

## Proptech and entrepreneurship – innovation in real estate

Someone rolled a rock to the entrance of a cave and created an enclosed space for his/her family – a warmer, more defensible shelter, distinct from the surrounding environment. This can be called the first real estate development. (Graaskamp, 1991)

That was then and this is now. The research in this special issue focusses on entrepreneurship and emerging trends within the technology world and how it has already impacted and will continue to influence the commercial real estate sector clearly illustrates that times are changing. Graaskamp's real estate definition that includes a fourth element (length, width, height) of space-time, time for possession and benefit, might need a fifth element incorporating technology. That is, maybe instead of "space delineated by man, relative to a fixed geography, intended to contain an activity for a specified period of time" it includes something about pushing a button or putting on a pair of virtual reality glasses to better understand the real estate investment you are making.

The world in which we work and live in is changing at an incredibly fast pace. The papers in this special issue highlight the entrepreneurial spirit that is alive and well as real estate and technology collide to enhance the everyday lives of our consumers and the way that they interact with the built environment. Most of the papers highlight the benefits that the changes have brought to the industry, making it more efficient and easier to make investments and complete transactions. We have papers that focussed on smart buildings, neural networks, artificial intelligence, big data analysis for real estate and the use of blockchain for real estate transactions.

Many of the papers are more exploratory in nature but the message from all of them is that those of us working in commercial real estate will need to add tools to our toolbox to continue to have success in this profession. The traditional set of skills used to analyse a real estate transaction or a real estate market are still important but advances in technology will make the analysis easier and in many cases more efficient. However, some cautionary words are also provided. Reminding us to be careful, that old adage of "Garbage In, Garbage Out" (GIGO) is still valid perhaps more important now than ever. It is tempting to cut costs and replace humans with machines, but we cannot do this unless we make a commitment to standardize our data. The current commercial real estate data available to us are anything but standardized. These shiny new tools and techniques developed in computer science programmes and electrical engineering departments across the globe could be useful. In fact, venture capitalists are actively investing in fintech and PropTech specialists but they may not be ready for prime time. The human factor is now more important than ever in making real estate decisions and it needs to be incorporated in to the models. We cannot yet, "Beam Me Up Scotty", and take away that rock or that cave but we are getting closer to that reality every day. This first of two special issues will provide insight into the benefits of adapting to our changing environment, but also alert us to some of the potential pitfalls or a dip in the road that could send our driverless car crashing into a tree.

**Larry Wofford**

*University of Tulsa, Tulsa, Oklahoma, USA, and*

**Elaine Worzala and David Wyman**

*College of Charleston, Charleston, South Carolina, USA*



## Reference

Graaskamp, J.A. (1991), "Fundamentals of real estate development", Reprinted in Graaskamp on Real Estate by Stephen Jarchow, Urban Land Institute, USA, pp. 228-265.