# THE DIGITAL AGE:
## TECHNOLOGY DEVELOPMENTS

**The digital age is in full swing and, from office-based administration to earthmoving operations in the field, very few corners of industry have yet to feel its impact.**

## DIGITAL TOOLS

However, while terms such as "digital disruption" have become associated with technology transformation, it is not always a case of new technologies arriving to market and fundamentally changing industry in the short term. As new digital applications are developed, it is often a matter of fine-tuning, finding the right fit across workflows and adapting as needed, with the impact being cumulative rather than instant. Of course, as the collective suite of digital tools at our disposal continues to grow, it will pay to keep up to speed with new developments and the ways in which businesses can benefit.

## GOING MOBILE

The smartphone is one of the defining and instantly recognisable technologies of the digital age, and has become an indispensable work tool for many. Mobile technologies have progressed at pace over the last two decades, in concert with improved mobile coverage and faster data speeds, and the smartphones most of us now carry around in our pockets serve as mobile computers, capable of carrying out an ever-increasing array of functions in an increasingly connected environment. From something as simple as sending or receiving an email, to accessing real-time data on the status of machinery, to remotely managing connected devices in an Internet of Things (IoT) network, smartphones are playing a pivotal role in the digitalisation of industry.

## THE INTERNET OF THINGS

The Internet of Things (IoT) encompasses an ever-expanding network of connected physical devices capable of collecting and sharing data, from security cameras on a job site to heavy machinery in the field. Embedded sensors in IoT devices are configured to deliver pertinent data, providing real-time insight into operations and allowing for remote monitoring/management. For instance, machinery decked out with sensors could provide information such as current location, operating hours and fuel consumption, with this data being used to help coordinate workflows and maintenance schedules, driving productivity and efficiency gains.

## CLOUD COMPUTING

Cloud computing comprises the delivery of a range of services over the internet – from basic data storage to advanced software applications – as opposed to local computing infrastructure (such as a personal computer or server). The benefits for businesses are multifold, especially in industries with workers spread far and wide across different offices and job sites, with cloud infrastructure providing the convenience of on-the-go access to company and project information, typically accessible across a range of devices. As the digital ecosystem continues to evolve, the cloud is poised to play an increasingly critical role in data management and service provision.

## AUGMENTED REALITY

Augmented reality (AR) brings the real and digital worlds together, overlaying digital information, such as text or graphics, onto the user's environment in real-time, carried out via technologies such as headsets, smart glasses and smartphones. AR technology is still broadly in the early stages of development, however its potential is vast, and applications are set to expand in the coming years. It's not hard to envisage possible work site applications, with AR having the potential to provide insight into the status of heavy machinery or the individual components of a system, assisting users with real-time operations guidance.

## ARTIFICIAL INTELLIGENCE

Artificial intelligence (AI) is a much-hyped technology, and the subject of significant speculation about the extent of its potential, how it will evolve and what sort of impact it will have in the coming years. Certainly, AI momentum is building, with an ever-increasing range of AI applications being released to market, designed to tackle varied, complex functions. AI's potential is truly vast, and industries across the board are, with good reason, keeping a close eye on developments. As far as AI is concerned, it's certainly a case of "watch this space". //EE