

CICES 50TH ANNIVERSARY

New Challenges for Surveyors



On the occasion of the 50th anniversary of the Chartered Institution of Civil Engineering Surveyors (CICES), the president, Chris Preston, looks at the current status of the profession and highlights some challenges. 2019 marks the 50th anniversary of CICES. To launch this year of celebrations, past presidents, region and committee chairs, and special guests joined institution staff on 20

February at Albert's Shed in Manchester's industrial heartland. With tram lines above, canals below and railways being reconfigured around us, it was the perfect place to mark 50 golden years of surveying.



The Institution was established in 1969 as the Association of Surveyors in Civil Engineering. It changed its name to the Institution of Civil Engineering Surveyors (ICES) on 31 December 1980, following a successful submission to the Registrar of Companies. It became a registered educational charity on 14 August 1992.

On 2 September 2009, the Institution was granted a Royal Charter of Incorporation and became known as the Chartered Institution of Civil Engineering Surveyors. Article 4 of the

Royal Charter states:

"The object is to advance the science and art of civil engineering surveying in all aspects of the specialisations of geospatial engineering and commercial management within civil engineering for the benefit of the public, by upholding and advancing the standards of education, competence, practice and conduct of members of the Institution."

The Institution comprises around 5,100 members split between the two areas of practice.

It is with this background to the Institution that I was honoured to be asked to become the 32nd President of the CICES and to lead it into its 50th year. I have strong links to the RICS, being the most recent past Chair of the Geomatics Professional Group Board and am still a member of this board. At the celebration in Manchester, I set out my vision for the Institution and the challenges ahead and this is summarised below.



The line-up of past and current presidents.

Where are we now?

I believe that we need to build a unified approach to those outside the industry, which is why I am a keen supporter of the Survey Liaison Group. This group instigated the GeoBusiness conference and exhibition and enables standards, procedures and guidance notes to be cross endorsed by all our relevant UK professional bodies and The Survey Association. CICES must continue to be relevant to its membership and foster improved links with other kindred institutions by making joint badged regional meetings the norm rather than the exception. We are currently reviewing the way in which we can share knowledge with training and distance learning and make regional meetings available remotely for CPD.

As a smaller institution, in member numbers, compared to some, I wish to make CICES known as the 'Friendly Institution' where members' views really count. The future lies with our younger members. The immediate past President, Ian Cowling, set up the '2040 forum', a group of younger members, to help the institution through the next twenty or so years. So much so, that every Institution committee now has a member of the 2040 forum sitting on it, adding their often thought-provoking views to the discussions.

One area where CICES can make a difference is in improving safety and reducing reputational risks associated with underground service strikes. The idea of poorly trained staff undertaking this type of work makes me very nervous and CICES have now produced a set of competencies associated with 'Utilities and subsurface mapping' with the aim of making the CICES the natural institutional home for Utilities and Subsurface mapping surveyors.

The Institution is very concerned about geospatial education in the UK and is putting a paper to the Geospatial Commission that has the

consensus of the industry and other interested parties to highlight the inconsistencies and disconnects in the current situation and seeking some assistance to help things. This looks across the age ranges from primary right through to tertiary education.

The Future in the 4th Industrial Revolution

Many GW readers will be very aware of many aspects of the so-called '4th Industrial Revolution' which is now upon us. Virtual reality is becoming commonplace and can help stakeholders visualise city or infrastructure scenarios more clearly and support decision-making. Companies should ask themselves 'Is the data you collect fit for virtual reality and would your clients like it to be?'

Recent initiatives like ICE Project 13 and the National Infrastructure Commission's digital twin proposals have set out the principles for change and a vision for the future; in particular, the need for greater collaboration and enterprise. An ICE special report in the autumn of 2018 implied that "there will be a new division of labour between humans and artificial intelligence (machines and algorithms)."

In my market sector, big data and analytics of the railway track data combining numerous datasets are used to provide information for maintenance. Interpreting data provided by the increasing amount of technology is becoming the norm. There will be many sensors and devices connected in the future. From streetlights to bins, bikes and street furniture. The same report predicts that the number of smart devices will jump from 27 billion now to 125 billion by 2030.

Industry needs to collaborate to develop an industry-wide definition of value that takes into account more than capital cost. I call this the value equation where the value of a survey far outweighs its initial cost: **Survey once use many times**.

Most geospatial data is created for one specific reason or need, such as imagery for GIS applications or Google maps in main stream culture, but there is so much more information in geospatial data that is underutilised or not recognized. With the newer technologies, the data-rich information is growing exponentially, but we are using only a small percentage at this point. However, it could be used in the future: **Survey once use many times**.

Our job roles will change. Professional geospatial engineers will not be so much about collecting data, but working on the analysis and producing intelligence from the data. Will the Institution need new competencies to harvest new members in such specialisms, and CPD to ensure our members are not left behind? Should we be developing a specialism for VR and AR modellers now, for example? We have to ensure that our profession adapts quickly.



At this event the Presidency was handed over from Ian Cowling to Chris Preston.

Beware Disrupters

There is a warning for us all: disrupters are coming to take some of our work. Engineering and construction is ripe for disruption. The large management consultancies do data analytics well, so will they soon be in this market sector in a big way? Some already are. We have to bring people into our sector who can challenge the status quo. Would we welcome them? There are many extraordinary people at work, trying to support projects, but then it comes to the project manager's budget. Is it too much risk to do something differently?

However, are we shaping our environments around technology that is moving too fast for us to fully grasp its implications? I am all for technology and progress, but do we know what we are losing?

The inventor of GPS, Professor Bradford Parkinson, is lamenting that this is now leading to the demise of map-reading skills as people are so dependent on smartphones and satnavs.

Will people be able to cope when the GPS signal is jammed?

To sum up, the Institution is entering a new and exciting period as we seek to adapt to our changing world of work and I wonder what, in another 50 years, the President will be talking about?