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INNOVATION AND DIGITAL IN THE PROFESSION

SCSI Chartered property, land and construction surveyors

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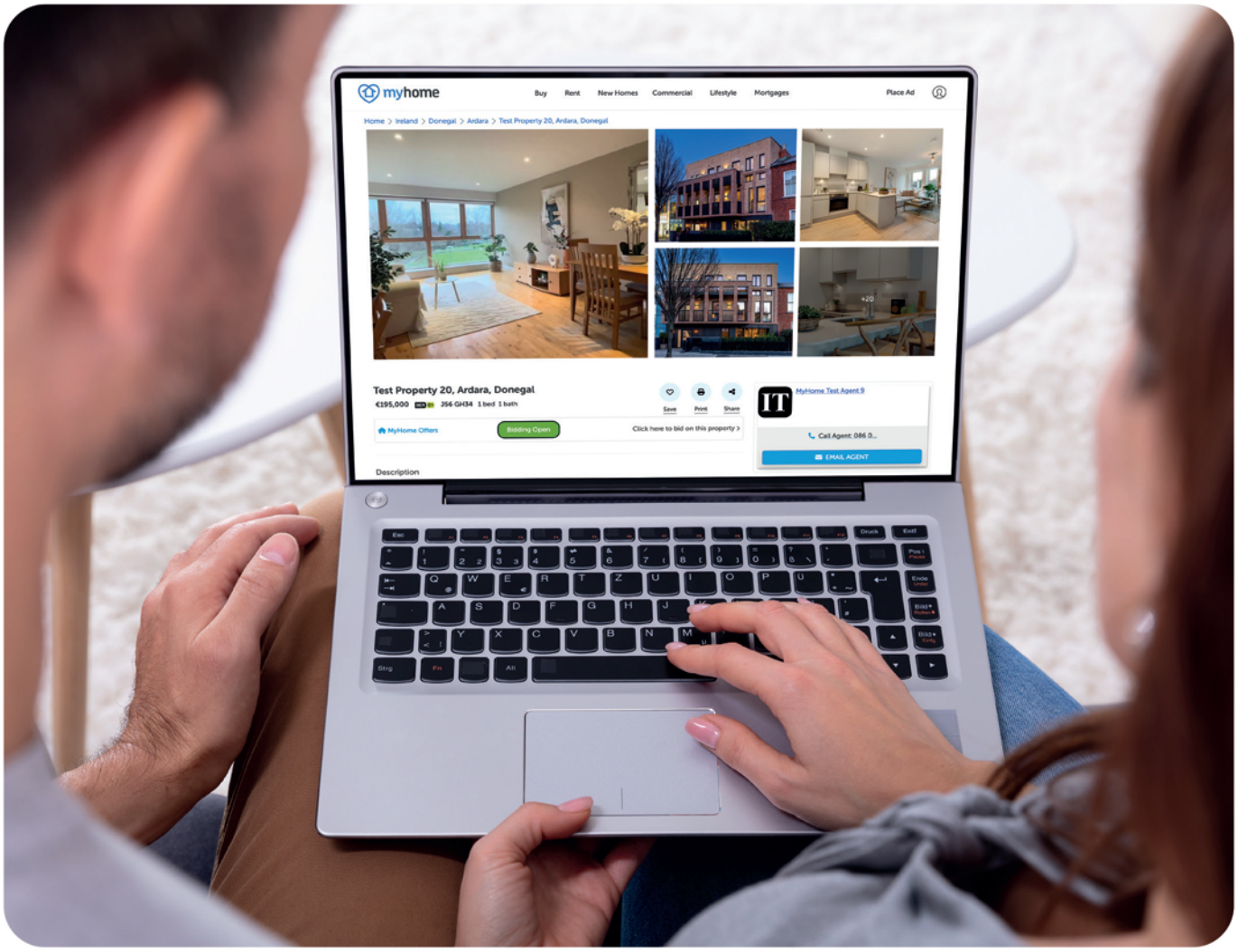

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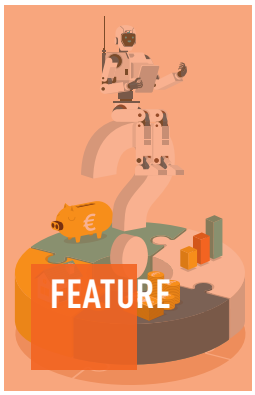

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All submissions will be considered by the Editorial Board: editor@scsi.ie

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A VISION FOR THE FUTURE

THE SCSI HAS A PIVOTAL ROLE TO HELP FUTURE-PROOF THE SURVEYING PROFESSION THROUGH INNOVATION AND DIGITISATION.

The surveying profession stands at a critical crossroads. With rapid advancements in technology and evolving demands across the property, land, and construction sectors, there are both challenges and opportunities: to adapt, innovate, and lead. Future-proofing the profession requires embracing digital transformation and leveraging innovative tools to remain relevant, resilient, and indispensable in a changing world.

Traditionally, surveying has been rooted in accuracy, precision, and methodical data collection. With the integration of technologies such as drones, light detection and ranging (LiDAR), building information modelling (BIM), geographic information systems (GIS), artificial intelligence (AI), virtual reality (VR), and automated valuation models (AVMs), the profession can now deliver faster, more accurate, and richer insights.

One of the most significant opportunities lies in digitisation. BIM, for instance, revolutionises the way surveyors interact with design, construction, and facilities management teams. By creating intelligent 3D models that integrate time and cost information, surveyors can contribute to more sustainable and cost-effective project outcomes. Similarly, GIS enables advanced spatial analysis, crucial for urban planning, environmental assessments, and land use strategies in both developed and developing regions.

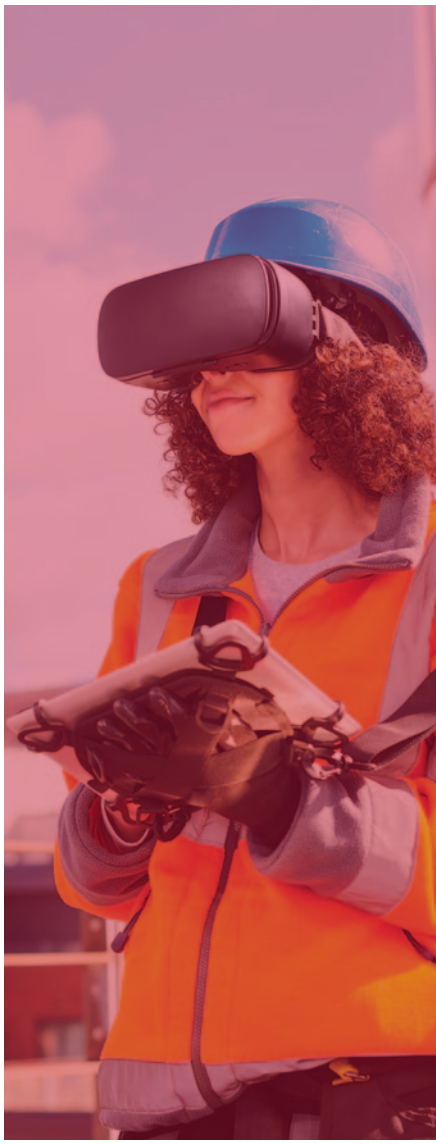
Drones and remote sensing have redefined site analysis and topographic surveying. Tasks that once took days or weeks can now be completed in hours, with centimetre-level accuracy. This technological leap not only increases productivity but also reduces human error and enhances safety – especially in hazardous or hard-to-reach areas.

To fully harness these opportunities, surveyors must commit to lifelong learning and upskilling. Educational institutions and professional bodies like the SCSI have a pivotal role to play in this transformation. Updating curriculums, offering accessible CPD opportunities, and fostering digital competencies across the profession will be essential. Equally important is the need to attract a new generation of tech-savvy professionals who see surveying not as a traditional trade, but as a dynamic, high-tech career path with significant societal impact.

Innovation is not solely about adopting new tools; it's also about rethinking processes and embracing collaboration. Surveyors must work more closely with data scientists, software developers, urban planners, and sustainability experts. By doing so, they can position themselves at the heart of smart city development, climate resilience planning, and digital twin implementation – areas that will define the built environment of the future.

Moreover, with increasing global focus on sustainability and carbon reduction, surveyors have a unique opportunity to contribute to environmental stewardship. Through accurate land assessments, life cycle analysis of buildings, and advising on sustainable land use, the profession can support climate action efforts while enhancing its own relevance and value.

In conclusion, the future of surveying is digital, collaborative, and purpose-driven. By embracing innovation, investing in skills, and positioning themselves as data-centric, solution-oriented professionals, surveyors can not only future-proof their careers but also play a leading role in shaping a more sustainable and technologically advanced built environment. The path ahead is clear – those who innovate will thrive.



PRESIDENT'S MESSAGE

Gerard O'Toole
SCSI President

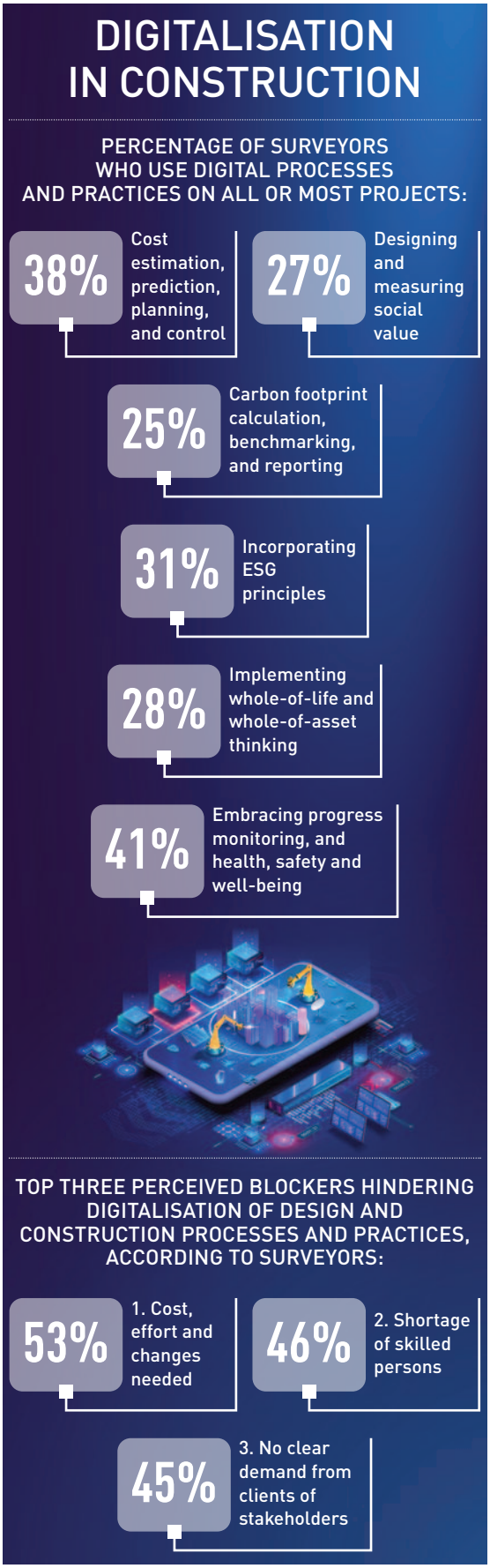
EMBRACING TRANSFORMATION

THIS SPECIAL EDITION HIGHLIGHTS THE CHALLENGES AND OPPORTUNITIES FOR SURVEYORS IN A NEW DIGITAL ENVIRONMENT.

I see on page 7 of this edition of the *Surveyors Journal* that 79 new APC graduates were awarded their diplomas at the recent graduation ceremony. It is heartening to see all these young surveyors advancing in their careers and becoming eligible to use the title Chartered Surveyor. Congratulations to them all and I wish them well in their careers. This special edition should be of great interest to them as they grow their expertise in a professional world where developments in information technologies are particularly intense.

I am sure they will all note SCSI President Gerard O'Toole's comment in his contribution that the profession stands at a critical crossroads and future-proofing the surveying profession requires embracing the digital transformation all around us. As he says, by working closely with data scientists, urban planners and sustainability experts, all of whom are embracing the benefits of these new technologies, surveyors can position themselves at the heart of the areas that will define the built environment of the future.

In his piece on page 10, James Lonergan, SCSI Director of Education, tells us that this autumn the SCSI will unveil its first Digital Strategy. This will aim to empower members to operate effectively in the current rapidly changing digital landscape. I am sure this will be welcomed by members. I am also sure that while many are looking forward to embracing the rapid change, some will take time to accommodate their established work practices to the new environment. The series of articles in this edition will help surveyors to inform themselves about developments in their practice area and also in other areas where surveyors work. Certainly, all these make for informative, interesting and at times intriguing reading. Having read them, I was glad to come to the Last Word piece by Andrew Ramsey where he says that one truth remains clear: surveyors are more essential than ever. Reflecting on all of the truly interesting contributions in this edition, and thinking again about the 79 new graduate Chartered Surveyors, he is surely right when he leaves us with a cheerful thought: there will always be a place in surveying for the human touch.



Source: RICS 'Digitalisation in construction report 2024' – https://www.rics.org/content/dam/ricsglobal/documents/research/Digitalisation-in-construction-report-2024.pdf.

SCSI RENEWS PARTNERSHIP WITH RICS

From left: Kevin Hollingsworth, then SCSI President, and, Nicholas Maclean, Acting RICS President, signed the SCSI/RICS partnership agreement in London recently.

The SCSI was delighted to renew our partnership agreement with the RICS in London recently. Together, we will continue to provide members with local expertise and support enhanced by global connections and insights from the RICS.

Through this partnership, members receive:

- a 50% concession from the RICS;
- access to RICS and SCSI guidance;
- global recognition as a Chartered Surveyor;
- support from the charity supporting Chartered Surveyors – LionHeart; and,
- a single regulatory compliance with SCSI CPD Log (meeting requirements for both bodies).

HAVE YOU COMPLETED YOUR PSRA HOURS?

Complete your PSRA hours online or register for the SCSI's live online PSRA CPD Zoom event, which will take place on Thursday, October 2, from 9.30am-2.30pm.

The PSRA course is included in your SCSI subscription. Simply register to attend at scsi.ie/calendar. If you are completing the course online, simply log in and get started at scsi.ie/psra.

APC GRADUATION 2025

Congratulations to the 79 APC graduates who were awarded their diplomas at the SCSI graduation ceremony in June. We congratulate you on reaching this professional milestone and wish you the very best in your careers!

Visit the APC Hub to book a one-to-one session or arrange a free APC workshop this autumn to support your team. Whether you're preparing for your final assessment or unsure of your next step, we're here to help. Let's get you Chartered!

Joining this year's APC graduates were (front row from left): SCSI CEO Shirley Coulter; SCSI President Gerard O'Toole; SCSI Deputy Director of Education Ruth Comerford-Morris; and, SCSI Director of Education James Lonergan.

APC GRADUATES 2025

Eymard Ahern, Quantity Surveying
Patrick Beggs, Quantity Surveying
Cian Beirne, Quantity Surveying
Joanna Berry, Valuation Surveying
William Bolger, Valuation Surveying
Peter Boylan, Quantity Surveying
Gavin Brown, Quantity Surveying
Kieran Byrne, Quantity Surveying
Aaron Coen, Quantity Surveying
Niall Coleman, Quantity Surveying
Tomás Colleary, Quantity Surveying
Tom Cullen, Valuation Surveying
Jake Daly, Commercial Property Practice
John Dowd, Residential Property Practice
Hannah Dowling, Valuation Surveying
Daire Dunne, Geomatics Surveying
David Flanagan, Facilities Management
Ian Fox, Quantity Surveying
Thomas Geary, Quantity Surveying
Christian Gibney, Quantity Surveying
Patrick Gill, Geomatics Surveying
Olga Harney, Valuation Surveying
Louise Healy Hogan, Valuation Surveying
Michael Hewer, Valuation Surveying
Adam Hewitt, Building Surveying
Robert Hughes, Geomatics Surveying
Sean Kellegher, Valuation Surveying
Darragh Kelly, Building Surveying
Marc Kelly, Valuation Surveying
Darragh Kildea, Property Management
Kevin Kurian, Quantity Surveying
Eoin Lavers, Quantity Surveying
Michael Lennon, Quantity Surveying
Niall Little, Commercial Property Practice
William Long, Quantity Surveying
Terence Mackey, Quantity Surveying
Zach Maguire, Commercial Property Practice
Frank Mallen, Building Surveying
Ben Malone, Quantity Surveying
John Mason, Quantity Surveying
Jason McBride, Quantity Surveying
David McCarthy, Valuation Surveying
Iain McGann, Property Management
Paul McGeehan, Geomatics Surveying
Michelle McKeever, Quantity Surveying
Niamh McKenna, Valuation Surveying
Michael Mitchell, Quantity Surveying
Declan Moran, Quantity Surveying
Padraig Moriarty, Quantity Surveying
Ian Mulreid, Geomatics Surveying
Anthony Mulvey, Valuation Surveying
Daniel Murphy, Commercial Property Practice
John Murphy, Quantity Surveying
Laurence Murphy, Valuation Surveying
Ben Nesbitt, Property Management
Paul Noonan, Quantity Surveying
Caroline Nugent, Valuation Surveying
Caroline O'Connor, Valuation Surveying
Archie O'Donnell, Building Control
Jeremiah Okanola-Biala, Geomatics Surveying
Rory O'Neill, Commercial Property Practice
Harry Oppermann, Valuation Surveying
Ailbhe O'Sullivan, Commercial Property Practice
Robert Phillips, Quantity Surveying
Killian Quigley, Commercial Property Practice
Gianangelo Radaelli, Commercial Property Practice
Declan Regan, Quantity Surveying
Heather Rogers, Valuation Surveying
Martin Ruane, Quantity Surveying
Uchenna Sampson Igwe, Quantity Surveying
Francis Simpson, Building Surveying
Szymon Slowiak, Commercial Property Practice
Marcel Stanisz, Valuation Surveying
Sarah Talbot, Property Management
Conor Timmins, Valuation Surveying
Dean Treanor, Geomatics Surveying
Ricardo Vidoto, Quantity Surveying
Gary Walsh, Quantity Surveying
Sean Zahir, Quantity Surveying

SCSI/*IRISH TIMES* TENNIS TOURNAMENT

Get ready for one of the highlights of the SCSI social calendar – the 2025 SCSI/*Irish Times* Tennis Tournament returns on Thursday, August 21, at Donnybrook Tennis Club, with matches starting at 3.00pm sharp.

All matches are doubles, and each team must include two male and two female players. Enjoy refreshments throughout the day, with a BBQ and prizegiving to wrap up the action in style.

As ever, our thanks to *The Irish Times* for their continued support of this much-loved event.

NEXUS SOCCER TOURNAMENT 2025 KICKS OFF WITH 16 TEAMS

The Nexus Soccer Tournament winning team 2025 from Avison Young Ireland. Pictured are: Carolyn McCarrick, Claire Hackett, Seamus Weldon, Owen Cleary, Zach Byrne, Leo Seddon, Vitaliy Makeravich, and Aaron Smith.

The 2025 Nexus Soccer Tournament brought together 16 teams for an evening of friendly competition this summer. Congratulations to the winning team from Avison Young Ireland and also to runners-up Lisney Ireland.

Organised by Nexus, the SCSI's young professional network, this event helps to foster industry connections and camaraderie among early-career surveyors.

To support future Nexus events, including the upcoming Nexus Ball, visit scsi.ie/sponsor.

TEE UP FOR A GREAT DAY OUT!

Join us for the SCSI Golf Day on Thursday, September 11, 2025, at the stunning Castleknock Golf Club – a perfect mix of friendly competition, fresh air and great company.

This year's format is a four-person Champagne Scramble, ideal for players of all levels. Each team uses the best drive on every hole, with all players playing their own ball from that point – a fun and inclusive set-up for golfers of mixed ability.

Whether you're bringing clients, colleagues, your team or a few friends, it's a brilliant way to connect, unwind, and enjoy a day on the course.

Book your team now to avoid missing out!

SCSI LUNCH – BRING YOUR CLIENTS AND COLLEAGUES

The North East Region Committee warmly invites all members to a special networking lunch at the elegant Westbury Hotel, on Friday, October 3, from 12.30-3.30pm. Enjoy a stimulating afternoon connecting with fellow professionals from across the region – and bring your clients and colleagues along to make the most of this networking opportunity.

We're delighted to welcome renowned economist, writer and broadcaster David McWilliams as our guest speaker, who will share his insights on the economy and current affairs.

Step away from your screens and join us for great conversation, fresh perspectives, and a memorable afternoon.

REMEMBERING NOEL MCDONAGH

It is with great sadness that we have learned of the passing of a beloved Past President, Noel McDonagh FSCSI FRICS. Noel was a valued and dedicated member of the SCSI for nearly 70 years. Our thoughts are with Noel's family, friends and colleagues during this time. RIP.

CONSTRUCTION + QS CONFERENCE

Caroline Timmins from the Department of Housing, Local Government and Heritage addresses the Construction and QS Conference.

Thank you to the nearly 100 members who joined us both online and in person for the 2025 SCSI Construction and Quantity Surveying Conference. During this half-day conference, we explored a range of key topics including market trends, capacity challenges, industry updates, and real-life case studies.

Thank you to our speakers and panellists for sharing your time and expertise, and to all who contributed to the success of the event.

TOOLS FOR TOMORROW

THE SCSI'S NEW DIGITAL STRATEGY WILL PUT PROFESSIONALS AT THE HEART OF A DIGITAL BUILT ENVIRONMENT.

This autumn, the SCSI will unveil its first digital strategy – marking a pivotal step in its Roadmap 2027 strategy, and the digital transformation of Ireland's surveying profession. Developed in collaboration with SCSI members and innovation hub BLOXHUB, the strategy responds to a clear call for support: while over 75% of surveyed members see digital transformation as critical, more than 30% admit that they don't know where to start. The SCSI's strategy aims to close that gap – empowering members across property, land, and construction to effectively operate in a rapidly evolving digital landscape. At its core, the strategy aims to position digitalisation and sustainability as twin objectives of change. It will outline how the surveying profession can use digital tools to drive better collaboration, transparency, and decision-making for the betterment of clients and the environment.

From culture to capability

The first step is cultural transformation. The SCSI will focus on working in collaboration with a range of stakeholders to build a shared digital language, standardised practices, and future-ready skills. This cultural shift is essential to overcome barriers such as resistance to change, cost-driven decisions, and fragmented systems thinking.

Development of real-world case studies from members can showcase how digital tools – when paired with the right training and mindset – can unlock efficiencies and improve outcomes across the project life cycle.

Fixing the data disconnect

The strategy will also aim to address longstanding challenges such as fragmented data, poor interoperability, and gaps in asset and equipment information. It will call for standardised sustainability metrics and clearer guidance – helping members to meet growing expectations for digital and sustainable practices by default.

Tools for tomorrow

From digital twins to shared platforms, the strategy will highlight how existing and emerging technologies can support better risk management, circularity, and real-time decision-making. These tools will be critical in aligning with EU and Irish sustainability legislation and frameworks, and ensuring that members stay ahead of regulatory change.

Collaboration across the value chain

Success will depend on collaboration, from developers and designers to facility managers and financiers, and all other stakeholders within the built environment. The SCSI is committed to making learning inclusive and practical, working in collaboration with others to align roles and responsibilities, and to ensure that members are equipped for this continued transformation. This isn't just about adopting new technology – it's about reshaping how the profession works. With this strategy, the SCSI aims to equip members to work collaboratively in a digitally integrated, sustainable built environment.

NEWS FEATURE

James Lonergan
SCSI Director of Education & CPD

DATA DAY IS HERE

DAN HUGHES OF ALPHA PROPERTY INSIGHT TALKS ABOUT HOW DATA IS GOING TO TRANSFORM THE PROPERTY SECTOR, AND HOW SURVEYORS CAN BE PREPARED FOR THIS.

Dan Hughes has been looking at data and technology in the real estate sector for most of his career. Having previously worked at the RICS, about seven or eight years ago he set up Alpha Property Insight, which works with property companies, industry organisations and governments on how data and technology are changing the property sector.

There is a lot of talk about data, but one thing Dan believes is often missing from the conversation is ethics: "We've become more and more data driven, but an awful lot of property professionals don't really think about the ethical implications of what they're doing".

There are three questions to ask before you begin to use any data, says Dan: "The first one is: can I get the data? The second one is: is it legal to use the data? Now, clearly, those are both incredibly important".

The third question is: should you use the data? A lot of data can be collected on people using or living in buildings, but there is information that most people would probably rather was not collected about them: "How far do you need to go before it's not really proportionate? I think this is a way off, but in an office building you could make an argument that it is more valuable if it helps employees to be happy and healthy, and more productive. You could use facial recognition to understand people's mood when they walk in. You could track their movements around the building to see how active they are. You could measure their heart rates and understand their health. You could look at tracking their keystrokes to look at how productive they are. In certain situations, all of those things are done. But you get to the point of going, 'That would be valuable insight, but is that proportionate? Is that the right thing to do?'"

The answer for Dan is probably not, and that it will often fall to those in surveying to decide: "You've at least got to be very open and transparent about it. I think it's going to be the property manager or the property owner or the surveyor who is going to be making those decisions going forward".

Data trends in property

Dan notes a couple of data trends in the industry: "The first one is that data is growing all the time and becoming exponentially larger, faster, more collected, more everything. I think it's inevitable that the sector is going to become more data driven. I think we've seen that over the last 5, 10, 20 years, and I think that's in line with other sectors as well".

The real estate sector tends to move a little more slowly than other industries, says Dan. While that may be frustrating for some, there are some mitigating reasons: "For example, we are made up of, relatively speaking, an

INTERVIEW

Colm Quinn
Senior Journalist,
Think Media Ltd

> WE'VE BECOME MORE AND MORE DATA DRIVEN, BUT AN AWFUL LOT OF PROPERTY PROFESSIONALS DON'T REALLY THINK ABOUT THE ETHICAL IMPLICATIONS OF WHAT THEY'RE DOING.

awful lot of small companies. There are obviously some large companies, but if you look into the sectors that are really forward-thinking, some of the financial services or pharmaceuticals, they have a relatively small number of very big companies, so they have huge amounts of data. That means that they can have it in one format and do some analysis on it relatively straightforwardly".

An issue at the moment is that not all data is the same. To take full advantage, we need to be speaking the same language around data, says Dan, and we're often not right now: "If you're talking about a property and I'm talking about a property, there's actually quite a lot of grey areas within the data – it's not necessarily that subtle".

Role of surveyors

Dan sees all surveyors' roles changing over the next decade to become more data driven, and notes the example of a valuer: "What's going to change is the volume of data that's available, to inform the same things that they look at at the moment: what's happening in the market, what are the rents, indicators of behaviour about what's likely to happen going forward, what occupiers are going to think and what they're likely to pay. We're going to have huge amounts more data that can be accessed and analysed".

Dan is very optimistic about the future for property professionals, and says that as the use of data and technology increases, the role of the surveyor is going to become ever more important: "However, it is going to be a little bit different. It's not specifically jobs that are going to change, it's going to be some of those tasks. Technology is really good at number crunching, and then the human will do what the human is good at in terms of the ethics, the judgement, the interpretation, the human interaction, all of those".

AI promises a lot when it comes to data but it may also throw up problems, says Dan, and it will be an increasing challenge to know where data comes from: "I think there is this challenge for the sector in how do you understand that the data that you're using is true and accurate, and how do you use your professional scepticism on that when it's no longer five data sets from your own database, but it's eight billion data sets through several algorithms in several different systems?"

AI has been around for a lot longer than people realise, but Dan says that the past few years have been exciting and transformative. It is now much easier for people to communicate with computers using plain language: "I don't code. I was talking to someone yesterday about creating a calculator. It's a simple application to work out various different things about sustainability. There is a programme I went on to. I typed into it. Within five minutes, I had a working prototype of an entire application that would do these calculations. Now, that's nothing to do with me being clever. That's purely the technology being amazing at interpreting what I wrote and then being able to code and to create stuff".

The future

Technology raises a number of questions, and when Dan was working with the RICS he looked at how technology is going to change the sector, and what the RICS can and should do about it: "Which is obviously a relatively simple question with a fairly complicated answer".

While at the RICS, Dan worked on the body's PropTech strategy: "It was really trying to paint a vision about where you go in the future, what needs to change. I think rather than having a separate side project looking at technology, it was about how does that get infused across the overall organisation. Now, clearly, this is a slow evolution of a sector, and we move, not a criticism, but we move quite slowly. In many ways, that's the attractiveness of our sector. But it's about how do we evolve the sector over time".

There are different definitions of PropTech, but to Dan it is an umbrella term about the property sector becoming more technologically driven: "One of the trends that has come along is more technology platforms. If you go back 20 years, you could only really use the big established technology programs. It just wasn't really safe or secure to do anything else. But that world has completely changed now. You can start up very small, agile, very advanced companies with not a huge amount of money, and they can scale very, very fast. That's a change that we've seen over time. The overall strategy at the RICS at the time was, how do we embrace all of this, that is the Googles, the start-up that's a minute old, the property companies, the technology people who are the users of the buildings? The whole thing is changing, and how do we evolve to meet that need?"

Data and carbon reduction

If you don't measure data, you can't know how well you're doing with things such as carbon reduction: "Understanding what impact a building is going to have is much, much easier if you have a huge amount of data, precedence, and you can analyse it so you can understand much better what is likely to happen. Then we can design buildings significantly more efficiently to have a much lower impact".

Technology also has a massive role to play in making buildings run more efficiently: "If you just look at a very simple example like HVAC, huge amounts of energy are used through HVAC systems. If you can control parts of the building, whether that means turning it off or changing the temperature on individual floors, technology can help us use buildings much more efficiently. There is a huge amount that data and technology can do to help us understand the implications of what we're doing".

Dan says there are two caveats to add to this. The first is whether the data on building performance is available for people to make use of and if there is enough to draw good conclusions from: "If you and I own one building, we can measure that data. But we really want to learn from another 10,000 buildings that have tried different things".

The other caveat is that technology itself uses a lot of energy: "The principle is you can use a lot of technology to reduce the operations and increase the efficiency of a building. But by doing that, you're using a lot of energy elsewhere. I think it's important that as a sector, long term, we think about whether the use of technology is proportionate. I would argue that in most situations it is, but we need to make sure that there's a real outcome and purpose, because the last thing we want to do is save 5% efficiency here, but increase the cost by three times more over here".

SCSI conference

Dan will be speaking at the SCSI National Conference in December and there are a few topics he would like to cover. In the property sector, there are very long timescales. People buy buildings to operate them for decades, whereas the tech sector can turn in a second: "How do we take a world that is designed to be very slow, stable in the long term, with a world that is all about changing fast? So if you look at the culture within the property sector, then it's all about long-term evidence-based, very low risk. We don't want a building to fall down, clearly. All of those cultural aspects are exactly what you want for buildings. Now, if you look at the technology sector, it's all about forward-looking, acting fast. 'Fail fast' is a term that's used a lot. So failure is seen as a good thing in the technology sector and a bad thing in the property sector. How do we combine the business processes, the governance, the culture, the skills to make sure that we operate in the right way moving forward in those two different worlds?"

Government support

Dan says there are a few ways governments can support industries around tech and data: "The first one is that governments have a huge amount of data. I don't think that necessarily means give it all away for free and to make everything accessible, but it certainly has an important role in thinking through what data is out there and what's important. I think if you assume that most markets are driven by either the people using buildings or the capital investing in them, then from a capital point of view, people want transparency, they want understanding. So the more data that's available, it becomes a national investment strategy, so it attracts inward investment. And people using buildings want to understand the building they're using and how it's operating".

Some companies or institutions may not want to share their data because it either doesn't benefit them or even goes against their interests: "There are situations where improving one data set doesn't help the person who's creating the data, but it helps the overall building and the overall market. I think that there is an argument for some interventions where there is an overall market benefit, but the people who have to do something to the data, for example, aren't the ones who directly get that benefit. I think that's a role for industry bodies and for government".

The property sector is critical to entire economies, says Dan, and governments need to look at it as a whole more: "It's so critical to almost everything, whether that's employment, whether that's the economy, whether that's attracting investment, impact on the planet, productivity of people, well-being, happiness. It affects everything. Yet because we're so big and fragmented, governments tend to focus on a bit of it. They will focus on the residential house building, and then separately, residential buying and selling, and then separately, the construction sector. I think we need to have a little bit more of a joined-up approach".

Dan's overall message is that the future is exciting: "The built environment is really important. There's so much to be optimistic about, but we need to change and move with the times. I think as long as people do that, if they are very old, very young, very into technology, very against technology, it doesn't really matter. The world is moving on and we need to be part of that transformation".

> **THE BUILT ENVIRONMENT IS REALLY IMPORTANT. THERE'S SO MUCH TO BE OPTIMISTIC ABOUT, BUT WE NEED TO CHANGE AND MOVE WITH THE TIMES.**

Real estate experience

Dan studied engineering at the University of Nottingham, and data science at Johns Hopkins University. He began working in sales before moving into marketing. He is a former Head of Land and Property Sector at Ordnance Survey, and was Director, Data & Information Products and PropTech Lead at the RICS. He has served as founder to a number of companies, and in 2018 established Alpha Property Insight.

DRIVING PRODUCTIVITY AND COST EFFICIENCY

ENTERPRISE IRELAND IS WORKING TO SUPPORT SURVEYORS TO BE AT THE FOREFRONT OF DIGITAL AND LEAN CONSTRUCTION.

The Irish construction industry faces the dual challenge of boosting productivity while simultaneously reducing construction costs. In response, Enterprise Ireland (EI) has a clear mandate under the Government's Housing for All strategy to support the domestic homebuilding sector through targeted Lean, research and development (R&D) and digital initiatives. At the heart of this transformation are quantity surveyors (QSs), emerging not just as cost controllers, but as essential digital champions.

Enterprise Ireland's mandate

EI is uniquely positioned and explicitly tasked to enhance construction productivity and cost efficiency nationwide. Through structured support frameworks around Lean principles and digital technology adoption, EI is empowering construction businesses in the homebuilding sector to achieve greater accuracy, reduce waste, and streamline workflows. Many surveying practices will recognise EI from its exporting mandate to assist companies in growing their ambition internationally. However, with the launch of the Government's Housing For All strategy in September 2021, the agency's

FEATURE

Gary Greenan SCSI
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mandate was changed to begin working with the domestic construction sector, specifically the end-to-end housebuilding sector.

Central to this effort is the emphasis on digitalisation, which fundamentally revolves around data: how it is captured, analysed, and leveraged. EI's Digital Discovery Voucher and Digital Process Innovation (DPI) supports are pivotal tools, enabling construction companies to systematically explore, plan, and implement effective digital strategies.

The QS as digital catalyst

QSs stand at the critical intersection between data, strategy, and execution. Their role is now transforming as they harness digital technology to refine and enhance every aspect of the estimation process. By improving accuracy in cost estimation, QSs directly contribute to lower construction costs and reduced project risks.

Today's QS is deeply involved in data-driven decision-making, from initial feasibility stages through to final project handover. They actively engage in capturing real-time construction data, perform detailed analysis using powerful platforms like Power BI, and integrate insights into robust common data environments (CDEs).

Data capture, analysis, and application

Modern digital tools allow QSs to move beyond traditional spreadsheet analysis, enabling real-time tracking of project metrics and costs. The digital QS utilises building information modelling (BIM) and sophisticated analytical software to perform precise, predictive cost estimations and continuously refine cost rates based on actual project data.

Digital platforms help QSs to quickly identify inefficiencies, track productivity, and forecast potential cost overruns, allowing project teams to proactively manage risks and maintain tighter budgetary control.

Lean principles in practice

Alongside digital solutions, Lean principles underpin EI's strategy for improving productivity in construction. QSs trained in Lean methodologies can be instrumental in identifying process inefficiencies and eliminating waste. Through accurate digital reporting and Lean analysis, QSs help deliver projects faster, at lower costs, and with higher quality outcomes.

Building a ConTech ecosystem

EI is also actively fostering Ireland's burgeoning construction technology (ConTech) sector. By facilitating collaboration between innovative tech companies, industry professionals, and academia, EI ensures the continuous development of tailored digital tools designed specifically for the homebuilding and broader construction sectors.

QSs are playing a key role in this ecosystem, influencing the development of new digital solutions and actively adopting technologies that enhance their strategic value.

Seizing the opportunity

The transformation in Ireland's construction industry presents a major opportunity for QS professionals. By embracing digital and Lean approaches, they are not just responding to change but proactively shaping the industry's future. QSs are becoming indispensable digital leaders, central to delivering productivity gains, cost savings and, ultimately, better housing outcomes for Ireland.

EI is a founder member of the Construction Sector Group (CSG) Innovation and Digital Adoption Subgroup, where the transformation of the sector and management of the new ecosystem is being managed across sustainability, modern methods of construction, Construct Innovate, skills and training, and Build Digital actions. Established in 2020, this group is chaired by PJ Rudden, has some 300 private and public sector people working across seven actions, and meets monthly to drive and deliver change.

To learn more about how EI can support your business in adopting Lean and digital practices, contact Gary Greenan SCSI, Senior Client Advisor in Enterprise Ireland's Housing Delivery Unit.

THROUGH STRUCTURED SUPPORT FRAMEWORKS AROUND LEAN PRINCIPLES AND DIGITAL TECHNOLOGY ADOPTION, EI IS EMPOWERING CONSTRUCTION BUSINESSES IN THE HOMEBUILDING SECTOR TO ACHIEVE GREATER ACCURACY, REDUCE WASTE, AND STREAMLINE WORKFLOWS.

FUTURE-PROOFING COMMERCIAL ASSETS

PROPTECH CAN BOOST SUSTAINABILITY AND EFFICIENCY IN IRISH COMMERCIAL REAL ESTATE.

As pressure grows from regulation, investors, and tenants, sustainability is now a performance expectation rather than a design aspiration. For surveyors and real estate professionals, this means shifting attention from compliance checklists to how buildings perform in day-to-day operation. Property technology (PropTech) has emerged as one of the most powerful tools to close the gap between ambition and delivery. Smart systems offer the potential to reduce energy use, track carbon emissions, and create healthier, more responsive workspaces. But real value lies not just in installing technology, but in using it effectively.

The '1980s Dad' meets modern automation

Many building users will relate to the iconic '1980s Dad' figure; the one who marched around the house turning off lights, the dreaded immersion, and the heating to keep bills down. This instinct for energy conservation is still valid, but in modern buildings it needs to be automated and optimised.

Today, sensors and smart schedules do what the '80s Dad' once did, but more consistently and with far less shouting. Lights go off automatically in unoccupied rooms. Heating and cooling systems adapt based on occupancy and usage. Fresh air is boosted when indoor CO_2 rises. The result is not just lower energy use, but a better user experience. Sustainable buildings no longer need to feel like a compromise.

From design intent to verified performance

A consistent challenge in the property sector is the 'design versus performance gap', where buildings often fail to live up to their design promises. Poor equipment design specification, low-quality commissioning, ineffective control system configuration, and changing occupancy patterns all contribute to performance shortfalls. PropTech helps to address this by turning static building assets into responsive systems.

PropTech plays a key role in closing this 'performance gap'. Smart commissioning tools ensure that HVAC, lighting, and control systems are correctly set up from the outset. Digital twins and advanced analytics allow property managers to monitor building behaviour in real time, identify inefficiencies, and fine-tune systems based on actual usage rather than assumptions. This system control is no longer optional. Under the revised EU Energy Performance of Buildings Directive (EPBD), large non-residential buildings in Ireland must be equipped with automation and control systems.

But technology alone is not enough. The real value comes when data leads to informed action. Effective PropTech platforms support measurement and verification (M&V), a structured process that confirms whether interventions deliver the expected savings. M&V compares post-intervention performance against a baseline, adjusted for weather and occupancy, giving property owners confidence that improvements are measurable, reliable and providing value.

FEATURE

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Post-occupancy evaluation (POE) complements this by gathering occupant feedback on comfort and usability. When combined with real-time system data and M&V processes, POE helps to identify operational or design issues that may not show up in energy metrics alone, and that create a full picture of building performance. POE systems can be integrated within the tenant platform in the property to enable simplified data collection, such as with tenant apps, QR codes on desks, or feedback prompts in the automated room booking system. Having a real-time user feedback system in place provides greater value than annual tenant surveys and provides users with an active voice in how well the building is operating.

In Dublin, PropTech-enabled retrofits have demonstrated energy savings of 10-20%, showing that with the right tools and follow-through, design intent can be turned into operational reality.

PropTech and ESG data: who reports what?

Accurate greenhouse gas (GHG) emissions reporting depends on whether the entity is a landlord or a tenant. For landlords, tenant energy use is typically Scope 3. For tenants, the same use may be Scope 2. This overlap creates complexity and highlights the need for collaboration and shared data. PropTech enables clarity by tracking energy by zone and function, supporting consistent environmental, sustainability and governance (ESG) reporting across parties. For funds and investors, automated data collection improves accuracy and aligns with frameworks like the Global Real Estate Sustainability Benchmark (GRESB), EU Taxonomy or the Sustainable Finance Disclosure Regulation (SFDR) Articles 8 and 9. Buildings with integrated digital systems are better equipped to meet compliance and market expectations.

The human factor matters

Even the smartest systems can underperform if people aren't fully engaged. A well-designed control system may be overridden by staff who don't understand how it works. Tenants may bypass landlord systems with their own fit-outs, losing the opportunity to benefit from shared infrastructure.

To avoid this, user experience (UX) needs to be built in from the start. Control interfaces should be intuitive, training should be standard, and co-ordination between landlords and tenants during fit-out should be the norm, not the exception.

Many landlords are now offering 'smart fit-out guides' or ongoing performance support for tenants aligned with green leases. This helps to ensure that systems remain connected and that sustainability goals are shared, not siloed.

The value beyond energy

While PropTech can deliver measurable energy and carbon reductions, the broader business case is often even more compelling. Buildings that are well monitored and responsive offer a better experience for users, are easier to manage, and attract and retain premium tenants.

Air quality, lighting quality, and thermal comfort are increasingly recognised as core to tenant satisfaction. Tools that monitor these metrics not only improve well-being but also support certification under schemes like WELL or Building Research Establishment Environmental Assessment Methodology (BREEAM) In-Use.

Indoor air quality (IAQ) has historically been overlooked in energy efficiency strategies. Though harder to quantify than kilowatt-hours, its impact on well-being and productivity is no less significant. The pandemic underscored the importance of IAQ and made clear that, to bring people back from remote working, offices must be places where health, comfort and performance are actively supported.

Improving IAQ can potentially increase energy demand, especially where ventilation is extended. However, smart solutions are available that combine IAQ monitoring, artificial intelligence (AI), and user feedback to optimise air quality without over-conditioning. By targeting only areas that need improvement, the system maintains comfort while controlling energy use.

Ultimately, buildings that can show real, continuous performance are more valuable. They attract ESG-conscious tenants, command premium rents, and are more resilient to regulatory risk.

The tools to create more efficient, healthier, and lower-carbon buildings already exist. The challenge now is to use them effectively. PropTech gives us the ability to automate the best instincts of the '1980s Dad', track performance in detail, and share responsibility across landlords, tenants, and fund managers. Surveyors and property professionals play a crucial role in making this work. By asking the right questions, promoting better integration, and keeping a focus on real-world outcomes, we can ensure that PropTech delivers not just data, but real value. PropTech is not just about technology; it is about future-proofing commercial assets.

DO YOU KNOW YOUR COST GROUPS FROM YOUR BUILDING ELEMENTS?

THE INTERNATIONAL COST MANAGEMENT STANDARD, THIRD EDITION, IS AN ESSENTIAL DOCUMENT FOR SURVEYORS.

Managing costs on construction projects, both building and civil engineering, is a key part of the role of the quantity surveyor and cost consultant. Civil engineering projects generally identify cost centres based on the method of measurement used on the project, or as instructed by clients. The National Standard Building Elements (NSBE) and Design Cost Control Procedures has been the cornerstone of building project cost reporting in Ireland for decades.

The NSBE is an agreed elemental format based on a Nordic system. The National Building Elements Committee members were a mix of industry experts and Government representatives. The third and final edition of the NSBE was published on behalf of the Committee in 1993. Original copies can now only be found in archives or online as digital copies. What most practitioners are only starting to realise is that the NSBE has not moved forward with construction methods or digitalisation. What is more important to realise is that the NSBE will not be moving forward. The Committee was not renewed past 1993, so the NSBE is effectively stranded.

The Society of Chartered Surveyors Ireland (SCSI) Quantity Surveying Working Group recognised the issue at hand in 2013 and investigated who currently had ownership and rights to the NSBE. The answer was that nobody knew. The last committee was defunct. The publishing unit had been assumed into other Government departments and responsibility for the NSBE was effectively lost. That led to a more urgent question: what next?

International Cost Management Standard, third edition

Following on from the initial success of the International Property Measurement Standard (IPMS), the Royal Institute of Chartered Surveyors (RICS) reached out to interested organisations involved in construction cost management. This led to the inaugural meeting of the International Cost Management Standard (ICMS) coalition in Washington DC in June 2015. A total of 14

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organisations, including the SCSI, joined the coalition with a view to standardising cost reporting on construction projects globally. The SCSI recognised that a new global cost reporting standard would benefit the built environment by providing an alternative to the defunct NSBE. ICMS coalition membership has grown to over 70 organisations, and the ICMS has 19 project-type cost report templates representing the major sectors of the built environment.

The ICMS has now published its third edition, which looks at capital expenditure (development/construction costs), operational expenditure (daily operating costs over the asset life cycle) and embodied carbon reporting.

> MANAGING COSTS ON CONSTRUCTION PROJECTS, BOTH BUILDING AND CIVIL ENGINEERING, IS A KEY PART OF THE ROLE OF THE QUANTITY SURVEYOR AND COST CONSULTANT.

What is the ICMS?

Simply put, the ICMS is a globally recognised, high-level cost and carbon reporting standard that considers multiple project types.

What is the ICMS not?

ICMS3 is not a method of measurement. Neither was the NSBE, so why should this be any different? Confusion has occurred around this point as earlier editions were called the International Cost Measurement Standard. This has been rectified. Buildings will still be measured using the Agreed Rules of Measurement (ARM) 5 and civil projects will be measured using the Civil Engineering Standard Method of Measurement 4 (CESMM4) or the Transport Infrastructure Ireland Requirements for Measuring and Pricing (TII RMP). All costs and carbon values can be reported into an ICMS cost report format.

Who should use the ICMS?

As the SCSI is a coalition member, all SCSI members should use ICMS3 as their primary cost reporting standard, unless a client requests otherwise. ICMS3 has been mandated for use by the Irish Government on publicly funded projects since January 2024. New cost and carbon templates are available on www.constructionprocurement.gov.ie.

The language of the NSBE has been used to describe areas and components of projects for years. But the ICMS is not just for those concerned with cost. In a building we have always referred to these components on an elemental basis, such as the substructure. This language did not translate into the civil engineering world. The language of the ICMS is common across the sectors and provides descriptive consistency for all construction professionals.

Building surveyors can use the ICMS as a template for costs around dilapidations. Facility managers can use the ICMS in maintenance programming and costing through life cycle costing. Construction professionals can use the ICMS as the reporting structure for life cycle assessment.

Clients can see how the ICMS can assist their organisations in recognising, and reporting on, sustainability issues. These are both financially relevant and significant in their impact on people and the planet.

From an Irish perspective, the ICMS is not too unlike the NSBE, other than the fact that it differentiates between structural and non-structural components of the building. The ICMS does not use the term 'element' to describe a building area/component. Instead it uses the terms 'cost groups' and 'sub-cost groups'. When you review the ICMS cost groups you will find many similarities, but care must be taken to understand the differences to prevent confusion. The ICMS is also coded for digitalisation and is mapped to Uniclass, which is mandated for use with the Irish Government building information modelling (BIM) mandate.

Supports for industry

A range of supports have been produced by an industry working group and are hosted on the SCSI's website. These include an 'ICMS Explained' document, an NSBE to ICMS mapping document, and a tutorial video explaining the ICMS in detail.

WILL AI HELP QUANTITY SURVEYING?

THE QS OF THE FUTURE WILL OPERATE IN THE DIGITAL AGE OF ARTIFICIAL INTELLIGENCE.

Artificial intelligence (AI) is no longer a futuristic concept, and it is conceivable that quantity surveyors (QSs) will learn how to train and optimise their own AI-powered assistant robotic QS, such as a QSGPT, in the not-too-distant future.

In the history of the profession, which goes back to 1792, there has never been a better time to be a QS. The QS of today stands at the cusp of seismic shifts due to technological advancements such as building information modelling (BIM) and artificial intelligence (AI), to name but two, which are disrupting the traditional practice of quantity surveying at an unprecedented rate, and are set to accelerate further in the coming years.

AI is making waves worldwide and is a major game changer, an invaluable tool transforming the role of quantity surveying, shaping the profession into a new digital era or, as the AI professionals would say, 'the intelligence age'. Kathy Bloomgarden, CEO of Ruder Finn, states: "We are in a moment of unprecedented human potential, and AI is the key to unlocking that potential".

The AI revolution is making significant inroads into the architecture, engineering and construction (AEC) sector and the QS of today lives and will need to function in a digital data age. Emerging technologies are advancing at a rapid rate, so the QS must keep pace and take advantage of the unlimited opportunities that lie ahead. The QS will operate in an AI-powered BIM world that uses machine learning (ML), natural language processing (NLP), computer vision, generative design, intelligent virtual assistants (IVAs), predictive analytics, augmented reality (AR) and virtual reality (VR). The public sector BIM and International Cost Management Standard (ICMS) mandates, climate action, the rapid growth of modern methods of construction (MMC), sustainability, circularity and other such initiatives have irrevocably transformed the way the QS works, in terms of analysing costs and managing data.

What is AI?

Put simply, AI is a list of instructions for computers, utilising algorithms to identify patterns in data, and leveraging these patterns to understand and address specific tasks.

There are basically three different types of AI with numerous subsets. QSs are familiar with 'narrow AI' in our everyday lives, such as smartphones, social media platforms, banking, smart home devices, online shopping, and so much more. Our main problem lies with the hype

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and science fiction surrounding machine intelligence (artificial general intelligence or AGI) and machine consciousness (artificial superintelligence or ASI) and the fear of the unknown, and for good reason. However, we are a long way off that yet.

Subsets of AI include ML, and this is one area that future QSs need to upskill in and utilise for maximum advantage. Neural networks is another subset where computer systems are designed to imitate the neurons of the brain. NLP is yet another subset, which, put simply, is the ability to understand speech, as well as understand and analyse documents, like ChatGPT, which we QSs are familiar with in our everyday interactions, although currently not so much in the world of quantity surveying.

QSs are already using industry standard AI-powered QS software to streamline their workflows and many QSs may not even realise it, as it is so natural and intuitive, and they are completely at ease interacting with the software as part of their work. These tools can assist with automatic quantity take-off, real-time revisions, detailed cost estimates, embodied carbon calculations, collaboration, improved accuracy, optioneering, identifying materials with lower carbon footprints, clash detection automating repetitive tasks, providing valuable insights for data-driven decision-making, enhanced efficiency, logistics planning, and the list goes on and on.

Using AI

The use of AI can greatly assist the QS in adding value in the following areas of the life cycle of an asset:

1. Enhanced efficiency and accuracy.
2. Automated data collection and analysis.
3. Predictive cost modelling.
4. Real-time cost tracking.
5. Optimisation of resource allocation.
6. Life cycle assessment.
7. Cost–benefit analysis.
8. Risk management.
9. The creation of bills of materials (BOMs).
10. Collaboration and communication.
11. Enhanced transparency.

What are the limitations for QSs engaging with AI?

When QSs understand what AI cannot do, it exposes its limitations, reduces the fear that has been generated by hype, and manages their expectations:

1. As with all forms of digitalisation, including BIM, AI needs to be used properly; it is only ever as good as its inputted data ('rubbish in, rubbish out').
2. Humans make AI work; they write the code, the algorithms, they operate the robots, and they repair the machines/robots. There would be no AI without human intelligence.
3. AI lacks emotional intelligence (emotional quotient or EQ), which is the distinguishing factor that makes us human. AI cannot feel emotions and therefore does not know how to interpret human experiences.
4. AI does not have the soft skills that are a 'must have' in the workplace, such as teamwork, interpersonal skills, critical skills, etc.
5. AI has no physical form; for example, AI can't handle tasks requiring hand-eye co-ordination.
6. AI still needs fact checking. If AI uses data from susceptible websites and other news sources, it can get the facts wrong and produce false results.
7. AI is inflexible. Automation and AI are programmed to follow strict rule sets or algorithms to produce specified results. They follow the rules and stay within the rules.
8. AI and humans have different limits and capabilities. Humans get tired, must eat, need the company of other humans to thrive and interact with to achieve great things. AI will endlessly do whatever it is programmed to do and only do that. AI does not have the physical agility or dexterity that a human has. AI has no moral compass and is not sensitive to the needs of others. Not everything humans do can be rule based, and thus used to train AI.
9. AI cannot match human creativity; it is impossible for AI to be as creative as humans, as not all human creativity can be rule based.
10. AI should complement humans. The purpose of AI is to help humans and not replace them.

11. AI can't understand causation. AI machines can accurately identify patterns and data associations; however, what AI can't grasp are the cause and effect of such patterns. For humans, understanding causation is an innate ability; we know the reasons behind specific actions.

QSs be aware when using AI

When using AI in our work, QSs need to be aware of a number of important issues:

1. AI is vulnerable to bias and discrimination; it is only as good as the data it is fed. Biases in AI applications can have far-reaching consequences, reinforcing existing societal inequalities, as AI does not possess emotional intelligence.
2. Technology is brilliant when it works, but when the system goes down or fails, it can make a practice vulnerable. Overreliance on AI technology by QSs may cause a decline in professional skills and ability.
3. There are ethical and moral concerns over a wide range of issues, including fairness, transparency, accountability, human rights, regulation, explainability and data ownership, especially when sensitive project or client information is involved.
4. The AI process comes with legal risks including intellectual property (IP) infringement. It presents major challenges over patents, copyright, trademark infringements, and IP ownership, such as who owns the AI-generated content. Future QSs will need to have an awareness of who owns the data on which the AI is trained, how that data was sourced, and whether copyright, etc., was breached.
5. AI can have unpredictable and unforeseen consequences and can get out of control. Autonomous or self-driving vehicles have been involved in accidents.
6. Like all digital tools, AI is subject to security risks. AI systems are vulnerable to data breaches, to hacking and all classes of cyber-attacks. The more complex the AI system, the more difficult it is to secure, as it operates in an increasingly interconnected world.
7. AI comes at a cost. SME QS practices and SME AEC businesses may not have the resources to invest in AI compared to Tier 1 counterparts, and this can lead to a digital divide in the construction sector, which could lead to monopolies in some circumstances and a skewed market.
8. AI could have an adverse effect on human interaction in the longer term. AI social media platforms and chatbots are already altering human interactions, resulting in decreasing face-to-face interactions, and affecting social skills and emotional intelligence, not to mention detrimental effects on our mental well-being.
9. Future QSs need to be aware of and consciously reduce the carbon footprint of training large AI models, where it compares to significant real-world activities like flights.
10. There is a need for good governance and tighter regulation. This is an area that requires regular updating to keep abreast of rapid and unprecedented digital accelerations. Future QSs should take note of the initiatives included in the Government's refreshed 'AI Here For Good', first published July 2021, which introduces the implementation of the new EU AI Act. This Act covers four different risk categories: unacceptable risk; high risk; limited risk; and, minimal risk. Unacceptable risks will be banned, with stiff penalties for breach thereof. High risks such as the use of AI in critical infrastructure will require human oversight of the technology in use as well as strict security controls. Small QS practices should refer to this document as it details how it supports the adoption of AI for micro-enterprises and SMEs.
11. Implementation barriers, such as high upfront costs for AI tools and training can be prohibitive, especially for smaller QS firms.

The role of the future QS will be impacted by using AI. However, we QSs are among the lucky few whose role will be enhanced using AI. Our skillset will evolve to include more digital skills as we become more AI literate and learn how to operate in a rapidly advancing complex digital world. The use of AI and BIM will create a digital synergy with the promise of even more innovation in the construction sector.

Useful resources for QSs using AI

RICS. Draft standard, Professional conduct and the responsible use of AI. https://www.rics.org/news-insights/wbef/professional-conduct-responsible-use-ai.

Department of Public Expenditure, NDP Delivery and Reform. Government commits to using trustworthy AI in the Public Service. https://gov.ie/en/department-of-public-expenditure-infrastructure-public-service-reform-and-digitalisation/press-releases/government-commits-to-using-trustworthy-ai-in-the-public-service/.

European Commission. Commission publishes the Guidelines on prohibited artificial intelligence (AI) practices, as defined by the AI Act. https://digital-strategy.ec.europa.eu/en/library/commission-publishes-guidelines-prohibited-artificial-intelligence-ai-practices-defined-ai-act.

European Parliament. EU AI Act: first regulation on artificial intelligence. https://www.europarl.europa.eu/topics/en/article/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence.

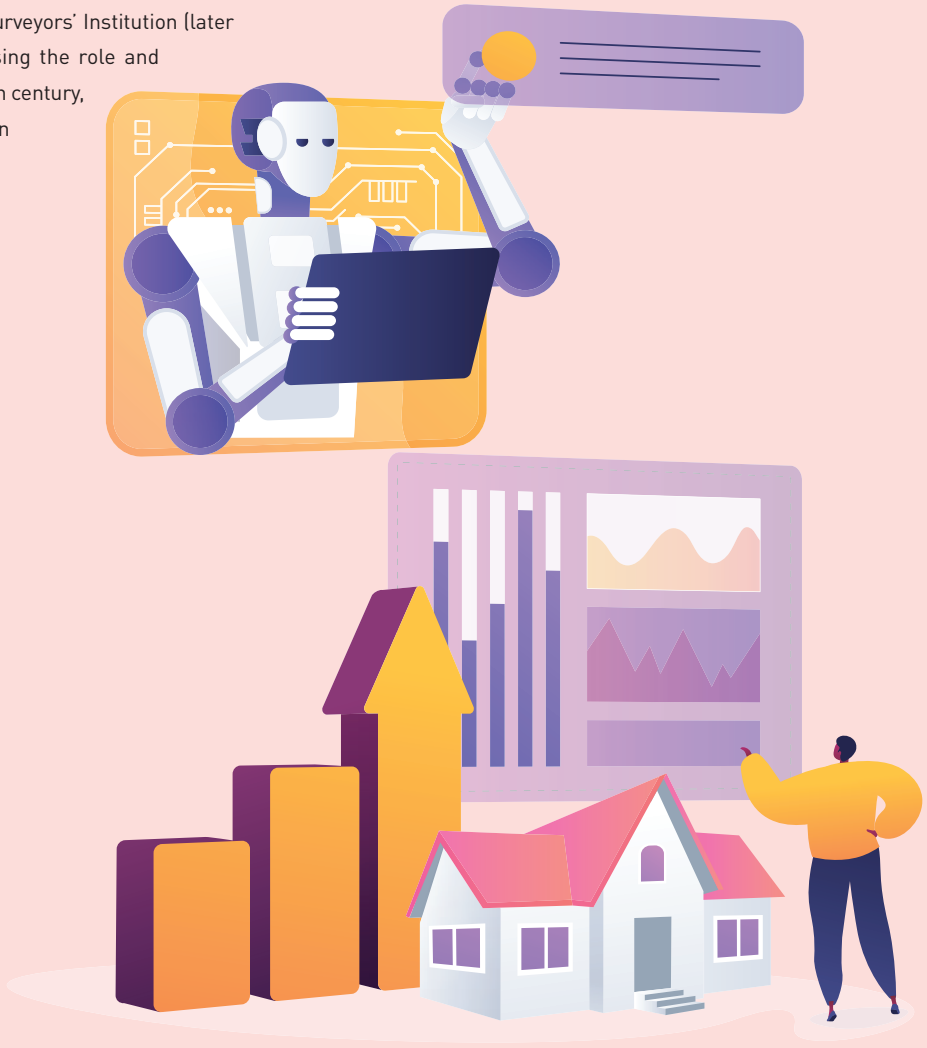
United Nations. Governing AI for Humanity, September 2024. https://www.un.org/sites/un2.un.org/files/governing_ai_for_humanity_final_report_en.pdf.

Nemko Digital. Understanding the EU AI Act 2025: Strategies, and Compliance Guide. https://digital.nemko.com/insights/navigating-the-eu-ai-act-in-2025#:~:text=The%20EU%20AI%20Act%3A%20A%20Unified%20Regulatory%20Framework&text=When%20navigating%20the%20EU%20AI,strict%20transparency%20and%20governance%20requirements.

FROM EXPERTISE TO ALGORITHMS

WITH THE INCREASING USE OF AUTOMATED VALUATION MODELS, CHARTERED SURVEYORS MUST ENSURE THAT THE HUMAN ROLE IN PROPERTY VALUATION IS RETAINED.

Land and property valuation was practised in ancient Egypt, Greece and Rome, primarily for taxation and military tribute. Roman surveyors (*agrimensores*) performed basic valuations based on land productivity and area. In medieval Europe, there are recorded surveys, and feudal and land assessments, for rent setting, but without a formal valuation profession. The rise of capitalism in the early 18th century and urbanisation in Britain led to a growing need for independent appraisals. In 1868, the Surveyors' Institution (later the RICS) was established in the UK, formalising the role and profession of Chartered Surveyor. In the early 20th century, valuation emerged as a distinct branch within surveying, especially with the rise of compulsory purchase, mortgage lending, and taxation systems. Since then, not much has significantly changed, even when the first RICS Red Book was published in 1976.



Valuation in the modern era

As someone who has worked as an active valuer for the past 20 years, and is also engaged in the automated valuation model (AVM) area (having written many research papers and established an AVM for Cyprus data), I believe that in the last 10 years, the valuation profession has been facing significant challenges, driven by rapid technological

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change, shifting client expectations, regulatory scrutiny, and the increasing demand for faster, scalable, and data-driven solutions. At the centre of this transformation lies the growing use of AVMs. Initially seen as tools for bulk property assessments or preliminary checks, AVMs have evolved into sophisticated systems powered by machine learning, geospatial analytics, and real-time data streams. They now offer instant value estimates across large portfolios, support mortgage lending workflows, and provide consistent benchmarking for institutional investors and regulators.

However, their rise also raises fundamental questions, not only about accuracy and transparency, but also for the evolving role of the professional valuer. As the industry stands at the intersection of automation and expertise, surveyors must now navigate how best to integrate AVMs into professional practice – leveraging their strengths without compromising judgement, local insight, and ethical responsibility.

The valuation profession today faces a complex set of challenges that extend beyond traditional technical concerns. One of the most pressing issues is the increasing commoditisation of valuation services, driven by digital platforms and client expectations for faster, lower-cost outputs. This shift risks reducing valuations to mere number generation, eroding the professional judgement and nuanced market insight that Chartered Surveyors provide. At the same time, data quality and availability remain uneven, particularly in secondary markets, rural areas, or jurisdictions lacking transparent property registries. Valuers must also navigate regulatory uncertainty, as international standards evolve to accommodate hybrid and automated models, often without clear guidelines on professional liability or methodological disclosure. Compounding these issues is the growing reliance on AVMs and artificial intelligence (AI) tools, which, while powerful, introduce new risks related to transparency, explainability, and ethical use. In this rapidly changing environment, the profession must reaffirm its value by adapting to technological progress without compromising its core principles of independence, reliability, and contextual expertise.

Data and expertise

While data has become the cornerstone of modern valuation – fuelling AVMs, geographic information systems (GIS), and predictive analytics – professional judgement remains irreplaceable. Undoubtedly, high-quality data enables greater consistency, speed, and scalability in valuation outputs, but does not capture all the nuances that affect property value. Factors such as planning uncertainty, market sentiment, construction quality, or recent off-market transactions typically escape data-driven models. Furthermore, even the most advanced AVMs require human oversight to interpret their outputs, assess confidence levels, and contextualise results within specific legal, physical, or economic frameworks. Professional judgement acts as the safeguard against blind reliance on automation, ensuring that assumptions are questioned, anomalies are investigated, and valuations remain both defendable and ethical. I believe that as the profession evolves, the future lies not in choosing between data and expertise, but in combining them, using robust data to inform, and experienced judgement to interpret.

Ethical considerations

My view is that AVMs will inevitably become more common in valuation practice, but their use must continue to be centred on ethical responsibility. Transparency is a major issue: clients, regulators, and end users need to be aware of the model's constraints, confidence intervals, and data sources in order to comprehend the valuation's foundation. In the absence of this clarity, an excessive dependence on opaque, algorithmic outputs that could mask bias or uncertainty exists. Equity and fairness constitute another ethical dilemma. Studies have indicated that AVMs may inadvertently reinforce market prejudices, especially in historically underprivileged or underrepresented communities, as a result of imbalances in training samples or inconsistent data quality.

It is the responsibility of surveyors to assess whether the use of AVMs is in the best interests of their clients and complies with fairness standards, particularly in high-stakes situations like financing, taxation, or compulsory purchase. Most importantly, professional valuers remain accountable for their conclusions, even when AVM tools are used. This underscores the need for informed consent, careful model selection, and the clear communication of when human judgement has adjusted or overridden automated estimates. Ethical AVM use is not just about compliance – it is about preserving trust in the valuation profession.

A random example of AVM's bad application in mortgage lending

Scenario: A national retail bank in a fast-growing urban area begins using an AVM to speed up residential mortgage approvals for properties under €300,000. The AVM, trained primarily on historical sales data from established neighbourhoods, systematically undervalues properties in newly developed areas on the city's periphery, where there are fewer recorded transactions and less historical data. As a result, several loan applicants receive lower-than-expected mortgage offers – or are denied altogether – despite local market evidence (e.g., new infrastructure, school catchments) suggesting higher market values.

Ethical dilemma: The bank's loan officers rely solely on the AVM estimate without a professional valuer's review. Borrowers are not informed that the valuation was automated, nor are they offered the chance to challenge it or request a traditional appraisal. This raises several ethical issues:

- transparency: borrowers are unaware of the valuation method used or its limitations;
- equity: applicants in data-poor areas are disadvantaged despite similar or better property fundamentals;
- accountability: no qualified professional assumes responsibility for the estimate; and,
- duty of care: the institution fails to inform or protect the client's financial interests adequately.

The dual role of the modern Chartered Surveyor is the resolution in AVM use

The role of the modern surveyor has evolved into a dual responsibility:

both as a data custodian and as a critical evaluator of model outputs (**Figure 1**). On one hand, surveyors must ensure that the underlying data feeding into AVMs – property characteristics, zoning information, comparable sales, and locational factors – is accurate, up to date, and contextually relevant. Errors or omissions at this stage can significantly distort the model's conclusions. On the other hand, surveyors are also responsible for reviewing and interpreting AVM results, assessing whether the output aligns with local market realities, legal frameworks, and the unique characteristics of the property in question. This involves questioning anomalies, validating confidence intervals, and applying professional judgement where the model lacks nuance. In this sense, the valuer becomes both auditor and analyst, bridging the gap between automated efficiency and human expertise, and safeguarding the integrity of the valuation process.

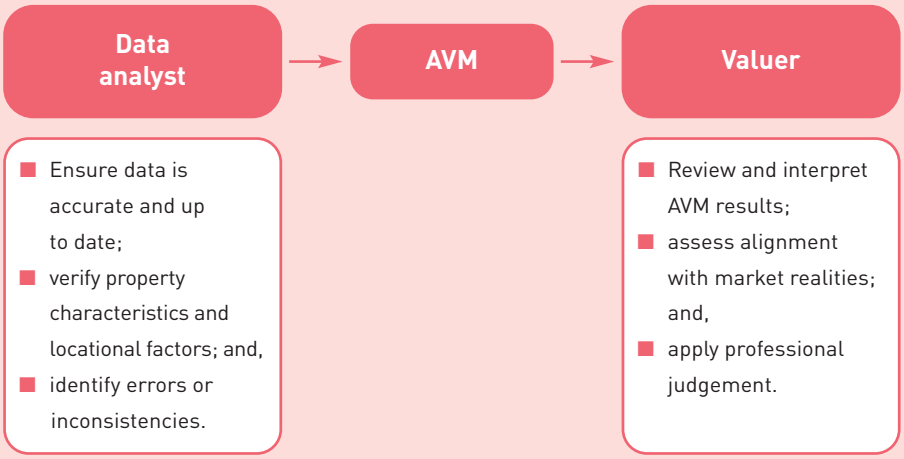

FIGURE 1: the dual role of the surveyor in valuations.

> THE ROLE OF THE MODERN SURVEYOR HAS EVOLVED INTO A DUAL RESPONSIBILITY: BOTH AS A DATA CUSTODIAN AND AS A CRITICAL EVALUATOR OF MODEL OUTPUTS.

SURVEYORS WILL REMAIN

TECHNOLOGICAL ADVANCES ARE TRANSFORMING THE BUILT ENVIRONMENT, BUT THERE WILL ALWAYS BE A PLACE FOR THE HUMAN TOUCH.

As technology rapidly transforms the construction and built environment sector, several trends have taken centre stage: building information modelling (BIM), artificial intelligence (AI) systems, 3D-printed homes, modular construction, and insulated concrete forms (ICF), to name a few. From automating tasks to generating building plans in seconds, AI is revolutionising how we design, programme, sequence, and construct. Despite these advancements, however, one truth remains clear: surveyors are more essential than ever.

Accurate surveying is essential

While 3D-printed homes are an exciting leap forward in construction methods, they do not build themselves: the process is not fully autonomous. The set-up, alignment, and calibration of 3D printing machinery require precise site preparation, and that starts with accurate surveying. Surveyors provide the critical data about land contours, boundaries, utilities, and subsurface conditions, factors that machines cannot sense or interpret on their own. If the ground is not level, if there's underground infrastructure, or if there is a minor boundary dispute, the entire printing process can fail or lead to legal complications. In other words, before a 3D printer lays a single layer of concrete, a surveyor's expertise lays the groundwork.

What AI doesn't know

AI has made huge strides in data analysis, image recognition, and pattern detection. In theory, AI tools can scan a building and generate a digital model or flag potential structural issues. However, these systems still rely heavily on data that is captured and verified by human surveyors. AI does not know if an anomaly is a structural defect or just an architectural quirk unless it is told. It cannot climb onto a roof, lift a ceiling tile, smell, sense, feel and recognise context the way an experienced professional surveyor can. At best, AI enhances what surveyors already do, but it cannot replace the judgement, intuition, and on-the-ground problem-solving that come from years of on-site experience.

AI lacks the legal and professional authority to make binding assessments. Only a registered/Chartered Surveyor can produce a legal boundary map, provide expert advice in court, or sign off on a dilapidation's settlements. No matter how advanced the software becomes, it cannot assume liability or professional responsibility. It does not have professional indemnity insurance, something clients and regulation require.

Surveyors are key to translating technological outputs into practical action. An AI-generated model of an existing building might be visually impressive, but it takes a trained eye to validate its accuracy, interpret results, and identify what is missing. Human surveyors also bring an understanding of local regulations, environmental considerations, and stakeholder interests that no algorithm can fully comprehend.

The evolving role of the surveyor

The role of the surveyor is not being diminished, it is evolving. Technology is providing surveyors with powerful tools to enhance precision, speed, and safety. But these tools need trained professionals to wield them effectively. The future of surveying is not about replacement; it is about collaboration. AI, BIM, and 3D printing can automate certain tasks, but the wisdom, context, and responsibility that surveyors provide remain irreplaceable.

As the construction industry and built environment technical advances push forward, surveyors will continue to be the backbone of reliable construction and regulation.

THE LAST WORD

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