THE FUTURE OF THE VALUATION PROFESSION

Preliminary Report – Literature Review

prepared for

The Australian Property Institute

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EXECUTIVE SUMMARY

The valuation profession faces significant challenges as more and more valuation processes become automated, and the role of the valuer becomes more one of data handling and information processing than an economic analysis. With this, the role of the valuer must change in order to respond to the industry's needs. In Australia, professionally qualified valuers are members of the Australian Property Institute (API) who have completed tertiary educational course (typically an undergraduate or post graduate accredited degree) and a professional training period. This membership is ageing, that is the median age of members is early to mid 50s. With the ageing membership, it is vital to attract new talented individuals into the profession. The aim of this research is to explore the future of the property profession and the role of the valuer in particular, and how the profession could maintain and increase relevance and currency, and set an agenda to support employers in attracting and retaining a more diverse talent pool to run the businesses of the future. This paper presents the findings of the first stage of the research project that investigates extant literature on the issues and challenges faced by the current valuation profession.

1.0 INTRODUCTION

Real estate markets have a leading role to play in a country's economy, society and the environment. The valuation industry plays a vital role in establishing market values for properties and valuers are major part of restoring normalcy and trust to real estate markets (Coester, 2016a). Like most knowledge based professional services and industries, the valuation profession is experiencing a more competitive environment. As a result of a combined effect of market conditions, state and federal regulations, investor overlays, and market perception issues, the industry has experienced unprecedented attrition in the recent years. Facing an identity crisis, the valuation industry is trying to figure out how to effectively serve the property market while navigating the increasingly complex market environments and technology advancements (Coester, 2015b). To understand how the valuation industry arrived at this point, it is necessary to establish where the profession is going, where it is now, and future strategic planning required for the profession at both the profession and corporate level (Elliot and Warren, 2005).

The valuation profession is facing significant challenges as more valuation processes become automated, and the role of the valuer evolves to become more of data handling and information processing than of economic analysis (Elliott and Warren, 2005). With this reality, it appears the role of the valuer inevitably must change in order to respond to changing technologies and evolving industry needs. In Australia there is, moreover, an ageing membership with the main professional body, the Australian Property Institute (API). As its members retire and subscriptions are lost will lose its ability to lobby, and to promote its members and their services and so it is vital to attract new talented individuals into the profession. It is not surprising that valuers are recently preoccupied with the future of the profession considering the rapidly changing business environments with the focus on cost minimisation (Elliot and Warren, 2005). Clients will not pay for services that do not add value to their function and as a result valuers are being forced to re-evaluate their business models in order to provide more cost effective services that meet client requirements.

Instructions were received on the 27th July 2016 from the API to investigate and explore the future of the Australian property profession and the role of the valuer in particular. The aim of this research is to determine how the profession could maintain and increase relevance and currency, and set an agenda to support employers in attracting and retaining a more diverse talent pool to run the businesses of the future. In order to achieve these, it is first necessary to understand issues facing the profession and various drivers of change. Once the issues and causes are identified, it is possible to more rapidly predict the future and then plan for the success of the profession. Therefore as part of the study, this interim report, incorporating a review of the literature;

1. explores and maps the changing role of the valuer,
2. explores the issues and challenges faced by the profession,
3. identifies insights and suggestions; and
4. sets out some suggestions on a way forward for the profession.

2.0 ISSUES AND CHALLENGES FACED BY THE VALUATION PROFESSION

It is said we are undergoing a period of immense change in terms of technology and emergence of artificial intelligence (AI) and that this is having a great impact on professionals (RICS, 2015). In the past, the availability of data was a critical aspect of valuation and the valuers' main strength was the data they held, or the contacts they could use, to gather publicly unavailable information required in valuations (Motta and Endsley, 2003). However the globalisation of business, as well as the rapid growth in information and communication technology (ICT), mean that more and more information is available from different sources to more and more people. As a result, the business environment has become more competitive for most knowledge based professional services (Elliot and Warren, 2005). For example, in the UK the legal profession is being undermined with large numbers of people seeking and using internet based solutions rather than appointing legal advisers to resolve disputes (Susskind and Susskind, 2015). Similarly, digital technologies and artificial intelligence (AI) pose significant threats to the existing valuation practice. It is no longer the availability of data and market knowledge that differentiate valuers, it is in fact what they do with the data that differentiates them from their counterparts. Therefore, the role of the valuer is increasingly moving towards being an information analyst from being an information gatherer.

In order to understand how the valuation profession should be changed to not only survive, but thrive, in the new century, there is a clear need to understand the main issues and challenges faced by the profession. Then the next step should be to establish an analytical framework upon which these issues can be evaluated in order to plan for its success in the future. This section of the paper focuses on identifying some key challenges likely to affect the profession in the short to medium term.

2.1 The changing role of the valuer

The fundamental nature of property markets has changed over the last few decades and this has significant implications on the valuation profession. Client demand for property valuations have moved from providing single valuation opinions and increasingly moving towards providing broad market analysis, accurate value predictions, and risk pricing which require valuers to broaden their knowledge and expertise (Motta and Endsley, 2003). Furthermore, the growth of property trusts, and similar investment opportunities in the property sector, together with changes in the size and complexity of development projects around the globe, have meant that a valuer needs to have a totally different skill-set in order to undertake valuations on such properties and portfolios (Elliot and Warren, 2005). Changes in the financial market with the emergence of commercial mortgage backed securities (CMBSs), and other securitisation instruments have also put a great pressure on valuers to review their valuation models (Motta and Endsley, 2003). A consequence of any secondary market is that it leads to a standardisation of data available in electronic format with a corresponding increase in the use of automated valuation models (AVMs) (Grover, 2016). With the increased availability of freely available data, the mortgage industry is moving to the 'science of valuation' and the valuation profession 'is caught in the middle' (Schneider, 2016). Furthermore, as property markets are increasingly internationalising with cross-broader investment and financial activities, valuers need to be familiarised with the internationally agreed valuation standards and guidance (Gilbertson and Preston, 2005).

All practicing valuers should be conscious of the changing business environment and the need to strengthen their skills and must be forward-thinking to survive in this new era of globalisation. However, it is suggested that some Australasian valuers remain parochial and resistant to change in the face of the challenges of internationalisation and doing business in the global economy (Bond, 2003). Particularly, solo practitioners and small valuation firms are at the risk of not being able to adapt to the changes in the business environment. Concerns have been expressed that the pace of change threatens the livelihood of many valuers who are unable to meet the challenges, and as a result, the larger firms will get larger while many smaller firms will be forced out of business (Bond, 2003).

2.2 Competition

One of the main challenges to the valuation profession today has been the growth of competition between firms on price rather than quality. There is no room for inefficiency and clients will not pay for services that do not add value to their function (Elliot and Warren, 2005). Furthermore, internationalisation and standardisation of property and financial services will continue to allow other organisations such as financial institutions, banks, management consultants and accountants to make major inroads into the valuation profession (Gibson, 1987). Due to their economies of scale and the expertise in the financial market, these organisations are in a position to provide more complete, cost effective services that meet clients' objectives in more aggressive manner. Particularly, for residential mortgage valuations some lenders are already looking at the possibility of using non-inspection valuation products such as broker price opinions, electronic valuations and non-appraisal desktop valuations for lending purposes (Coester, 2015b). In Australia, there is a move for the banks to change the contracts with valuers so that the banks get the intellectual property associated with the valuation which would eventually allow banks to develop their own databases in order to generate their own valuations for mortgage purposes (Blass, 2016). To survive in this competition, valuers need to move away from specialising on particular skill set and develop speciality in different areas in valuation. Even though considered to be minor, other barriers to entry to the valuation profession can be summarised as government policy through regulation and licensing of professionals, the costs of professional indemnity insurance and customer loyalty (Elliot and Warren, 2005). Therefore, it is observed that whilst the fundamental skills of valuers are likely to remain relevant, the nature of the future work that they are likely to undertake will be significantly different (Hefferan and Ross, 2010; Hefferan, 2011).

2.3 Changing technology and technical knowledge and skills

Due to the enhancement of technology and increasingly freely available market evidence, many of the steps in the valuation process – data collection, data analysis, and data formatting – are performed by computerised models and the valuation profession is seeing a progressive shift towards automated processes (Grover, 2016). Particularly, automated valuations have become a significant challenge as such computer driven reports without the objective inputs of the valuer are seen as acceptable 'valuation reports' by clients (Gilbertson and Preston, 2005). In the Australian context, companies such as CoreLogic, APM Price Finder and Monitor are already offering computer generated valuation reports on a subscription service. Specifically, computer generated automated valuation models (AVMs) which have been developed to allow for rapid, cost-effective valuation outputs are being widely used after the GFC and their potential applications are much wider than simply for mortgage valuations (RICS, 2016). They use one or more mathematical models – such as regression, adaptive estimation, neural networks or an artificial intelligence program – to estimate the value of a property or series of properties (RICS, 2016). It is surprising and disconcerting that in an industry in which trillions of dollars are involved, the conventional valuation methods have not paid much emphasis on checking the math and statistical accuracy of property valuations (Silva, 2014). Therefore typical valuers may struggle with the use of these models which require sound knowledge in statistics. For example, future mortgage industry needs valuers who are 'supported by analytics' (Schneider, 2016).

The use of blockchain technology which develops continuously growing list of data records that are organised into a series of blocks, each containing a batch of records of transactions, has been moving beyond banking and financial services applications (Taft, 2016). The banking sector is already exploring the application of blockchain for their mortgage valuation system. So far, Bank of China in Hong Kong has led tests on a property valuation system for home loans based on blockchain technology and the bank plans to go live with it in December 2016 (Weinland, 2016). They aim to use blockchain to create a decentralised network of banks and valuers through which the latest valuations are listed, verified and shared in a matter of seconds. HSBC bank also recently announced plans to use blockchain to speed up mortgage applications by keeping a register of property valuations. It is suggested that banks are focusing on integrating a blockchain into their mortgage valuations as there is less regulatory concern for this (Weinland, 2016). With a database of property valuation, it is hoped that property purchases can be streamlined, with much less reliance on mortgage valuations from valuers. Kumar (2016) predicts that impact of blockchain technology will be overestimated in the short term but underestimated in the five to ten year period. In fact, there are predictions that residential valuations may not be even in existence 10 years from now. Over the next few years, as the lenders discover the advantages of these new valuation products with their statistical reliability and unparalleled market analysis, the industry will transform from the art of appraising to the science of appraising (Bradford, 2014). With the availability of advanced visual technology that is being developed, it is not too far-fetched to consider a time when a property inspector streams live video to the valuer and a full valuation is completed in a few hours with increased speed and accuracy (Bradford, 2014). Similar concerns have been raised about the future of the residential mortgage valuers by the Australian Property Institute Chief Executive Mike Zissler (2016b), who suggests that they could soon be extinct unless they rapidly change their business model as their data are gobbled up by major data crunching firms. The possibility of developing accurate and efficient property databases in Australia is significantly high given the fact that an average home in Australia is valued at a rate of about 3 times in every 10 years.

It is suggested that the challenges that technology brings to the profession must be embraced as strategic partners and thus should be viewed as a positive addition to the profession rather than a threat (Robson and Downey, 2010). However, disruptive innovation – technology that does not support, sustain and enhance the way that professions have worked in the past – will continue to change the way existing industries operate (Susskind and Susskind, 2015). The use of advanced technologies also has a significant effect on current and future employment. Even though they offer major cost, time and efficiency savings, it eliminates the need for young people starting out in the professional world looking for experience and employment opportunities. Also, the varying digital skills and approach to technology between the younger and older valuation professionals at workplaces may create a daily issue for many companies. Therefore, the challenge for the profession will be learning how to embrace new technology into the practice and how to maximise the use of the technology where it is appropriate by maximising the reliability of valuations.

2.4 Changing membership demographics

The decreasing number of valuers is a major challenge for the long-term health of the valuation profession. For example, in the US, the number of valuers has steadily declined; as of June 2015, there were 78,500 appraisers practicing, 3% fewer than in 2014 and a 20% decrease from 2007 (Murphy, 2016; Coyle, 2015). Similarly in Australia, it is well-known that it has an ageing workforce and that a large percentage of labour market growth in the future will come from older workers. There is a demographic time bomb in the valuation profession which means that a large number of property valuers who are members of valuation professional bodies such as Australian Property Institute (API) and Royal Institution of Chartered Surveyors (RICS) will retire in the next ten years causing questions as to where the next generation will come from. This may be softened slightly if members choose to continue working beyond what has been a typical retirement age of 65 years. This has huge implications, both for the way the profession defines, educates and markets itself and also in terms of client perception (Hannah, 2006; Vandell, 2007). This is also a particular problem within academia, where an aging teaching profession is a visible barrier in attracting young people into property valuation programs at the tertiary sector (Baxter, 2007). Furthermore, different age groups at workplaces will have different social and economic needs, therefore long-term planning is imperative in order to create balance and equality at workplaces (RICS, 2015).

This problem is further increased by lack of new entrants entering the profession. Employers need support in attracting and retaining a more diverse talent pool and, coupled an ageing membership, it is vital to attract new talented individuals into the profession. In the US, it is claimed that the valuation profession may not attract many young people as higher profile careers as many accredited universities do not offer valuation related degree programs or they are a relatively new phenomenon (Coyle, 2015). Increasing licencing requirements, lower remuneration compared to other professions, increased pressure on the job, additional valuation related underwriting requirements and client pressure have been the main reasons for lack of new younger individuals joining the profession (Murphy, 2016). Therefore, while it is in the industry's best interests to condense the upfront educational requirements needed to enter the valuation field, it should be compensated by strengthening and lengthening the amount of ongoing education training of valuers (Beane, 2016). Even the universities that offer valuation education are under increased pressure as small, niche programs such as valuation are struggling for their survival since universities have been looking carefully at their own cost management (Baxter, 2007). Currently in Australia, 14 universities offer property degrees (face-to-face and/or online) which are housed in business schools or built environment schools, however some universities are already facing the risk of downgrading of status of those programs within universities or shutting down the program completely. Furthermore, there are no property programs in the Northern Territory, the Australian Capital Territory or Tasmania. Attracting property graduates into valuation has also been a challenge as not all property programs feature valuation concentration degrees and also many graduates opt to work in other areas in property such as property financing and portfolio management. The lack of interest in the field of valuation among graduates may be related to the lack of public profile associated with the valuation profession. Therefore, in order to keep property and valuation as a recognised discipline within the university sector stakeholder groups need to work far more closely with each other, mutually responding to needs as circumstances and situations change (Baxter, 2007). In addition, recruitments need to be more focused and professional associations need to respond by ensuring that the very best students are attracted to professional membership (Coyle, 2015).

2.5 Market acceptance issues

The future of the valuation profession has been a subject of discussion, particularly after the global property market crash in 2008. Back in 1994, McHolland expressed fears over the future of the valuation profession suggesting that 'the appraisal industry is being left with clients who really do not care about what we can do' (McHolland, 1994: 638). The valuation industry has not done its job in proving its importance to the market, some investors look at the entire valuation process as nothing more than an investor requirement rather than a risk-mitigation tool that is valuable to all parties involved in the transaction (Coester, 2015b). Over the years, it is clear that clients have come to expect little from valuers and are not willing to pay much for valuation services (Elliot and Warren, 2005). Lance Coyle, The President of the Appraisal Institute (2015) suggests that valuers' income and their business models have been affected by the process of commoditization where valuation advice and reports have ended up becoming simple commodities in the eyes of the clients. As a result, the pricing power of valuers has weakened and the quality of valuation products has decreased. This has happened in the banking and financing industry in the residential mortgage lending valuation space. Therefore, valuers working in the highly-regulated mortgage lending environment must consider how to adapt their business models to the effects of commoditization (Coyle, 2015). Same concerns were raised in the Australian context by the Australian Property Institute Chief Executive Mike Zissler (2016a), who suggests that valuation companies have been "pitted off against each other over pricing, and prices have been forced back to 1980's rates, yet so much more work and prescription is now required". The fee paid to a valuer for the valuation undertaking normally is a very small percentage compared with the risk that a valuer is exposed, economically, when undertaking valuations (Levine, 2015). Valuers may find that they are involved in expensive lawsuits related to their valuations, but with a fee that was very small in comparison to the amount in dispute. Given this situation, it is apparent why some insurance providers elect not to insure property valuers for professional liability (Levine, 2015). In order to survive in the pricing competition, many valuation firms have opted to cut their margins to sub-cost pricing to be competitive in tender processes. In the long run, many small valuation firms would be forced out of business which might lead to a monopoly in mortgage valuations. Mergers and acquisition activities might be good in theory for the smaller firms looking at it as a possible option if they are concerned they won't be able to survive alone, but it can only be successful with a highly calculated approach (Beane, 2016).

Furthermore, valuers are increasingly questioned with automated valuation models and free or subscribed online valuation sites. Particularly in the US context some loan programs require just an AVM or automated tool and the valuation is sidestepped completely (Coester, 2015b). In the US context, various valuation-review programs such as Collateral Underwriter and Redstone are now available to examine the reliability and weaknesses of various valuations submitted by valuers to banks based on comparing the valuation against an extensive database of property and market data. The availability of such valuation review programs will forever change the way valuations are perceived as well as the way quality control is managed. The days of valuers just having different opinions will be over as valuations will have an instant contextual comparison and their competency will be accounted for (Coester, 2015b). Furthermore, with the availability of big data, it is feared that eventually valuations will be ordered less and less frequently with the trend leading to eliminate them altogether in the mortgage financing process (Coester, 2015a). It is also suggested that the valuation outcomes produced by valuers are increasingly influenced by the major banks as they have grown much more conservative about their lending positions. Zissler (2016a) further emphasises that the valuation industry "must change if the valuation profession is to continue to remain an independent, objective and authoritative provider of valuation services to the Australian banking and financing industry”.

2.6 Fragmentation of the profession

Given the spread of asset and business types that require valuation, there is a huge diversity in the standards that govern the valuation process (Fernandez, 2014). It has been difficult for the valuation industry to have a cohesive voice and move in one direction (Coester, 2015b). Particularly, different countries have different rules and regulations set by different financial regulators when it comes to valuations for financing reporting purposes (Gilbertson and Preston, 2005; shah, 2015). According to International Valuation Standards Council (IVSC), the independent body that sets global standards for valuation, one of the main challenges faced is the fragmentation of the valuation profession globally. As a consequence it is difficult to engage politicians and financial regulators with a single voice to organise the profession more effectively (Thorne, 2012). Particularly, valuers are frustrated with lack of clearly defined professional identity when providing valuations for financial reporting purposes (Zyla, 2015). It is interesting to observe in Australia that legislation affecting the valuation profession is becoming more relaxed and deregulated; for example several States no longer require the banks to use ‘State registered’ valuers. This will allow other financing and banking professions to make inroads in to the valuation profession. Another major potential challenge is the structural vulnerability issues the banking sector faces from other forms of lenders such as peer-to-peer lenders. They are new-age, internet-based lenders such as Zopa, Ratesetter and Funding Circle which bring individual borrowers and lenders together, bypassing traditional banks. These transactions are almost free from any serious regulatory oversight and if borrowers use these new lenders they have a whole new set of rules and regulations to meet which may not include professional services such as property valuers.

Another challenge faced by the profession is that various professional bodies use different criteria to measure the eligibility of valuers to obtain membership in their professional bodies. The need of those organisations to unite behind common standards for education, behaviour, service delivery, monitoring and regulation have been emphasised in order to mitigate the risks arising from a lack of a clear identity for the profession as a whole (Thorne, 2012). Such harmonisation of international valuation standards and practice would enhance the market confidence in the profession and broaden the scope for valuers by allowing cross-border valuations (Shah, 2015).

As discussed, the future of the valuation profession is not altogether clear and valuers will have to negotiate their way through these challenges and conflicts. It can be speculated that automated valuations will fulfil the demands of many clients in the residential mortgage business in the future. Therefore valuers that are involved in residential work will continue operating in increasingly competitive business environments compared to valuers in other property sectors. Failing to address these issues will damage the perceptions of the valuation profession and leave valuers under-equipped to deal with changes in their business environment. Table 1 summarises the key characteristics of the past and those of the future **for valuers.**

Table 1: Key characteristics of the past and the future for Valuers

Past characteristics	**Future characteristics**
Availability of data was critical	More information is available from different sources to more people via web – may seek online solutions
Possessed individually / company owned data	Have access to large databases on property transactions (big data)
Vast majority of property sold via Real Estate agents	Selling property online via websites such as Gumtree outside of Real Estate
Valuers made an appraisal or judgement of value	Artificial Intelligence (AI) and Automated Valuation Models (AVMs) value
Move from providing single valuation opinions	Clients require broad market analysis, accurate value predictions, and risk pricing.
Valuations of individual properties	Valuations of portfolios
Focus on the valuations for the present	Focus on the valuations for the present as well as the future and the past
Valuations for primary markets	Commercial mortgage backed securities require robust valuation models
National market and valuations	Trans-national market requires knowledge and development of internationally agreed valuation standards and guidance
National markets dominate	Globalised markets

(Source: Authors).

Individually these challenges would not have completely devastated the valuation profession, however, all together, these challenges can cripple the profession, mainly the aging segment that is fighting to maintain its place within the changing business world (Coester, 2016b). Therefore it is the responsibility of the practitioners, professional bodies and educators to embrace changes that market and technological advances bring to the profession and lift the professionalism of the practice so that the valuation industry will continue playing a vital role in the economy.

3.0 INSIGHTS AND SUGGESTIONS

In this part of the paper some key skills and qualities that will be needed, as well as emerging future and existing knowledge fields and specialisms are highlighted and discussed. There is a discussion on some ideas for a way forward to plug gaps in knowledge and skills. Table 2 summarises the key challenges facing the profession and opportunities that are created by those challenges for the valuation industry as identified in the literature.

Table 2 summarises the key challenges and opportunities for Valuers

Challenges	**Opportunities**
Some markets are parochial	Strengthen their profession and have a more global focus by keeping pace with change in the market at national and international level To survive in this competition, valuers need to move away from specialising on particular skill set and develop speciality in different areas in valuation.
Small firms may not be able to adapt to changed business environment and are forced out of business by larger firms	Joint venturing with other firms to explore business opportunities Intervention of government and professional bodies by introducing stricter legislation related to the profession
Competition on fees based on price from larger firms	Valuers develop specialisation in different and emerging areas Valuers to diversify their coverage of valuation types. Non-residential valuation industry will remain a fruitful business because of the diversity in commercial assets.
Issues with the ownership of valuation reports	Seek legislation on strong intellectual property and copyright requirements for valuation reports
Technology	Industry and tech providers to develop and push out new technology to make the valuation workforce more efficient and make their opinions more bulletproof
Increasing use of automated valuation models	The continued use of automated valuations could be supplemented with consulting-based products such as comprehensive property valuation, risk analysis, portfolio evaluation and risk mitigation. Professional bodies to loosen valuation guidelines to allow for specific valuations for mortgage purposes with a more limited scope of work and less comprehensive file requirements
Government policy through licensing	Thorough legislative processes to protect the independent

and regulations	nature of the profession
Costs of professional indemnity insurance	More insurance companies offering professional indemnity for valuers Seek legislation to limit the level of risk exposure (e.g. ceilings to the maximum liability one will face in certain cases) Provide contractual agreements between the valuer and the client as to the maximum exposure to the valuer Obtain indemnities from other third parties as to the work by the valuer Set legal precedents that allow for similar awards to litigants with other international jurisdictions Consider other alternatives that allow the valuer to remain as an active valuer, but to reduce the amount of risk exposure
Customer loyalty	Offer more specialised services and undertake a range of specialised work for clients
Many valuers are specialised in one main area of valuation	Skills are relevant though future work differs
Knowledge of statistics needed for understanding AVMs	Education provision needs amending
Mismatch between digital skills and knowledge of younger people compared to senior staff	Companies need to embrace new technology to maximise reliability of valuations
Ageing membership	Recruit and attract new entrants with potential to fast track to senior positions
Ageing academia	Major firms offer PhD scholarships to ensure age profile of academia matches practice and also drives forward new approaches, knowledge fields and skills.
Difficulty of attracting talented new entrants	Creating enough revenue for individual valuers by introducing a minimum customary and reasonable fee Industry consider actively recruiting talented entrants and establishing training funds for them
Niche programs like valuations struggle in new business driven university sector	Establish more formalised teaching and research agenda to the mutual benefit of universities, the profession and users of valuation services Programs moved to generalist undergraduate programs, with

	add-on specialist post-graduate programs aimed at valuation professional outcomes
Lack of public profile of valuation professionals	Engage politicians, financial regulators and general public with a single voice to organise the valuation profession more effectively.
Within the school leavers category , lack of profile of valuation professionals	Attract school leavers into the profession, by promoting the valuation profession at careers days held in high school. Encourage employers to participate in the work experience placements for students in high school. These students generally seek 5 days of unpaid industry experience to obtain a better understanding of the work involved for the profession.
Market does not value valuers and pricing power has diminished along with quality of valuations	Increase the profession's influence and business potential nationwide with an united approach
Many have cut margins to sub-cost pricing for valuations	Introducing scales of fees to be used by all valuers by professional bodies
Wide diversity in the standards that govern the valuation process and fragmentation of the valuation profession globally	Developing more political clout with an united approach by all property related professional bodies such as Australian Property Institute, Australian Securities Institute, Property Council of Australia, Real Estate Institute of Australia and Royal Institution of Chartered Surveyors
Valuers have been left on the outside of an interconnected marketplace due to the independent nature of their work	Developing inclusive committees with market participants to work together on issues that affect all parties
Various professional bodies use different criteria to measure the eligibility of valuers to obtain membership	Potential to unite behind common standards for education, behaviour, service delivery, monitoring and regulation

(Source: Authors).

From the literature it is clear that most work, including that of valuers, will become more technology dependent and as a profession valuers need to embrace computer literacy not only to ensure they remain abreast of the changes, but also to pre-empt and influence change (Elliot and Warren, 2005). There is a need to offer more specialised services and undertake more specialised work for clients. Employees, in general, and including valuers, will need to embrace change and become more entrepreneurial, and there is scope and potential for these entrepreneurial skills to be included in education programmes. Research predicts that the workforce will have more freelancers or contracted staff who work for multiple employers. This means the valuation professions may need to move from honing one particular narrow skill set and develop a broader, adaptable and flexible skill set (Susskind and Susskind, 2015). In some sectors social entrepreneurship and projects involving social good will become increasingly important and redefine employment opportunities and there may be opportunities there for some valuers.

So some skills and knowledge are fading in importance and are declining; it is necessary to identify which knowledge fields and skills are in decline. In terms of skills, it is said that today professionals need to be outcomes focused, with good oral and digital communication skills. Furthermore advanced problem solving skills are required, as the problems we face have far greater complexity, and are sometimes known as 'WICKED problems' (Bright et al, 2016), because no simple solution exists. Some of these WICKED problems require value to be determined and there is a role for valuers to play. Problem solving skills should be embedded within our education programmes and need to be developed to much more advanced levels. The solutions for these complex problems are likely to involve inter-disciplinary working and also trans-disciplinary working. Alongside the inter-disciplinary and trans-disciplinary approaches it will be necessary to develop skills associated with a collaborative approach. Other skills focus on advisory services and being able to determine the optimum course of action clients should take; this require the ability to evaluate all possible options and to select the best course of action. Finally professionals need to have an advanced understanding of technology and its applications.

As for practices on the rise, it appears that data management capabilities need to be built among the professions, including valuation and this should be done partially in the workplace and through continuing professional development (CPD) offered through the professional bodies such as the Australian Property Institute (API) and the Royal Institution of Chartered Surveyors (RICS). The building of data management skills should also be delivered through the education system at TAFE and University level. Education and industry providers should be mindful to ensure compatibility and awareness of the systems and use of new technology is embedded across the built environment sector. Concurrent with this, there is potential to generate new avenues for value creation from the vast amounts of data now available from real estate.

When we consider the knowledge fields valuers need in the future, growth areas include sustainability and how it impacts on value. Risk management is another important knowledge area which valuers need to master. Existing skills of data analysis need developing in the context of digital technologies and artificial intelligence. With up to four generations now in the workforce, professionals need greater leadership skills to ensure optimum productivity and quality of outputs.

Finally there is a need, as professionals to adopt ethical behaviour. Professionals, corporations and professional institutions must embrace ethics and collective social responsibility, admit information gaps, and commit themselves to continuous learning, organisational improvement and pushing the barriers of the body of knowledge. Education has a vital role in the way forward and 'the relationship between the professional bodies and universities, government and other stakeholders is, therefore critical if the professions are to emerge as reflective as well as responsive to the issues and expectations of the 21st Century' (Hughes and Hughes, 2013).

4.0 CONCLUSIONS & RECOMMENDATIONS

The period of immense change in terms of technology is underway. Other professional groups have realised that their members are finding change in the services they provide for clients. The property profession has to educate and upskill members of its' professional bodies to become 21st century professionals. This paper has shown that the valuation profession is facing major challenges as more processes are digitised and automated, and the role of the valuer becomes more of data handling and information processing than of economic analysis (Elliott and Warren, 2005). The role of the valuer must change to respond to changing technologies and evolving industry needs; the question is; *what does it change to?* In Australia the ageing membership with the main professional body, the Australian Property Institute (API) may compound problems as members retire, subscriptions are lost and it will lose its ability to lobby, and to promote its members and their services. Attract talented individuals into the profession is vital.

This study explores the future of the Australian property profession and the role of the valuer in particular. This paper has explored the changing role of the valuer and describes the valuation profession in Australia. It has explored the issues and challenges faced by the profession and presented some insights and suggestions; and finally set out some suggestions on a way forward for the profession. Some of the gaps in knowledge and skills that the profession faces are known, but all of them, and the way forward is to conduct a broad discussion with the membership about the services and knowledge fields they believe are on the rise and also those, in decline so that an agenda for change for the short and long term can be compiled. The next steps in this research begin that dialogue. A series of focus groups and semi-structured interviews will be held with a number of selected practitioners based in Melbourne and Victoria, and Sydney and NSW to ascertain what their experiences and views of the state if the profession is, and what they perceive the future will hold for them and their profession. Further data will be collected and discussions will be held in a colloquium hosted by API 2016. This will be reported in a further final report to API during 2017.

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