Three digital technologies accelerating FP&A into the future

New and emerging technologies will transform the FP&A function as companies want to unlock the full potential of data. Leaders will need to know how to utilize these technologies and effectively implement them so that FP&A can focus on being a strategic pioneer rather than a historical scorekeeper by increasing deeper communication and partnership between FP&A and the business.

There are three key technologies that will transform the future of FP&A



While the business can derive benefits from each of these technologies individually, the effective combination of all three is required for FP&A to achieve the greatest impact on the business.

Cloud

While many organizations have originally resisted the switch to the cloud due to their large investments in on-premise, legacy platforms are nearing their "end of life," and organizations must adapt accordingly. Beyond sunsetting support for many on-premise products, leading vendors are also providing frequent functionality updates and improvements to further justify the migration to the cloud. **New hybrid infrastructures** are encouraging a gradual shift to cloud, allowing for increasing cloud usage as the on-premise systems depreciate. With **70% of organizations** already having at least one cloud application today, organizations are expected to have **100% cloud-based** computing in the near future.¹

Switching to cloud unlocks the following abilities, which are currently unavailable or very challenging with onpremise solutions:

Standardization	≫	٠	System upgrades in the cloud ensure all users of the financial management system have access to the most up-to-date version. This also helps to improve collaboration across different entities and regions.		
Stanualuization		*	Improved disaster recovery, as back-up solutions and capacity can be accessed from anywhere, considering different circumstances, such as loss of power.		
Streamlining	≫	•	Cloud-based ERP, for example, can allow disparate teams to create and access the same data, which can enable quicker decision-making.		
		*	Cloud models, which employ "in-memory" computing, provide the ability to access real-time data on demand, allowing organizations to identify issues within the business quickly and respond more efficiently.		
Flexibility	≫	•	With cloud services, companies usually pay on a "per usage" basis, thus shifting upfront capital expenditures to operating expenditures, resulting in large cost savings to the organization.		
Scalability	≫	*	Scalability or "elasticity" is inherent to any cloud model, thus businesses have the ability to scale support functions rapidly in response to business growth or reduce the size of the business during a downturn or recovery.		
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"Finance leaders must leverage cloud-based FP&A solutions that will enable capabilities like machine learning, self-service reporting anytime anywhere, and connected planning at a faster speed and lower total cost of ownership."					
– Samir Jaipati, EY Finance Consulting Solutions leader					
Case in point: By developing a cloud-based solution that scales to meet demand, Ernst & Young LLP helped the Rock & Roll Hall of Fame develop a digital platform that enables engaging fan experience and delivers value for fans and business. Click here to learn more.					

Notes: 1. "FP&A in 2020: A Look Back and a Look Ahead"./Source: APQC. December 2019.



Big data

FP&A is at the forefront of the push toward deriving valuable business insight from big data. Advancement in technology has lowered the cost and scaled data processing, allowing companies of all sizes to unlock the value across multiple data sources. Big data is a **"must have"** for analyzing structured and unstructured data to make better strategic decisions, as companies are able to gather large amounts of data to derive **real-time business insights** that relate to customers, risk, profit, performance and enhanced shareholder value.

It is typically characterized by the four Vs:

Volume	≫ .	The amount of data being created is vast compared to traditional data sources. Enterprises gather and process data from numerous sources, including click stream, social media activity, business transactions and sensors from smart-connected devices.
	•	In the past, storing data was expensive, but cost-effective platforms like data lakes have made it easier for enterprises to deal with the scale of data.
Variety	≫.	Data comes from different sources and in multiple formats – from "structured" (e.g., spreadsheets, database, financial statements) to "unstructured" (e.g., emails, social media posts, online feedback).
Velocity	» `	Data is being generated extremely fast – a process that never stops, even while we sleep. With the development of the internet of things (IoT), data must be handled in a timely manner, as it flows into enterprises at an extraordinary speed. There is a need to process and utilize fast-moving data streams from RFID markers to sensors in real time.
Veracity	» .	Big data is sourced from many different places, and as a result, enterprises need to test the quality of the data. There is need to link, match, cleanse and transform the data across systems. Companies need to connect the dots, make sense of relationships, hierarchies and linkages, and take control of the data.

FP&A teams are leveraging advances in big data technology to do their job of guiding companies' strategic plans and investments, as well as building profitable operations. To leverage big data, move up the complexity curve and create more strategically actionable insights, FP&A teams are collaborating and engaging with business partners to understand what is really important to them. Because companies can analyze much more data, faster and cheaper than ever before, FP&A is equipped to present a much more robust and sophisticated analysis.

Blockchain and internet of things (IoT) enable companies to look at other value-chain entities such as suppliers, contract manufacturers and system integrators that they depend on to deliver products and services to take planning, analysis and forecasting to the next level.



of finance leaders say that blockchain will be the function's most important technology in five years¹ Blockchain is allowing FP&A departments to effortlessly track and manage data, resulting in faster and more effective reporting. It is challenging the accepted norms, improving transparency across the value chain, and transforming finance, supply chain and customer relationship management for a digital, connected age. In the future, FP&A will be able to leverage blockchain to increase enterprise security, manage extended value chains and streamline contract enforcement. Instead of having to reconcile the internal system of record with information from suppliers, partners and customers, FP&A will be able to pull data from the blockchain network that supports the end-to-end

value chain. Companies have traditionally needed to make a case (e.g., weakness around reporting and tax efficiencies) for getting data related to external factors to make more informed decisions. Going forward, blockchain networks will enable **access to external data with frequent, near real-time refreshes**. Blockchain will enhance the FP&A process for improved decision support by enabling the **transformation of transactions** with partners, suppliers and customers across the entire value chain through **real-time data and visibility** into the transactions and **unparalleled protection from fraud and unauthorized use**. Blockchain offers the potential to improve market data sharing and integration. Ultimately, this will help FP&A move **beyond linear models**, integrate more touchpoints and improve forecasting.

Deep Ghumman, EY FP&A leader, outlines how blockchain will transform the future of FP&A, saying:

"Blockchain technology helps enterprises access the information across their value chain of partners, key suppliers, contract manufacturers and customers. FP&A teams are able to access and use the data for the entire ecosystem to run scenarios and provide real time insights."

Case in point: By implementing a blockchain solution and streamlined forecasting, Ernst & Young LLP and Microsoft created a more transparent and connected ecosystem that is better for the Microsoft Xbox business and for its partners. Click <u>here</u> to learn more.

1. "How can the digital transformation of reporting build the bridge between trust and long-term value?," EY, <u>www.ey.com/en_gl/assurance/how-digital-transformation-of-reporting-connects-trust-and-long-term-value</u>, November 2018.

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of organizations are likely to make considerable investments in the internet of things and app and web-enabled markers¹

Internet of things (IoT) presents another huge opportunity for companies, as smart-connected devices give access to better information, enabling better decisions. IoT serves as the bridge between the physical and the digital world by connecting a network of devices, using the internet and embedded software and sensors to enable the devices to communicate, collect and exchange data with one another. Companies are using active and passive sensor data from the value chain to look for correlations across information that wasn't previously analyzed together. With more **accurate, real-time data across the entire value chain**, companies are planning and forecasting inventory, cash, etc., more effectively.

IoT enables the "connected enterprise" paradigm in which all aspects of a business' operations are digitalized, and people and technology across the value chain are used to create more efficient processes and unlock more value. Advantages of a connected enterprise include the ability to make more informed decisions by leveraging all of the value chain data at its disposal, uncover areas where **productivity** can be improved, and improve customer experiences by having the infrastructure, data and automation in place to meet customers' needs.

"Innovative businesses tap into a plethora of insights to refine products and manage margin through pervasive IoT devices."

- Julie DeDomenic, EY Cost Management & Control and FP&A leader

Case in point: By using IoT solutions to leverage the data generated by professional cyclists, Ernst & Young LLP and Velon built a platform that brings cycling closer to the fans, lays the foundations for an effective business model and monetizes global viewership to transform the economics of the sport. Click <u>here</u> to learn more.

Machine learning/artificial intelligence/visualization

Machine learning (ML), artificial intelligence (AI) and visualization technologies enable an advanced analytics platform for FP&A to empower businesses and functions to share information and make **connected**, **data-driven decisions**. Analytics starts with data, but using techniques such as predictive modeling, statistics and visualization turns the data into insights. Most importantly, analytics is always linked to specific business decisions and outcomes. NextGen analytics tools integrate data from both financial and operational systems, resulting in a common, much **richer view of the business**. These new technologies give management teams a comprehensive view of the business across products, customers and geographies. Business users can analyze the historical data and plan within the same user interface to make quick, informed decisions collaboratively.



A cross-functional "connected planning" platform supported by data, analytics and machine learning can help an organization act as a cohesive unit while navigating through uncertain times. A data-driven and machine learning supported approach to planning can better inform decisions across an organization on how to drive growth and mitigate risk.

Advanced analytics utilizes ML and AI to **improve an organization's ability to predict**, **forecast and perform whatif analysis**. In an EY survey³ of CFO's top priorities for finance function, "improving data and analytics capabilities to transform forecasting, risk management and understanding of value drivers" was cited as **the No. 1 priority**. ML and AI will derive insights from data, which allows organizations to make better informed data-based decisions that previously relied solely on management's intuition and basic historical data analysis. Data visualization technology dramatically changes how FP&A communicates valuable analysis and reporting by moving from static to dynamic reporting while making it more accessible to executives. Leading technologies enable finance function to **schedule**, **automate and tailor visualizations for key stakeholders**, making the data they most care about "the first thing they see when they log on."

"The Future of Jobs Report 2018," World Economic Forum, <u>www.weforum.org/reports/the-future-of-jobs-report-2018</u>, 17 September 2018.
Ibid.

3. "DNA of the CFO: Is the future of finance new technology or new people?," EY, https://www.ey.com/en_us/consulting/is-the-future-of-finance-new-technology-or-new-people, 11 April 2019.



Financial forecasting

Connected

planning

Liquidity 8

capital

Demand planning

Inventory

planning

planning

Data

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Advanced analytics using ML, AI and visualization has been shown to improve FP&A in multiple ways:



"Advances in technology have allowed the offices of the CFO to simultaneously utilize multiple technologies to address otherwise unreachable problems. Al solutions allow for insightful, seamless predictive information that are self correcting and updating with ML. These outputs can now naturally integrate with an organization's previous investments in planning and budgeting platforms. Visualization tools can sit on top of the collective data set, enriching the information and providing deeper insights outside of the rows and columns of excel. But the focus should not be technology. The focus is finding ways for them to help produce a better answer for the team."

- Taylor Adams, EY Enterprise Performance Management leader

Case in point: By using advanced analytics, including process mining and real-time satellite data, Ernst & Young LLP helped a large advanced manufacturing company anticipate customer demand while maintaining the flow of essential goods to avoid supply disruptions and make better-informed decisions. Click <u>here</u> to learn more.