



constructsteel

Monthly update for the construction industry
February 2022



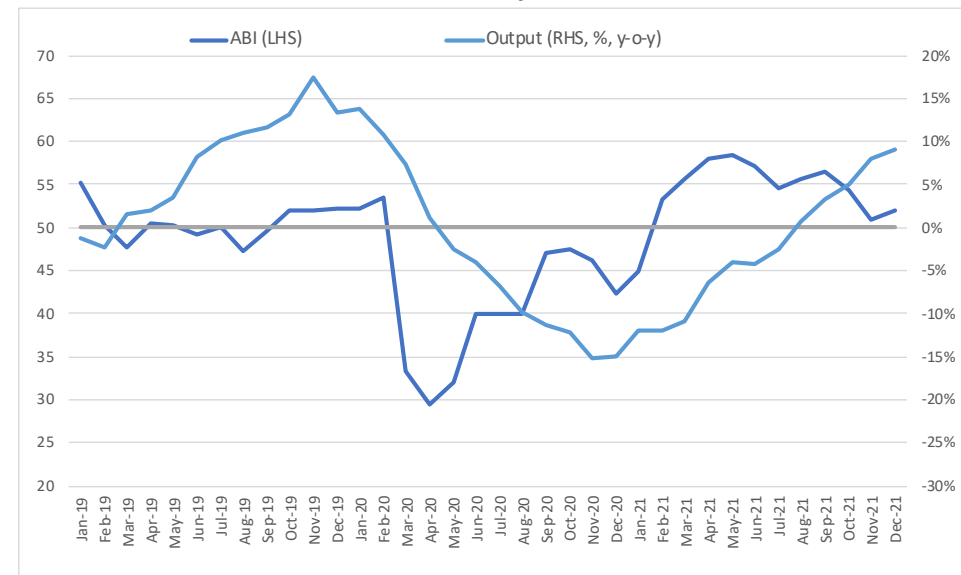
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Construction market trends

United States Shortage of available homes underpinning homebuilding; higher house prices and increasing interest rates could impact buyers.

Private residential output up 1.1% m-o-m (15% y-o-y); building permits up 9.8% m-o-m (7.2% y-o-y). Private non-residential output flat m-o-m (9% y-o-y). Architecture Billings Index (ABI) reached 52 in December from 51 in November (>50, expansion).

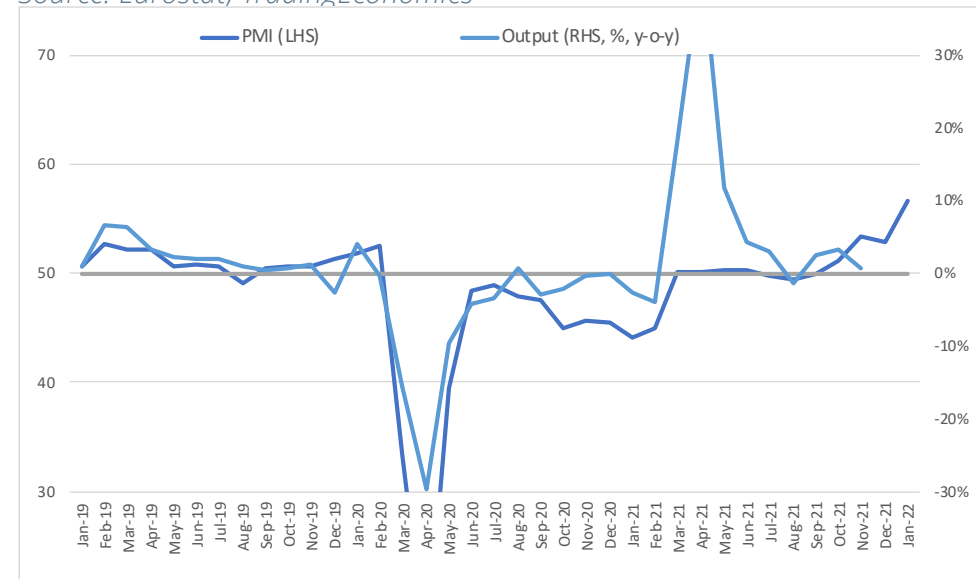
Private non-residential construction output
Source: US Census, American Institute of Architects



Europe Eurozone construction optimism improving.

Eurozone construction down -0.2% m-o-m in November (0.6% y-o-y); Civil works up 1.0% m-o-m (0.7% y-o-y). The IHS Markit Eurozone Construction PMI jumped to 56.6 in January from 52.9 in December (> 50, expansion) and to the highest levels since January 2018.

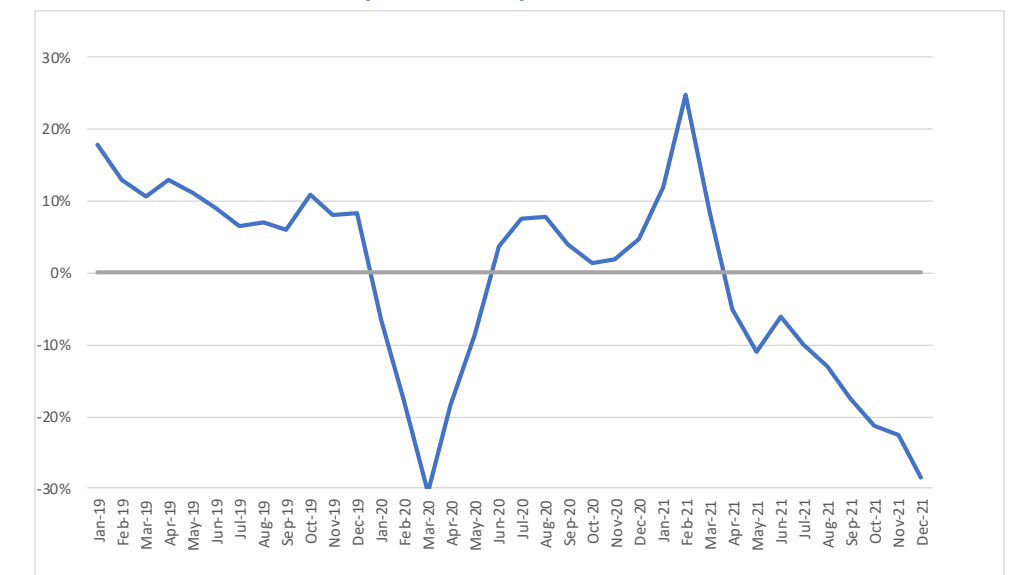
Eurozone construction output vs PMI
Source: Eurostat, TradingEconomics



China Decline in residential floor space started continued in December.

Residential floor space started was down -11% in 2021 (2020: -1.2%); home sales by volume rose by 5.3% in 2021.

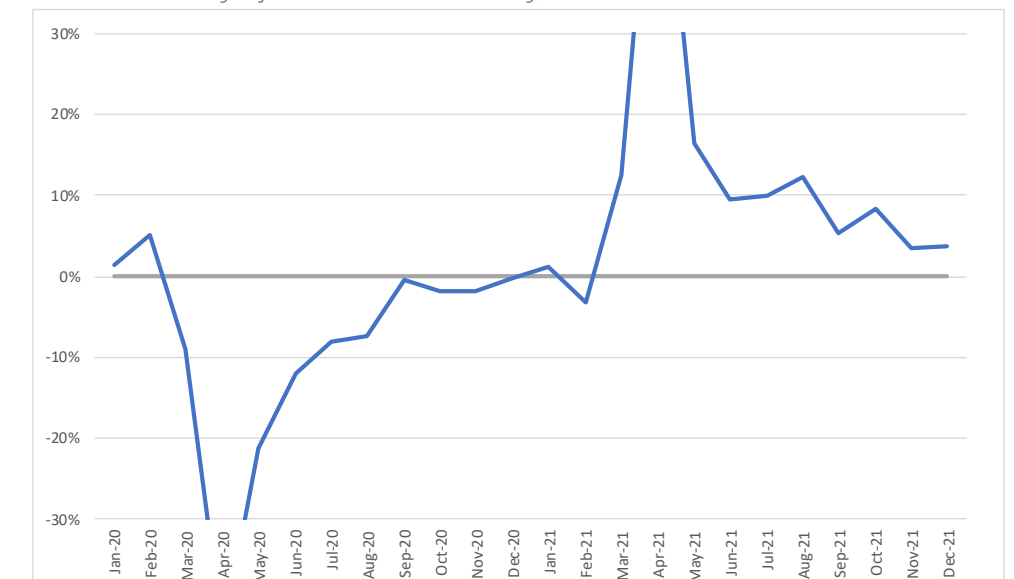
Floor space started (3 month moving average, %, y-o-y)
Source: National Bureau of Statistics of China



India Gradual pickup in activity to continue.

Weighted average of eight core industries output up 3.8% y-o-y in December; production of steel down -1%; cement up 13% y-o-y.

Weighted average of eight core industries industrial production (% y-o-y)
Source: Ministry of Commerce & Industry, India



Special topic: The sustainability of steel products and metal carpentry construction



Caterina Epis

President at Fondazione Promozione Acciaio



Every aspect of our life is influenced by the concept of sustainability: sustainability is an essential element of our times. We are more conscious that our wellness is linked to the health of the planet, and we adopt sustainability as a selection criterion between different kinds of products.

The current processes of exploitation of natural resources are based, still too often, on a linear growth model, according to which resources are abundant, available and low-cost. This model of "growth" cannot continue unchanged as the balance of the ecosystem is already compromised. Resources are scarce, while their demand does not cease to increase. A circular economy presupposes that the products retain their added value for as long as possible and that, at the end of their life cycle, they are not lost but re-enter the economic system to create new value.

In this context, steel is fully integrated into the concept of "permanent resource", essential in a circular economic vision: steel is 100% recyclable and is the most recycled material in the world. Steel can be continuously transformed through recycling processes without loss of quality, allowing us to use it over and over again for the same application and consistently increasing its potential for real sustainability. Real sustainability that must now be thought of from several points of view: ecological, energy, structural, aesthetic, social, industrial and so on.

According to the federation of Italian steel companies Federacciai's 2021 Sustainability Report, Italy rated number one among European countries for scrap recycling: in 2020 the Italian steel mills remelted about 17 million tonnes of ferrous scrap. To give an idea of the relevance of this data, it can be calculated that this quantity corresponds to about 300 times the structure in steel from the Empire State Building in New York and translates into a "recycling rate" in Italy of about 32 tonnes of recycled steel per minute.

Do we need more innovation in the construction sector?

In truth, a great change has already become a reality before our eyes. Today the opportunities offered to designers and developers are many, yet the players in the real estate market are not always aware of the real economic and environmental costs related to the construction and management of a work and ready to adopt new paradigms. Just think about the durability of building and infrastructure works: the useful life of steel structures can easily exceed 50 years, in some cases even a century, avoiding the use of repeated and expensive maintenance cycles, which avoids the unnecessary waste of economic and environmental resources.

A cultural training activity on the subject therefore becomes indispensable to overcome inaccurate beliefs and to understand the real impact of steel and the construction techniques related to its use. Precisely for this reason Fondazione Promozione Acciaio has created the [Steel - Infinite Perspectives](#) document, dedicated to a new design culture and positioning steel as an essential resource in a circular economy vision.

Fondazione Promozione Acciaio is the cultural institution that promotes the development of steel construction in Italy and the interests of all the actors in the supply chain. It represents the steel construction sector in the institutional and technical standardisation offices at national and European Committee for Standardization (CEN) level. It collaborates with public and private bodies that operate or are involved in the construction sector, growing awareness of the specificities of the metal carpentry sector through the dissemination of information aimed at increasing knowledge. It disseminates and enhances the design and technological-constructive aspects that differentiate metal carpentry from other construction systems, through intense editorial, communication and marketing activities, training and technical support activities. The action plan is supported by a network of member companies: Italian and European steel mills, trade associations, processing and distribution companies, metal manufacturers, machine tool manufacturers, software companies, architects, engineers, students and university professors. Since 2007 Fondazione has been part of the international circuit Independent Promotion Organisation (IPO) Steel Network, the network that coordinates promotional initiatives in all the countries of the European Community for what concerns the use of steel in the construction sector, in collaboration with the World Steel Association and the European Convention for Constructional Steel Work (ECCS).

www.promozioneacciaio.it



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Atelier(s) Alfonso Femia / af517 ©Oskar Da Riz / Pichler Projects

Technical trends: Decarbonising the built environment: Takeaways from COP26

McKinsey & Co., Engineering, Construction and Building Materials



How can the cement and construction industry achieve net zero by 2050? Here are the key takeaways from a roundtable discussion McKinsey hosted at the COP26 Climate Change Conference.

The built environment—that is, the cement and construction value chain—accounts for approximately 25 percent of global CO₂ emissions. Reaching net zero by 2050 will require the buildings and construction industry to decarbonise three times faster over the next 30 years versus the previous 30. Companies from across the ecosystem have committed to decarbonisation, but no one player can achieve this goal alone. At the COP26 Climate Change Conference, in Glasgow, Scotland, McKinsey hosted an interactive session that brought together global property owners, contractors, materials suppliers, investors, equipment manufacturers, and disruptors to define the path forward, with a focus on the following questions:

- What actions can the industry take now?
- How can stakeholders across the value chain collaborate to succeed?

Four key themes emerged from this roundtable.

1. The challenge is huge, but concentrated. Materials processing and building operations together account for some 97 percent of building and infrastructure emissions. New

buildings incorporating alternative materials, decarbonised cement and steel, and reduced embodied carbon are needed to meet net-zero targets. Existing stock will require renewable-energy sources, efficient building operations, and measuring performance, supported by more convenient end-to-end retrofit solutions.

2. Businesses that move quickly and work together will solve the challenge—and create value. COP26 made clear that achieving net-zero emissions has become not only an organising principle for business but a point of competitive differentiation. The construction industry has been stymied by a first-mover problem between policy, funding, and projects. CEOs can break the stalemate by joining (or forming) coalitions and moving at pace on investment and innovation.
3. How do we get there?
 - Shift from volume to value. Decarbonisation is a license to grow, but grow responsibly. The industry historically has relied on GDP and population growth to create value—this will no longer suffice in a retrofit, redesigned world. Players must differentiate through decarbonisation and by meeting new green demand. For example, developers that construct green buildings will have access to cheaper funding and green-only planning districts. Conversely, those that do not decarbonise will face an existential threat.
 - Scale by sharing. Fragmentation distorts the risk equation for new green investment. The industry can boost innovation by developing common standards, shared R&D resources, and a forum to navigate and align decarbonisation levers and new technologies.
 - Get serious about green investment and new technologies. As the commitment of \$130 trillion of private capital to the Glasgow Financial Alliance for Net Zero (GFANZ) made clear, there is no shortage of patient, green financing. Investors, however, face a shortage of large-scale green projects. Corporates can channel capital by making bigger bets on sustainability—decarbonising existing assets at scale and partnering with the wide range of green start-ups serving the built environment.
 - Start with the customer. Unlocking demand will require high-quality, convenient solutions, with a clear payback. In the retrofit market, for example, consumers are often deterred by complexity, unattractive offerings, and unclear financial benefits. Companies can break through by investing in new products and integrated solutions, taking a design-thinking approach to customer problems.
 - Create a culture of innovation. The buildings and construction industry is notoriously slow to change. COP26 participants addressed the need to create a culture of innovation. Practical steps include setting targets for net new growth, promoting “test and learn” with minimum viable products, deploying venture capital-style metered funding, increasing R&D budgets, using certifications to drive a sustainability premium, and fostering precompetitive collaboration. Develop the skills now to deliver at scale. COP26 demonstrated that the industry has reached an inflection point. Policy and capital are moving and will make skills the bottleneck down the line: for example, the retrofitting workforce of tomorrow is not in place today. Industry leaders across the public and private sectors need to start developing the skills and capacity to deliver on the anticipated demand.
4. The public sector can support by aligning ‘decarbonomics’ incentives. A mixture of carbon pricing, higher building performance standards, and building code changes can help move consumers and industry toward a more just and orderly net-zero transition. Clear signals are also needed on investment horizons, especially for transitional solutions (for example, biomass).

Construction steel news headlines

construction market and regulations

EU: European Union member states will together have to invest some €550bn in nuclear energy between now and 2050 if the bloc is to meet its net zero carbon target. Investments include €500bn on new nuclear plants and at least €50bn on existing capacity over the next eight years. Reactors are under construction in Finland, France and Slovakia, and more are planned in Bulgaria, the Czech Republic, Finland, France, Hungary, Poland and Romania. [Link](#)

Europe: Russia mulls plan to build \$2.6bn Arctic rail link to the Barents Sea. When complete, the line will provide a direct route to the north trade route for the industrial regions of the south Urals, the Caucasus and Central Asia. There is also a plan to develop an all-year port in Indiga, to relieve pressure on Murmansk, the only ice-free port in the Arctic, which is at maximum capacity. [Link](#)

USA: Portland Cement Association forecasts strong year for construction - U.S. is poised to spend \$1.2 trillion on new and rehabilitated infrastructure projects, consuming 46 million metric tons of cement over a five-year program, with a quarter of that spend going toward roads and bridges. [Link](#); The US Department of Transportation launches a program worth more than \$27bn to fix or replace some 15,000 bridges across the country. It is claimed to be the single largest dedicated bridge investment since the construction of the Interstate highway system, which began in the 1950s. [Link](#)

USA: Contractors expect increasing demand for numerous types of projects in 2022 despite ongoing supply chain and labor challenges, as most firms plan to

add workers this year, according to survey results released by the Associated General Contractors of America and Sage. In 15 of 17 categories of projects, most survey respondents expect growth – retail and office construction were the two exceptions. [Link](#)

USA: New York State to spend \$991m on creating 3,242 affordable homes. The fund is intended to draw in an additional \$380m in private funding, giving a total \$1.4bn investment in the sector. Governor has planned further housing spending of \$25bn across the next five years, yielding 100,000 affordable homes. [Link](#)

Asia: India's government will step up spending to US\$529.7 billion in the coming fiscal year to build public infrastructure and drive economic growth. Money will be allocated to expressways, affordable housing and solar manufacturing. [Link](#)

Asia: The Chinese government has released a five-year development plan for the construction industry that aims to put the industry on a “greener, smarter and safer path.” The plan for years 2021-2025 states that the industry will increase the modernisation of its industrial chain, form the preliminary stages of a green and low-carbon production mode, see more widespread application of information technologies, and improve the safety and quality of buildings. The plan also says that modular buildings will account for more than 30% of the country's new construction. [Link](#)

Africa: The city government of Ethiopia's capital, Addis Ababa starts work on fast-track prefabricated condominiums. The flats will be located in a series of four and nine-storey buildings and

will be built by the state-owned Ethiopian Construction Works Corporation, which is planning to use prefabrication to complete the projects in a 12-month period at a cost of around \$160m, or \$32,000 each. [Link](#)

Building materials & construction technologies

ME: A team comprised of Danish 3D printer maker Cobod, Mexican cement company Cemex and the German University of Technology in Oman (GUtech) has produced the world's largest 3D-printed building using real concrete. The concrete used for the house's walls cost €1,600, with Cobod saying the printable dry-mix mortar usually used in printed buildings would have cost upwards of €20,000. [Link](#)

Asia: China's five-year plan for the development of its space industry will include a satellite launch centre in Pakistan and steps to develop an inhabitable Moon base by 2035. [Link](#)

USA: Investing in workforce wearables on construction sites can help companies become more competitive in the labor market. Exosuit technology and other workforce wearables are investments that can result in healthier, happier workers. Some companies also reported reductions in injury rates for workers using shoulder exoskeletons for overhead work. [Link](#)

construction sector players

Europe: Chilean modular space specialist Tecno Fast has acquired 100% of the capital of Spanish modular space business Alco Rental Services for an undisclosed sum. The transaction, completed 18 January, represents Tecno Fast's first entry into Europe. [Link](#)

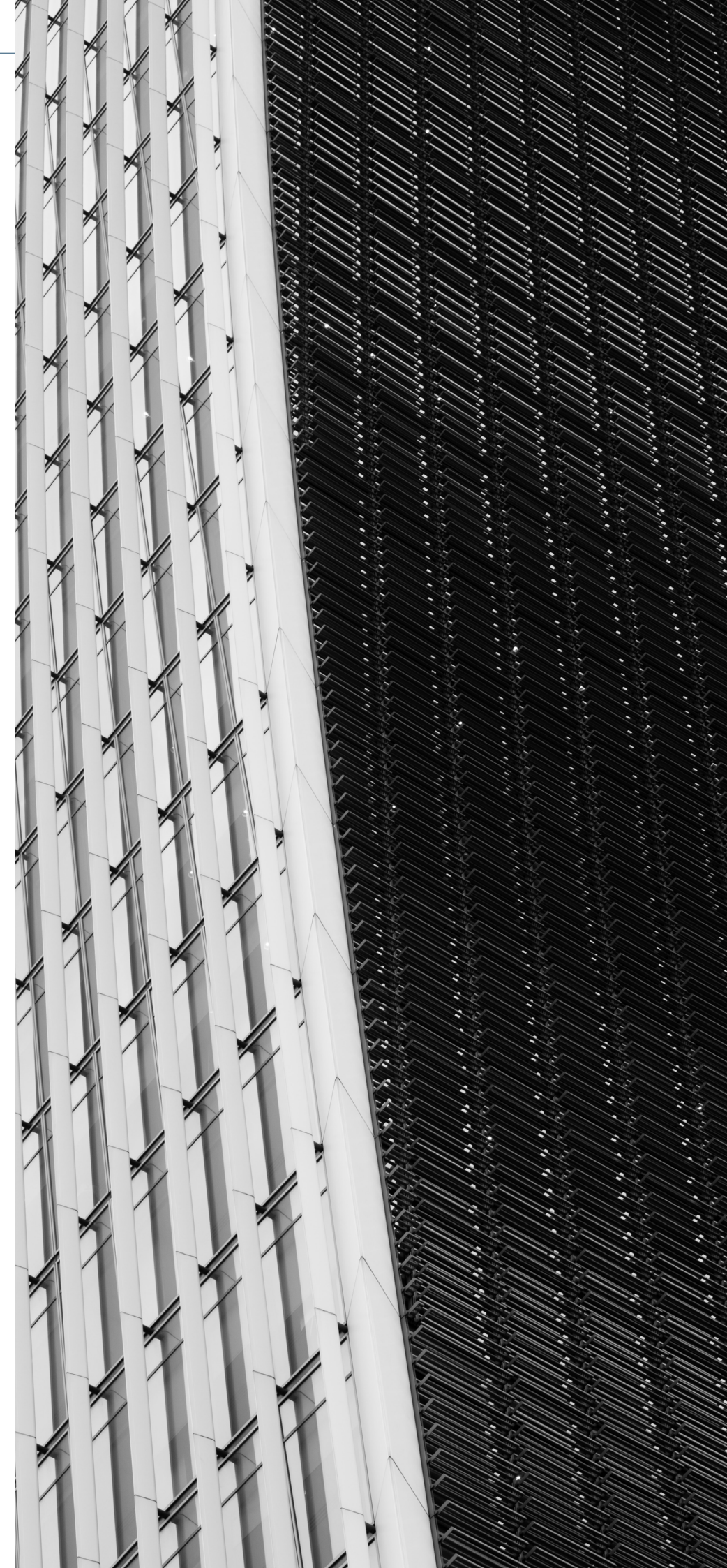
Europe: Swedish construction

firm Skanska reported that fourth-quarter profit tumbled 40% to \$334 million, as divestitures and weak residential development swamped gains in its construction business. Pandemic continues to weigh on its construction business, driving up material prices and creating supply chain bottlenecks across its markets. Commercial construction has been most impacted, while residential construction is stable. [Link](#)

Europe: Danish engineer Ramboll has bought US data centre consultancy EYP Mission Critical Facilities for an undisclosed sum. EYPMCF is data centre strategy, planning, design and commissioning company. The acquisition will allow Ramboll to strengthen its position in the data centre market, while reducing its carbon footprint. [Link](#); Data centre construction has been surging during the pandemic, fuelled by huge growth in e-commerce. According to a data centre report from Turner & Townsend 95% of respondents predict data centre construction demand in 2022 will be greater than 2021. [Link](#)

Europe: HeidelbergCement CEO is very optimistic for 2022, company can match or even exceed last year's growth in 2022. Shares in the company rose as much as 1.8% on the comments. Moreover, group will update investors on its efforts to cut emissions and invest in climate protection during a capital markets day in May. While the group has already intensified its efforts to cut emissions and turn cement into a carbon-free product, more needed to be done. [Link](#)

Americas: Mexican cement maker Cemex announced it had achieved the first step in fully powering plants with solar energy, producing what is known as clinker via the sun's rays. Cemex teamed up with Swiss solar company Synhelion to generate “record-breaking” solar heat. The move to produce clinker via solar heat is part of Cemex's push to go carbon neutral by 2050, as current clinker production uses fossil fuels. [Link](#)



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