Digital information is essentially the wavelength of construction but is currently beyond the ability of the majority of the construction workforce because they lack the opportunity, skills and digital vision to detect, interpret and use in their work.

In a traditional industry like construction, we spend too much time and effort focused on the ‘bricks and mortar,’ on the small slice of construction that we can physically see and not on the wider integration of all the stages of construction and utilising the digital tools and the common language that would deliver a wider spectrum of innovation, reduced carbon content, increased competitiveness and enhanced skills.

Construction is the world’s largest industry, comprising 13 percent of global GDP however it is also one of the least innovative sectors, productivity growth in construction registers at a mere 1 percent over the past 20 years. Many sectors are enjoying the resultant benefits of technology deployment however it is still lagging within the construction sector and as a direct result the construction worker has become more ‘blinkered’ to the benefits of digitalisation and big data. This disconnect is manifested in lower productivity, higher costs and increased inefficiencies across the entire built environment value chain, for construction to become inherently innovative it must realise the benefits of digitalisation, and provide the workforce with access to the skills that will stimulate and empower them to engage, communicate and deploy these skills of the digital process.

Digitalisation is a game-changing strategy that is empowering the construction sector to thrive and deliver the expertise for sustainable construction. There is a direct correlation between digitalisation and energy efficiency and the ARISE project is building the digital scaffold that will ensure the built environment is best placed to achieve this digital efficient success by upskilling the workforce.

Digitalisation is the process whereby the construction sector can get everybody onto the same page and enable communication across the entire construction supply chain. It provides a connectivity that embraces all forms of communication between all the stages of the construction process enabling standardisation, communication and transparency.

Digitalisation is currently changing the face of the construction industry, enabling companies to engage in the transformation process and to avail of the ensuing opportunities. Those who fail to engage will fail, it is that simple. Data is being generated throughout the construction process and presents tremendous value that needs to be captured; those with the capability and capacity to do so will thrive. All companies must develop a mechanism of dealing with the levels of data that they are faced with and provide their workers with the skills to interpret and utilise this information, in order to engage, companies must get the basics right, upskill their staff and give them the tools to deliver, this is essential to take advantage of the opportunities and succeed.

BIM is one of the critical tools in today’s toolbox. It is a system for handling data that allows all users from across the construction value chain to manage construction, reduce waste, decrease downtime and importantly increase energy efficiency at each and every step in the construction process. In short BIM is the language of construction and all workers must develop a basic command of the language.

In the ARISE project digitalisation represents this learner process or journey, one which individuals and companies embark upon with BIM as one of the digital vehicles or tools utilised.

Key in the definition is the use of the word process, digitalisation doesn’t happen overnight, it is a journey that takes time. The digital tools developed in the ARISE project are enablers for the user to engage with at a time and pace that suits them and prepares them for the journey of change that will transform their company. The user is introduced to a suite of digital tools in the new digital built environment where their old paper based information is converted into a digital value or format i.e. the information remains the same but is transformed into a different ‘language’. Information as data is gathered and enables the user to make informed analysis and choices about the work.

ARISE is working within the built environment assisting companies to engage, start and to continue their digital skills journey, helping workers to translate their knowledge into action and increasing the digital skills of the construction sector in an environment where efficiency, sustainability and competitiveness are significant global factors.

A digitally educated workforce is one that has had the ‘blinkers’ removed and is sufficiently agile and informed to utilise all of the information available to them. They are able to take the BIM data to manage every step in the construction process and ensure sustainability, efficiency and environmental effectiveness.

A digitally informed and empowered construction workforce will drive innovation and growth in the sector and ensure that the sector can adapt, modernise, embrace new technology and truly adopt digital working as the new standard. They will help their companies and the sector to overcome inherent resistance to change and shape the sector to overcome current hurdles and prepare for future growth. The benefits of digitalisation for the construction sector have been well documented but the starting point in this journey and to ensure the benefits are sustainable is to empower and upskill the workforce to build better and build greener.

Digital skills and tools such as BIM provide the sector with the ability to measure, monitor and analyse the impact of our construction in every step of the value chain.

One of the greatest challenges facing the construction sector is that of skills shortages. These shortages are manifested in both lack of new entrants to the sector and the under utilisation of those already working in the sector. The pool of skilled personnel is getting shallower as more demands are made on the current workers. Digitalisation enables the sector to ‘deepen’ the skills pool, by ensuring all the inhabitants of the pool are better equipped, informed and have the necessary tools to do the jobs more effectively and more efficiently and therefore achieve enhanced productivity both qualitatively and quantitively.

Tools such as BIM and other digital transformation techniques will enable the construction sector to become more visionary and overcome the current obstacles that are hindering innovation and increased employment and enjoy the full benefits of a better enabled, equipped, and loyal workforce.