



January 2019

# Future of the profession

Consultation response report





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# Foreword

**For 150 years, chartered surveyors have helped drive economic growth. We've built towns and cities, managed land, fostered communities and generally ensured that the world is a more interconnected place.**

Moreover, the trust and confidence we have inspired as a profession has helped support the sustainable development of the built and natural environments.

But the world in 2019 is very different from 1868, the year we were founded. The impact of big data and artificial intelligence, climate change, urbanisation on an unprecedented scale, the loss of institutional trust – these are just a few of the challenges we now face.

In 2015 we published a ground-breaking report, *RICS Futures: Our Changing World*, which looked at major drivers of change across our sector – from the impact of technology to the rise of new economic powers.

Over the last 12 months we have conducted well over a thousand conversations through roundtables, seminars, consultation and outreach to understand how the change we documented in 2015 is impacting across the profession as well as the clients and markets we serve.

This paper is a thematic summary of the responses we have received and provides an initial assessment of our readiness for the future. It draws extensively on the views of members working across a wide breadth of specialisms and markets, and attempts to summarise how the profession is adapting to a more frenetic, uncertain and digitalised age. It also represents the first stage of a work programme that will lead to the publication of our second major RICS Futures report in 2020.

Although the challenges in front of us may occasionally seem daunting, they also represent immense opportunity for our profession. Whatever comes our way there are certain fundamentals that have always united us – our professionalism, our technical expertise and ethical judgement, and the high degree of commitment we bring to our clients and our sector. These core strengths will continue to enable us to meet public expectations as a leading profession, shaping the built and natural world around us.

We are excited about what the future holds and confident that we have what it takes to adapt and embrace what is in front of us. Our hope is that this report will be the starting point for a wide-ranging debate over the course of the next year.

**Chris Brooke FRICS**  
RICS President 2018-19

**Sean Tompkins**  
RICS CEO





# Executive summary

## Introduction

RICS Governing Council – our elected strategy-setting body – needs to understand how the world is changing so that RICS can continue to provide leadership to the profession in the years ahead. To do so will require thinking about the skillsets and business models needed in the future as well as the way in which we set and implement standards.

This report starts with what members of the profession have told us they are experiencing in their day-to-day working lives and how this experience is changing. This has to be the basis for any serious appraisal of how we need to evolve to continue to meet the profession's needs.

## Part one: Drivers of change across the profession

It is critical for our profession to be able to understand and utilise data effectively. The underlying quality of this data will need to be managed, while the data itself is something the profession will need to think seriously about owning.

Artificial intelligence (AI) and the internet of things are now a core part of our sector. This brings huge possibility but we need to think about the privacy aspects of these new technologies.

The drive for better connectivity will bring opportunity and risk for the profession as we see increasing convergence between the built environment and tech sectors. While technology offers greater efficiencies, it has its limits and our professional judgement will be vital.

Traditional business models are changing and also becoming more decentralised, as is the way real estate is owned, traded and managed. It is no longer just about bricks and mortar but the customer; the retail sector needs a greater focus on service delivery to remain attractive to consumers.

It will become increasingly important to understand the full lifecycle of an asset, not just its value at a fixed point in time. We also need to think about how we value the digital as well as the physical assets we manage.

The traditional office is going through a paradigm shift and workspaces are increasingly being designed to help drive culture and performance. Smarter utilisation of these buildings will bring significant benefit.

The profession continues to move up the value chain as technology improves our efficiency and effectiveness. Lifelong learning will become increasingly important here. We will need to become more proficient in the use of technology. Non-technical skills and emotional intelligence will also be key to our continued competitiveness.

Finally, we need to understand and manage the impact of urbanisation on the environment, which will be an increasingly urgent requirement of the profession going forward.

## Part two: Quantitative research findings

New business models and innovative technologies are driving the need for new skillsets within our profession. In this section, we showcase your views on how day-to-day roles within the built and natural environments are already being impacted, and how likely they are to evolve in future.

## Part three: How should we be responding to address the challenges and opportunities the profession is seeing?

There are significant drivers of change across our sector that we need to understand and address. While a number of these drivers will take time to comprehend, there are also immediate practical steps RICS is taking to help the profession navigate this change. We need to tackle barriers to entry and encourage a more diverse profession. The way we accredit, train and develop needs to keep pace with technology. We need to drive collaboration across the profession and continue to set and regulate the highest technical and ethical standards. We must ensure our regulatory role keeps pace with developments across the sector. Most of all, we need to help the profession anticipate and respond to change.

## Conclusion

The questions raised in this report are going to require smart, imaginative solutions from the profession. We should be confident that we are up to the task. The principles that define us as professionals – our ethical and technical judgement, the strategic insight and challenge we give to our clients, the deep understanding of the built and natural environments and how these can be used for the greater good – will remain core to our ability to add value as the world evolves.



# Introduction

As a global professional body, RICS needs to understand how the world is changing so that we can continue to provide leadership to the profession in the years ahead. This is not a new challenge. Over the last 150 years the built and natural environments have evolved significantly. What is new is the scale of this change, which is now of a different order and requires that we think strategically about how to respond.

In broad terms, what we are seeing can be described as urbanisation. If UN predictions are correct, two thirds of the world's population will be living in cities by 2050 – approximately 6.5 billion people. Urbanisation encompasses a range of related challenges from climate change to smart cities and includes what is left behind when people migrate.

Our profession has a compelling opportunity to help manage this global demographic shift in a way that is sustainable – through for example the application of technology and the careful measurement and usage of finite resources. To do so will require that we think about the skillsets and business models needed in the future, as well as the way in which we set standards.

The starting point has to be evidenced-based analysis of what is happening in the world together with a willingness to respond imaginatively to these challenges.

In 2015 we embarked on a major initiative to research and document how the built and natural environments were evolving. The outputs from our first *Futures Report: Our Changing World* helped shape the business plan we have been implementing over the last three years.

For example, we have been developing the World Built Environment Forum as an industry vehicle to collaborate with key influencers impacting our sector, and help champion new and innovative ideas to meet the challenges associated with urbanisation. Turned into action, these ideas will provide opportunities for our profession to shape and improve our cities. Our Tech Affiliate Programme is increasing awareness and adoption of technology in the real estate and built environment sectors. We are now setting standards to address the issue of digital data consistency.

This consultation response report represents the first step towards our second major Futures Report. It will help to inform our immediate Business Plan as well as the strategic Futures Review our Governing Council will be leading in 2019/20. This will develop our understanding of the five- to ten-year horizon and inform our strategy for the foreseeable future.

It takes as its starting point what our members experience in their day-to-day working lives and how this experience is changing – this has to be the basis for any serious appraisal of how RICS needs to evolve to continue to meet their needs.



# Part one: Drivers of change across the profession

The first section of our report sets out the comments and insight we have received from the profession over the course of the last 12 months, grouped under thematic headings.



## Our profession needs to be able to understand and utilise data effectively

*“The new constant is a data explosion and the need to make sense of it.”*

*“Not only does sharing data allow the industry to move faster and add customer value, but it also allows us to be more ambitious. Rather than firms reinventing the wheel to create solutions to problems that already exist, sharing data means that the industry can focus on more complex customer challenges.”*

*“Owners and investors are exploring in more detail how data analytics is going to be able to add value to operations and asset management going forward.”*

*“We are beginning to use the internet of things and sensors on buildings to create big data sets, enabling us to see how they perform relative to what exists already and what’s in the virtual world.”*

*“Understanding how data can be used in decision-making for acquisition, development, facilities management, contract management and valuation is essential.”*

*“The ability to collect extremely broad data sets and leverage them in order to make buildings more efficient, and in turn more valuable, will help drive growth [across our sector].”*

*“Models of the urban landscape now offer 3D visualisations of proposed changes to cities. This data can be used to forecast how planning proposals will impact on air quality, carbon, social interaction, infrastructure and quality of life.”*

*“A more holistic view of data and its relevance will be required – not just the ability to process huge amounts of it much of which may create limited value.”*

*“The data sharing agenda around the whole lifecycle of a building will be a huge influence on the built environment going forward.”*

## The underlying quality of this data will also need to be managed

*“The profession needs to be fully versed in obtaining data, sorting out what is useful and what is not, and then applying it to a given situation.”*

*“Our market is totally exposed to any deficiencies in data so how this [data] is given credibility internationally [in ways] that will support consistency of standards is an area that I believe that RICS must influence.”*

*“A world of AI relies on and revolves around well collected, cleansed and managed data. Our various industry sectors are at varying levels of maturity when it comes to data and the veracity, volume, variety and velocity of it. Surveyors have a key role to play in this journey.”*

*“In the valuation world the provision of high quality data is a key tool – RICS should be thinking about how it ensures the consistency of this data.”*

*“Data intelligence is multi-faceted and it is important to understand the whole data lifecycle from the data source, through data acquisition and data management, to analysis and visualisation.”*

*“Some automated data validation can be done but ultimately there will still be a need for someone who understands the details to be able to generate and enter, review and check the accuracy and veracity of the data.”*

*“Data is the new challenge and the output can only be as good as the combination of what has been entered.”*

## Data itself is something the profession will need to think seriously about owning

*“The ability for surveyors to syndicate their data [subject to confidentiality and compliance] is crucial. If we don’t consolidate the data that already exists in the marketplace, others will and we will be disenfranchised from our own marketplace.”*

*“Information is power and unless we as a profession take serious steps to protect this information (with the assistance of government), our relevance and the confidentiality of our clients will be seriously compromised.”*

*“[We need to protect] our intellectual property and not give it away to then have it sold back to us, which will ultimately diminish the value of our profession. Much of what we are seeing in the Australian valuation industry will ultimately result in a loss of competition and an exponential number of breaches of confidential client information.”*

*“Those that own the data, know what to do with it and create value from it will dominate all industries. That will be no different in the built environment. Companies will disrupt the existing disciplines with better use of data analytics, AI and machine learning.”*

*“Who owns the data is a big question for RICS and the industry at large.”*

## AI and the internet of things are now a core part of our sector, which brings huge possibility ...

*“When hundreds of mini-sensors can now be installed within hours and have embedded connectivity and batteries that last for 15 years, suddenly, the return on investment for moving to an automated, internet of things based solution comes much faster.”*

*“We can use this technology to understand the conditions that cause equipment to trigger a fault, do preventative maintenance and optimisation, and prioritise maintenance work based on criticality, improving budget estimates of maintenance costs.”*

*“Real-time [information can now be sent] to a cloud service where analytics are performed. Depending on the criticality of issues raised, a technician can be alerted to act immediately or specific maintenance scheduled.”*

*“When it comes to transportation route optimisation for project planning and scheduling, AI has the potential to assess endless combinations and alternatives based on similar projects.”*

## ... but we need to think through the privacy aspects of this new technology

*“We need to understand how our digital personas interact with a building. How do I know a piece of hardware is doing what I think it’s doing and not anything else?”*

*“In the past, ‘championing the public interest’ for RICS may have meant ensuring buildings/infrastructure doesn’t collapse, in the future, could this be ensuring a privacy-friendly journey through the public realm and into buildings?”*

## The drive for better connectivity will bring opportunity and risk

*“The implied ultra-connected world requires significant amounts of hard infrastructure. Many markets remain well behind others when it comes to ultrafast broadband,*

*5G etc. All these things are critical to creating [a] world where AI and digital/data is in place to the fullest extent possible. There are lots of opportunities for all our specialisms here, for many years to come.”*

*“Our homes and workplaces might bristle with the latest technology, but the network that powers them is decidedly 20th century.”*

*“Unless London delivers world-class digital connectivity, the city will lose fast-growing businesses to other parts of the world.”*

*“The best way of protecting a city used to be by building a wall around it. But in an era of smart property and infrastructure, it is digital attacks rather than physical [attacks] that we must guard against.”*

*“Decision-makers need a clear understanding of cybersecurity and its impact. A city that can be stopped by hackers is not smart.”*

## We are going to see increasing convergence between the built environment and tech sectors

*“The inevitability of business information management and the internet of things converging will bring technology companies more into focus for our industry.”*

*“Elements of all roles carried out by professionals in our industry will not exist in the future. Instead, they will be dealt with by black box technology solutions. It is the role of the professional to help develop these solutions.”*

*“UK productivity needs to be increased by at least 20% just to meet current infrastructure demand. This adds even more pressure to increase levels of productivity through technology.”*

*“Technology companies [are increasingly] applying machine learning to the built environment.”*

*“Most property companies will be tech companies going forward, yet at the moment, most don’t have a [Chief Technology Officer] or [Chief Data Officer]. Data analysts through to technologists are in demand and should be part of the property HR approach.”*



## While technology offers greater efficiencies it has its limits

*“There are doubtless some areas where some form of ‘automation’ or remote assessment may be possible and perhaps appropriate. However, much of what we do as a practice is centred on physical assessment of buildings. Technology may improve how we assess and provide tools/equipment to assist, but at present I cannot foresee the end for a need to physically attend and assess a building where a building defect needs to be analysed.”*

*“Technical roles and repetitive tasks that involve low levels of social interaction, creativity, mobility and dexterity are at the greatest risk of being automated. By contrast clients are looking for interactive, real-time, cost effective solutions and meaningful professional opinions.”*

*“Any areas where standard processes are applied are open to greater efficiency through digital application/ machine learning, etc. However, the converse opportunity also is evident where these tools can equip and enable the profession ... to resolve and remedy the inefficiencies that are clearly evident. The profession is moving to a knowledge-based economy as opposed to one that is process led.”*

*“Technology has led to a reduction in the time between instruction and [the time clients expect to be offered the advice requested]. This has not always had a positive impact on the quality of advice nor has it always led to a reduction in cost for the customer.”*

*“The introduction of technology brings with it new challenges and requirements that may supplant the older ways of working but will still require input and management of the output.”*

*“[There have been some] wonderful changes in technology: 3D surveying and recording; drones and inspections; real time management and reporting ... but you still need to know the fundamentals of how buildings are built, occupied and how they decay and should be maintained.”*

## Professional judgement will still have an important role to play

*“The importance of the qualitative aspects in valuation where professional judgement is involved would be hard to determine using quantitative methods.”*

*“If using an algorithm, how do you introduce a level of integrity, ethics and accuracy into it? That is what a valuation professional will do ... they will be someone who has the ability to understand the application of data to real estate.”*

## Traditional business models are changing ...

*“Our current business model is set up such that the time of a professional is considered of central value; professionals often bill on the amount of time it takes to complete a job. This is changing. Clients of the future will be inclined to pay for output rather than input, for the value delivered rather than the effort expended.”*

*“The solutions of the future will come from new collaborations and combinations of capabilities from across existing professions with new and different partners from digital, media and analytics worlds.”*

*“The potential for new business models in construction delivery ... construction management and the deployment of new methods including offsite, robotics [and] automation are all extremely present as we head into the next 5 years.”*

*“Our traditional service no longer makes the cut. We need to innovate and invest in ecosystems that help our clients address their own changing industries. For building surveying, the use of augmented reality to understand what is within voids, the use of drones to inspect façades and the use of data analytics to provide deeper insights are three areas I believe will change rapidly.”*

*“We are in the dawn of the fourth industrial revolution, digitised construction is steadily becoming the norm. Property professionals either [need to] raise the bar or risk extinction.”*

*“Business models are changing to suit the rapid development in technology, social media and systems such as BIM. [We need a] ‘one stop shop’ for the client bringing economies of scale and faster decision-making in a 24/7 world.”*

*“Changing business models are challenging long held ideals, e.g. the relevance and importance of physical stores in an online age, the role of social media in disrupting customer loyalty, etc.”*

## ... and also becoming more decentralised

*“Historically, trust was based on a centralised model. Either you trust the company (brand), or you know the regulator and trust this stamp of approval. Now, there is a decentralised trust model. There is a rise in trust in platforms like TripAdvisor and ... trust portals are being developed for professionals in our industry (rating their performance).”*

*“People increasingly favour decentralised trust platforms (which have thousands of users rating whether that company was a good company to employ, etc.) over a corporate brand or regulator. This opens different corridors for RICS to pursue.”*

*“Looking forward, it’s likely that we’ll see highly centralised workplace models based on long-term planning replaced by decentralised models of flexible and adaptable innovation hubs.”*

*“By using blockchain technology, property valuations are carried out much faster by utilising a decentralised network of banks and surveyors through which the latest valuations are listed, verified and shared.”*

*“The ability to use blockchain in the title/ transaction process will change the nature of the real estate market.”*

*“There is likely to be a ranking system for valuers just like there is for Uber drivers.”*

## The way in which real estate is owned, traded and managed is also changing

*“We are being beaten at our own game by [companies] who are now specialising in the management of communities; they’re changing the rules of occupancy through managing the facility for end users, big or small. They create a global community into which you can drop in/drop out. Property managers need to learn about the management of communities and the soft skills that came with that.”*

*“A Spotify approach to real estate? No-one owns entire properties, they instead invest in bits of them. For example, BitProperty democratises investment and helps create a decentralised society by making it available to everyone (not just those with significant spare capital).”*

*“WeWork are scaling up quickly. They’ve attained 220,000 sq ft in one new space in Brooklyn. Building out 2 million sq ft a month globally. The scalability is huge and is redefining a new category in real estate. That scale threatens the industry (WeWork now employs hundreds of architects internally). This is a bigger trend/ threat to surveyors than just what tech means for the use of property – changing the very definition of the typology of property.”*

*“Commercial real estate is being securitised in the US – banks are increasingly using portfolio appraisal techniques (looking at borrower demographic as well as the demographic area to make lending decisions).*

*Property then gets securitised and becomes a tradable commodity and appraisals become less and less relevant (so long as banks operate in a prudent way). It is good in that real estate data can become more transparent, and then more readily analysed, but is a risk for valuation professionals.”*

## It is no longer about bricks and mortar but the customer

*“Real estate is moving from being B2B to B2C. As with B2C markets, landlords and investors will need to be thinking about the ‘lifetime value of [a] customer’ – how to build a brand that can support a customer from 25-65.”*

*“The real estate customer is now every single person who enters into a property.”*

*“Traditional real estate companies know almost nothing about their customers – in the future the best will know a very great deal, and use it to shape personalised [spaces] for each and every one.”*

*“The real estate industry is changing from a property-centric to a customer-centric industry.”*

*“We tend to start from ‘the profession’ rather than what the end customer needs. We should be asking: what does the customer want and how does the profession need to change to deliver that?”*

## The retail sector needs to focus on service delivery to remain attractive to consumers

*“Going forward there will need to be greater collaboration between owners and occupiers of retail centres to ensure they remain attractive to consumers.”*

*“The retail landscape is evolving. Malls are being repurposed with more common areas and activities and landlords need to consider other forms of anchor properties to draw in customers.”*

*“Shopping malls and retailers are increasingly using facial recognition technology to track customers and collect data about their demographics.”*

*“The surveyor will need to broaden his or her skill set so as to be able to critically evaluate the operationality, integration and overall experience generating capabilities of key retail operators within a centre or retail precinct.”*



## It will become increasingly important to understand the full lifecycle of an asset not just its value at a fixed point in time

*“There is an increased focus upon strategic asset management, with delivery being based upon the full lifecycle of an asset as against traditional divisions of labour between consulting, leasing and management.”*

*“There is now more demand on the professional to understand and appreciate the importance of the ‘full cycle’ – it is no longer about just ‘measuring’ a building or a bill of quantities, asset management and its new value drivers need to be understood.”*

*“We’re moving from a transactional model to a service model. We’re increasingly looking at the lifecycle of an asset – when should I buy, when should I dispose of my property, etc.”*

*“A simple commentary of value at a point in time will not suffice in future – we need to be able to call the cycle in the markets and analysing data trends will be key here.”*

*“Traditionally, we have used a very simple approach to the way we look at buildings – we create them and then hand them over. Now, there is a greater focus on looking at the inside of a building. Using technology we can now focus on the lifecycle of a physical asset.”*

## We also need to think about how we value the digital as well as the physical assets we are being asked to measure

*“The more we see industries being reduced to data the more the value of the data comes into play. In future, professionals will have to start contracting for the data asset alongside the physical one.”*

*“Valuing the data asset will become hugely important in the future. At the moment, valuations are largely done on the physical asset, but if the sector can start to get to grips with data governance and commercial exploitation, this will have massive implications for our sector.”*

*“In the property industry, we understand better than anyone the importance of laying down strong foundations to guarantee the longevity of our assets. We cannot limit that to steel and concrete, but must understand how the digital foundations that we lay will be paramount to the future success of our properties.”*

## The traditional office is going through a paradigm shift

*“The demand for space will remain the same, but how we utilise it is set to change significantly.”*

*“Buildings are becoming ‘thinner’. The days they were built for fixed IT infrastructures have gone. The cloud came along and people moved to portable devices. Fixed telephone systems are dying very quickly. Printing is vanishing as well as storage for paper in offices. This is one of the reasons coworking has exploded; classic traditional office buildings are no longer fit for purpose.”*

*“Every building we create is a bespoke set of stuff, a prototype. This needs to change.”*

## Workspaces are increasingly being designed to help drive culture and performance

*“Workplace design is now being used as a strategic tool to drive growth, productivity and employee retention.”*

*“The office of tomorrow will be built around flexible models of working and management as well as intelligent building structures.”*

*“There is increasing pressure on the supply chain to measurably work up productivity (even a fraction of a percent could save millions) and get better facts and data into systems so that we’re designing buildings that work better.”*

*“We should be looking at the role of property as a contributor to organisational performance.”*

*“Multi-generational workplaces will become the norm, and companies will need to rethink the way different generations work together.”*

*“Landlords need to offer more than a ‘workspace’, they need to offer high quality ‘workplace’ solutions – ‘sell me a productive workforce, not an office’.”*

*“The future will not just be about ‘use’, it will require an understanding of purpose, design and integration within both social and economic ecosystems.”*

## Smarter utilisation of buildings based on this approach will bring significant benefit

*“Buildings are no longer just bricks and mortar. Increasingly they are becoming sentient, armed with the tools to listen, monitor and report back to us, letting us know how both they and their occupants are feeling.”*

*“By curating the user experience we are able to provide exactly the spaces and services that people need, wherever and whenever they need them.”*

*“It is increasingly critical for organisations to focus on human-centric innovation and improving the human experience.”*

*“The new journey? Virtualisation/digitisation of existing information, collection of data through sensors and the internet of things, collation of this data which can then be analysed to provide performance metrics that can be fed back into the design, planning and building process.”*

## The profession is likely to move up the value chain ...

*“Transactional roles will be displaced and value will increasingly be found in the advisory aspects of our work. Key sectors of the next 5 years will be smart cities, infrastructure, housing, health, wellbeing and sustainability.”*

*“Professionals are placing themselves in new places in the supply chain.”*

*“The advisory aspects of roles will become more important as ‘the measuring bit’ is increasingly automated.”*

*“Client expectations have never been higher. It is not just in speed and accuracy it’s also the ability of surveyors to provide truly global perspectives and insightful solutions.”*

*“The way in which information is presented largely removes the risk of data entry error permitting the surveyor to spend more time focusing on those areas that determine value.”*

*“The skills required within the built environment value chain need to leapfrog from multidisciplinary (viewing a discipline from the perspective of another) to become transdisciplinary (knowledge beyond the disciplines, where disciplines merge to create new methods.”*

*“The human role within surveying will be more focused on the creative and advisory elements and less focused on pure process.”*

*“The advancement of technology will make data collection and information analysis much easier. Instead of carrying out the tedious and time-consuming tasks, surveyors will shift their roles by offering critical analysis and valuable professional advice to their clients in future.”*

## ... as technology improves our efficiency and effectiveness

*“Predictive applications can now forecast project risks, constructability, and the structural stability of various technical solutions, providing insight during the decision-making phase and potentially saving millions of dollars down the road. These applications can enable testing of various materials, limiting the downtime of certain structures during inspection.”*

*“New ever more sophisticated technologies will continue to disrupt typically knowledge-based roles as data analytics can be quicker, cheaper and more accessible.”*

*“There will be a greater emphasis on digital technology helping to improve the safety of buildings during design, construction and occupation. The use of digital records will become mandatory for build[ing] owners and those responsible for the management of infrastructure.”*

*“Whereas traditional design tools passively await our instruction, algorithmic design can now anticipate our needs based on vast amounts of data and computing power in order to help us discover the best design possible for the problem that we want to solve. Examples include directing our decisions around the optimum placing of partition walls or the design of staircases based on the surrounding environment.”*

*“From land review and impact studies to planning consent, technology is providing us with a better understanding of the built environment both on a macro and a specific building level.”*



## Lifelong learning is going to become increasingly important for our profession

*“The range of knowledge professionals must have is broader than ever. The days of someone labelling themselves as an expert in one specific niche surveying role in the social housing sector are gone.”*

*“Recent research suggests that less than half of those in the UK and Germany think they have all the skills they will need to last them the rest of their career. The global average is just 54%.”*

*“There will need to be a boosting of skills that are not currently viewed as primary; a refocus on adult education and specific tech training around bespoke solutions that do not yet exist.”*

*“Adaptability and resilience will be key. There won’t be such a thing as lifelong careers in future. People will continue learning throughout their lifetimes.”*

## We will need to become more proficient in new technology

*“There is a need for well-tuned professionals, people who speak the language of both property and tech[nology]. We currently act as interpreters between both worlds, but rarely can anyone speak both languages.”*

*“UK research shows that highly skilled and highly paid digital jobs grew at twice the rate of non-digital jobs between 2011 and 2015. How we design, manage and validate buildings will all require these digital skills.”*

*“When I started in the industry there were 3 elements you needed to know about: economics, legal structures and building technology. To these three we must now add: digitalisation, programming and coding as a new skill (not for everyone or in depth) as the fourth pillar of education for the sector.”*

*“It is no longer enough to acknowledge that technology is changing the way real estate professionals work. We need to learn how to use PropTech to provide better business intelligence to our stakeholders.”*

*“Modern buildings are developed using technology that inspectors and operators need to understand and know how to use. BIM is an obvious example of this. I see technology more [as] an enabler to provide a better service rather than a threat, but those that ignore it will be left behind.”*

*“BIM will make major changes in to the traditional roles of the quantity surveyor. In the Middle East its impact is limited due to the upfront costs but this will change in the coming years.”*

## However, non-technical skills and emotional intelligence will remain key

*“Innovation and creativity are the key components of value creation.”*

*“Because machines are better at things like crunching numbers, remembering things and finding patterns ...[the] focus for skills development might be creativity, abstract thinking and managing uncertainty – all things where humans beat machines. Put them together and we may have a ‘sweet spot’.”*

*“In the fast-paced modern world social skills and emotional intelligence are increasingly important, yet we don’t currently teach these.”*

*“The human element is still where the value is.”*

*“Creativity and managing ambiguity and uncertainty. I think machines are a long way off mastering these areas to the same degree of effectiveness as human beings. Machines won’t have all the answers.”*

*“As surveyors we are selling a service based on our knowledge, skill and experience, with our clients at the heart of what we do and why we do it. By embracing technology we will be able [to] achieve our outcomes more efficiently and sustainably, but the real improvement in our client’s experience will be achieved by how we interact with them, using our humanity to interpret the data, problem solve, be creative and empathetic to their needs.”*

## Our profession needs to understand and manage the impact of urbanisation on the environment

*“Making cities bigger and bigger just isn’t sustainable.”*

*“We will run out of natural resources to build way before demand has finished with the current rate of urban development.”*

*“Climate change is happening and we are not really doing anything of actual value to stop it...This will see huge opportunities for consultants who are offering real solutions to carbon neutral buildings and those that can be fully integrated into the circular economy.”*

*“How do we change practices so that what is developed is sustainable? Who are the disruptors and how do we champion new methods that may make minerals and mining obsolete before they run out?”*

*“Mass urbanisation will present less of a physical infrastructure problem and more of a human one. Physical assets will [need to] be used to solve human problems.”*

*“Economic, political and population pressures are increasing the demand on the sector driving the need to innovate and do more with less.”*

*“We need to act in a more significant capacity than just starting to produce more energy efficient buildings. Our professionals should be urgently and aggressively driving a quantum shift in the environmental impact of the built environment.”*

*“Statistics show us to be heading for critical global temperature rises in a short space of time. Does our response need to be more proactive and resolute?”*

*“We need to make cities and human developments sustainable – supporting positive economic, social and environmental links between urban and rural areas.”*



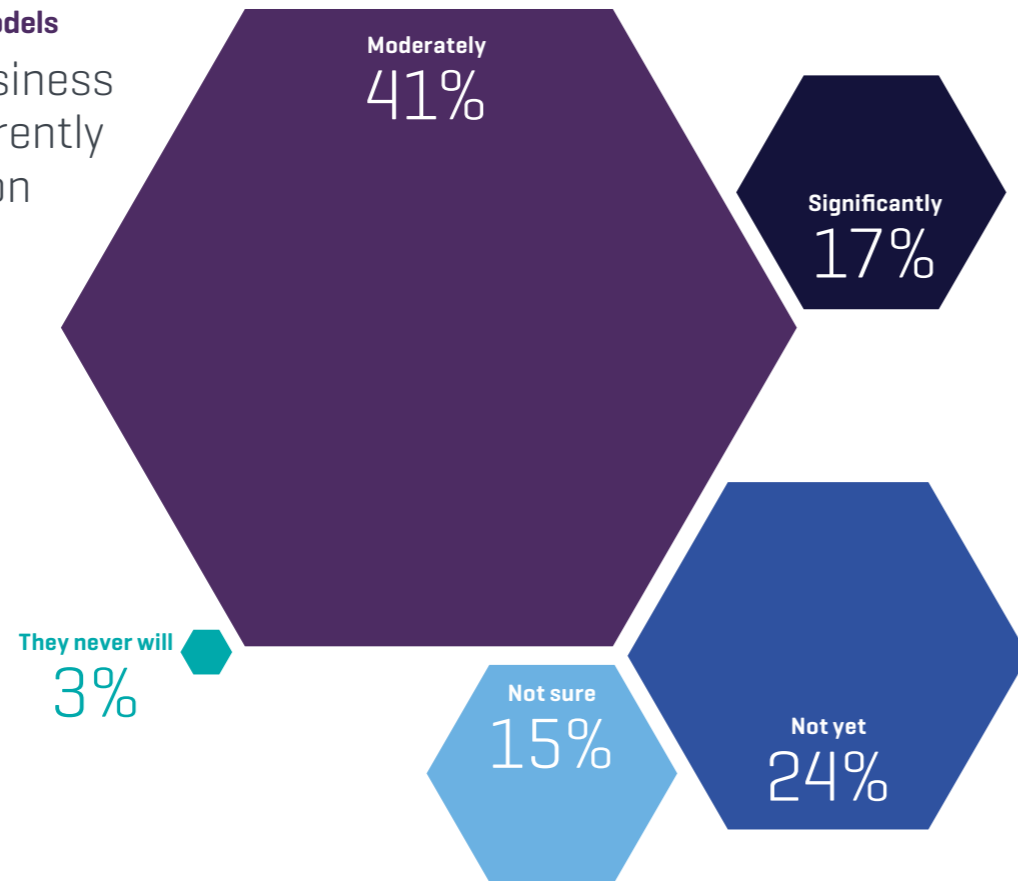
# Part two: Quantitative research findings

We showcase your views on how day-to-day roles within the built and natural environments are already being impacted, and how likely they are to evolve in future.



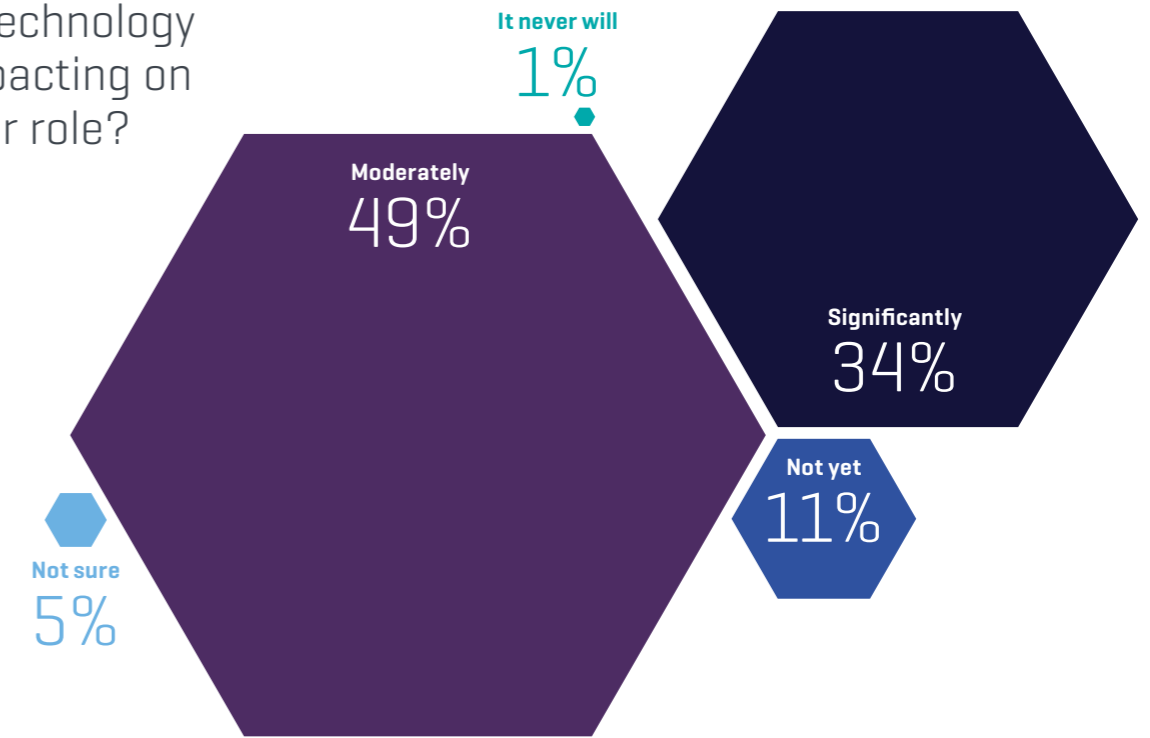
**New business models**

Are new business models currently impacting on your role?



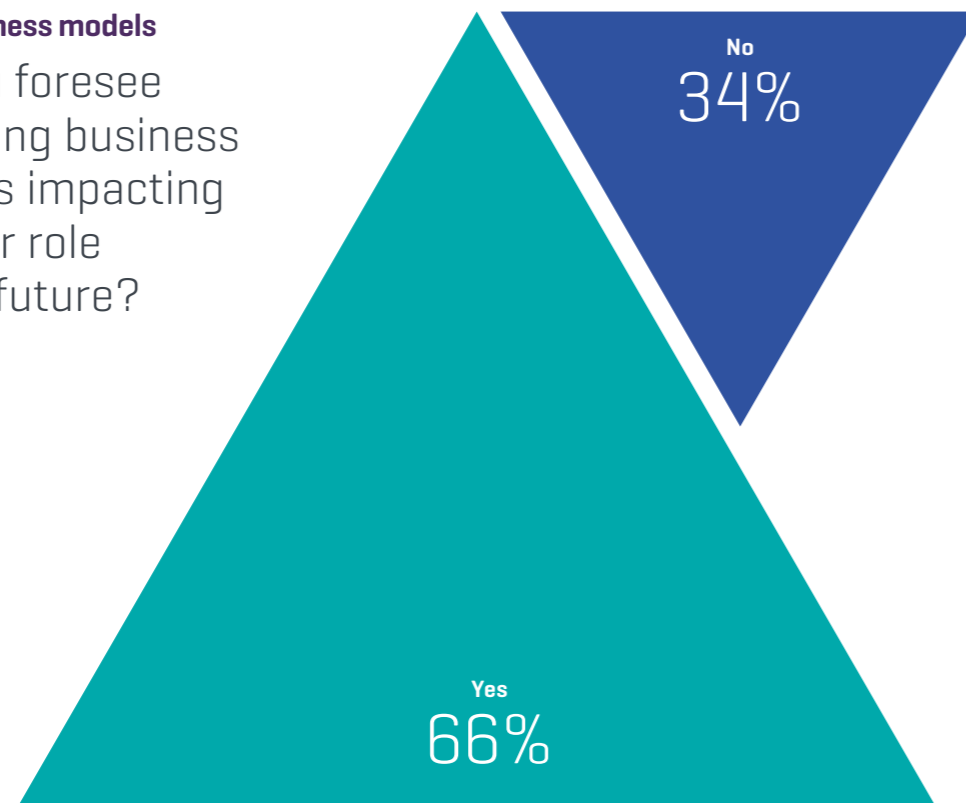
**The changing role of an RICS qualified professional**

Is technology impacting on your role?



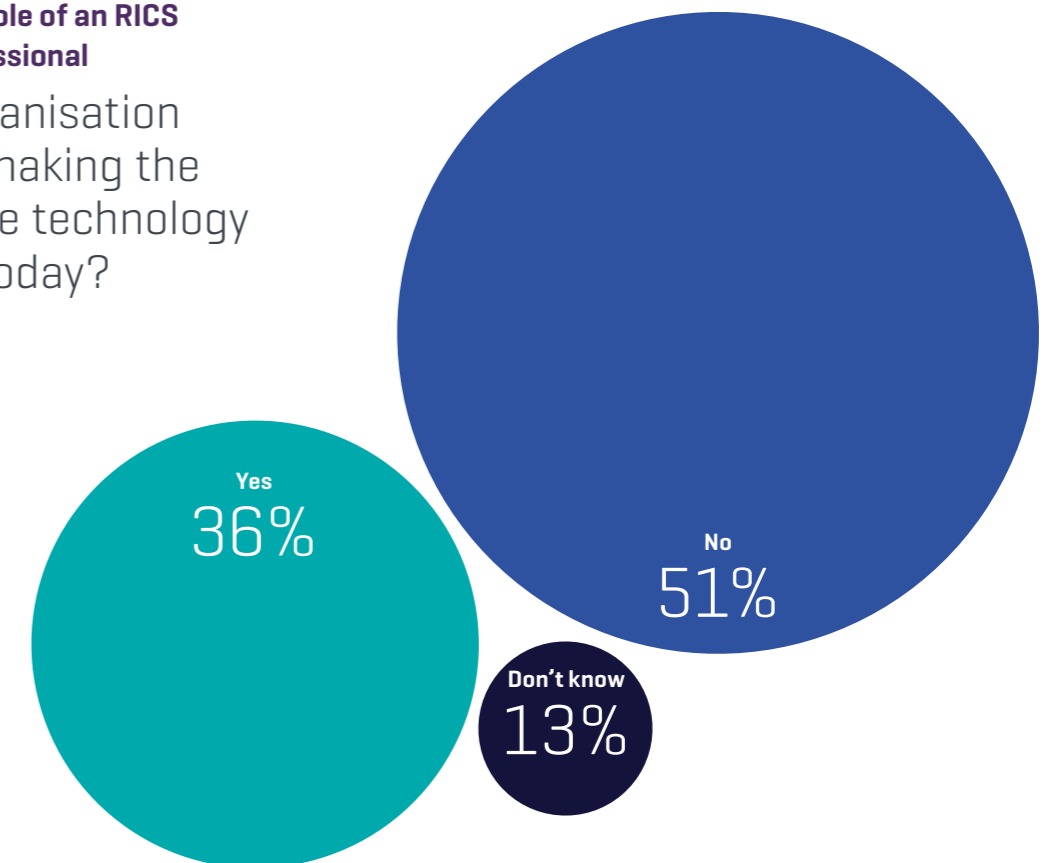
**New business models**

Do you foresee changing business models impacting on your role in the future?



**The changing role of an RICS qualified professional**

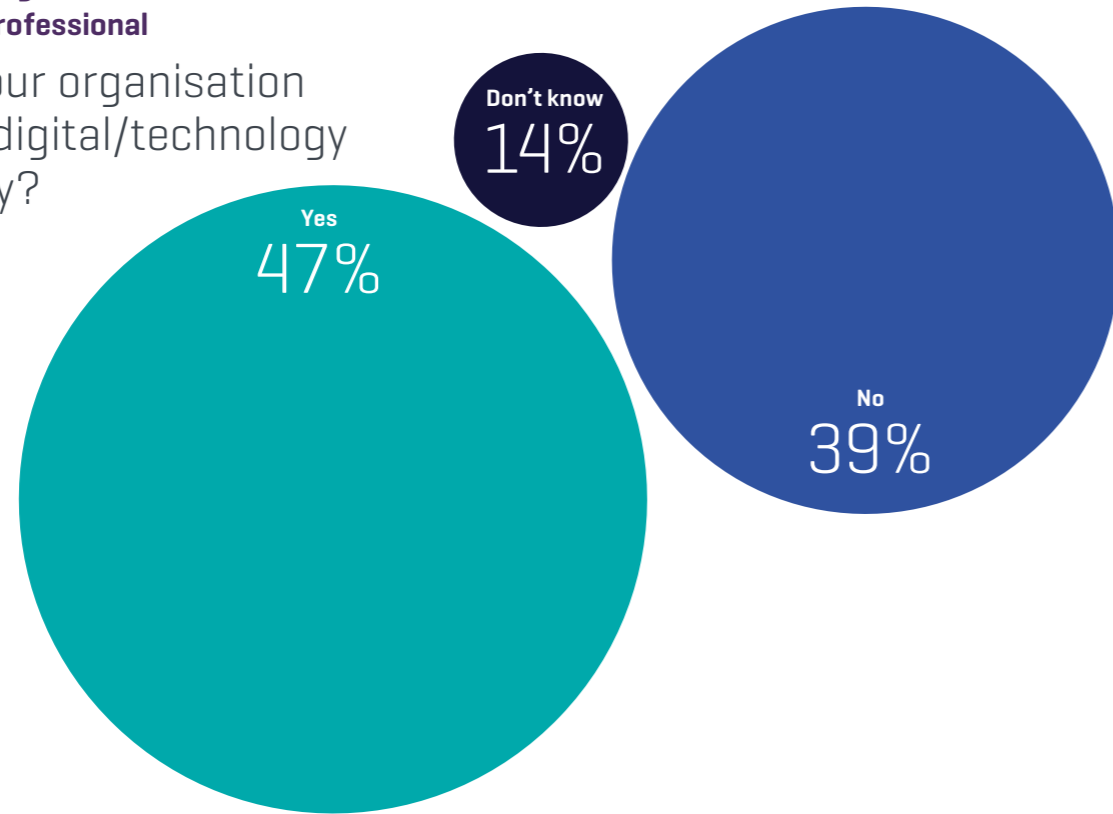
Is your organisation currently making the most of the technology available today?





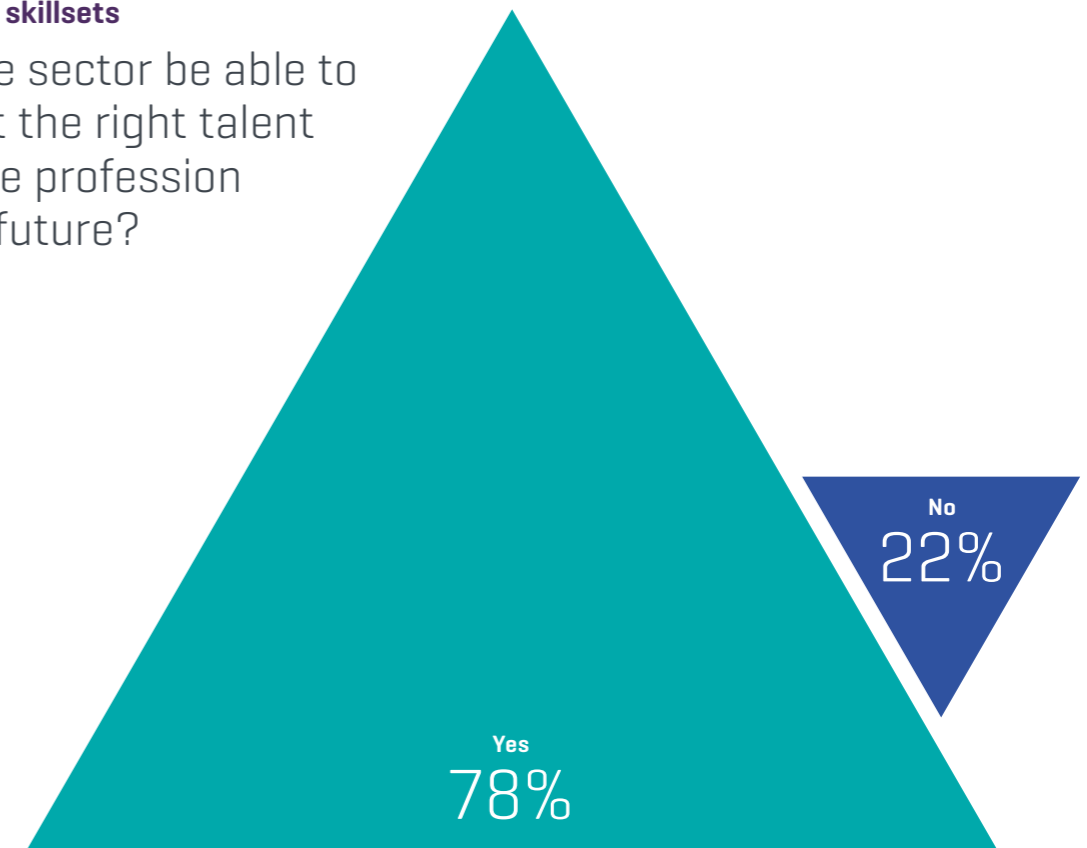
**The changing role of an RICS qualified professional**

Does your organisation have a digital/technology strategy?



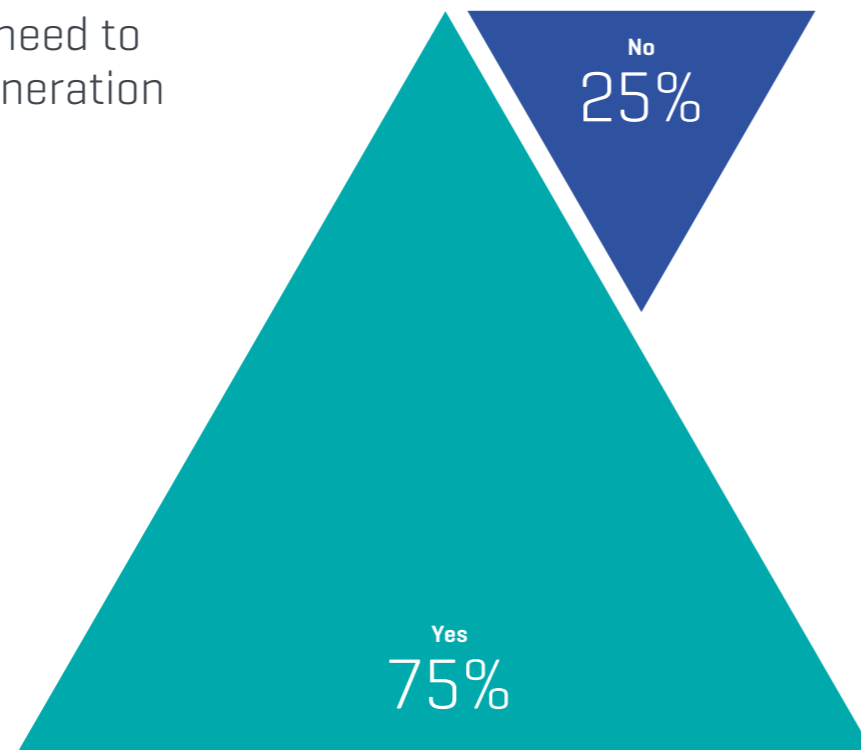
**Changing skillsets**

Will the sector be able to attract the right talent into the profession in the future?



**Changing skillsets**

Do you think we need to train the next generation of professionals differently?





# Part three: How should we be responding to address the challenges and opportunities the profession is seeing?

**In order to support the profession in remaining relevant and equipped for opportunities, we need think through the big, strategic implications of the drivers of change we are seeing – this will take time as well as informed debate across the profession.**

**What is also clear from the feedback we have received is that there are a number of practical actions we can be taking now to help our members navigate change. A number of these issues, notably ethics, diversity and cross-sector collaboration, are already in hand, having been highlighted in our 2015 report. We see a need to go further than previous, somewhat generic prescriptions for any profession, and seek specific actions both RICS and the profession can take as the leading global professional body.**



## Tackle barriers to entry and encourage a more diverse profession

*“Increase diversity within the profession by opting to choose from a bigger talent pool and developing a strategy to change the image of non-traditional education routes.”*

*“We’re employing from the same sectors, the same university backgrounds, the same pool of people. We need to widen access and break the silos.”*

*“RICS needs to seek the brightest minds from a range of educational establishments including the top universities and also provide opportunities for those who may not be able to benefit from traditional forms of further education.”*

*“Apprenticeship schemes lend themselves to surveying – get students at A-Level straight into the profession. We should look at how we promote these routes and change preconceptions. The more we can make it more open the better.”*

*“It is important for RICS to be at the forefront of effective training for non-grads.”*

*“Anything we can do to widen the talent pool will be positive.”*

## Review the way we accredit

*“We need more people in the industry that have a good understanding of what is going on in engineering and science (they don’t necessarily need to be experts but they will need some understanding). Could we seek to accredit more courses here?”*

*“Any professional pathway that is data dependent will be useful to our future generations.”*

*“Increase the proportion of women becoming surveyors; the physical sciences and humanities have traditionally attracted a better gender balance.”*

*“Accredited courses need to teach on a more flexible curriculum which reflects future trends including AI, blockchain, big data and the automation of many surveying tasks.”*

*“As flexible curricula are developed, a proactive effort should be made to accredit qualifying university programmes globally.”*

*“The more collaboration we can foster with universities the better.”*

## Think about how we develop our qualifications

*“Update RICS competencies with speed, in line with market demand.”*

*“Introduce more crossover between the pathways so there is a better understanding of project lifecycles.”*

*“Introduce more general, multi-skilled broad-based foundations (change management, leadership, etc. as core competencies) and then move to technical competencies.”*

*“Ethics, data and AI should be built into everything we do.”*

*“Infrastructure is a growth area. Environment is incredibly important. How do some of our pathways come together? Do they need to be as diverse as they are now?”*

*“Technical core competencies, without stating the obvious, need to be relevant to the latest technologies and these are changing at an unprecedented rate.”*

*“What do universities need to teach a course? What competencies are needed in the market? We need to bring these two questions together to provide a holistic solution.”*

## And our CPD programmes

*“We need to revisit the CPD programmes to ensure that content is in line with what is happening, I would suggest that we even give thought to some modules being mandatory for members depending on their specific area of practice and registration.”*

*“It is imperative that all courses in the built environment should include education around the principles of financing the sector.”*

*“Adaptability and resilience will be key. There won’t be such a thing as lifelong careers in future. People will continue learning throughout their lifetimes.”*

*“We need to cross train our members with those of other professions so that we have an appreciation of the need for skill integration amongst the professions.”*

*“RICS should continue to provide learning opportunities not just for the young or those mid-career but those in the later stages too. That is critical to stay[ing] relevant.”*

## Ensure technology is integral to the way we train and develop

*“We have to be brave. Where we are able we need to open up elements of our portfolios to use as test beds for new technologies. There are lots of incubator/accelerator schemes in FinTech for example. We need to encourage those thought processes within the surveying profession.”*

*“RICS should take a more active role in mentoring and acclimatising professionals within the tech sector.”*

*“The built environment professional will need to realise the potential from Industry 4.0 and strive for holistic solutions not just project solutions.”*

## Drive collaboration across the professions

*“A new attitude towards collaboration is something we have to teach.”*

*“Encourage collaboration in the sector through inter-disciplinary events and conferences.”*

*“RICS acknowledges the technology agenda. How could it partner and who would it partner with in the tech space to produce joint-programmes?”*

*“If [the] future is all about multi-disciplinary thinking, how can professional bodies work together? Engineering, architecture, real estate all have common interests. Together they may form a strong voice on how the [built environment] as a whole could go in future.”*

*“The industry is starting to collaborate with all sorts of people (digital modelling, neuroscientists who understand the cognitive links between work and productivity) and relating that back to things you can measure around a building – internet, daylight, cognitive load, air quality, etc.”*

*“RICS should remain collaborative in educating and supporting professionals in the use of up-to-the-minute tools to provide cutting-edge professional services.”*

## Continue to drive the highest technical and ethical standards

*“As technology reshapes the market, the adoption of standards becomes more important; this includes both technical and behavioural standards.”*

*“The ownership of data and data standards is challenging. We have our own separate market data but there is increased dominance in this space by information-providers like CoStar. Having a large commercial organisation that is a platform for business is not a great position for the industry. Should RICS own that data? Or at least regulate it?”*

*“Ethics and professionalism becomes increasingly important as automation increases.”*

*“Along with the ethical best industry guidance a long-term assumption should be to provide practical templates and working examples. Integration, collaboration and standards will be the cornerstone of the next 150 years.”*

*“Our role is completely about trust and although many commentators suggest that our social institutions are obsolete, I’d suggest we still need guardians of trust and integrity.”*

*“I believe the professional bodies will have a greater role in the future (as trust diminishes); as the use of technology increases, ethics and conduct need to keep pace.”*

## Ensure our regulatory role keeps pace with change across the sector

*“Professional services delivered by technology need to have standards and be regulated ... for the public interest to be met.”*

*“How do you regulate if software (not humans) are doing the work? You can regulate the software but is that the role of RICS or technology companies?”*

*“Do machines need to be professional? If so, how? How do you impute ethical standards into code?”*

*“People will do the bit that machines can’t do well – which is act ethically – so our job will be to enforce ethical standards.”*

*“Regulation for machines? We should be creating regulation, not responding to existing circumstances. For example, it may not be too long before banks and pension funds, etc. will be using their own systems to value property assets without human intervention. It is likely that they and not private practice firms will own and control the actual software – the systems and algorithms. RICS should have a role in setting standards for these systems, in just the same way as we now regulate valuers. Time may be shorter than we think. There are many other examples where in future it will be machines rather than people that require regulation.”*

## Help the profession anticipate change

*“Know the industry well enough to be able to identify trends and make members aware of these ideas.”*

*“Promote the need to be agile and flexible and listen to what is happening in the real estate industry and outside it.”*

*“Assess the development of future technology and its impact on surveyors and their clients. Work with employers and stakeholders to define the competencies of surveyors and set relevant professional standards, and collaborate with the universities to offer necessary training programmes.”*

*“Work at the core political and educational levels to both learn from and influence the educational curriculum so that future employees understand the possibilities of surveying.”*



# Conclusion and next steps

What is clear from the many conversations with RICS professionals over the last year is that we are in the midst of significant change across our sector. Our challenge as a global organisation is to help the profession and its clients navigate this change, managing the opportunities and risks that it brings.

As a profession we should be confident that we are up to the task. Change has been something we have been able to turn to our commercial advantage over the last 150 years. The principles that define us as professionals – our ethical and technical judgement, the strategic insight we provide to our clients, the deep understanding of the built and natural environments and how these can be shaped towards the greater good – will remain core to our ability to add value as the world evolves.

At the December meeting of our Governing Council we presented a draft copy of this report to our Council Members. Their feedback was clear: RICS needs to think in brave and imaginative terms if we are going to continue to provide leadership in the years ahead.

To put this in context, if one of the biggest challenges facing the profession is how we assure data, we need to think about the kind of business models that would enable us to do so. We are already taking steps in that direction, for example, the way in which we now set standards around data consistency.

If the raw materials that will be required to meet the exponential increase in urbanisation over the next 10 years simply do not exist in current form, then we should be collaborating on smart, environmentally sustainable solutions that address this challenge. The work we have been pioneering through our World Built Environment Forum takes us in that direction.

If AI and the internet of things are raising fundamental questions about our right to privacy in public spaces, we should be thinking about how we evolve our ethical standards to provide principles to which the profession can adhere.

These and other big questions are going to require smart, imaginative solutions and RICS needs to curate a wide-ranging conversation that enables us to identify and then deliver a credible (and evidenced-based) response.

In May our Council will embark on a 12 month strategic 'Futures' review, the aim of which will be to ensure that we can continue to provide leadership and support to the profession as well as meet public expectations and needs. This report and the dialogue and reaction we hope it will provoke with industry and market leaders will help set the parameters for that Review. Only by understanding how the world is changing can we hope to respond effectively.

Please do take the opportunity to engage with us on these important issues.

You can find out more at [rics.org/futureprofession](https://www.rics.org/futureprofession)





## Confidence through professional standards

RICS promotes and enforces the highest professional qualifications and standards in the valuation, development and management of land, real estate, construction and infrastructure. Our name promises the consistent delivery of standards – bringing confidence to markets and effecting positive change in the built and natural environments.

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