

Future-proofing real estate: An insight into the potential use of blockchain in real estate funds

David Dalton

Partner
Consulting
Deloitte

Lorn Kehoe

Director
Consulting
Deloitte

Cillian Leonowicz

Senior Manager
Consulting
Deloitte

John Hallahan

Analyst
Consulting
Deloitte

Introduction

The global real estate funds industry has recently experienced a stunt in growth due to a number of factors, most notably

- Uncertainty regarding the European Union e.g. Brexit
- A slowing Chinese economy
- More recently, the U.S presidential election
- An increase in ‘rich pricing’

A slightly lower level of transactional activity of \$292 billion was recorded in H1 of 2016 in comparison to the figure of \$324 billion in H1 of 2015 (FOOTNOTE 1 HERE). Yet, fundraising on average amongst the top 5 private equity real estate firms, over a five year period, has increased by \$26,735.67 million (U.S.) indicating the leading players remain confident in the

future state of the industry . (See figure below).²

This article will explore existing real estate property management solutions, focusing on the top private equity real estate platforms in the marketplace, including subject matter expert’s viewpoints on the existing software infrastructure. Blockchain technology and its core distinctive characteristics, will be discussed as an alternative solution whose unique features are well suited to the real estate funds industry. Lastly, future considerations will be addressed in order to assist industry players consider and understand the value of incorporating a blockchain solution for the whole asset management process.

Industry sector ripe for disruption

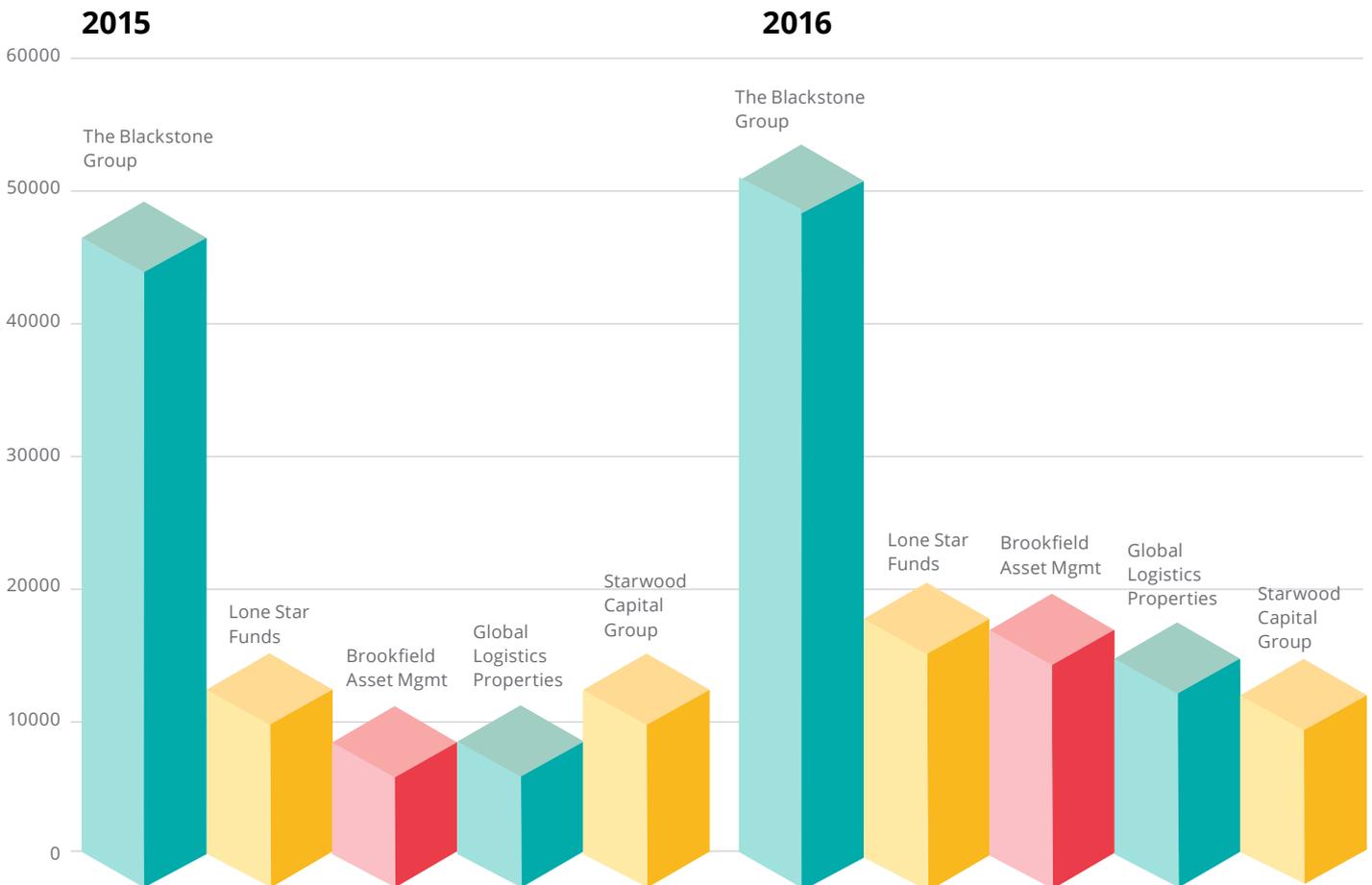
This decline has resulted in global investors taking a more conservative approach,

focusing on gateway cities and managing their expected return on investments accordingly. The industry is undergoing a sizeable change in its core offering away from real estate as a financial asset to real estate as a service. For example, Germany is regarded as the prime hub for capital within Europe, followed by Ireland. Both locations are considered prime locations for investment and property development for 2017.

“Blockchain technology is rapidly advancing and we see in real estate an opportunity to drastically improve efficiency and reduce costs leveraging this technology” – David Dalton, Partner Deloitte Ireland, Global Blockchain Leader

Industry players will need to identify and realize new efficiencies and achieve cost savings in order to compete in this increasingly changing landscape. ➔

Top 5 largest Private Equity Real Estate firms in the world



1 Prequin, Real Estate Spotlight, August 2015

2 PERE's Annual Ranking of the Largest Private Real Estate Firms in the World, May 2016, 2015

As highlighted by **Mark Degnan, Director Corporate Finance, Deloitte Ireland:** *“the buy and sell side of transactions in real estate funds are hampered by a lack of technology being used in the process. The management information (MI) being used is derived from a number of different systems and has to be manipulated, which takes time and proves to be expensive. There is an opportunity for technology to be leveraged to expedite this process for all involved”.*

Currently, there are a number of different systems used by asset managers including property management software, loan software and arrears software amongst many others. A common concern raised by industry players is the lack of integration amongst the different systems, people and teams working in silos and ultimately not effectively communicating with one another. As such, this lack of integration and consistency presents pitfalls for data manipulation to take place when producing management information (MI) required for a deal to take place. The key to enabling all deals to move quickly (not just those specific to real estate funds) is to:

- Involve and engage all stakeholders
- Keep stakeholders up to date
- Resolve issues quickly

What are the common denominators to the points above? It's simple, people and data! The Real Estate Funds sector requires very detailed information (right the way down to the wiring in a building) and for that information to be able to be shared securely and quickly with the other participants. So what is required is an industry standard technology which is used by all participants to store information securely, to share data quickly and which can be trusted by all participants to be accurate view.

Due to the detailed level of data which needs to be recorded for a property, investing in a secure and transparent property management software would provide a clear means of enhancing the efficiency of the real estate management process for all stakeholders. YARDI, MRI and SS&C are regarded as the top Private Equity Real Estate Software Providers. These platforms enable users to efficiently track and manage the vast numbers of documents required to ensure compliance with all of the contractual and legislative requirements affecting their company currently in the marketplace. It will become clear when we walk through their service offerings how a more advanced solution with an ability to connect all users in transparent way would be a favourable alternative for all involved.

“Real Estate transactions and valuation data tend to be relatively lower in volumes and highly complex. We believe that this, coupled with the fact that this process remains relatively manual across multiple participants, means fund administration in this sector will be one of the greatest beneficiaries of Blockchain transformation”. – Cormac Dinan, Director Consulting, Deloitte Ireland

The existing property management solutions: a sub-par game?

Oracle JD Edwards

Oracle JD Edwards EnterpriseOne Real Estate Management integrates all of the information about your properties under management, hereby working to streamline financial and operational processes throughout the entire real estate lifecycle. Users have noted easy configuration, good mobile access and excellent customer support. Therefore it will not come as a surprise that that Oracle JD Edwards is a popular choice amongst the US Real Estate Investment Trusts, per Deloitte US analysis.

Yardi

More than 20,000 businesses, corporations, and government agencies rely on Yardi software to manage and drive their real estate business. This property management platform facilitates clients worldwide to access information specific to their needs, including owners, managers, investors, and other stakeholders. Yardi offer two platform services; the Yardi Genesis³ platform for smaller real estate firms, and the Yardi Voyager platform for mid- to large-sized property owners, managers, and investors. Both platforms include accounting, operations, and ancillary processes with mobility for residential and commercial portfolios. The solutions serve over 18 real estate markets, including construction development, government, office, industrial, retail and airports.⁴

MRI

With over 45 years of experience with clients in 5 continents, MRI offers business management software solutions to the global property management industry. As one of the leaders in real estate enterprise software applications and hosted solutions, MRI serves the global multifamily and commercial properties by helping them improve their bottom line and returns on their business portfolios. The Multifamily suite effectively manages the entire real estate cycle, from online leasing to renewals and statement of deposit. The Commercial suite provides budgeting and forecasting, financials and accounting, and tenant connect.⁵

3 Oracle, November 2016

4 Yardi, October 2016

5 MRI, October 2016

6 SS & C, October 2016

7 SAP, October 2016



SS & C

SS & C provides property management software, real estate fund administration services to more than 6,900 clients globally. It offers a vast array of products such as; SKYLINE which is a property management and accounting platform and TNR Solution which provides Portfolio and Fund Managers with the tools to track and manage property deals and relationships at the Fund and Investor level.⁶

SAP RE FX

Outside of the US, SAP offers a full stack, integrated work management solution that aims to simplify the complex real estate operations for clients of all sizes. This software has the added benefit of also being fully integrated to SAP financials, which from our analysis, some users note as a major benefit.⁷

A clear trend in our analysis is that the systems discussed are currently struggling to handle the massive amount of data that now needs to be held on each property. This has seen these systems see faults such as severe lagging, increase in cost and in the worst cases system failure. It is abundantly clear that an alternative solution could prove to be a better fit. In theory, a system which has the capacity to distribute a ledger to all parties involved in the process would be a major plus. This shared nature would mean no single point of system failure, and its security could be achieved with high levels of encryption. The cost would also be less, as scale would be achievable as the ability to add more parties would be written into the software. It is our opinion a viable alternative could be a blockchain based solution.

Real Estate in a blockchain world

"We believe that blockchain technology holds tremendous potential for the financial services industry, particularly as a digital ledger of transactions that can increase efficiency and reduce errors. In the alternatives sector, I can foresee potential uses for blockchain in the recording of mortgage liens and property title transfers in real estate, as well as clearing and settlements in the private equity space. We are closely watching and evaluating these areas of application." Alan Flanagan, Global Head of Private Equity & Real Estate Fund Services BNY Mellon. 

The global real estate funds industry has recently experienced a stunt in growth due to a number of factors, most notably uncertainty regarding the European Union, Brexit, a slowing Chinese economy, and, more recently, the U.S. presidential election.



The hype around blockchain is one which is not going away, with Don Tapscott going as far as calling it 'the technology most likely to change the next decade of business.'⁷ In 2016 we have seen a vast majority of the world's largest financial services clients test the technology either through consortia, such as R3, or in proof of concepts by themselves. While some sceptics claim this is little more than marketing to 'stay relevant', what cannot be denied is blockchain technology has a number of key characteristics which are well suited to a plethora of identified use cases. Below we will look at how there are some key characteristics which could alleviate some of the current issues problems with the property management software discussed.⁸

Cross-border – an easy to use, cross-border ledger, which is particularly powerful for the nature of this business. This is particularly powerful given the current trend in real estate funds to diversify their portfolio across locations.

Transparency – easy auditing and tracking of transactions across the network is a clear benefit of a blockchain enabled solution. By having full transparency between all parties on the ledger, users will have a clear, holistic view relating to the property.

7 Harvard Business Review, May 2016

8 Deloitte Netherlands, "Blockchain technology: 9 benefits & 7 challenges," 2016

9 Deloitte Netherlands '#3 Blockchain – the benefits of smart contracts', November 2016

Permanent trusted records – a blockchain is an immutable record of transactions, which ensure no manipulation or loss. This is particularly powerful to have when selling on a property, as there is the opportunity to cut the time for due diligence significantly.

Automation – the possibility of conditional transactions via smart contracts, which can ensure less error on behalf of operational staff looking after the property, both on & off site.⁹ This could potentially see the introduction of smart contracts which could track mortgage arrears,

Multi-party – a blockchain by nature is a multi-party technology, with transaction information being shared peer to peer across the network. A criticism of some of the software vendors currently is the inability of parties to communicate on the platform, which could be eliminated by using a solution powered by blockchain technology. Low overhead to add many different parties, whether trusted or untrusted.

Secure – strong encryption functions built in. No single point of failure like the current systems due a distributed record of the truth across a number of different devices.

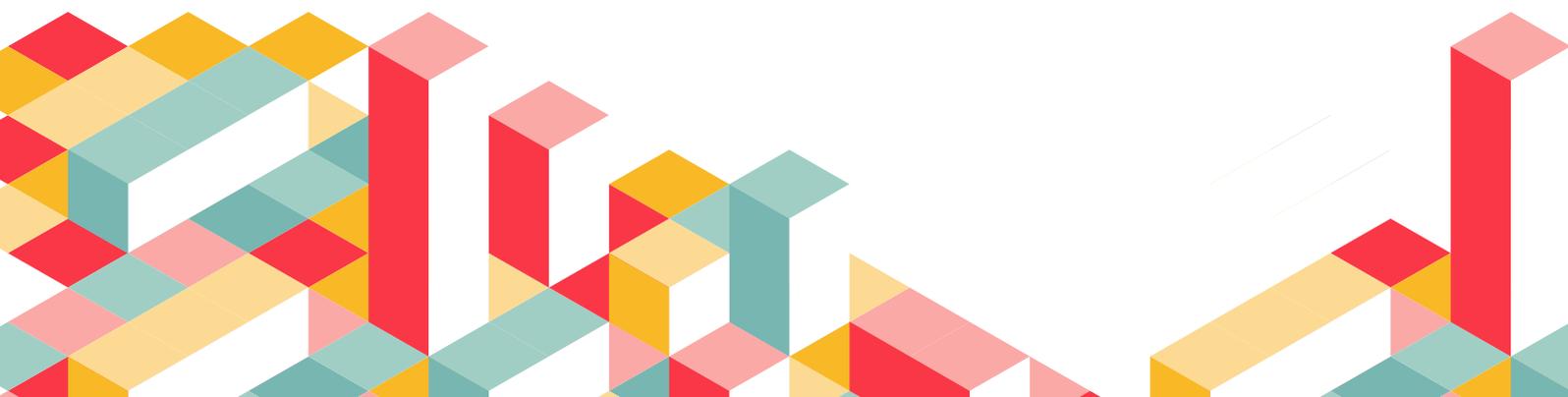
Real time – close to real time data available to all stakeholders, which can ensure total confidence in the investment for all parties.

For instance, a distributed ledger could be used to record all operations related to property management where whole invoicing (payables and receivables) and related payments maybe reported on a distributed ledger, or even actually paid with fiat currency-backed virtual money. These data can then be retrieved upon authorisation as input of the property valuation, streamlining as such various processes such as reporting, valuation or risk management." – Thibault Chollet, Director Consulting, Deloitte Luxembourg

It is clear when reading the above that a blockchain-enabled property management solution would be well suited to the real estate funds business. A real-time, secure view of the data relating to a property is something that many of the current systems struggle to provide in an easily digestible format.

A blockchain-enabled solution could solve this issue, and drastically reduce the time it takes to manipulate the data about a property into usable management information. We will now look at some key considerations moving forward for the real estate funds industry.

"By implementing additional blockchain applications in the real estate industry transaction times and costs can be reduced further. Furthermore it enables decision makers to use data analysis for making future investment decisions on selling, buying and constructing real estate," according to Jan Willem Santing, manager of Deloitte Real Estate.



“Blockchain technology works best when there is a clear business problem to solve and clear business benefits to be achieved. With no multi-party, secure, fast and inter-operable industry standard technology in the real estate fund sector, blockchain has all the features to rapidly become the ‘go-to’ technology solution.”

Lory Kehoe, EMEA Blockchain Hub Lead

Future Considerations & Conclusion

As Thibault Chollet contends, *“It is difficult to exactly shape the future of the real estate industry ecosystem that distributed ledger technology will enable. But have no doubts that blockchain is coming”* Indeed, while we may not see blockchain technology cause a paradigm shift across the whole industry in the near term, it is abundantly clear from the above that an alternative real estate management system would be the perfect use case to test the applicability of blockchain in this market. The benefit for the big players is being part of the transformation of the industry as we know it, and building solutions which will see lower costs and greater efficiencies.

As Cillian Leonowicz mentions “there is an open goal for an asset servicer to take real estate by the scruff of the neck, create a new standard, control the killer app platform and then invite inefficient competitors to their new blockchain enabled platform on a service model fee basis”.

Deloitte’s Global Head of Real Estate, Bob O’Brien remains very positive on

the future of blockchain in real estate, remarking “Blockchain technology has significant potential to impact the Private Equity Real Estate industry by enhancing the speed and quality of data shared in the due diligence process of transactions, improving property level operating and performance information available to portfolio and asset managers, and facilitating communications between fund management and fund investors.”

The future for blockchain is much closer than people realise and whether people realise it or not (and or like it or not), blockchain is here to stay! The opportunity for distributed ledger technology is significant and now is the time to start your blockchain journey. By developing POCs and carrying out pilots, the true potential of the technology can begin to be realised and what Tapscott claims will be the most disruptive technology of the next decade. Don’t be tempted to sit on the fence and adopt a ‘wait and see’ approach. We don’t want to be here next year saying we told you so...

Now is the time. Be Ready. ●

To the point:

- The global real estate fund industry has recently experienced a stunt in growth due to a number of factors (most notably, uncertainty regarding the European Union, Brexit, a slowing Chinese economy and, more recently, the U.S. presidential election) yet fundraising on average among the top five private equity real estate firms over a five year period has increased by US\$26,735.67 billion between 2015 and 2016
- A blockchain-based solution will become an alternative in the real estate fund industry
- A real-time, secure view of the data relating to a property is something that many of the current systems struggle to provide in an easily digestible format. A blockchain-enabled solution could solve this issue, and drastically reduce the time it takes to manipulate the data about a property into usable management information
- The future is near, and blockchain is here to stay

