## The Future for People in Property

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by Andrew Heaton March 20th, 2019





Whether it's property developers, builders, leasing agents, architects, electricians or marketing agents, opportunities for people in the development and construction industry are varied and plentiful.

In the construction part of the industry alone, ABS statistics indicate that as many as 1.164 million people (seasonally adjusted) were employed as at May 31, up from 979,200 five years earlier. Add in the 217,000 employed in real estate and the property sector all up employs around 1.4 million.

Going forward, questions surround how technology such as robotics, augmented reality/virtual reality and the Internet of Things will impact employment and work throughout the sector.

Many positions going forward will be similar to those today. Property developers, architects, real estate sales people and tradespeople will still be needed in ten years – albeit with some evolution in how these roles are performed.

Nevertheless, technology will have an impact. Whilst there may be fewer opportunities in tasks which can be automated, new roles will be created in robotics, AI and other areas.

Shara Evans, a futurist and keynote speaker whose clients span sectors ranging from government, property, security, communications, education, healthcare and banking and finance, says it is unlikely that major change in roles such as trades will happen in the immediate future.

Look beyond five years, however, and Evans says new opportunities will open up.

To understand these, she says it is important to consider how technology is impacting the sector.

For starters, there is the ability to produce virtual models of buildings and structures to aid not just in building but also in maintenance. When entering homes, Evans says understanding where hidden pipes and cables lie can be difficult. This will be easier, she says, when tradespeople are able to look at virtual models using building information modelling and augmented reality. Since this requires having the modelling data available in the first place, Evans says this will initially be mostly applied to newer buildings.

On a related note, virtual reality and augmented reality will impact other areas. In landscaping, for example, augmented reality will enable landscapers to combine a real-world view of what exists at the moment with an overlay of where certain plants and features need to go. Before starting, Evans says it may also be useful to have a virtual walkthrough of the job.

Virtual reality is also affecting real estate, where firms are using 360 degree cameras and either VR or the internet to provide prospective purchasers with all-round property views. Next, there are is robotics, which is being helped along by artificial intelligence, data and more precise GPS. Hadrian X, a robot produced by Fastbrick Robotics, can lay an entire brick wall for a house in a single day.

Whilst less influential in smaller jobs, Evans says this will come into play on larger projects where there is more space, greater scale and greater opportunities to realise efficiencies.

Next, there is 3D printing. Evans says this has significant potential – especially once the technology is such that 3D printing machines can fit in trucks and vans. Given the amount of time which tradespeople spend trying to find parts when doing home renovations and maintenance, she says there are gains to be made from being able to simply print out replacement parts. This is not to mention the new shapes which the technology will free up in design.

Next, there are advancements in global positioning systems. Organisations such as Geoscience Australia are looking at advancing greater precision in GPS and being able to make GPS centimetre accurate.

Evans says this could have interesting implications. The ability to pinpoint existing boundaries when doing property renovations, for example, will reveal many boundaries from the past half-century which are in fact out of place.

In infrastructure, meanwhile, the Internet of Things will play an increasing role in alerting both drivers and autonomous vehicles to issues such as speed limits, steep gradients or curves which are approaching and how long traffic lights will remain green or red.

Finally, there is blockchain. Though she stresses that application of this in property is at least five years away, Evans says distributed ledger technology will have applications in conveyancing and property titling.

Already, this is impacting share trading. Last December, the Australian Securities Exchange announced its intention to replace its existing CHESS settlements system a new system using distributed ledger technology to manage the clearing and settlement of share transactions.

Evans says jobs related to new technology will eventuate in several areas.

First, many opportunities will arise in robotics. These will range from designing, making and operating robots to the design of robot parts and updates.

An interesting area is robot training via imitation learning. A common method of 'teaching' robots, Evans says, is to place the robot in front of people and have them observe and learn from human behaviour. The day could come, she says, where robot trainers go on to construction sites and real humans teach them how to build.

Next, there will be roles in 3D printing for those who design applications which are specific to the building industry and to different trades within the sector. This includes those who design applications which fit into vans or trucks.

Similarly, Evans says there will be many roles in augmented reality and virtual reality. In construction specifically, there will be roles for architects and others who combine both the understanding of the technologies and how they work with a background in architecture or engineering. Such people will be integral in helping software providers

design products which are based around an understanding of the needs of the market. They also will be needed by software providers to help promote and distribute products into the marketplace.

Finally, there is the smart home handy person. As fridges, televisions and various other household devices become increasingly interconnected, Evans says there will be opportunities for those who set up and help to maintain connected home networks.

Adam Shapley, senior regional director of recruitment firm Hays Property, says technology will not so much replace workers but will change how people go about their roles. Whilst technology is changing how properties are being advertised and sold, for example, Shapley says any reduction in demand for real estate agents at the high end is unlikely.

"Yes new technology such as big data, artificial intelligence, virtual reality and the Internet of Things will impact property roles over the next few years," Shapley said.

"But rather than leading to redundant roles or changed job titles, technology will transform the tools property professionals use to do their job, enabling them to offer a more comprehensive service in the process."

One area in which Shapley sees change is property management – a task he says is being increasing conducted online.

Should blockchain adoption become widespread, this could affect the requirement for legal services as property transfer processes are simplified.

Facilities management, as well, will be transformed by the growth of intelligent buildings. As matters such as heating and cooling are controlled remotely, Shapley says building managers will become more like concierges who are comfortable and familiar with technology.

Asset managers, as well, will make increasing use of technologies such as drones to conduct external property inspections.

As technology advances, roles in property and construction will evolve.

For many, this presents exciting opportunities.



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