

Embrace robotics and cognitive automation

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Augment productivity

Many real estate companies have been relatively slow to effectively adopt technology and is reflected in the many operational inefficiencies that exist in the industry today. For example, many real estate companies continue to use spreadsheets for recording, aggregation, and analysis of data for cost aggregation, lease administration, invoices, accounts payables, property valuation and forecasting. However, many other businesses in other industries (and some of the technology leaders among real estate companies) use sophisticated analytical tools on gathered data to provide enhanced business intelligence and visualisation.

Taking a deeper dive into a real estate company's lease accounting and administration processes suggests that many documents such as lease agreements, deeds, brokerage contracts, vendor payables and credit applications, property management agreements, and property tax assessments are still maintained in a physical (either scanned or excel) format. As a result, too much time is lost reading, manipulating, or abstracting paper or digital documents for relevant information.

When real estate players are challenged to perform in-depth analysis, as they frequently need to, the data is not structured in the desired format. Consequently, companies typically employ dedicated teams for defining parameters and analysing the data. More importantly, they are challenged to develop and capitalise on the insights locked within their documents to make informed decisions.

Inefficiencies and errors

The high level of human intervention increases the probability of fraud and error. Research suggests that most typical errors in accounting and tax functions tends to be due to human intervention, either by deleting excel formulas and/or making incorrect manual calculations, as well as using multiple sources of data input and storage of sensitive data on unsecured devices.

Robotics and Cognitive Automation technology (R&CA) can be a game changer in this evolving environment. Using a combination of robotic processes and cognitive automation, can help real estate companies reduce errors and increase operational efficiency by replicating human actions and judgement at tremendous speed, scale and quality, all at a relatively lower cost.

Let's understand the two technologies in more detail.

1. Robotic process automation (RPA) essentially uses software to automate many manual, repetitive and often rules-based processes and tasks. The technology has huge potential. The market is estimated to touch \$16.9 billion in 2024, reflecting a CAGR of 47.1% during the 2016-2024 period.
2. Cognitive automation uses machine learning capabilities for judgement-based processes and predictive decisions. Natural language processing, natural language generation, machine learning, cognitive analytics, and sensing are some of the cognitive capabilities that can revolutionise the real estate ecosystem.

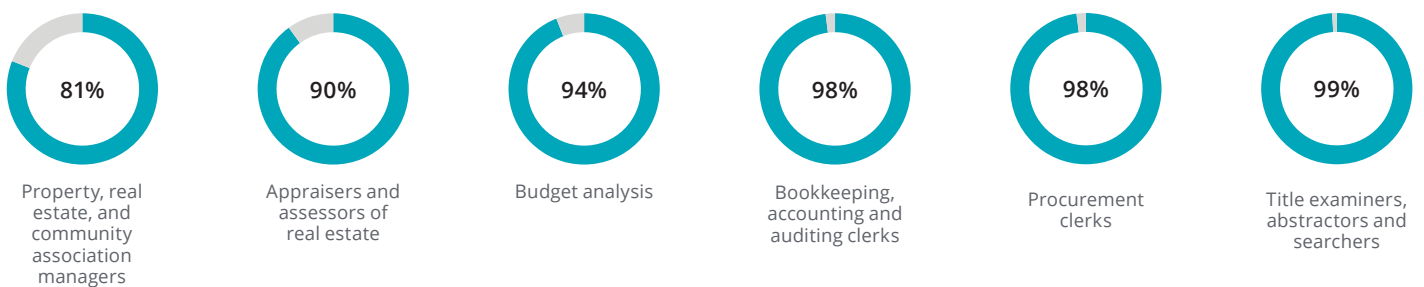
Implementing R&CA can eliminate inefficiency inherent in many finance and accounting tasks such as lease accounting and administration, invoice processing, and payroll management by:

- Optimising costs: RPA can bring down costs drastically and may end up being cheaper than even offshoring. R&CA software can enable processing 24/7/365 without breaks and holidays.
- Improving speed and accuracy: Mundane and cumbersome tasks, such as extraction and digitisation of data from lease contracts or invoices, can be accomplished faster and more accurately than humans. Studies have shown that using cognitive technology to generate actionable data from unstructured documents can increase efficiency by 4.5 times than traditional processes.
- Streamlining record management: Optical character recognition with cognitive technologies can enable lease records, invoices and other essential documents that are usually recorded manually or scanned to be converted into formats suitable for reporting and analysis.
- Enhancing compliance and risk monitoring: Given the rule-based nature of RPA, real estate companies can automate many of the risk and compliance monitoring activities. As examples, tracking invoices for compliance with contractual terms or periodic review of lease contracts to avoid any potential risks of tenant defaults of any contractual obligation can be easily automated.
- Allowing informed decision making: Using cognitive extraction technologies such as natural language processing (NLP) companies can cull relevant data and information from unstructured documents fairly quickly. Then they can use a variety of tools and technologies to convert the unstructured data into a structured format that visualises, and generates actionable insights. For example, converting lease data into a structured format could also provide benefits to property management, lease administration, and billing processes as it would be easier to integrate the data and store it in a more centralised manner.

Eventually real estate companies would be able to enhance their overall productivity and let their employees take on more meaningful tasks.

Real estate companies may also have to revisit their talent strategy, as using R&CA technologies may require reskilling existing employees to do higher order work that requires thoughtfulness and discernment. To learn more about this, see the 'People' section

Automation probability of key occupations

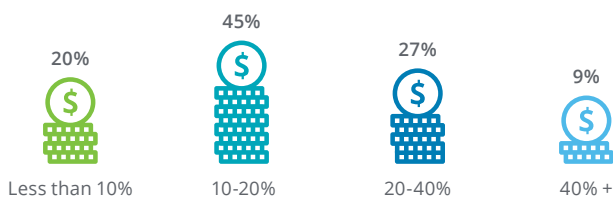


Note: The numbers mentioned above are based on the research paper "The Future of Employment: How Susceptible Are Jobs to Computerisation?"

Source: Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting and Social Change*, 114, 254-280. <http://doi.org/10.1016/j.techfore.2016.08.019>

Expected cost savings through RPA implementation

Savings anticipated by organisations



RPA technology is expected to help organisations achieve significantly higher savings and productivity gains.

Source: Deloitte Global Shared Services Survey, 2017.

NUMBERSPEAK #3

Where should companies start?

Given the apparent benefits of R&CA technology, companies should consider both evaluating processes and tasks that can be automated and the technology implementation approach.

Evaluate processes and tasks

To begin with, companies should assess current processes and tasks and identify what tasks are eligible for RPA and cognitive automation either respectively or collectively. Some of the key considerations could be the large volume and repetitive nature of work, scalability through addition of labour, high incidence of errors, use of traditional workflow tools, budget constraints that are limiting system modernisation, and finally workflows where decision making is based on disparate systems.

Roles requiring perceptual human skills such as handwriting recognition or facial identification, and other cognitive abilities, like planning and reasoning, could also be considered. Based on our analysis of some of the key jobs in the RE sector (highlighted in NUMBERSPEAK 3#), we believe many property appraisal, budget analysis, accounting, bookkeeping, and auditing and property management related tasks are ripe for RPA application.

Real estate companies may even consider using R&CA technology for future cash flow projections, billing, payables processing and payroll applications.

However there are a number of real estate occupations and skills that are less likely to be automated. These include architectural and engineering managers (1.7%), architects (1.8%), landscape architects, (4.5%), architectural and civil drafters (52%), electrical engineers (10%), industrial engineers (2.9%), civil engineers (1.9%), and mechanical engineers (1.1%).

Assess implementation approach

Along with assessing processes and tasks, companies will need to evaluate which technology approach they wish to pursue. This will largely depend on their budgets and estimated return on investment, and the sense of urgency to automate existing tasks.

In addition, real estate companies should consider two more things which go beyond financial considerations. First, it would be an imperative for companies to evaluate and implement data access, protection, and privacy measures based on the number of tenants' and employees' personally identifiable information (PII) processed using these technologies. Secondly, owners should acknowledge that the application of R&CA technology would enable information and analysis to be used across different functions. This would require more collaboration between a broader group of stakeholders.

The bottom line

As automation transforms industries and changes the nature of work, it is helping companies go beyond conventional barriers. To date real estate owners have generally been slow movers in this space.

This year there is a real need to consider how best to embrace automation to drive operational efficiency and augment productivity. And like any new technology, R&CA typically comes with the promise to radically improve routine tasks by making them faster, cheaper, and more accurate.

As the process matures, companies can then look beyond the immediate and begin to use R&CA to create more value through improved decision making rather than just cost efficiencies.



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