



Business-friendly Solutions

Reimagining Corporate Finance Functions with Cognitive Technologies





Executive Summary

A recent study by America's SAP Users' Group revealed that “too manual/time-consuming” processes and “moving data across too many systems” are the major challenges faced by today's Corporate Finance functions.

The Corporate Finance function is largely driven by standard policies and procedures. Many companies conduct finance operations manually and use extensive paperwork, facing the risk of documentation errors and delays in processing.

Personnel working in the Account Payable and Account Receivable functions spend an awful lot of time dealing with a vast majority of non-standard invoices that are received in multiple different formats. A huge effort goes into activities like Invoice approval and categorization, Invoice matching and verification, Data capture and validation, Assembling the required documents for payment authorization, Accounting and reporting.

A major challenge is the enormous amount of time spent by the Account Payable and Account Receivable functions dealing with a bulk of non-standard invoices that are received in multiple formats.

Bringing in technologies and processes to address a plethora of mundane tasks, can potentially increase accuracy and speed while freeing up time for finance professionals to focus on more value added work for the organization.

However, finance leaders must look beyond the usually quoted clichés of appending a value to the business and existing operating models. Instead, it's vital they consider innovative ways of producing better performance, contributing to more diverse and rewarding communication and enhancing resilience with cognitive technologies.

In this paper, we proffer a hypothesis and examine the possible future of the Corporate Finance through Automation, that harnesses the power of cognitive technologies.





Introduction

The rise of automation, artificial intelligence (AI) and other cognitive technologies is helping create new opportunities for automation in finance functions.

Cognitive technologies such as AI and machine learning are not new concepts. In fact, AI has been around as an educational discipline since the 1950s. Today, technological innovation is essentially transforming the tasks and role of the finance function. What's also changed is that we are on the cusp of something new, where computer performance, through machine learning and cognitive technology, can outpace human performance.

Cognitive technology is a collective term that encompasses are as such as artificial intelligence, Machine learning, NLP (Natural language processing), Intelligent Character Recognition, Computer Vision and Deep Learning.

In the finance function, monotonous manual tasks between systems are termed by some as 'swivel chair processes.' Usually, this involves a complex technical workaround, where an accountant manually enters data into one system, before inputting the same data into another system. Without a swivel chair, turning from one system to another would greatly impede the transfer of data. Cognitive technologies already have the capacity to automate the combined data from different systems; swivel chair processing is heading toward extinction.

Blending AI/Cognitive technologies & RPA is proving to be a very useful solution in automating invoice processing. RPA is an intelligent software that can monitor folders and corroborate invoice value with a Purchase Order and GRN (Goods Received Note). AI enabled OCR (Optical Character Recognition) can extract information without the need for manually defined templates. With machine learning and data analytics, businesses can predict cash flow, assist in improving collection and inform stakeholders of significant delays.

The more intelligent technologies become, the larger the role AI will play in the accounting area. As a result, Cognitive technologies are becoming more effective at validating transactions, matching quantities and prices, and determining which transactional documents require exception handling.

A combination of these technologies can be used to free employees from performing manual and repetitive tasks, while eliminating errors and delivering better data accuracy across finance and accounting. This can help businesses reduce both errors and costs while boosting efficiency.

What experts think of the future of Corporate Finance

A recent research by McKinsey's ranked the key activities performed in typical Corporate Finance function according to their perceptivity to automation.

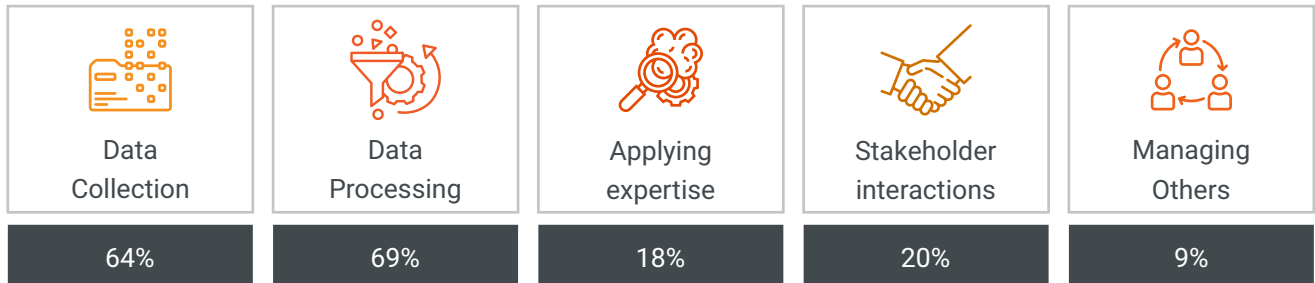
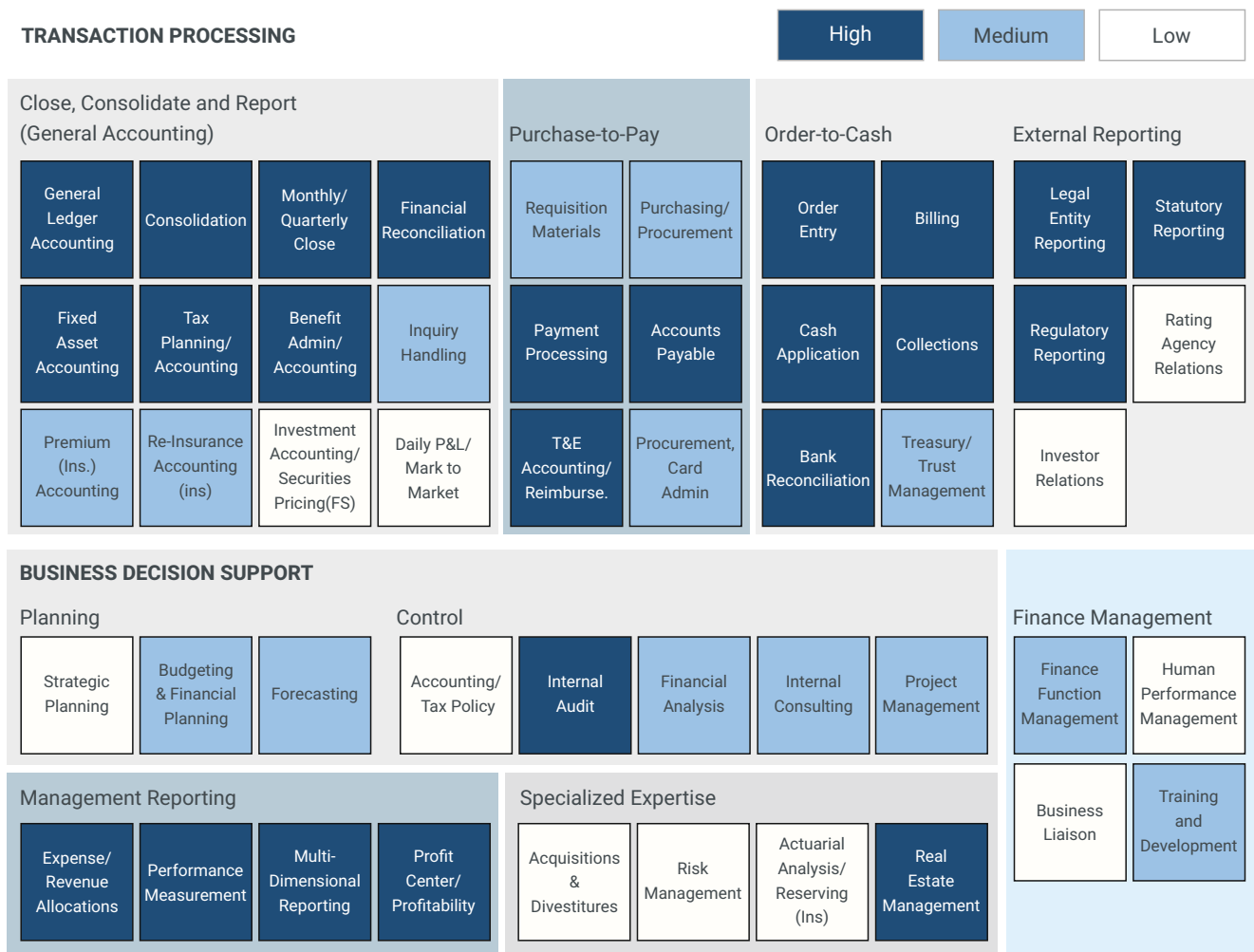


Figure: The potential for automation of the basic finance activities

The above activities that are most suited for automation include data collection and data processing, including expected physical work. Less automatable activities include managing others, applying expertise, stakeholder interactions and unpredictable physical work. McKinsey's forecast is that: 'while few occupations are fully automatable, 60 percent of all occupations have at least 30 percent technically automatable activities.'

Industry view on perceptivity of automation within different process areas of Corporate Finance function is well summarized in a recent study by Deloitte. Below Figure is a pictorial representation of the same



The current state of Cognitive Technology adoption in Corporate Finance

According to a 2018 research study by The Hackett Group, 56 percent of finance organizations invested in some form of process automation to streamline and optimize their business processes.

Take Monthly Management Information as an example. Computer packages are now available that can deliver management information with the click of a button. The purpose of the finance experts, therefore, shifts from one of information acquisition and creation to the interpretation of the meaning and curating the information outputs produced by the software solution.

PwC partnered with AI-based software providers not only to analyze billions of data points, applying judgment to detect anomalies but also to deploy Machine Learning for Contract Analysis.

Likewise, Thomson Reuters also collaborated with AI-Based software providers to deliver AI driven Contract Remediation solutions.

For optimizing budget and financial forecasting, Uber is using a “Machine Learning platform” called Michelangelo which has proven to be very effective. These types of ML platforms are also used to find fraudulent invoices for clients.

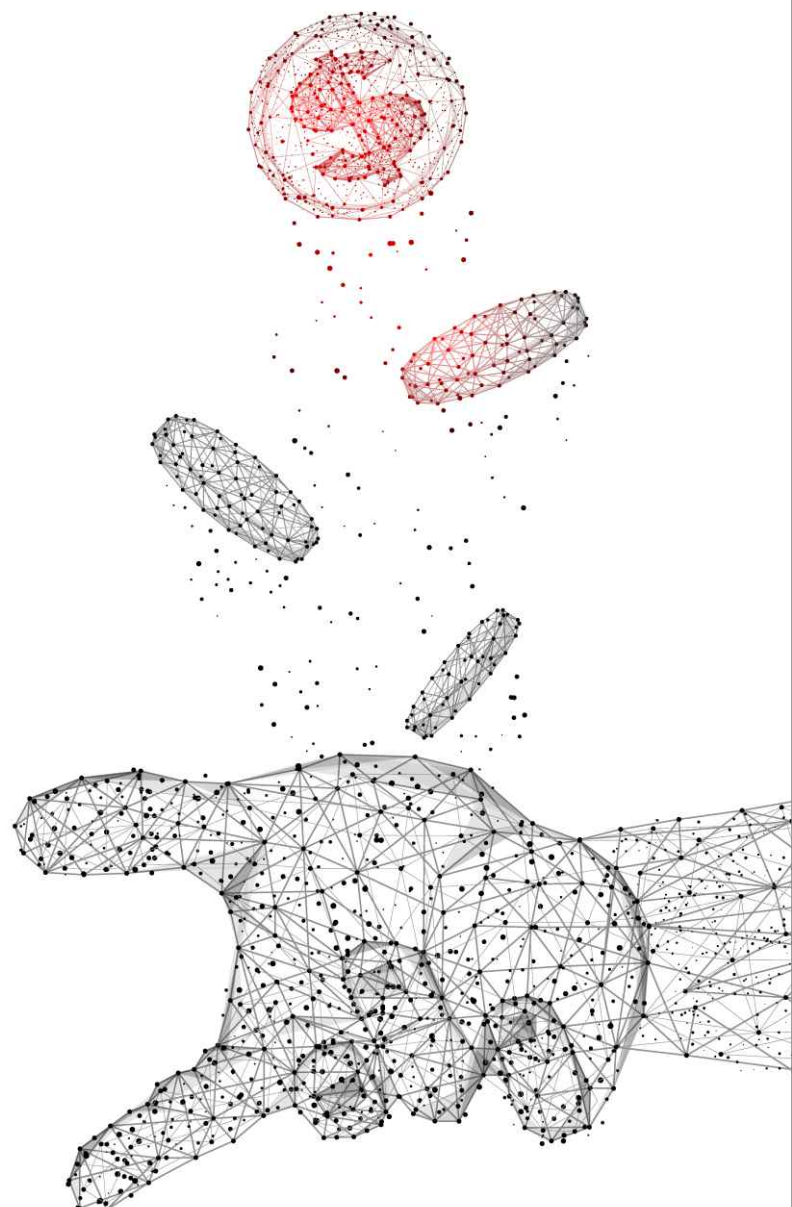
One of EY’s global clients uses a Machine Learning system, which processes millions of invoices each year with 97% accuracy and has already been rolled out to over 50 companies.

IBM and Deloitte are making the most of cognitive technologies as well. IBM is speeding up its Procurement to Payment process through cognitive bots. With the help of IBM Watson, KPMG rolled out AI-Driven tax Document Review.

Meanwhile, Deloitte created detailed Narrative Reports of individual Tax Returns using NLP. Tax professionals are increasingly relying on these reports to provide more targeted financial advice to clients during consultations.

These technologies are also saving millions of dollars for multinational businesses. Unilever saved multi-million dollars in savings by reducing forecasting errors from 40% to 25% using AI & Analytics.

Reynolds Aluminum also reduced forecasting errors using AI/ML, resulting in a reduction of 1 million pounds in inventory.



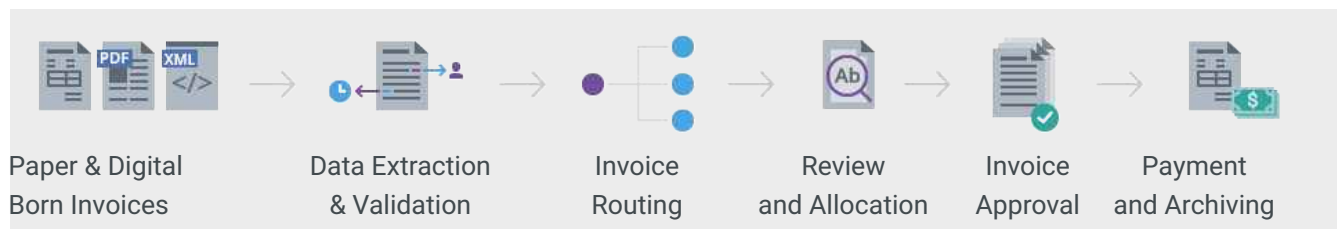
Use Cases for automation through Cognitive technologies in Corporate Finance

There are large number of practical user cases that are well suited for automation thru AI and Robotics. This article explores some of the practical use cases

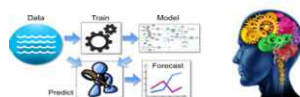
Accounts Payable	Accounts Receivable	Payroll/Other Finance	Operation and Planning
<ul style="list-style-type: none"> • Data entry of non-electronic invoice • Invoice matching • Expense Approval • Audit of Supplier payment 	<ul style="list-style-type: none"> • Generate and validate invoice • Creating reports (AR ageing, Credit holds etc.) • Analyzing & processing disputes 	<ul style="list-style-type: none"> • Audit Timesheet • Detect Timesheet error • Harmonize data against multiple time-keeping systems • Calculate deductions 	<ul style="list-style-type: none"> • Cash flow Estimation • Account Reconciliation • Journal entries • Prepare wire-transfer requests

The following section takes a Deep Dive on end-to-end process flow of a few of these use cases

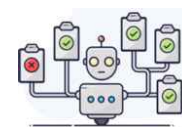
Blending AI/Cognitive & RPA solution brings greater accuracy and scalability in Invoice Processing.



- Data extraction with the use of
- Text recognition (OCR)
- Multi-lingual Hand print extraction (ICR)

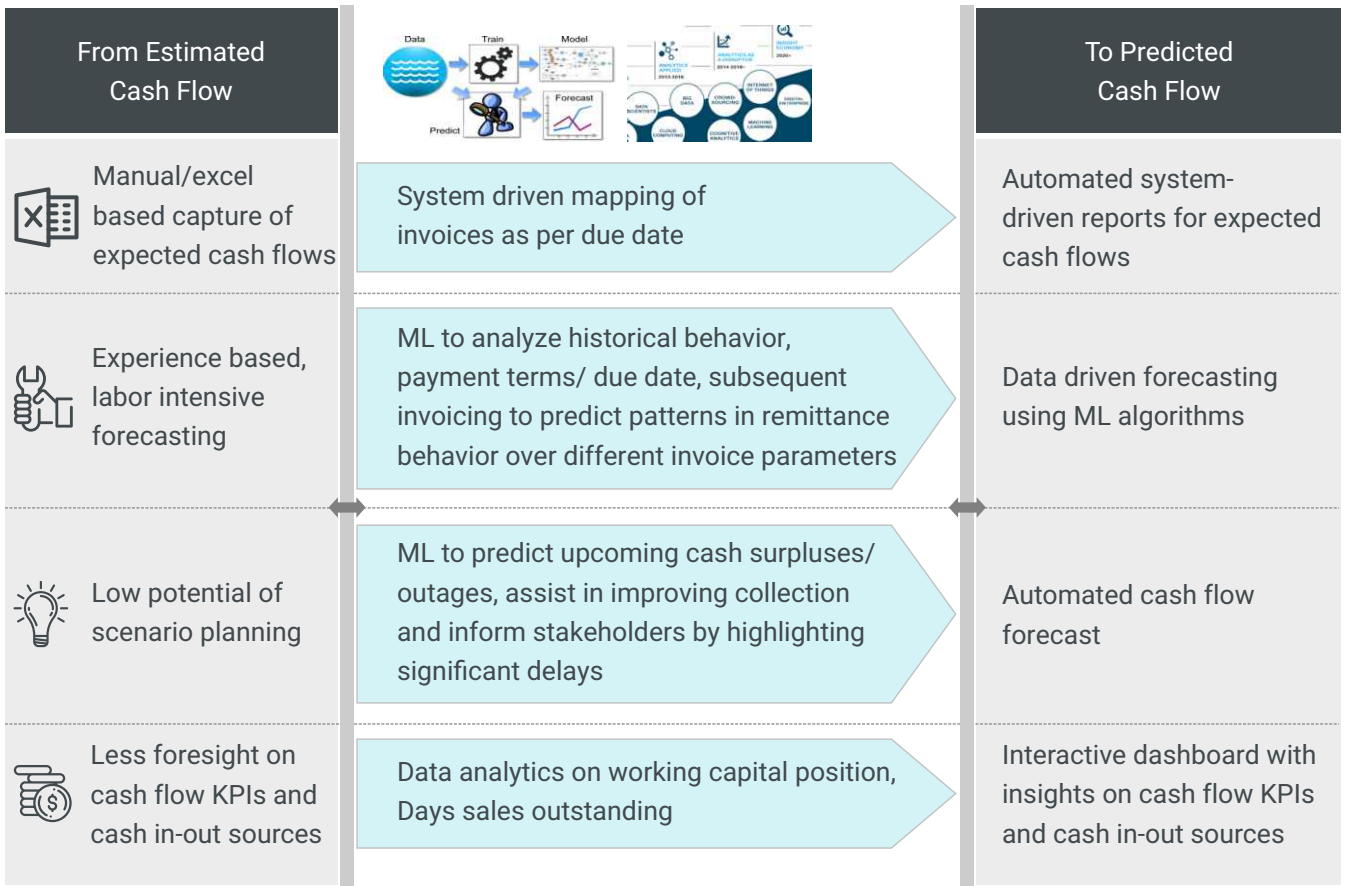


- AI enabled OCR is capable of extracting information without the need for manually defined templates
- Extract and assemble semi-structured data
- Document matching
- Categorize documents and sort them into predefined document classes for routing
- Review document and detect anomalies and exceptions

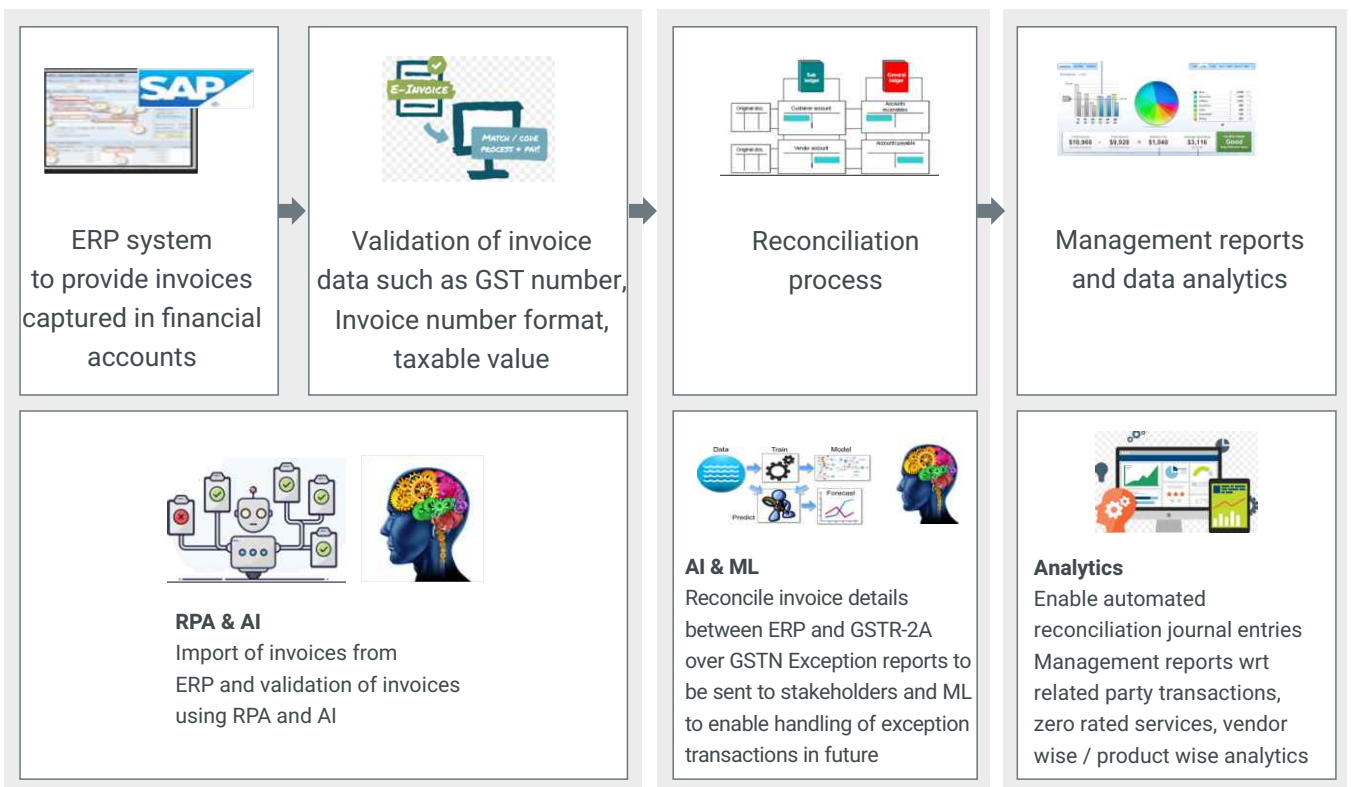


- Monitoring folders where invoices are stored in different formats
- Corroborate invoice value with Purchase Order and GRN where applicable
- Validation of details such as Invoice number, GST number
- Report details such as applicability of TDS
- Send exception emails where invoice validations fail
- Trigger approval workflows
- Payment
- Accounting entry

Machine Learning and Data Analytics can enable Corporate Finance Function move from Estimated Cash flow to Predictive Cash Flow.



AI and Data analytics can bring automation in Reconciliation process to a large extent



Conclusion

Adopting Cognitive Technologies in Corporate Finance function is quickly becoming an indispensable strategy for large and mid-size businesses alike. Future employee-centric cultures will be hosted in digitally enabled workspaces that drive productivity.

In order to remain cost-effective as well as competitive in the market, businesses must look for solutions to automate their finance functions. These solutions should be simple, scalable and at the same time, functional enough for their employees to adopt right away.

Progressive businesses are already adopting cognitive technologies to automate their Corporate Finance functions. Automation in the finance function is contributing to minimize repetitive and automatable tasks, fewer error-prone documentations and greater scalability.

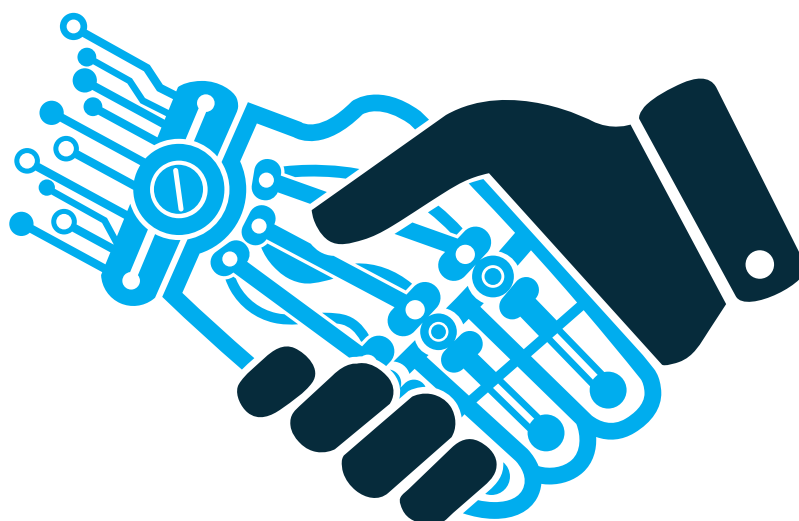
Corporate finance departments in many companies are increasingly turning to cognitive technologies to enhance their ability to innovate continuously. With machines handling routine tasks, the accounting and finance professionals will have more time to focus on advisory roles.

The future of finance: join us on our journey

All businesses face common obstacles when it comes to building capacity, capability, and reliability within their future finance functions. However, future-proof businesses are innovators and early adopters. With this research, we want to help more organizations lead from the front.

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Partha Sarathi has over 19 years of diverse technical and functional experience, associated with Application Development and System Integration Services in several different business areas such as Banking, Financial Services, Insurance and Healthcare. At present, Partha is working with ITC Infotech as Senior Program Manager where he manages delivery of multiple projects for major banking clients across different geographies.

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