contractors' evolving ways of working and meeting them where they're at, including expanding value-added services like pre-assembly, and further integrating with tech tools like job-site management platforms.
- Adjust your investment portfolio approach. A traditional product-development approach that delivers large investment dollars based on milestones may not work in a rapidly changing environment that requires more iteration and incremental steps to scale. When McKinsey recently looked at one manufacturers' product portfolio, they saw that fewer than half of the products had "earned the right to grow" via accelerating investment. The remainder would benefit from cost improvements or market repositioning in order to maximise value creation. Some even warranted outright cancellation, given the inefficiency of capital expenditure required to maintain their position. Managing this broad portfolio of concepts, each with a differentiated approach to investment, requires a much more agile approach to resource allocation. Exhibit 4

Getting smart—investing in innovation and R&D—is going to be the key differentiator for the market over the next three to five years. Building-materials players that do not adapt to these trends will be left behind, but those who embrace the future through innovation will succeed in turning the experiences of the past three years into a new growth trajectory.

Digital manufacturing is seen as an area with the greatest opportunity, while supply chain transparency and broader distribution channel shifts are believed to be threatening.

Where do you see the greatest opportunity, or threat of disruption, from digital?, % of executives



Note: Factors are sorted by those most often identified as an opportunity across all respondents to those most identified as a threat.
Source: McKinsey Building Products Survey, 2022 (n = 547)

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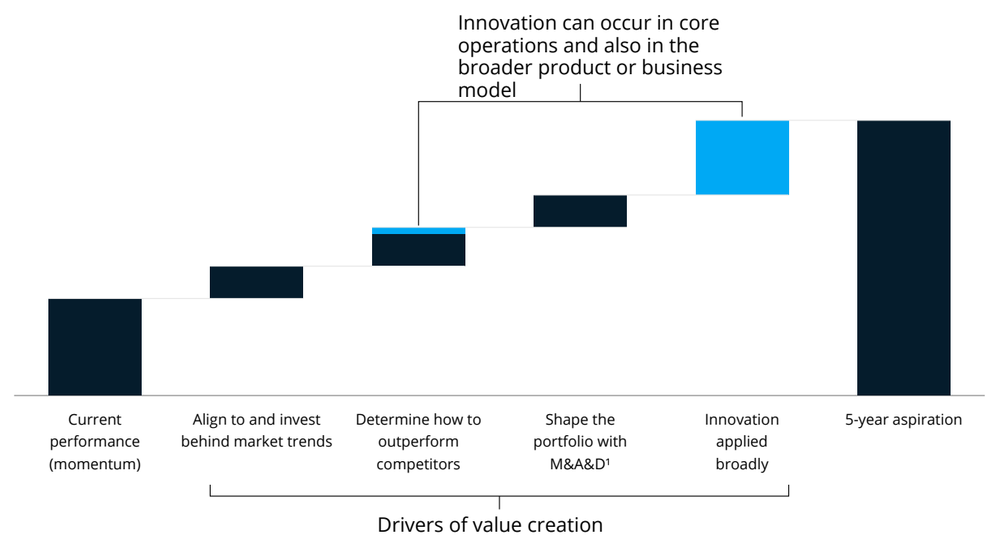

¹Mergers, acquisitions, and divestitures.
Source: McKinsey analysis

Construction steel news headlines

construction market and regulations

North America: The Federal Aviation Administration will award about $1 billion to repair and improve terminals at 85 airports across the country. This is the first round of grants over a five-year period from the $5 billion Airport Terminal Programme, one of three aviation funding programmes created by the infrastructure act. The infrastructure act contains another $5 billion for air traffic facilities and $15 billion for aviation infrastructure. Link

North America: The world's largest real estate company, Coldwell Banker Richard Ellis (CBRE), has predicted a 14.1% year-on-year increase in US construction costs by the close of 2022, citing financial pressures such as inflation, labor shortages, supply chain challenges, COVID-19 and Russia's invasion of Ukraine. It is the largest jump since CBRE began making cost projections in 2007. Link

North America: A full 91% of firms are having trouble staffing job-sites, an Associated General Contractors of America survey found. Construction firms are struggling to find workers to such a degree that it's threatening the success of federal investment in infrastructure and manufacturing projects, the Associated General Contractors of America said. Link

Europe: British building firms suffered a squeeze on activity for a second month in a row during August as new orders slowed to their lowest level since the summer of 2020 in the latest sign that a UK recession is looming. With inflation at a 40-year high, construction businesses reported that their customers were putting new work on hold, forcing them to stop buying materials and hiring staff. Link

Latin America: Guanjuato in central Mexico has proposed a double track rail link stretching 144km between its major cities. The project goes to plan and the railway line will connect five of the largest cities across the state - León, Irapuato, Celaya, Salamanca and Silao - and may also connect to neighbouring states. It has been reported that the development stage could cost a total of US$2-2.5 million. The project was previously put on hold due to financial constraints during COVID-19 but conditions are said to have improved but the project will rely on private finance under a revised financial structure. Link

Asia: China is making $1.1 trillion in funds available for infrastructure spending, a decisive shift away from a focus on controlling debt toward supporting a lockdown-ravaged economy. Link New construction starts by floor area in China slumped 45.4% in July, the biggest fall in nine years, and property investment was down 12.3% from July last year as woes in the country's property sector grind on. Link

Middle East: The UAE is developing its transportation networks at great speed and using innovative new methods to reach ambitious goals - plans US$23bn of infrastructure investment. GlobalData expects the UAE market to grow 4.2% in real terms this year, as the country continues a strong recovery following a difficult two years during the COVID-19 pandemic. Link Meanwhile, since the launch of Saudi Arabia's National Transformation Plan in 2016, the total value of real estate and infrastructure projects

Building materials & construction technologies

has crossed US $1.1tn as per Knight Frank. Link

Europe: Aarsleff Ground Engineering carried out the world's first trial driving of cement-free ultra low-carbon precast piles manufactured using Cemfree concrete. Cast and cured at Centrum Pile's Newark headquarters, the piles were driven in non-working positions at a working Aarsleff site. The trial is part of a wider scope of work package plans Aarsleff's sister company, Centrum Pile, are involved in as a partner in the LOCOWAG (Low-Carbon Concrete within Aggressive Ground) project. Link

Europe: The survey, which looked at 300 of the world's largest capital project owners and contractor construction professionals across Europe, North America, and APAC, showed that Europe is the most digitally mature region with the highest proportion of digital strategies in place. 96% of surveyed construction professionals in Europe are very or fairly optimistic about their organisation's growth prospects for the next year - up significantly from 89% in the same survey in 2021. Despite the higher uptake of digital technology in the region, 92% of European construction professionals still have "concerns about the future of digital transformation, highlighting the need for a more human-centric approach. Link

Europe: Sphera, a carbon-reducing concrete start-up, has secured approximately €2.3 million in funding, including significant grants from BEIS and Innovate UK. The UK-based company develops technology capable of transforming waste and other by-products into a carbon-negative aggregate for concrete. Sphera's flagship aggregate, OSTO, is being launched for concrete blockwork, making traditional carbon intensive blocks Net-Zero. Link

North America: The world's tallest mass-timber structure, has opened in Milwaukee. The 86.6m, 25-storey building contains 259 apartments with a gross floor area of 493,000 sq ft, featuring a swimming pool on the sixth storey and a top floor amenity level. The structure is supported on concrete-filled steel pipe piles, minimising material quantities and reducing installation time. Link

North America: Los Angeles-based startup Azure is using recycled plastic to 3D print prefab homes. Azure says it can build homes 70% faster and 30% cheaper than "traditional home construction methods." Link

Asia: The Chinese government says it has completed an 800m-long rail track to test "permanent magnetic levitation" (PML) technology. In contrast to conventional maglev track, which requires electromagnets, PML lines rely on alloys of rare earth metals, typically neodymium or samarium. These produce magnetic fields greater than 1.2 teslas, compared with 0.5-1 tesla from a conventional iron or ceramic magnet. This is thought to be sufficient to propel two-carriage trains with a capacity of 88 passengers at speeds of up to 80km/h. Link

construction sector players

North America: US modular housing start-up Vantem is planning to build 15 factories in the US to produce affordable and energy-efficient homes following a successful funding round led by Breakthrough Energy Ventures, a firm set up by Microsoft founder Bill Gates to accelerate low-carbon projects. Founded in 2020, the North Carolina-based company has already made more than 280,000 sq m of modular units for apartment buildings and single-family homes in Uruguay, Brazil, Bolivia, Chile, Colombia and the Caribbean. Link

Europe: Swedish contractor Skanska reported that their second quarter profit decreased roughly 1.3% year-over-year, or less than one cent per share. Meanwhile the contractor's revenue reached roughly $4.4 billion for the April through June 2022 period, up 18% when adjusting for currency effects like inflation. Skanska has continued to be selective about bidding on projects in Central Europe since the war in the Ukraine began earlier this year. Link

Europe: The contractor Webuild has revealed that in the first half of 2022 the company had sales of €3.9 billion and an order backlog of €47.2 billion, of which 74% comes from low-risk markets, such as Italy, Central and Northern European countries, the US and Australia. The half year revenue figure is up 24% on the same period last year. Over 70% of sales are from 'abroad' with just under 30% from the contractor's home market of Italy. Link

Europe: French Construction and concessions giant Vinci group has released its financial results for the first half of 2022, reporting revenue growth across all divisions by 11% on an actual basis and up 8% like-for-like, compared with the first half of 2021. In France, which represents 47% of the group's construction market, revenue totaled €6.4 billion, up 4% on an actual basis. Link

Europe: Backed up by its highest earnings in its history last year, Austrian construction company Strabag reported an output volume of €7.5 million, a 9 % increase when compared with 2021. The contractor also posted a positive showing in neighbouring nation Germany, which saw its order backlog grow by €2 billion. Despite continued growth and its second best half-year result, the Vienna-based company's EBITDA and EBIT earnings both declined from 2021. Link

Europe: CRH expects full year earnings to grow by 10% on a like-for-like basis after increasing prices by double-digit percentages in the first half. The Irish firm reported a 13% rise in first-half core earnings to $2.2 billion and that it expected that to rise to $5.5 billion for the year against a "continually challenging cost environment". Profit margins grew by 90 basis points to 14.7% to the end of June. Link

Latin America: Swiss-based global building materials and aggregates company Holcim has announced that it has closed the sale of its business in Brazil to CSN (Companhia Siderúrgica Nacional) for an enterprise value of US$1.025 billion Link

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