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THE DIGITAL TRANSFORMATION OF TREASURY: A CRITICAL IMPERATIVE



THE DIGITAL TRANSFORMATION OF TREASURY: A CRITICAL IMPERATIVE

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The Digital Transformation of Treasury – A Critical Imperative

Against a backdrop of new business models, changing regulations, increased competition from the digital natives and an increasing focus on real time, change and uncertainty have become the new normal. Furthermore, the pandemic has accelerated the momentum towards the Digital First strategy, whilst additionally highlighting the need for a more agile, secure and scalable IT infrastructure.

However, the current technology landscape contains a tsunami of innovative technologies that are available now or just on the horizon. Zanders, a leading global treasury, finance and risk consultancy is delighted to collaborate with AFP in the production of this 4-part series of articles to take a more practical look at the Digital Transformation of Treasury. The aim is to both define and demystify the enabling technologies in addition to highlighting the relevance and the fact that adoption of new technology is no longer a choice, but a critical business strategy.

Our first article takes a closer look at the key technologies that can elevate treasury as it progresses the journey towards becoming a Digital Treasury. It considers a number of key questions including:

- What are the key technologies now available?
- What is the relevance to Treasury?
- What are the potential benefits?

It is becoming increasingly critical for survival that companies remain both relevant and competitive during these constantly changing times. The second article focuses on the adoption rates of some of the key transformational technologies including identifying which ones are now becoming embedded within the digital first ecosystem and, importantly, the associated impact of adoption on treasury performance.

Despite the opportunities to accelerate and elevate treasury performance through adoption of these transformational technologies, evidence suggests Treasury has not been leading the charge. In the third article, we examine what is causing the ‘drag’ or inertia that is currently resulting in the low adoption rates within Treasury. Whilst every corporate has its own unique circumstances, it identifies some common characteristics.

Our final article considers how a digital treasury transformation can practically be achieved through a comprehensive roadmap. It also highlights some key guiding principles to build a successful digital transformation roadmap.

As the journey towards a digital treasury gains momentum, the partnership between man and machine will be redefined. These transformational technologies will have a profound impact on treasury as they automate, remove friction, and accelerate processes. The move towards predictive and prescriptive analytics will elevate treasury performance, enabling faster, better decisions whilst additionally helping to mitigate current risks. This ecosystem of transformational technologies will redefine what is possible.

We hope you find the articles provide thought provoking and valuable insights,

Zanders



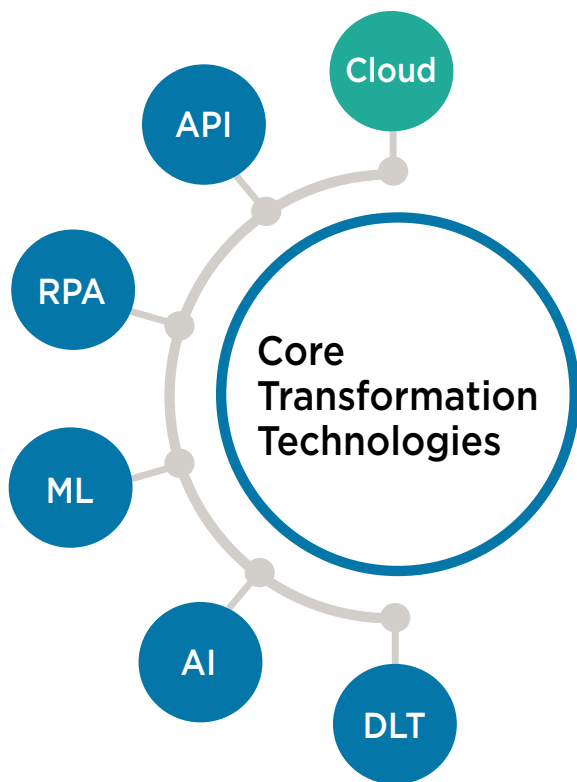
THE DIGITAL TRANSFORMATION OF TREASURY: A CRITICAL IMPERATIVE

THE CURRENT TECHNOLOGY LANDSCAPE

Against a backdrop of new business models, changing regulations, increased competition from the digital natives and an increasing focus on real time, change and uncertainty have become the new normal. Furthermore, the COVID pandemic has accelerated the momentum towards the Digital First strategy as companies look to stay competitive and relevant in the current environment. However, the current technology landscape contains a tsunami of innovative technologies that are available now and just on the horizon. In this first article in our four-part series, we take a closer look at the key technologies that can elevate treasury as it progresses the journey towards becoming a Digital Treasury.

What are the key technologies?

We first consider the core ecosystem of technologies that will have a profound impact on the performance of treasury. The diagram below highlights the six core transformational technologies that will ultimately re-define and elevate corporate treasury.



Cloud Technology: This must be viewed as a foundational technology, as industry discussions have evolved over the past 10 years from the “what is cloud technology?” to the current view “why not cloud technology?”. At its core, this technology provides flexibility and agility, with the added financial benefits of leveraging remote resources.

“Since these financial SaaS are on the cloud, functions and services are updated and added as needed in accordance with technological advances and regulatory changes, and there is almost no need to plan and execute system modifications in-house.”

Mitsuru Tsuboi, Deputy General Manager, Planning & Administration, Finance Division, Mitsui & CO., LTD.

THE CURRENT TECHNOLOGY LANDSCAPE

Application Program Interface (API): APIs should also be viewed as a core component within an overall digital first strategy. This technology makes it easier to connect and integrate real time capabilities.

Robotic Process Automation (RPA): The automation of rules-based processes using software. This technology is typically targeted at repetitive and mundane tasks, but the robots can operate around the clock, faster and with 100% accuracy.

Machine Learning (ML): Machine Learning is about building applications that learn and find patterns and features in substantial amounts of data in order to make decisions and predictions based on new data.

Artificial Intelligence (AI): This technology enables computers and machines to mimic the learning, problem-solving, and decision-making capabilities of humans.

Distributed Ledger Technology (DLT aka Blockchain): A consensus of replicated, shared, and synchronized digital data spread across multiple sites, countries, or institutions.

One final emerging technology on the horizon is 5G. Whilst this 5th generation mobile network offers higher performance and improved efficiency, the specific relevance to treasury is still under debate. 5G will be a key enabler of the IoT (Internet of Things), which is designed to connect virtually everyone and everything together including machines, objects, and devices. However, the performance benefit is maximized where high bandwidth and low latency is required, for example virtual and augmented reality devices. Treasury data and normal treasury processes do not typically require high bandwidth, so the benefits might be limited to the associated big data analytics connected to a predictive and prescriptive visualization technology. This is one technology to watch.

What is the relevance to Treasury?

When we consider the digital transformation journey, understanding the relevance of the plethora of technologies available is critical. Whilst the above technologies are all at a different stage of evolution and maturity, they all offer the opportunity to re-define what is possible, helping to digitize and accelerate existing processes and elevate overall treasury performance. To help polarize the potential application and value of these technologies, we need to look through two lenses. Firstly, we recap on some of today's mainstream challenges that currently impact the performance of the treasury function, including how these technologies provide a solution. Secondly, we consider how these technologies provide the opportunity to both optimise and elevate the treasury function.

1. Challenges and Opportunities based on the 2019 PWC Global Benchmarking Survey.

Corporate Treasury Challenge	Enabling Technology	Key Advantages
1. Cash Flow Forecasting	Machine Learning and Artificial Intelligence based solutions contain smart algorithms to mine data and generate highly accurate forecasts. Additional simulation engines enable companies to consider scenarios and measure impact.	Cognitive cash flow forecasting systems can learn and adapt from the source data, enabling the automatic and continuous improvements in the accuracy and timeliness of the forecasts. Additionally, scenario analysis accelerates the informed decision-making process.
2. Currency Risk Management	Machine Learning and Artificial Intelligence based solutions can create smart algorithms which can perform multiple calculations at once. Constant monitoring determines the optimum time to trade.	This cognitive technology is on a continuous learning loop and therefore continues to update its decision-making process which helps improve future predictions.
3. Working Capital Management	Machine Learning, Artificial Intelligence, and advanced OCR (Optical Character Recognition) based solutions can now accelerate the cash application process, reducing DSO (Days Sales Outstanding) and improving working capital.	The cognitive technologies combined with advanced OCR can read PDF and email remittance information as well as screen scrape data from customer portals. This data helps automate and accelerate the cash application process with levels exceeding 95% straight through reconciliation now being achieved. Applying cash one day earlier has a direct positive impact on DSO and working capital.

2. The Opportunity to Optimise and Elevate Treasury Performance.

REAL TIME PROCESSING:

With the increasing focus on real time treasury and the broader digital first strategy, API technology has a place as part of a blended solution architecture. Whilst API technology is not new, the relevance to finance really started with Europe’s PSD2 (Payment Services Directive 2) Open Banking initiative, with API technology underpinning this.

There are already several use cases for both Treasury and the SSC (Shared Service Centre) to help both digitize and importantly accelerate existing processes where friction currently exists. The following table provides additional visibility around some of the use cases that currently exist.

API Message	Treasury	SSC	Application and Benefit
Real Time Balance Enquiry	<input checked="" type="checkbox"/>		Can be obtained before treasury finalises its cash position and completes any hedging transactions. Provides the opportunity to minimize any cash buffer currently maintained due to deficiencies in the CFF process.
		<input checked="" type="checkbox"/>	Provides the opportunity to automate a current manual process to check treasury have funded an account before a payment file is released to bank.
Real Time Credit Notification	<input checked="" type="checkbox"/>		Provides the opportunity for Treasury to make real time informed decisions to optimise liquidity management.
		<input checked="" type="checkbox"/>	Accelerate the cash application process by 24 hours by applying funds real time as opposed to next day based on the EOD bank statement. This reduces DSO by 1 day and improves a key treasury financial metric.
Real Time Payment	<input checked="" type="checkbox"/>		Alternative to using SWIFT for urgent treasury payments.
		<input checked="" type="checkbox"/>	Automate current ad-hoc/nuisance manual payments that are typically made using a bank proprietary portal. This ensures maximum compliance through existing ERP/TMS controls.
SWIFT GPI Status	<input checked="" type="checkbox"/>		Immediate track and trace of both outbound and inbound cross border treasury payments.
		<input checked="" type="checkbox"/>	Support customer enquiry team through proactive more timely responses on payment status.
Real Time Transaction Status	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Timely automated notification around file and transaction level status (akin to the PSR via API message).
eBAM Messages	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Automate the opening/closing accounts and associated signatory updates.
Public Holiday Notification	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Automated and real time notification of ad-hoc public holiday changes (for example in India).
FX Interest Rates	<input checked="" type="checkbox"/>		Automated provision of FX rates
Pooling and Cash Concentration	<input checked="" type="checkbox"/>		Automated notification of pooling transactions
Payment Recall	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Secure way to initiate a payment recall request or payment cancellation.

(Please note that not all the above scenarios are currently supported by the banking sector)

DATA ANALYTICS:

Data is the fuel that powers Machine Learning and Artificial Intelligence solutions, so the ability to receive timely and accurate data will become a table stake as treasury looks to truly harness the potential of data analytics.

As the cognitive technologies become more mature, we will see treasury moving from the current descriptive analytics model, where big data is aggregated with insights provided into the past, onto the more predictive model where the statistical modeling and machine learning techniques analyze historic data and predict the future outcomes. The final evolution is prescriptive analytics, that uses a combination of business rules, machine learning, and computational modeling to recommend the optimum course of action for a given scenario. Combined with advanced data visualization capabilities delivered through cloud technology under a Software as a Service (SaaS) model, these capabilities will transform the role of treasury. Time will be freed up from the more traditional transactional type activities, enabling treasury to focus on the enhanced data analytics capabilities to support more informed, potentially time critical strategic decisions.

RPA FOR TREASURY:

Whilst the more advanced cognitive technologies will drive the greatest benefits to treasury, there is still a place for RPA within the technology ecosystem. RPA provides the opportunity to harness the power of a digital workforce, ideally suited to supporting manually intensive, time consuming, repetitive tasks. RPA technology enables employees to focus on higher priority and greater skilled tasks.

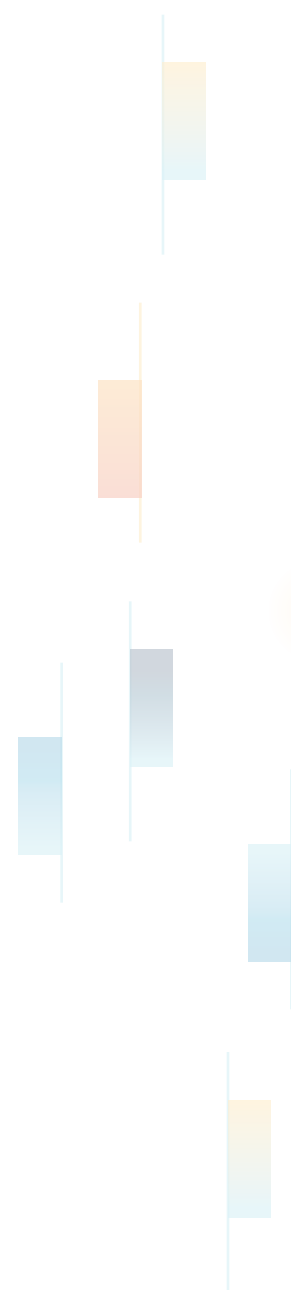
In terms of the possible application of this technology, examples include:

- Obtaining FX exposure information from multiple systems into a consolidated overview,
- checking the receipt of and loading bank statement information,
- converting data into a format instantly readable by another application,
- retrieving, combining, and compiling reports from multiple systems.

So as a technology, RPA will reduce processing time, reduce errors, improve compliance, and increase productivity, to name just a few of the benefits that will be achieved through adoption.

CYBER CRIME:

Another especially critical area is cyber risk, which should be a critical concern given treasury has a natural role to play in mounting defences against cyber-attacks. Machine Learning and Artificial Intelligence capabilities can help identify possible outlier transactions, which combined with robust operational procedures and a focused training strategy will help provide a resilient 'defence in depth' model.



DISTRIBUTED LEDGER TECHNOLOGY (DLT):

Whilst DLT or Blockchain is more of a long game, the potential transformational values cannot be understated. This technology will provide real value by removing business friction, enabling trust, and providing greater transparency. In terms of specific use cases, the list continues to grow and includes international payments, trade finance, electronic bank management, Know Your Customer (KYC) and reconciliation. Considering this list, some might say that trade finance is not normally a direct area of concern for corporate treasury. However, for companies that have significant trade activities, treasury will have an interest in the payments flows. If we consider the current process, this is typically underpinned by the letter of credit, which can include multiple participants across multiple countries and as a result its complex, paper based and sub-optimal. DLT can digitize this process, improving efficiency and overall end to end visibility, which delivers greater certainty with payments and the associated cash flows. Additionally, the use of smart contracts can help to determine the performance of a specific contract before a payment is released.

Looking through a treasury lens, this technology will help optimise liquidity, accelerate the reconciliation process, reduce the settlement cycle, and provide a secure and complete audit trail of immutable transactions.

Finally, given we are looking at DLT, it would be remiss not to reference cryptocurrencies given the increasing coverage in the press. Whilst these are not a technology, they are enabled through the use of distributed ledger technology. It's worthwhile noting that as at January 2021, there were more than 4,000 cryptocurrencies in existence. Additionally, as at November 2020, Coinopsy reported that at least 1,730 cryptocurrencies had failed - that is a significantly large number of dead coins! However, when we talk about the relevance of cryptocurrencies to treasury, the reality is that treasury is unlikely to be required to convert cash to bitcoins for example, in order to settle transactions. Crypto coins, like bitcoin, are really only for speculators or high-risk investors. The real relevance to treasury is more around the underlying technology - Distributed Ledger Technology, which does have a role to play as part of a digitised treasury ecosystem.

The Conclusion

As the journey towards becoming a digital treasury gains momentum, we will see the redefinition of the partnership between man and machine. These technologies will have a profound impact on treasury as they automate, remove friction, and accelerate processes. The move towards predictive and prescriptive analytics will elevate treasury performance and help mitigate current risks. This ecosystem of modern technologies effectively redefines what is possible.

Notes

<https://www.pwc.com/gx/en/audit-services/corporate-treasury-solutions/assets/2019-pwc-global-benchmarking-survey.pdf>



THE DIGITAL TRANSFORMATION OF TREASURY: A CRITICAL IMPERATIVE

CURRENT ADOPTION RATES

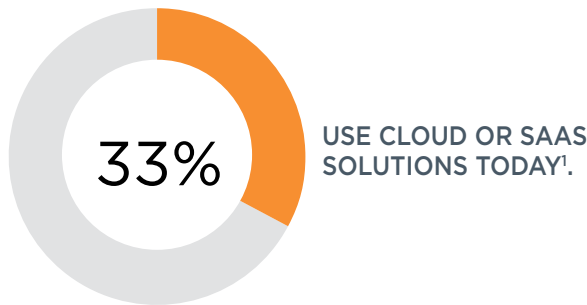
The forces of digital disruption are now driving change and it is really a case of ‘when’ and not ‘if’ a company will embrace a digital first strategy. With change and uncertainty becoming the new normal, the need for operational agility cannot be underestimated. It is critical for survival that companies remain both relevant and competitive in these constantly evolving times. In this second part of our 4-part series around digital transformations, we take a closer look at the adoption rates of some of the key transformational technologies we highlighted in Part 1. Which of these technologies are now becoming embedded within the digital first ecosystem and, importantly, what is the impact of adoption on treasury performance?

What are the current adoption rates?

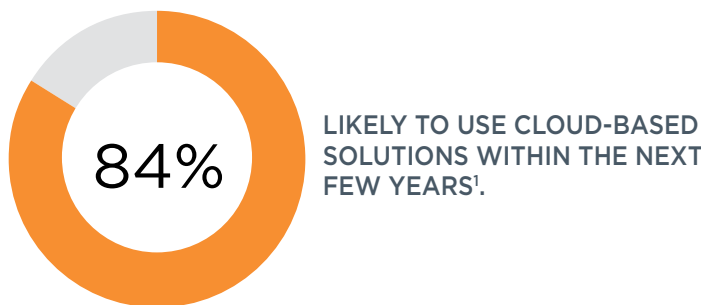
We first consider the core ecosystem of technologies that will have a profound impact on the performance of treasury. It is clear from the previous part in this series that modern technologies are already applicable to treasury through an increasing number of use cases, so what insights can we gain from the various industry surveys?

Cloud Technology

When we talk about ‘cloud technology’, we are generally referring to software applications and data storage in addition to the broader computing infrastructure that is available under a shared access model. So, if we focus on the specific relevance to corporate treasury, we are really looking at solutions like Treasury Management Systems (TMS) as well as a growing number of fintech providers offering bank agnostic capabilities from outlier detection through to cash flow forecasting and bank and transaction level reconciliation services. All of these are provided typically under a ‘Software as a Service’ (SaaS) model, with access from anywhere with an internet connection.



While this compares to the 36% identified in the Deloitte 2019 Global Treasury Survey, adoption within treasury is well below the current enterprise-wide adoption rates. If we consider Flexera’s 2019 Annual State of the Cloud report, this highlights 94% of enterprises are now using the cloud.



CURRENT ADOPTION RATES

But there are encouraging signs. This positive view was also echoed by the 2019 Economist Intelligence Unit data strategy study, which also stated that corporate treasurers view the advance of cloud computing as the most important technological development facing the industry over the next five years.

“Cloud services have always been the focus of OneConnect, especially financial cloud services. We provide cloud solutions for multiple financial verticals including banking, insurance and investment, to help our customers increase revenue, improve efficiency, improve service quality, reduce costs, and achieve digital transformation. With enterprises accelerating their cloud migration, we believe that cloud computing will bring significant market opportunities in the next two to three years”.

Mr Chen XuHua, OneConnect Chief Marketing Officer & Deputy General Manager, CEO of Gamma Team (OneConnect as an associate of Ping An Group)

These insights suggest that cloud or Software as a Service (SaaS) based solutions will start to become the technology deployment model of choice, given the advantages around an accelerated implementation, lower costs, less onerous system maintenance and, importantly in today’s increasing digital environment, greater agility.

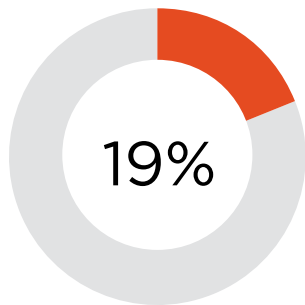
Robotic Process Automation (RPA)

Global RPA software revenue is predicted to reach nearly US\$2 billion in 2021 according to the latest forecast from Gartner, Inc. Forrester has predicted the RPA software market will total almost US\$3 billion in 2021. What is clear is that the initial interest in this technology is now moving into the adoption phase, applicable where manual repetitive actions are being performed by humans.



CURRENT ADOPTION RATES

Critically, this was expected to increase to 72% by 2020 and if this run-rate continues, RPA will have achieved near-universal adoption within the next five years. With the digital workforce becoming a reality, where is corporate treasury in the adoption curve?

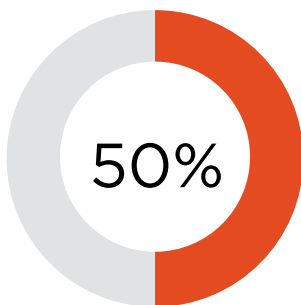


IDENTIFIED RPA AS ONE OF THE TECHNOLOGIES MOST BENEFICIAL FOR THEIR ORGANIZATION MOVING FORWARD³.

Despite the attention RPA is attracting, the treasury view focuses on the key point that it facilitates automation more than data analysis, which is where the real benefit is for treasury. However, RPA is becoming mainstream, and its value proposition is the automation of repetitive, manually intensive tasks, like manual cash pooling, financial closings, and data consolidation. It might be down to relative priorities, but adoption within treasury will increase.

Artificial Intelligence/Machine Learning (AI/ML)

The IDC report 'AI Strategies View 2020', which embraced the feedback of more than 2,000 IT and 'line of business' decision makers, provided unmistakable evidence that adoption of AI is growing worldwide.



HAVE ADOPTED AI IN AT LEAST ONE BUSINESS FUNCTION⁴

AI adoption is highest within the product development function as AI is being recognized as a tool to help drive innovation. Customer service contact centers are learning, predicting and recommending as part of an augmented model that elevates the customer experience. Within IT operations, we are seeing the rise of AIOps, which Gartner has defined as the "application of machine learning and data science to IT operations problems." Manufacturing is another function that is increasingly harnessing the power of AI/ML technology, from introducing data analytics at every stage of the process to predictive analytics around potential increases or decreases in demand. Earlier visibility of potential challenges enable more timely informed decisions to be made.

CURRENT ADOPTION RATES

This transformational technology is expected to have a profound impact and this view is recognized in 2019's Accenture report 'AI: Built to Scale', which stated that 84% of executives believe they won't achieve their growth objectives unless they scale AI. Furthermore, nearly all C-suite executives view AI as an enabler of their strategic priorities. An overwhelming majority also believe achieving a positive return on AI investments requires scaling across the organization.

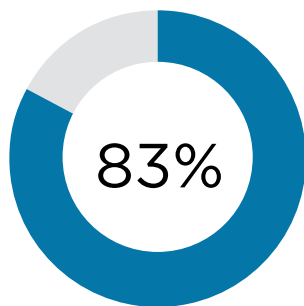
Given the potential to deliver both predictive and prescriptive analytics to elevate treasury performance, what are the current rates of adoption of AI within the treasury function?



Respondents from the 2020 Strategic Treasurer Perspectives survey indicated that only 15% are currently using AI technology. However, while this is low compared to the broader industry adoption levels, the report also highlights that adoption rates are predicted to significantly increase. Almost 70% of respondents expect to adopt AI technology in the next 5 years.

Application Program Interface (API)

API technology has generally been viewed as a critical component of a digital ecosystem, providing the orchestration and agility for microservices.



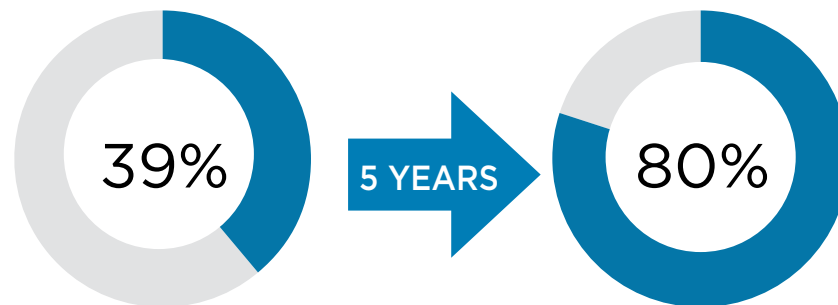
**CONSIDER API INTEGRATION
A CRITICAL PART OF THEIR
BUSINESS STRATEGY⁵.**

CURRENT ADOPTION RATES

API integration is recognised as a critical part of a business strategy, driven by digital transformation initiatives and cloud application adoption.

However, this technology is relatively new within the financial domain, with the various open banking initiatives being underpinned by this technology.

The European Association of Corporate Treasurers (EACT) 2020 Treasury Insights results highlighted that 35% of respondents either use, or plan to use APIs to facilitate integration for on demand or real-time exchange of transactions or data.



API usage is expected to double over the next 5 years⁶. This highlights the increasing recognition of this foundational technology to accelerate processes in the move towards real time treasury.

However, whilst there are numerous open banking initiatives around the world which are underpinned by API technology (for example PSD2 in Europe and UK Open Banking), there is no aligned industry standard around API financial messages. This represents one of the greatest challenges to mainstream adoption as corporate clients are not particularly keen to develop a series of bank proprietary API standards. Anything bank proprietary goes against the increasingly important corporate focus of standardisation and simplification – unless it is viewed as a value-added service and therefore represents a competitive advantage. It was only in 2020 that SWIFT formed a working group focused on defining a common message guideline for API balance enquiries based on the JSON syntax. This industry standard API message is now available from SWIFT, but at the time of writing, there are no banks or corporate clients live with this industry standard API. Furthermore, whilst the next phase will define the API payment message, there are currently no confirmed delivery timeframes.

Distributed Ledger Technology (DLT)

DLT, or blockchain technology, is continuing down a path of broader adoption as organizations gain a better understanding of its transformational value. It can provide value by removing business friction, enabling trust, and providing greater transparency. Gartner forecasts that blockchain will generate an annual business value of more than US\$3 trillion by 2030.

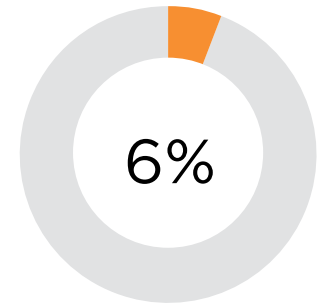
CURRENT ADOPTION RATES

The Deloitte 2020 Global Blockchain Survey finds that leaders now see this technology as integral to organizational innovation. 39% of respondents have already brought blockchain into production in 2020. If we look at the PWC 2018 Blockchain Survey, it highlights that 84% of respondents are now actively involved with blockchain technology. Given that broader industry adoption on the rise, where is treasury on the adoption roadmap?

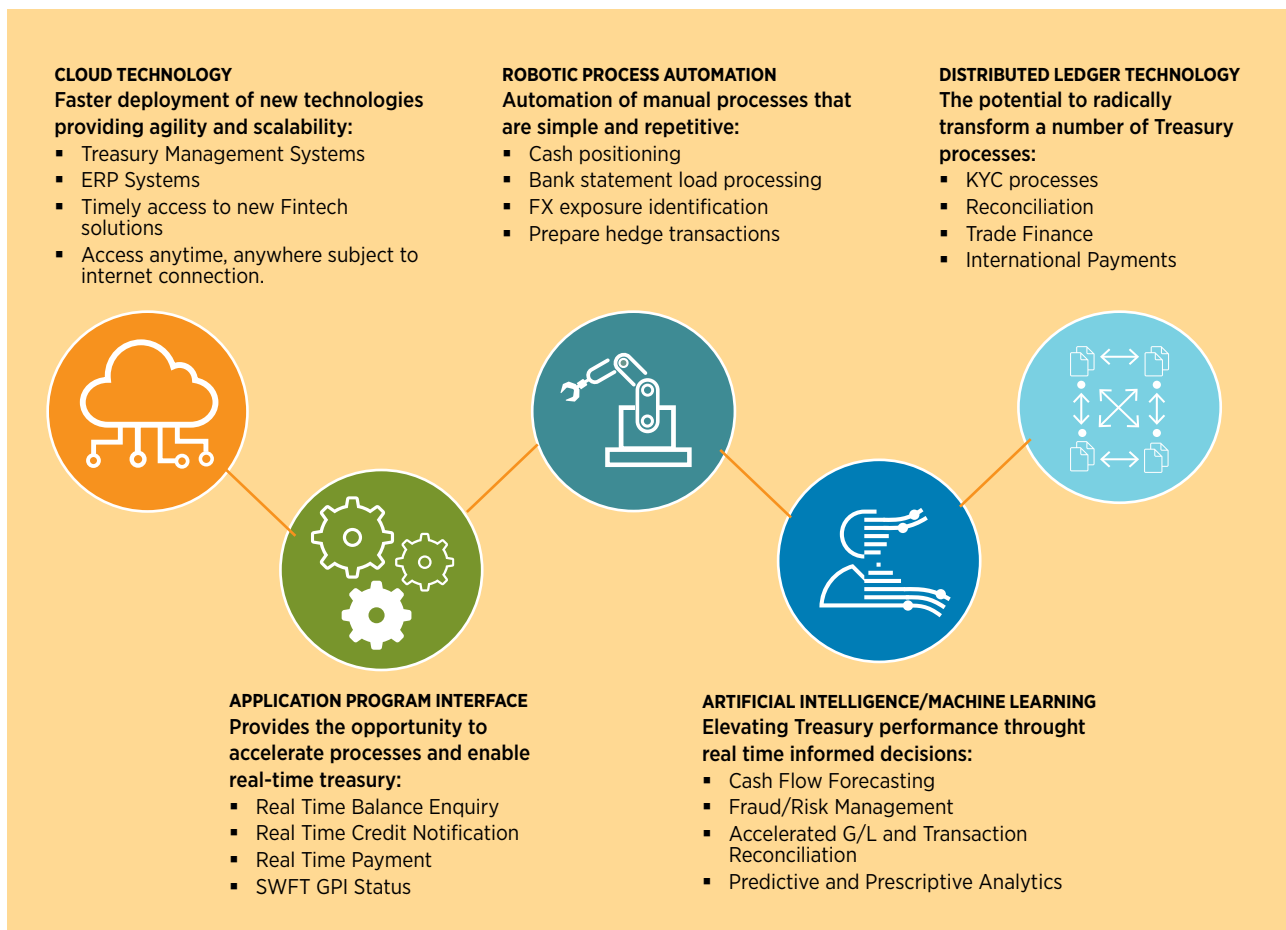
The Deloitte 2019 Global Treasury Survey reported only 14% of respondents viewed blockchain technology as critical or particularly important to treasury. FIS also only attracted 4%¹ of respondents viewing this technology as most important to treasury.

In line with the numerous corporate treasury surveys, the priority would appear to be with other transformational technologies, rather than DLT, at the present time.

The following diagram provides a high-level summary of the potential applications of these emerging technologies within Corporate Treasury:



BELIEVE BLOCKCHAIN TECHNOLOGY WILL BE RELEVANT FOR TREASURY IN THE NEXT TWO OR THREE YEARS⁷



What is driving the adoption?

Starting with cloud technologies, there are a couple of core drivers around the increasing migration to the cloud:

- Enterprise-wide IT strategy is encouraging the use of cloud-based solutions by treasury and other parts of the organization because IT lacks the resources to support installed software. This also reflects the introduction of more standardized controls and accreditations around security, which increases confidence in moving to the cloud.
- SaaS solutions provide greater flexibility and advantages across a number of areas. Implementation time, scalability, customization and typically a much lower total cost of ownership when compared with on-premise options.

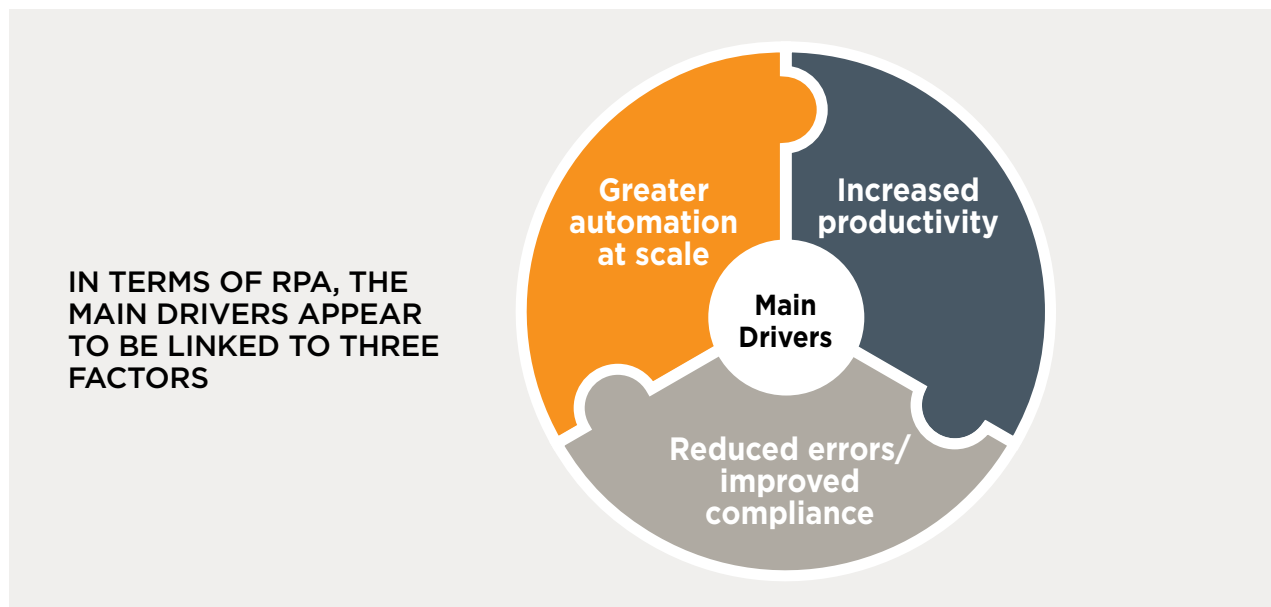
The combination of the above is effectively driving the treasury migration to a cloud-based model.



“OneConnect Financial Cloud was built from the Ping An Cloud independently developed by the Ping An Group. Starting with finance, OneConnect Financial Cloud provides the entire industry with infrastructure-as-a-service (IaaS), platform-as-a-service (PaaS), and software-as-a-service (SaaS) cloud services. It reduces costs and complexity of IT comprehensive construction and accelerates the process. It also addresses regulatory compliance, security and stability, and support for innovation”.

Mr Chen XuHua, OneConnect Chief Marketing Officer & Deputy General Manager, CEO of Gamma Team (OneConnect as an associate of Ping An Group)

CURRENT ADOPTION RATES



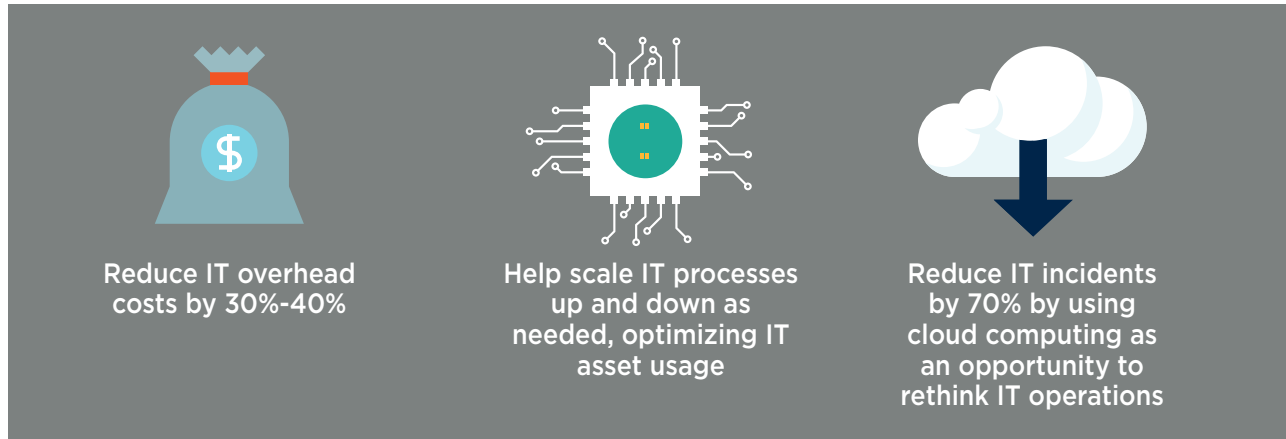
Moving on to AI/ML, the key driver is around enabling greater efficiency. By harnessing the power of these transformational technologies, businesses can elevate data analytics, identify patterns, and make more informed real-time decisions. In treasury, these are currently being used to address the numerous impurities in the cash flow forecasting process and to enhance cyber defenses.

We also have the drive towards real-time treasury, as well as the opportunity to accelerate existing processes and enable more timely visibility, is providing a real motivation to leverage API technology. Delivering real-time credit notifications will enhance liquidity management and improve key working capital metrics in the case of accelerating the cash application process.

Finally, you have the significant impact of the pandemic, which has provided the motivation for many firms to 'innovate their way out of the crisis'. The October 2020 McKinsey survey⁸ highlighted the acceleration of the adoption of digital technologies by several years. Companies have accelerated both the digitization of their customer and supply-chain interactions in addition to their internal operations by three to four years. Indeed, the survey also comments that experimentation with and investment in digital technologies have both played a key role in helping companies navigate successfully through the pandemic. The pandemic has also impacted the volume and mix of payment transactions, with consumers migrating from cash to contactless payment methods and corporates accelerating the switch from cheques to electronic payment methods to reduce the flow of physical paper instruments. We are now witnessing the redefining of the partnership between man and machine. Corporate treasury now has the opportunity to transform its technology, process and people, pushing the boundaries on what is now possible to create a more data integrated and informed strategic function.

What is the impact so far?

The 2018 McKinsey Digital report 'Cloud Adoption to Accelerate IT Modernization' stated that adopting cloud is a massive enabler of the necessary standardization and automation. With cloud, companies can:



The infographic consists of three icons on a dark grey background, each with a corresponding text block below it. The first icon is a blue money bag with a white dollar sign, representing cost reduction. The second icon is a white microchip with green circuitry and a central green circle, representing scaling and optimization. The third icon is a white cloud with a dark blue arrow pointing downwards, representing incident reduction.

- Reduce IT overhead costs by 30%-40%**
- Help scale IT processes up and down as needed, optimizing IT asset usage**
- Reduce IT incidents by 70% by using cloud computing as an opportunity to rethink IT operations**

The findings from the Deloitte RPA survey highlighted significant benefits:

Payback was reported at less than 12 months, with an average 20% of full-time equivalent (FTE) capacity provided by robots.

RPA continues to meet and exceed expectations across multiple dimensions, including improved compliance (92%), improved quality/accuracy (90%), improved productivity (86%), and cost reduction (59%).

Additional findings suggest that companies that use RPA bots to handle accounts payable functions process invoices 43% faster and for a cost of 40% less than those companies that invoice manually.

Deloitte Insights (October 2020) highlighted that experience and maturity play a significant role in realizing value from an AI/ML based transformation project. The return on investment (ROI) for AI projects varies greatly, based on how much experience an organization has.

Leaders showed an average of a 4.3% ROI for their projects, compared to only 0.2% for companies starting out. Payback periods also varied, with leaders reporting a typical payback period of 1.2 years and beginners at 1.6 years.

TechRepublic reports that 56% of global CEOs expect it to take between three to five years to see any real ROI on their AI investment. While the ROI will clearly depend on the nature and size of the project, it provides a perspective on what could be achievable.



The Conclusion

As the journey towards becoming a digital treasury gains momentum, we will see the redefinition of the partnership between man and machine. These technologies will have a profound impact on treasury as they automate the function, remove friction, and accelerate processes.

While the adoption of these innovative technologies within treasury is still at an early stage, the signs point to much broader adoption over the next three to five years as the relevance to treasury becomes much clearer. The move towards predictive and prescriptive analytics will elevate treasury performance and help mitigate several current risks, from forecasting through to cybercrime. This ecosystem of modern technologies will effectively redefine what is possible.

Notes

- ¹ FIS 2019 Treasury Modernization Survey.
- ² (2018) Deloitte Global RPA Survey.
- ³ 2018 Economist Intelligence Unit 'Future is Now' report.
- ⁴ The McKinsey Analytics Global survey 'The State of AI in 2020'.
- ⁵ The 2020 annual state of API integration report.
- ⁶ 2020 Strategic Treasurer Perspectives survey.
- ⁷ PWC 2019 Global Treasury Benchmarking Survey.
- ⁸ How COVID-19 has pushed companies over the technology tipping point—and transformed business forever



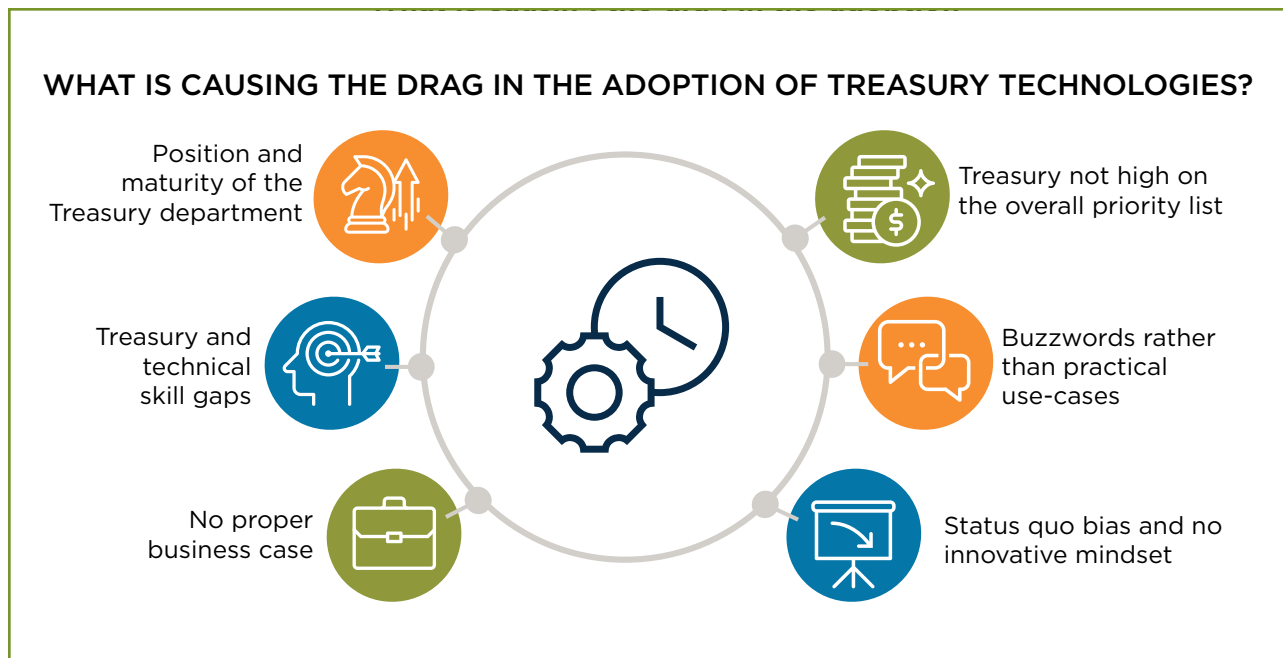
THE DIGITAL TRANSFORMATION
OF TREASURY: A CRITICAL IMPERATIVE

THE DRAG IN CORPORATE ADOPTION OF NEW TREASURY TECHNOLOGIES

Despite the endless opportunities enabled by technology, the previous part of this series shows that corporate treasurers have not exactly been rushing to integrate modern technologies to improve their processes and systems. In this third part of our four-part series, we examine what is causing the drag that is currently resulting in low adoption rates. While every corporate has its own unique circumstances, some common reasons can still be observed.

“Our organization began the digital transformation journey almost 10 years ago.”

Mukesh Singh, Treasury Manager of Microsoft



The maturity of the treasury department within the organisation

The treasury department can be seen as relatively young in comparison with other departments in the finance domain of corporations. Finance, accounting, and tax departments have been established for an exceptionally long time as teams or individual experts and are mostly appointed soon after the inception of a firm. Meanwhile, treasury departments typically originate out of the existing finance function when the department scope is extended and becomes more complex. It can take some time before a treasury department is fully established, is assigned budget for development, and gets a seat at the decision-making table.

In the preliminary stages after establishment, corporate treasury functions tend to focus on getting the basics right. This can start with the defining of treasury processes and policies, as well as the undertaking of standard transactions and cash management activities. The department builds up its relationships with banks and external service providers, relying on a small number of treasury staff. At this stage, treasury operations contain many manual processes. Microsoft (MS) Excel is widely used, while treasury technologies and systems are not yet considered. We can define this as a foundation level of treasury maturity.

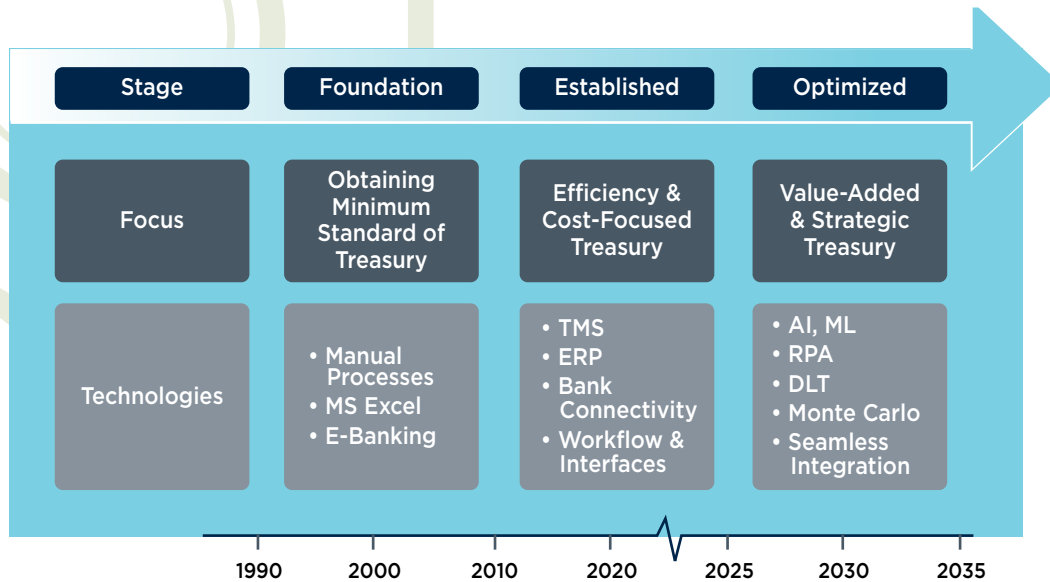
More established companies start to develop their treasury departments towards higher maturity levels. They aim to make treasury activities more efficient and their operations more cost focused. This is, for example, achieved by implementing a basic treasury management system (TMS), ensuring bank connectivity and integrated treasury transactions towards the accounting function. Furthermore, the focus is on minimizing manual intervention by means of streamlining processes and automating workflows. The treasury is then able to make steps in improving its reporting function by utilizing technology. Reports are being automated; however, data is not necessarily available on a real-time basis.

THE DRAG IN CORPORATE ADOPTION OF NEW TREASURY TECHNOLOGIES

For more established corporations, the needs and expectations of management and shareholders can be more demanding and necessitate that the treasury department climb further up the maturity ladder. Treasury departments then need to engage in more strategic value-added activities, as also discussed in the Defining the Future of Corporate Treasury white paper that AFP and Zanders published previously. It is expected to positively contribute to the P&L or ensure funding and liquidity is available to meet the demands of strategic initiatives. Only at this stage, when a solid foundation and system landscape has been built, can treasuries think about adopting the latest technologies applicable for their function.

Treasury operations can be further optimized by automating processes with the help of RPA. This can improve efficiency, reduce errors, and improve interfaces between internal systems and third-party external applications. API connections can be used for real-time information to increase the reporting frequency. In addition to streamlining processes, technology-driven enhancements can be introduced to add further value. For example, the use of Artificial Intelligence (AI) and Machine Learning (ML) in the cash flow forecasting process can improve accuracy and reliability, while the use of ‘Monte Carlo’ simulations can better quantify risk in risk management and hedging activities.

Treasury departments need to reach a certain level of maturity before they can introduce further digitalization, and it is this that is causing the drag on adoption of modern technologies. Only when this level of maturity is achieved can they take the next steps towards adopting treasury technologies that enhance the treasury function and enable it to strategically contribute to the organization. The adage “learn to walk before you run” is appropriate here.



Geographical differences can also be found with respect to how far treasury operations are optimized. US and European corporates tend to have a more optimized level of treasury maturity when compared with their Asian counterparts. One of the reasons for this is that US and European corporates have experienced international growth and therefore more treasury complexity for a longer period, which has stimulated them to optimize their treasury. However, Asian multi-nationals are starting to catch up by taking advantage of the technological advancements now available, avoiding several hurdles previously encountered by others. For example, the current treasury management systems are developed in such a flexible manner that they can easily be adapted to specific local requirements in Asia. Furthermore, the evolution of cloud-based solutions allows Asian treasuries to move immediately to the cloud and leapfrog the step of on-premise solutions that many more established treasuries had included on their treasury transformation journeys.

Having people with the right skills on board (skills gap)

It is often the case that treasury professionals are hard to find. At least, “modern skilled” treasury professionals needed to digitalize treasury can be considered scarce. The traditional skillset that is required for treasury professionals includes knowledge of financial markets, financial transactions, basic spread sheet modeling and functional reporting. The modern treasury professional also needs to have **technological and analytical skills**; knowledge about processing and analyzing data in addition to financial modeling and forecasting. This requires an understand of the relevant tools and programming languages, such as SQL, PowerBI and PowerQuery for data analysis and Python, R, Matlab for financial modeling and forecasting.

It might sound like corporates can easily fill this skill gap by hiring data scientists; statisticians and computers scientists as we used to call them. However, data scientists cannot immediately add value to the treasury organization because they generally lack treasury knowledge. Professionals that have a combination of the traditional treasury knowledge and an analytical skill set are even harder to find. The world of treasury can be considered a niche. Treasury does not feature in university courses as often as general Finance and Accounting and is typically something that must be learned on the job or via dedicated learning programs, such as those provided by AFP and other treasury associations. Therefore, traditional treasury professionals are needed in the organization to digitalize treasury in the first place. They need to have **treasury specific knowledge** such as a deep understanding of local markets and awareness of the common mistakes that beginners make in executing treasury activities.

Keeping up with latest technological developments while having a good understanding of what treasury means is key. Treasurers can achieve this by building diversified teams where all knowledge and skill sets are present but particular skills can be divided among various members. The Treasury experts in the team should be provided with enough time and should be incentivized to strengthen their knowledge. They can do this by for example participating in webinar, seminar and training provided by vendors or consultants. Internal knowledge sharing and treasury training is important to drive the entire team into innovative thinking. A good collaboration where individual experts can provide expertise to the team on their field is essential in making the first steps towards the near-term opportunities or ‘low hanging fruit.’ This will enable better strategic decision making towards digital transformation.



Leadership skills gap

We can also question whether today’s treasury leaders are able to drive digitalization. Are they equipped to understand the advantages of modern technologies, or are they too risk averse? When treasury leaders are too far from the operation it might be difficult to clearly interpret analytics and communicate effectively to the C-Suite. Therefore, they should have an understanding of technology that enables them to translate and explain the technical needs of their treasury. AFP’s The Strategic Role of Treasury Survey also shows that Treasury professionals consider that communication skills are the most important skill (cited by 96 percent of respondents) needed for treasury leadership. The survey also shows that strategic thinking and adaptability are considered essential. Modern treasurers need to have an innovative mind as well as the soft skills to clearly communicate and influence others.

“I think that our treasury team has transitioned from a very process-oriented team 10 years ago to really a combination of technical and analytical skills. But soft skills are something that will always be important. And we always strive to continue developing our employees to have those soft skills, especially as they move up in the organization those become more and more critical.”

Barbara Quiroga, Managing Director and Assistant Treasurer of Delta Airlines

Leadership and Soft Skills	Treasury Specific Skills	Technical and Analytical Skills	
<ul style="list-style-type: none"> ▪ Thought leadership ▪ Innovative mindset ▪ Pressure resistant ▪ Strong communication ▪ Relationship manager (external and internal) ▪ Ability to prioritize ▪ Negotiating skills ▪ Affinity for technology 	<ul style="list-style-type: none"> ▪ Best Treasury practices <ul style="list-style-type: none"> • Cash management • Risk management ▪ Financial markets <ul style="list-style-type: none"> • Transactional knowledge ▪ Regulations <ul style="list-style-type: none"> • Local markets • Payments requirements • Accounting regulation 	<ul style="list-style-type: none"> ▪ Data analysis <ul style="list-style-type: none"> • Processing date • Analyzing data ▪ Computer skills <ul style="list-style-type: none"> • Programming skills ▪ Modeling knowledge <ul style="list-style-type: none"> • Financial modeling • Predictive modeling 	
All	Pro-active	Attention to detail	Teamwork oriented
<p>In an integrated treasury department, these skills will help the team on take on different roles and drive digital transformation</p>			

Source: <https://www.afponline.org/publications-data-tools/reports/survey-research-economic-data/Details/strategy-survey/>

Building a proper business case for the adoption of new technologies

Making a proper business case is not as straight forward as it sounds. It tends to be quite difficult to map out and quantify the benefits of treasury technology adoption. The hard and soft benefits and costs involved with a digital transformation should be projected over a long-term time horizon to estimate the ROI. Furthermore, there are qualitative aspects that should be part of the business case. These include improvements in the IT landscape, such as the establishment of a secure and robust connection with the bank or the implementation of systems that reduce operational risk in the treasury operation. It is hard to put the value of such qualitative aspects into numbers.

Creating support for a treasury transformation project within an organization might be difficult. This is particularly the case for projects that are solely driven by the treasury department. When the benefits in the business case are assessed on a stand-alone basis from a treasury perspective, it might be difficult to get buy-in from other departments and stakeholders because they may not see the benefits that are relevant for them. The business case must be reviewed holistically.

For example, when assessing the business case for the implementation of a new TMS, the accounting and tax department could benefit in addition to treasury. A new TMS might have a better data structure that provides improved integration with the accounting department. Furthermore, data will be available in a centralized place, which is also beneficial for audit and reconciliation purposes. From an IT perspective, there are cross-benefits as well. When organization moves towards a more robust TMS, the IT risk is much reduced as compared to using old legacy systems. Ultimately, the sales department can benefit when it comes to registering invoices where the FX risk should be hedged by treasury. Furthermore, they might be able to enjoy the benefits of enhanced operational efficiency from a potential in-house bank (IHB) or payments on behalf of (POBO) structure. All departments can operate (at least part of) their daily business operation in one system, which is beneficial for the organization as a whole, particularly when the importance of data strategy and principles have become so evident.

“A lot of the times, it’s just about your influencing skills, so being able to take these products to management, make an effective use case and show how you can be a better partner to the company by spending a little bit up front and making automation work for you. And it is not always easy because not everybody understands the benefits the treasury department brings and not everyone understands what treasury does.”

Lee-Ann Perkins, Assistant Treasurer Ion Geophysical Corporation

Related to the business case is the relationship between Finance and IT when it comes to the budget. When departmental interests are not in line with the interests of the company as a whole, there might be a “first mover disadvantage.” When the CFO is determined to digitalize the treasury function and putting forward part of their budget, the CIO can “free ride” on the budget that is already planned to be spent. From the other side of the coin, when the CIO judges that the technology in the current treasury landscape is not future proof, the CFO can benefit from it. As treasury digitalization goes hand in hand with IT, it is critical to collaborate in the best interests of the organization.

As mentioned, it is important to take a holistic approach in creating and evaluating the business case. The benefits of adopting new treasury technology should be assessed from multiple perspectives and on a cross-functional basis including the secondary benefits. When allocating budget and resources, the distribution should consider the benefiting departments in a proper manner to get full buy-in from all stakeholders.

Treasury is not high on the priority list

It is too often the case that treasury is not a priority in the organizational structure of a company. This often results in slowing down the digitalization of the treasury function. For many companies, the client or customer is put at the center of the plate and the focus is on growing the revenue base. This is particularly observed at companies with a business-to-consumer (B2C) model. Budget and technical resources are allocated to the core business of a company to improve their value proposition towards their clients.

“We’re customer-facing, and our priority is to make sure the customer has the best experience. So, if you think about it from a back-office perspective, we’re constantly catching up with the front end.”

Tony Masone, Treasurer at Amazon

Furthermore, treasury transformation is also not always a top priority within the finance domain itself. Corporates have been focusing on “must-have” requirements, such as being compliant from an accounting, audit, and tax perspective. An important driver in this is the ever-changing regulatory environment in these areas, which causes corporates to de-prioritize treasury transformation projects.

Buzzwords vs. practical application

With all these modern technologies available, it is easy to drown in buzzwords without seeing what practical value they can bring to the treasury organization. Many of the technologies have been available for quite some time but were only used in academia. More recently they have been introduced for treasury purposes. Take ML models as an example. While they are not a new concept, low computational power, and low data availability a decade ago meant that they were rarely used in business processes. Since computational power is not an issue anymore and with the availability of Big Data, ML has become attractive for treasury analysis. However, practical use cases and success stories about adopting these technologies are still not widely available. Therefore, it is difficult for treasurers to see the practical applications from these technologies and ‘expose’ the buzzwords.



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Status quo bias and lack of innovative mindset

Some treasury departments exhibit a form of status-quo bias. This mindset is further causing a drag for digital transformation in treasury. Treasuries tend to take the “as-is” situation (the status quo) as the starting point when it comes to improving treasury processes. Any improvements or changes are considered unnecessary. With this process orientated mind state, it can be argued that novel solutions or technology should meet all the requirements from the legacy systems. Everything that is not met is defined as a functional gap. In order to optimize, standardize and automate treasury processes, it is better to take the “to-be” situation with the technical opportunities possible as the starting point. By setting the “to-be” approach as the baseline, a functional gap is only defined as a “must-have” requirement that cannot be met with the new solution or technology. Treasury should be freed of its legacy systems when better solutions are available, and the business case is positive. Having a technological and innovative mindset will enable a more opportunistic way of thinking that will accelerate the digitalization in treasury. Unconventional wisdom suggests ‘if it ain’t broke, break it.’ This needs to be the mantra of innovative treasury teams of the future, unshackled from legacy.



“We will continue to take on the challenge of introducing advanced technologies, such as blockchain for trade settlement and natural language processing for investment due diligence. However, we will not pursue novelty unnecessarily, but will strive to make efforts to improve efficiency and make it compatible with requirements from Compliance & Internal Control.”

Mitsuru Tsuboi, Deputy General Manager, Planning & Administration, Finance Division, Mitsui & CO., LTD.

The Conclusion

Across the board, some common causes can be observed that result in the drag in the adoption of new treasury technology. The most positive aspect here is that most of the causes are in the hands of the treasury department themselves. Treasurers and their teams can resolve the hurdles by having an innovative mindset and acquiring the right treasury skills, both technical and soft. In the end the treasury team is as strong as its people. Methods of learning new skills, such as via webinars and treasury training platforms are becoming more standard, which makes it easier to keep up with technology. Therefore, there is a clear path ahead for treasurers to adopt new technologies and unlock their benefits.

Notes

- ¹ Monte Carlo Simulation is a methodology that can be applied in risk management analysis. In this methodology risk drivers are identified and they are simulated via a random variable many times to get insight in the range of possible outcomes to quantify risk

A futuristic digital cityscape with glowing buildings and data streams. The scene is set against a dark background, with buildings rendered in vibrant colors like orange, yellow, and blue. The buildings are composed of a grid of dots and lines, giving them a digital, pixelated appearance. The perspective is from a low angle, looking down a road that recedes into the distance, with white lines on the road surface. The overall atmosphere is one of high-tech, digital innovation.

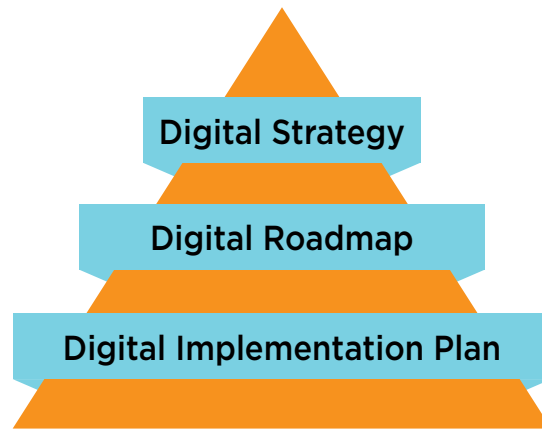
THE DIGITAL TRANSFORMATION
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THE DIGITAL TRANSFORMATION ROADMAP

In the final part of this four-part series, we consider how a digital treasury transformation can practically be achieved through a comprehensive roadmap. Prior to diving into how to build a digital transformation roadmap, however, let's take a step back and define what a digital transformation roadmap involves.

Defining the treasury digital transformation roadmap

A roadmap sits between a digital strategy and a digital implementation plan. It contains more detail than a strategy but stays away from the implementation details. Because a digital roadmap bases itself on a digital strategy, its only pre-requisite is the existence and definition of a digital transformation strategy. A digital transformation strategy paints a picture of the future digital treasury organization. This can be as short as a few lines or can be as elaborate as a one-page document. The key notion is here that a strategy defines the future end state, disregarding any current constraints or limitations of legacy processes or systems.



The digital transformation roadmap bases itself on the strategy and looks to elaborate to a more detailed level to answer the following key questions:

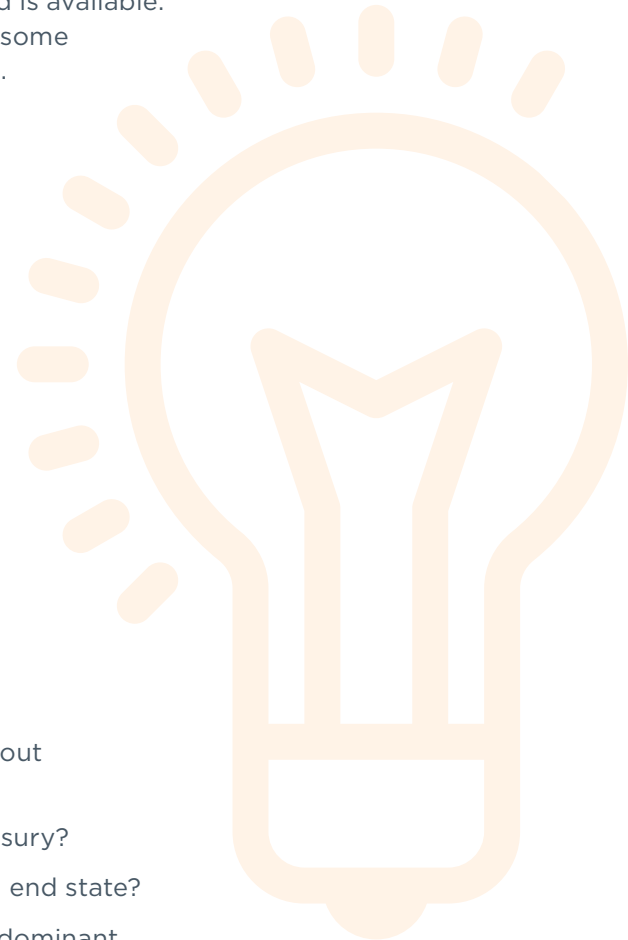
- Why are we transforming our treasury?
- What are the required changes that must occur to get to the end state?
- What is the best sequence of changes to occur?
- What are the interdependencies between the various changes?
- What are the technologies supporting the digital transformation?
- What are the risks and value drivers for the digital transformation?
- What is the impact of the transformation on various aspects of the treasury organization?
- What is the impact on other stakeholders?

Looking at the content and format of a digital transformation roadmap, we can observe that several formats are being used and no gold standard is available. Each organization defines a roadmap slightly different. However, some consistent specific building blocks are recurring across the board. A digital roadmap looks at a digital transformation across four streams:

- 1. Process** – Looking at the processes, workflows, tasks, and methods that are in scope of the digital treasury transformation.
- 2. Human** – Under this topic, the people aspect of the transformation is tackled. Key questions that are answered are:
 - a. What skills do our employees require to adequately operate a digital treasury?
 - b. How do we mitigate the skills gap, if any?
 - c. What culture do we need to advocate to enable a successful digital treasury transformation?
 - d. Where do we source our skill acquisition if we have a gap?
 - e. What is the impact on the organizational structure?
- 3. Technology** – No digital transformation can be complete without tackling the technology aspect:
 - a. Which technologies will be leveraged to transform our treasury?
 - b. What are the various technologies that fit our future digital end state?

Another essential part of the technology stream is defining a dominant design methodology. For example, adopting an API first design methodology, reflecting the fact that APIs will be a key building block of a digital transformation by enabling the process orchestration. A further key building block that can be included will be cloud technology. As mentioned in Part 1, cloud technology represents a logical first, foundational step towards digital transformation and importantly provides the core technology backbone.

With a cloud infrastructure, organizations start to have a more agile foundation from which to build significantly improved operations and business processes, as well as the opportunity to accelerate business change. The roadmap can also consider the adoption of microservices supported by API technology, which will provide greater flexibility, agility and importantly, in today's real-time age, speed.



4. **Data** - A key component that is a 'must have' into any digital first roadmap is data. As first stated by Clive Humby:



This statement was later further expanded upon by Michael Palmer,² who said that, like oil, data is “valuable, but if unrefined it cannot really be used.” This illustrates the exact point as to why data requires a separate stream in any digital transformation roadmap. How can data be refined such that it is an asset instead of just a by-product of the processes? For data to be the ‘secret sauce’ to elevate and optimize the increasing power of cognitive technologies and enable more timely and informed decisions, the strategy must embrace how to improve all the ways you acquire, store, manage, share, and use data. Only then will it address all the issues related to making data accessible and usable so that it can effectively support required decision-making activities.

Just like any other functional activity in an organization, treasury does not operate on an island. Particularly with regards to data, it is crucial for treasury to align with the enterprise level data strategy. By combining data across functions, greater, even exponential, value can be unlocked.

Where should ownership of the digital transformation roadmap lie?

The question of who should be building a digital transformation roadmap can be answered briefly - anyone that is looking to digitally transform their treasury. A big misconception in the market is that digital transformation requires gigantic budgets and is only reserved for the corporate giants of this world. Even a smaller company with a limited budget can build a digital transformation roadmap and bring it to fruition. Another common misconception is that a digital transformation roadmap must include Distributed Ledger Technology (DLT) and Application Program Interfaces (APIs), otherwise it does not count. A digital transformation roadmap must focus on how to digitally transform your treasury leveraging the technologies that fit your organization and its aspirations.

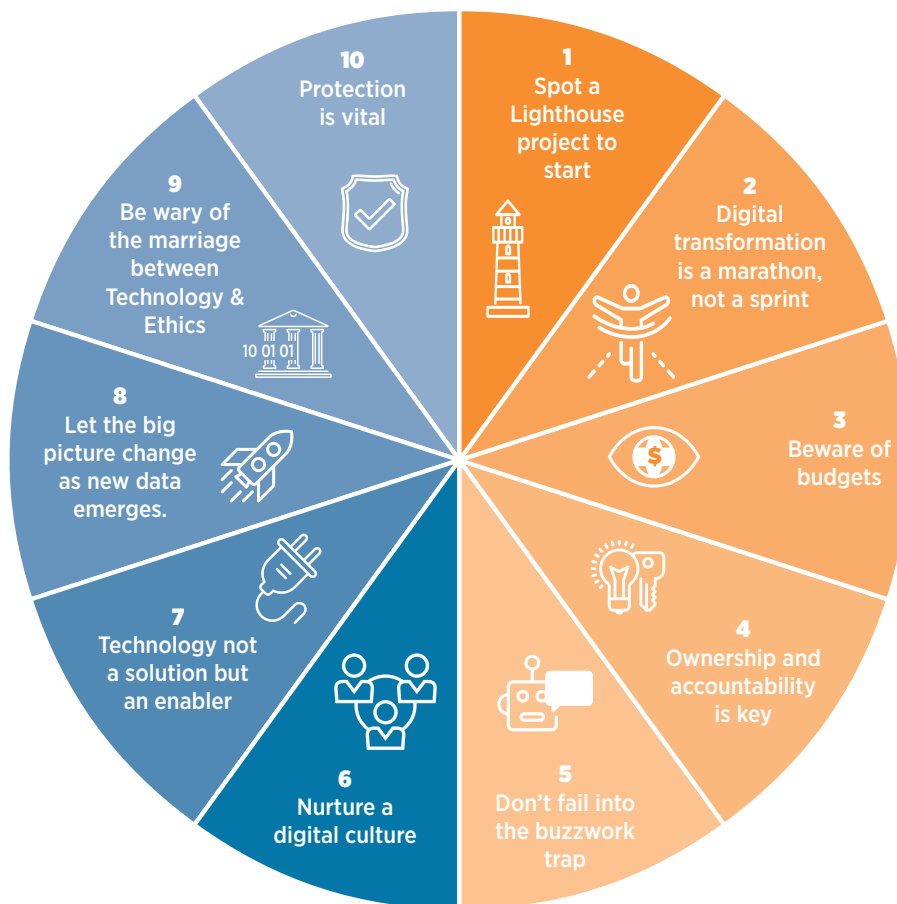
Moving on to the core question of who should lead a digital transformation, we can consider the findings from International Data Group’s 2019 survey³ of 700 IT professionals in its ‘Digital Business Transformation’ report. This highlighted that the CIO still takes ownership of most aspects of the digital transformation process, from data protection strategies to technology needs and IT skills assessments, to change management and data management strategies. However, a digital transformation roadmap is more than just the technology, it needs to embrace the broader business strategy, with collaboration and partnership the key to success.

Ten guiding principles for setting up a digital transformation roadmap

After considering the digital transformation roadmap from different angles, let us look at some key guidelines to build a successful digital transformation roadmap.

1. When sequencing projects, look to start with a so-called Lighthouse project. These are projects with significant rewards and manageable risks that create and strengthen the buy-in across the stakeholders across the organization. Typically, the lighthouse projects are shared and broadcasted across the companies upon completion via townhall meetings. A companywide broadcast boosts overall morale and buy-in for the rest of the digital transformation. Just like a lighthouse, it helps with navigation of projects through the digital transformation journey.
2. No transformation happens overnight, so start with smaller, easier to deliver projects and work towards a longer-term goal. For most organizations, this will be more of a marathon than a sprint.
3. Be realistic in your budget and timeline estimation. Nothing kills a plan quicker than unrealistic budgets and timelines.

TEN GUIDING PRINCIPLES



4. Assign ownership and accountability to streams and projects. Without ownership and accountability, roadmaps easily end up in no-man's land. To avoid this from happening, set up key performance indicators (KPIs), intermediate milestones, and assign actions and next steps so that the initiatives are executed and carried forward.
5. Involve the entire treasury function and its stakeholders. By involving the wider organization, the chances of actual steps being taken are greatly increased. Try to avoid it becoming another 'buzzword document' without practical applications to bring tangible benefits across the organization.
6. Take time to nurture a digital culture. Allocate time to shift people's mindset and encourage people to think in data flows and models.

Never lose track of the real value drivers and underlying issues that you are trying to tackle. It is human nature for people to fall back on what we know and feel comfortable with, so be sure to disconnect from the legacy setup and framework. To fully harness the power of technology, there also needs to be a change in mindset around the typical project waterfall process. The 'new norm' best practice will be moving towards weekly releases and even daily continuous deployments.

This changing environment is underpinned by the adoption of a development, security and operations (DevSecOps) methodology, where development and operations teams collaborate to build, test, deploy and monitor applications. A security mindset is also embedded into this culture to consider security, privacy, policy, and controls as part of the entire product journey. All this needs to be done with speed, quality, and control. If we look at the findings from the Deloitte 2019 report 'Looking beyond Digital Era Insights',⁴ 56% of CIOs expect to implement agile, DevOps or a similar flexible IT delivery model to increase IT responsiveness.

7. Technology is not a solution in itself; rather, is an enabler of opportunity. A digital transformation roadmap should not purely focus on the technology aspect but on the underlying issues and business value that you are looking to unlock through technology. Intelligent automation may offer a wealth of benefits to the organization, but this must be through a more strategic business lens than a purely as an IT initiative. Keep in mind the outcomes of the various changes enacted. All projects should contribute to at least one of the following value drivers:
 - a. Increased efficiency.
 - b. Better decision making.
 - c. Improved innovation.
 - d. Improved experience and engagement of treasury's stakeholders.

A digital transformation roadmap should not be purely about deploying a specific technology simply for the sake of having the technology. It provides the direction for delivery of a set of defined business enhancement objectives across the enterprise, enabled through technology.



THE DIGITAL TRANSFORMATION ROADMAP

- Any roadmap developed is a picture taken at a specific moment in time incorporating all information known at that point in time. It starts off as a static document but evolves into a living document where added information, including feedback on realized projects, is constantly updating the roadmap. However, be mindful that this is a balancing act between changing course and 'scope creep' to incorporate the latest information and staying on course to realize the end state envisioned.
- Beware of the ethical ramifications of modern technologies. Google⁵ has found out first-hand that technology does not operate within the same ethical boundaries as people do. Be sure when you act based on knowledge and insights from data analysis that you are not discriminating or supporting unethical behavior. Technologies are not perfect either. There are some problems that are easy to solve for humans but where technologies struggle. The most famous example here is the muffin - dog quiz. People get a near perfect score on this quiz, while AI struggles to differentiate between a Chihuahua and a blueberry muffin⁶. In short, be sure the technology you select fits the job are tackling.



- Bringing your treasury into the next digital era also means that cybersecurity is increasingly critical. Be sure to include cybersecurity checks in everything you do. According to the World Economic Forum,⁷ cyberattacks are perceived as the #2 global risk of concern to business leaders in advanced economies, second only to fiscal crises. Given its high importance, an effective mitigation of this key risk is mandatory in any setup. Recent data from Cybint,⁸ a global cyber education company, suggests the total cost for cybercrime committed globally will reach US\$6 trillion by 2021. It is therefore important that cybersecurity risks and compliance are viewed as a fundamental requirement as part of a digital transformation roadmap.

The Conclusion

The digital transformation roadmap will embrace a data strategy, infrastructure changes, process automation and even enable new business models as transformation becomes a must have as opposed to a nice to have. Technology is the enabler and foundational to unlocking both the opportunity for competitive advantage and achieving greater operational and financial efficiency. While for some, the process of modernizing a monolithic legacy architecture will be complex, costly and time consuming, establishing a roadmap that focuses on a digital first foundation should be viewed as an essential journey.

Finally, be sure to recognize that the strength of the digital technologies does not lie purely in the individual technologies themselves. The real strength and value is linked to how companies embed these technologies into their operations to transform the business.

Notes

- ¹ Arthur, Charles; editor, technology (2013-08-23). “Tech giants may be huge, but nothing matches big data”. The Guardian. ISSN 0261-3077.
- ² Firican, By George; April 22, 2019. “How Data Is (And Isn’t) Like Oil”. Transforming Data with Intelligence.
- ³ <https://www.idg.com/tools-for-marketers/2019-digital-business-research/>
- ⁴ Deloitte 2019 Looking beyond the Digital Era Insights Report.
- ⁵ (<https://www.wired.com/story/when-it-comes-to-gorillas-google-photos-remains-blind/>)
- ⁶ Mariya Yao : <https://www.freecodecamp.org/news/chihuahua-or-muffin-my-search-for-the-best-computer-vision-api-cbda4d6b425d/>
- ⁷ This is what CEOs around the world see as the biggest risks to business | World Economic Forum (weforum.org),” World Economic Forum, 2019
- ⁸ <https://www.cybintsolutions.com/cyber-security-facts-stats/#:-:text=Total%20cost%20for%20cybercrime%20committed,and%20me%20are%20also%20targets.>
- ⁹ Photo courtesy of Karen Zack, “@teenybiscuit”