

Steady and strong

The CAB confidence survey remains the only recognised confidence survey for the UK aluminium building trade. The survey results indicate that confidence, going into 2023, is slightly more positive than in the recent past, with an increasing positive net balance forecast of expected sales volumes, writes CEO Phil Slinger

Despite uncertain times during 2022 CAB members, and the wider construction products sector, continue to invest most of their capital investment in renewing plant and equipment and product improvement. As the construction industry continues to move towards a zero-carbon emission future, plant and product changes are needed to keep up with competition and legislation changes. This will continue to evolve in the coming years as legislation continues to force innovation.

Looking to the future of our industry, the industrial metaverse is still very much evolving and remains a loose term with different definitions and with different blends of digital technologies and networks. However, the convergence of physical and digital environments is accelerating at a pace. Many have long used virtual reality (VR) and augmented reality (AR) tools to immerse clients

in a proposed space, be it a stadium, hospital, office or apartment block. These tools can simulate building performance and play out various scenarios. They can model a city like London, for example, to show what it will look like if the population grows by five million and the sea level rises by four feet.

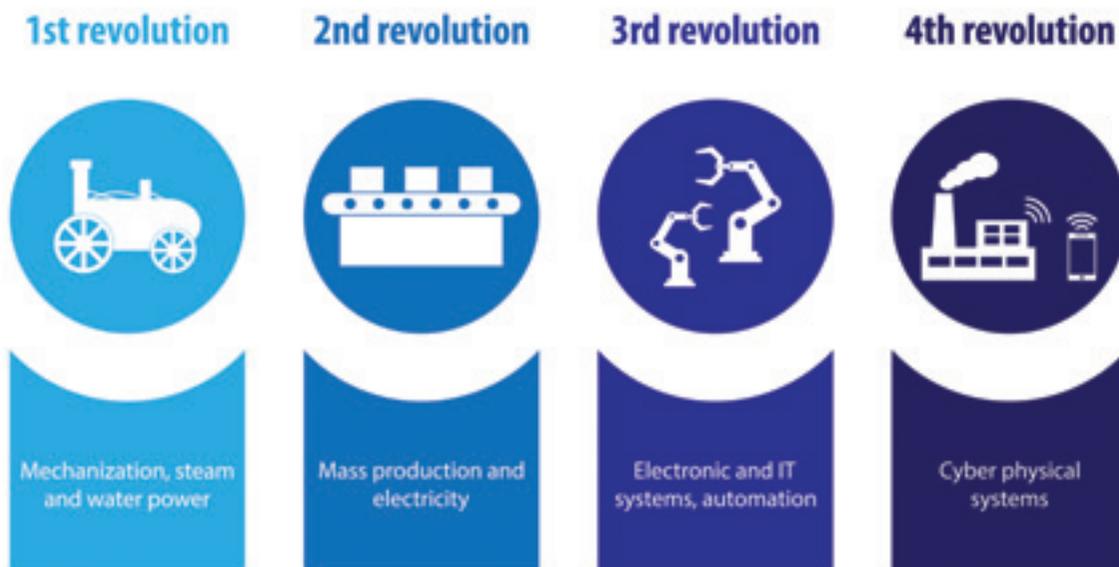
The emerging metaverse will make it possible to meet with a client inside a proposed or existing building and alter the design in real time. It is also possible to create a true digital twin – a virtual model that accurately reflects a real building and updated with real-time data from sensors to tell the story of a building’s performance throughout its life cycle, from design through operations to end of use. Early adopters of the industrial metaverse are said to be those involved in real-life machines, factories, buildings, transport systems and city planning.

In the past five years, a growing number of companies have started pulling ahead in their efforts to implement Industry 4.0 across their manufacturing business. Industry 4.0 is the term used to identify the latest industrial revolution currently underway.



Phil Slinger

“ ...the industrial metaverse is still very much evolving



The industrial revolutions one to four



Expected sales volumes – year to date

The first industrial revolution began in the 18th century characterised by machines powered by water and steam. The second revolution used electric energy and better management to create more cost-effective mass production. The third, commonly referred to as the digital revolution, is the industrial revolution commonly affecting most companies for the time being.

Industry 4.0 is the fourth industrial revolution which is now being introduced and implemented into our modern world. As a development of the third industrial revolution, this latest era is characterised by the use of cyber communication and smart information technologies.

Industry 4.0 converges information technology (IT) and operational technology (OT) using network connections to expand production systems. Combined with industrial metaverse applications a design team could step into a design or new factory equipment could be virtually installed and tested to evaluate improvements.

The industrial revolution 4.0 is considered the era when production facilities, storage systems and smart machines will trigger actions, control other devices and exchange information autonomously without any human intervention. This ideal distribution of information is made possible through the IIoT (industrial internet of things).

Another important aspect of the fourth industrial revolution is the increased attention to sustainability and environmental issues. Sustainable development, as defined by the three pillars of sustainability (environmental, economic, and social sustainability), is not only seen as a necessity to be more eco-friendly and conserve natural resources for future generations, but also an opportunity to improve the efficiency of manufacturing processes and improve business profitability.

Industry 4.0 is all about the significant transformation taking place in the way goods are produced and delivered, moving toward industrial automation and the flexible factory, leveraging the industrial internet of things and digitalisation, companies can be much more agile and efficient.

As technology continues to evolve we can expect improvements in how work is performed and ultimately in product quality.

In closing this month’s column, it is interesting to note that the EU now urges European banks to fund aluminium projects. European commissioner Thierry Breton urged European financiers in late January this year to provide more funding to aluminium and other metals supply chains to assist in transitioning to a more sustainable environment, to help meet the objectives of the upcoming EU Green Deal industrial plan.

Breton said that the need for greater energy security has been underlined by Russia’s invasion of Ukraine a year ago and the resulting search for new raw materials suppliers from other areas of the global market. The EU has been establishing strategic partnerships on critical raw materials with Canada, Ukraine, Namibia and Kazakhstan with advanced discussions with other countries underway. □

Based at the Bonds’ Mill development in Stonehouse, CAB staff are on hand during normal working hours to answer any membership, training or technical aluminium fenestration related questions. Up-to-date news and event information can be found on the CAB website: www.c-a-b.org.uk and in the monthly ezine *A Window Into Aluminium* which is free to sign up to. If you want to learn more about membership contact Jessica Deane: email jessica.dean@c-a-b.org.uk or telephone; 01453 828851.



The CAB team is looking forward to the Spring Forum on Thursday 16th March 2023. The forum is at Aerospace Bristol, now home to the last ever Concorde to fly. The forum, which is free to attend for CAB members, will include updates on CAB’s activities as well as topical business presentations. Following on from that, members who have booked, will enjoy exclusive access to Concorde before dining under the wings of the iconic jet. We would be delighted to hear from potential new members who consider joining us, please visit the CAB Spring Forum 2023 page for full details and drop us a line for an invitation