Your Guide to Digital Transformation Technology

Introduction

The use of technology by finance teams isn't anything new. Ever since the invention of the electronic spreadsheet by Dan Bricklin in the late 1970s, electronic technology has become integral to finance teams. Not only has it allowed them to do their jobs better, it has opened up new ways to add value to their organizations.

But this moment is different. Over the last decade, financial technology (fintech) start-ups have challenged the status quo set by traditional financial institutions and technology vendors. They've successfully introduced new technologies, new attitudes, and new ways of working to drag traditional finance into the 21st century.

As a finance professional, you have a once-in-a-lifetime chance to accelerate digital transformation in your role and in your department. And this doesn't just mean driving efficiencies and making your life easier.

It means completely redefining your role. Now you can rid yourself of manual tasks and demonstrate the impact your skills and knowledge have on the commercial success of your business.

We'd be lying if we said it would be easy. Change is hard, and the current pace of technological development is often overwhelming. In this guide, our goal is to help you understand and navigate the current technology landscape and the impact new technologies will have on your finance department.

We will also help you feel more confident about selecting and implementing new technology by sharing best practices and inside information. So what are you waiting for? Get out there and become a Chief Future Officer.

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Chapter one: the imperative to change

"When Henry Ford made cheap, reliable cars people said, 'Nah, what's wrong with a horse?' That was a huge bet he made, and it worked."

– Elon Musk

Technology has made us superhuman. Just think about what we're able to do at the click of a button. We can order anything we want and have it arrive the next day; we can communicate with friends and family on the other side of the world; we can find out what's happening anywhere in real time, and we have access to a seemingly infinite database of information to answer any question we may have. All this is not just changing the way we live our lives, it's also changing the way we view the world and our place in it.

The pace of change isn't slowing either. In 2001, Robert Kurzweil wrote that every decade our overall rate of progress is doubling. "We won't experience 100 years of progress in the 21st century — it will be more like 20,000 years of progress (at today's rate)," he said.

It's hard to argue with his statement. Take the cellphone, for example. At the turn of the 21st century, the Nokia 3210 was one of the most popular cell phones with its black and white screen, and limited connectivity. Then in 2005 we had phones with color screens before the iPhone changed the game completely in 2007. Today, hundreds of millions of people own an iPhone and the cell phone industry is one of the largest in the world awash with an array of complex supercomputers that power our daily lives. What comes next? Probably not just a faster phone.

Powerful at home, lame at work

While technology is making us more powerful at home, the likelihood is that when you step into your office you feel pretty lame. This has nothing to do with your ability. The simple fact is that you suddenly shift from having everything at your fingertips to feeling like you're back in the stone age.

The systems found in most finance departments aren't great. In fact, when we look into most finance departments we find three things: lots of paper, lots of Excel sheets, and often a collection of siloed technology solutions.

This is a problem. Since the global financial crisis the role of finance has transformed dramatically. Long gone is the image of the geeky mathematical wizards performing ledger alchemy in a dusty back office. Today's finance pros are expected to be slick business professionals that step out of the back office armed with unique insights that can add immense value to the business.

But how can finance professionals expect to fulfill this role when they're spending time on manual processes and struggling to provide even the most basic insights? It's like trying to juggle with one hand tied behind your back.

5 Mind-blowing stats about technology

1   90 percent of the world's data has been created in the last few years (IBM Marketing Cloud)

2   By 2040, 95 percent of purchases will be facilitated by eCommerce (Nasdaq)

3   26.66 billion IoT devices in 2019 were active (Statista)
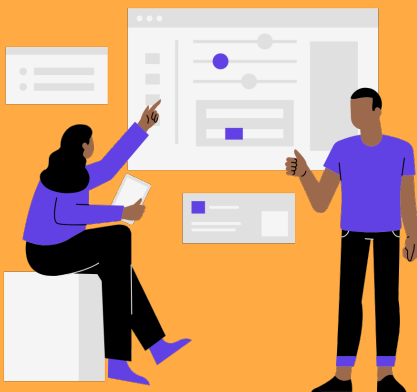
4   Less than 0.5 percent of all data is analysed and used (MIT)

5   A typical Fortune 1000 company can unlock $65 million additional net income with just a 10 percent increase in data accessibility (Baseline)

What's stopping finance from transforming?

Despite this challenge, many finance teams have done a great job of becoming more strategic. According to data from Deloitte, 55% of CFOs claim that their finance function has already transitioned into a more strategic role. This is a pretty good number, but with increasing demands placed on finance and businesses evolving at an unimaginable rate, this 55% can't rest on their laurels. And the remaining 45% have a lot of work to do to catch up.

So whether you're already pretty strategic, on your way to becoming strategic, or still focused wholly on tactical tasks, these are common challenges that you must overcome to reach your full potential.

Too many bandwidth issues

CFOs are increasingly asking their finance teams to do more with less. This would be fine if they could automate the process-driven aspects of their role. But as we know, many can't. So the spare time finance teams have to be strategic, goes from being little to none.

Too many short-term decisions

Because of these bandwidth issues, finance teams risk making short-term decisions, especially around technology. Technology is not meant to be implemented as a short-term band-aid—it's meant to be a long-term investment that adds value beyond just the finance department. And if finance teams don't implement future-proof technology that'll grow with the business, they'll only end up having to undo it later and find themselves further behind the curve than they are today.

Too many business silos

When finance isn't thinking holistically about the end-to-end process when adopting new technology, they reinforce those business silos that they want to break down. If finance can't see what's happening in other departments — and other departments can't see what finance is doing — there's very little chance of coming together to work towards common outcomes and finding new ways to add value.

Too many manual processes

Many teams are bogged down by manual processes. And when they're spending time processing paper and fixing issues in spreadsheets, they're unable to think about the bigger picture and where they can add value.

Why change doesn't happen — a hypothetical example:

The finance team of Ben's Breads are measured on how much cost they drive out of their processes. They're currently looking at fixing a very manual, paper-based process. This process takes them lots of time to complete, but it's also ridden with errors due to the data they're working with, causing issues further down the road.

They have two options:

A: Implement a solution that, in just a few weeks, digitizes the paper, allowing finance to halve the time it takes to conduct the process.

B: Spend a few months analyzing why the process is broken and solving this end-to-end with technology to both cut the time it takes to conduct the process but also remove 99 percent of the errors and give them lots of data to work with.

It's obvious that B is the correct answer. But in reality, a lot of finance teams will take option A. And this is perfectly logical when they're measured on driving cost out of their processes. But it does mean they're not fixing the real issues in their business, stopping them from reaching their full potential.

Can Fintech be a catalyst of change?

You probably recognize some of these issues. And we'll be honest with you, there is no magic formula that'll fix them. The steps your team must take will depend on your existing technology stack, your in-house skills, and your business realities. But one thing is for sure: fintech's emergence means you can access lots of new tools that'll help solve these challenges and give your finance team the opportunity to maximize on its potential.

If you've worked in finance for the past five years you've probably heard something about fintech. Go to any conference and you'll find banks, technology vendors, consultants, journalists, you name it, raving about fintech in all of its shapes and sizes.

It's not just talk, there's real money behind all this. In 2018, fintech companies around the world raised a staggering $39.6 billion from VC firms. More traditional financial services firms are also spending copious amounts of money to digitize and ride the fintech train.

And for good reason, fintech is a game changer. Just look at what's happening in the consumer space. Finance is trending. In London, it's cool to flash your 'hot coral' Monzo card in the city's bars. And in the US, kids have turned Venmo into a verb you'll hear thrown around in every mall and restaurant. While in China, apps like WeChat and AliPay have created a whole new category of financial services used by billions of people.

The impact of fintech hasn't been as dramatic just yet in the business world. There's certainly lots of talk, but in reality only a few trailblazing treasury and finance teams are embracing fintech. This is to be expected, fintech is still emerging and finance teams are often reluctant to shift beyond the status quo.

But if you're in one of those teams that hasn't made a move yet you can't stand still for long. Fintech is here to stay. And those teams that embrace it with courage will unlock opportunities to transform their department and become value-creators for their business. Those that don't will fall behind the curve.

Fintech stats you need to know

Fintech firms **raised $36.6 billion** from Venture Capital firms in 2018 (HubSpot)

460 billion annual transactions were recorded by Tenpay (through the WeChat app) in 2018 (Alipay & Tenpay)

In just four years Monzo **acquired over 3,000,000 customers** (Monzo blog)

Data from IDC shows that by 2022 **businesses will spend roughly $2 trillion on digital transformation** (IDC)

Three areas of finance where fintech is making its mark

With fintech creating opportunities for finance professionals to transform all aspects of their work it's often overwhelming knowing where to start. And the truth is there is no right answer. But there are some areas of finance where the impact of fintech is more mature. So if you're nervous about taking that first step, here are the areas you can do so with confidence.

Payments

Payments are core to the fintech revolution, and for good reason: they sit at the heart of global commerce. They're also a pain point for many organizations because they're slow, inefficient, risky, and stuck in the 20th century—especially cross-border payments.

A lot is happening on multiple fronts to fix payments. At a structural level, regulators are launching domestic faster payment systems. These 24/7 payment systems match the needs of modern economies and will be the building blocks for future payment innovation.

When it comes to cross-border payments, the most notable recent development is SWIFT's global payments innovation (gpi) initiative. Gpi aims to improve the cross-border payment experience for companies by allowing for more data exchange and increasing visibility into payments all within the existing SWIFT payments infrastructure.

There are also players building completely new payment rails. Ripple is a prime example. The company is using distributed ledger technology to facilitate real-time cross-border payments. These will be at a fraction of the price compared to today, and will carry rich remittance data helping companies to achieve straight through processing.

Risk management

Risk management is a crucial pillar of finance, especially treasury. It's also one of the hardest areas to manage. Why? Because finance teams lack the necessary data and visibility to make informed decisions.

Fintech is changing this. A wealth of data is made available as companies shift from pen and paper to using systems and platforms. Leading finance teams are harnessing this data to get deeper insights into the risks they face and the strategies they can use to manage these risks.

But it doesn't stop there. With machine learning and AI becoming more commonplace, finance teams can have technology do the hard work for them by analyzing billions of internal and external data points to bring hidden risks to their attention. This allows finance teams to be proactive, rather than reactive and mitigate risks before they materialize. And, in some cases, finance can just let the machine deal with the risk in the way it thinks best—within certain predefined parameters, of course.

Supply chain and working capital

Supply chain—and working capital by association—is the next frontier for digital transformation. Data from IDC shows that by 2022 businesses will spend roughly $2 trillion on digital transformation, with the vast majority of investment going towards technology designed to transform supply chain operations.

The impact of this investment will be extraordinary. For one, businesses will become more agile, resilient, and profitable. And the free flow of data and breakdown of internal (and external silos) will give finance teams insight into their financial supply chain like never before. This will allow them to fix age-old problems like cash flow forecasting and planning almost overnight. It'll also allow them to manage the cash they have more strategically and create value for the company.

The benefits of this transformation will flow through the supply chain. Already, there are new and exciting supplier financing tools emerging that are founded on data rather than paper. These are allowing innovative financing firms to push financing deeper down the supply chain and much earlier in the P2P process. This will go a long way to closing the $1.5 trillion financing gap and realize the promise of economic opportunity for all.

Challenging the status quo

There's some way to go before fintech delivers on its full promise, especially in the B2B space. But that doesn't mean you can't benefit right away. If you're a visionary and challenge the status quo, you can take advantage of solutions right away that provide you with the ability to unlock trapped value in your organization. And by taking those first steps you'll also provide the foundation for further innovation, setting up your department for long term success.
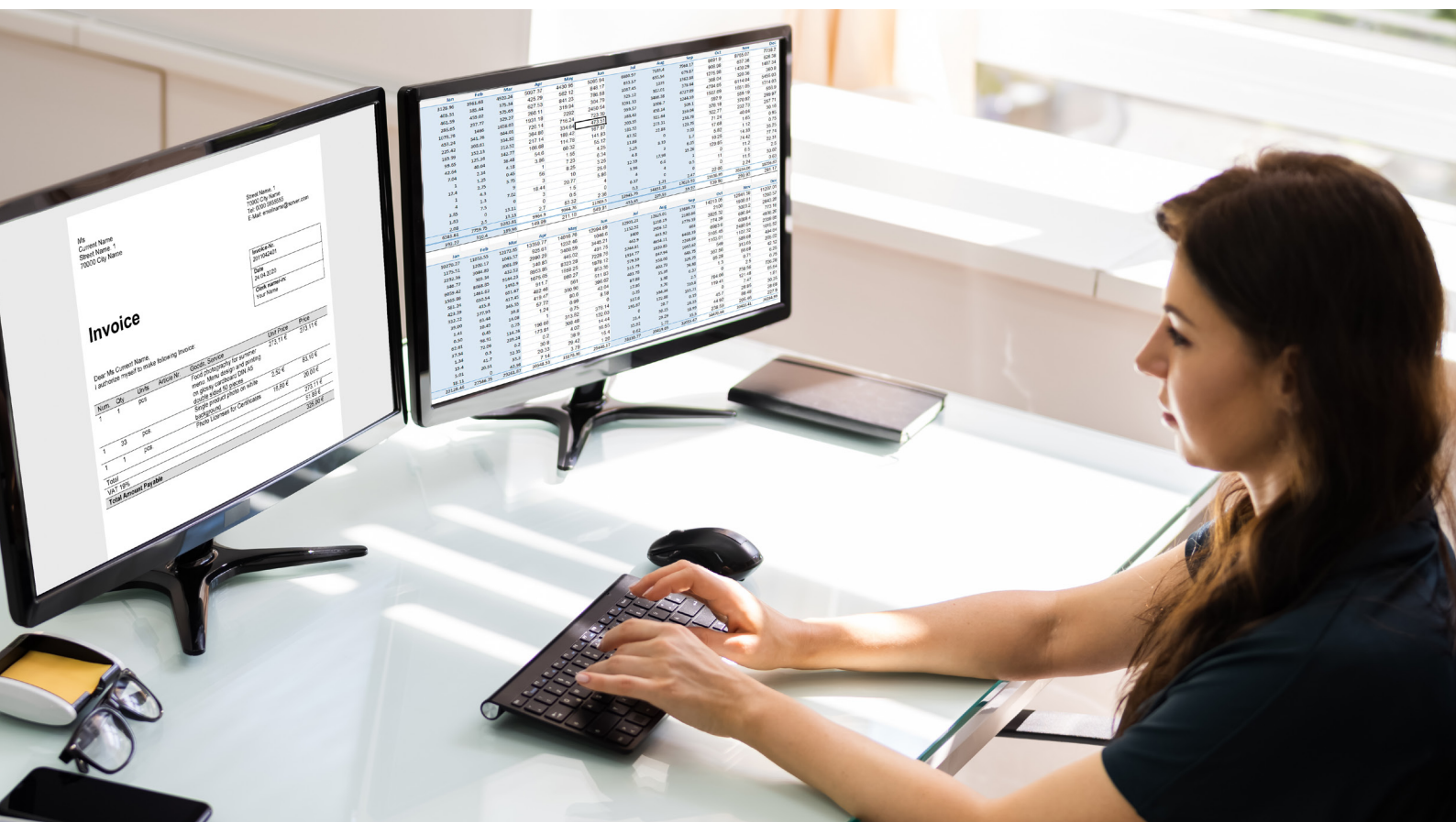
Insider insights: Interview with Damian Glendinning, former group treasure, Lenovo

Damian Glendinning is the former Group Treasurer at Lenovo and has over forty years experience driving digital transformation in treasury and finance teams. Here Damian shares his thoughts on the opportunities fintech is creating for treasury to transform how it operates and the value it creates for the business.

As I look back over more than two decades in treasury, two things strike me: the enormous amount of change I have seen and the huge opportunities that change has presented. As I look forward, I see many more changes coming.

First, the businesses we serve have evolved considerably. When I started working for a multinational, each company in each country had its own full suite of management, with its own banking relationships, own funding, own treasury teams, etc. Since those days, we have seen the introduction of the euro, a massive opening up of national boundaries around the world, and the installation of treasury management systems which collect balance data and issue payment instructions across many banks.

The opportunity for treasurers has been immense: we are now able to manage operations across much broader territories, and drive significant efficiencies. It also means we are able to be a much better strategic partner for the business: we now know—or should know—exactly how much cash we have, where it is, and how much we need. As national borders around the world have become more open, it has become commonplace for us to be managing operations, or at least payments and collections, across half the globe or more.

What changes do we have ahead of us?

New technologies are opening up whole new ways of working for treasury professionals. For example, in my last company, we ran a global treasury operation from Singapore. This was basically impossible a decade ago. But we're only scratching the surface of what's possible.

We already know how to transmit data files so they can be read by the IT systems of a customer or a supplier. It can only be a matter of time before we have all the information of the remittance advice as part of the data we get when we receive a payment. This will let us do the reconciliation of payments received to the accounts receivable system via straight through processing. There are many systems out there which make it much easier to manage letters of credit, and protect against duplication (and fraud), while eliminating discrepancies. These systems already exist— they are just not as good or widely used as they should be.

We're also already using portals for FX, and platforms are becoming increasingly common for activities like dynamic discounting. Will we see the point where bond issuance, or at least CP issuance, become pure internet auctions? Will we have a global, online market for discounting financial instruments, including receivables balances?

And, as these processes evolve and catch on, will we see a big change in the whole structure of the finance world? As we go through these initiatives, it's often not banks who are at the leading edge. After all, payments processing is mostly about the accurate execution of large amounts of instructions. Banks are quite good at doing this—but are they the best? In China, we are already seeing internet companies virtually take over the consumer payment space— usually using the smartphone to execute transactions. Why can't business-to-business payments go through a similar route?

And this is without even taking into account all the new technologies we haven't seen yet. There is a lot of hype around blockchain and many other new technologies. These still have a long way to go, and we, as treasurer, should be more interested in solutions than in the tools. Very few people, if any, foresaw how the smartphone would revolutionize daily tasks, including buying groceries and checking in at airports. Could we see the same sort of transformation of how we do things in treasury?

Each change is a threat, a threat to the established way of doing things. But it's also an opportunity.

Chapter two: understanding transformative technologies

"Every once in a while, a new technology, an old problem, and a big idea turn into an innovation."

— Dean Kamen

We've established that the role of finance has changed over the past decade. We've also established that it'll continue to evolve as new technology transforms how finance teams, businesses, and whole industries behave. And, most crucially, we've learned that finance teams can't rest on their laurels. The future is exciting with limitless opportunities for finance professionals like yourself to harness technology and redefine your role.

This transformation won't happen by itself, however. You must lead the charge by becoming obsessed with fintech. And we don't necessarily mean how it all works on a technical level—although an elementary understanding always helps. We mean obsessing over the outcomes it'll create and the opportunities it'll unlock.

Now we understand the fintech landscape is confusing. Every day there's a glut of new announcements about the latest and greatest technology that'll revolutionize this and that. Often these are written in a language that's clear as mud unless you're a technology wiz. It's hard to keep up when you spend all your time following these trends, let alone when you're also managing the financial needs of a global enterprise.

In this chapter, we'll tell you in plain english all you need to know about the technologies transforming finance. This'll give you a baseline knowledge around the most important technology trends, allowing you to start your explorative journey into the outcomes these can deliver. We'll also provide some practical hints and tips for how you can stay on top of the latest technology trends.

Understanding 5 transformative technologies you've already heard about

As a leading finance professional you're aware of the key technologies impacting your role. But do you really understand them? Can you distinguish APIs from AI? Can you demystify the cloud for your team? And do you have an elevator pitch ready to dazzle your CFO the next time they ask you about blockchain?

Here's what you need to know about the five main technologies transforming finance.

API's

AI & machine learning

Cloud

Distributed ledger tech

Internet of things

API's

Definition

Application programming interface, or APIs as they're more commonly known, are a set of programming instructions and standards for communication between software. They act as the messenger, delivering requests from one system to another and back again instantly and seamlessly.

Current and future use cases

APIs are used everywhere, we just don't know it. And they're allowing companies to do all kinds of exciting things. One of the best use cases is Uber. It uses APIs to connect maps, payments and communications tools to its platform. In finance more specifically, regulators are enabling APIs in payment systems, allowing companies to build improved services on these rails. Also, APIs are making it easier for finance teams to pull real-time information into their systems.

Technology background

APIs, prior to the dot-com bubble, were mostly private and proprietary. They were tools used by developers to help automate interactions between systems. After the dot-com bubble burst, companies like Google, Yahoo, and Twitter found that making APIs public led more rapid innovation via the efforts of developers experimenting with the tools.

Notable statistics

21,679:

number of APIs listed in the API directory

The financial industry is the fastest growing API category since 2014, adding over 1,000 APIs

Why finance professionals should care

With faster computers and more powerful processors, APIs are growing apace, and the innovations with APIs means that they can be used to enable financial transformation.

What to tell your boss

According to Capgemini, "APIs are enabling fintech firms in multiple ways including access to cloud-service providers, connecting to platforms provided by financial services firms or connecting with other ecosystem players" to take advantage of APIs for digital business transformation, you must have modern capabilities. And it's worth the upgrade. Invest the time and research to make sure you're using APIs and API management to support business transformation. Or risk falling behind.

AI & machine learning

Definition

The basic definition of artificial intelligence (AI) and machine learning (ML) is a computing system that uses available information and reason to make decisions.

Current and future use cases

AI and ML technology have flourished over the last thirty years, making substantial strides and breakthroughs. Modern computers have what early computers didn't: substantial storage and processing speed to make rapid decisions. And in the era of "big data" there's a ton of information for computers to base decisions off of. And AI is already making massive impacts on technology, medicine, entertainment, finance, and banking.

Technology background

While it seems like these two ideas are entirely new, they've been around for a while. Alan Turing, in his 1950's paper, Computing Machinery And Intelligence questioned why computers couldn't do as humans do: use available information and reason to solve problems. Of course, the ability of AI and ML to solve complex problems is limited by the technology of the time. In the '50s computers couldn't actually store information, so its ability to make decisions was purely hypothetical, as it could only perform commands, not remember them.

Notable statistics

1.2 billion
1.2 billion in additional GMV for the finance industry will be created by AI.

40 percent
40 percent increase in productivity by using AI in business.

15 percent
15 percent of enterprises are currently using AI.

Why finance professionals should care

Application programming interface, or APIs as they're more commonly known, are a set of programming instructions and standards for communication between software. They act as the messenger, delivering requests from one system to another and back again instantly and seamlessly.

What to tell your boss

Get on board now and put together a discovery team. Have that team identify the narrow use cases to gain the most tailored benefits for your enterprise. AI makes the phrase "a calculated risk" a reality. And it gives a wealth of data for every suggested decision. There are enough use cases to transform your operations and the benefits of them make it a digital no-brainer to explore.

Cloud

Definition

All those traditional services like servers, storage, databases, networking, software, and anything else that used to be only on your physical computer are delivered over the internet. You only pay for what you need, and you can swap in and out capabilities when you need them, allowing you to be more nimble and efficient managing and scaling your business.

Why finance professionals should care

They're highly flexible; uber connectable; enable process to happen faster; are continually updated with the latest tools and compliance capabilities; and are much cheaper than legacy on-premise solutions.

Technology background

So, it all got started with the internet. But really, when internet speeds increased and services matured, solutions moved to grid computing (solving large scale problems with parallel computing) to utility computing (on demand pay-per-use service), to now: SaaS (network subscriptions for services) and cloud computing (always on and available access to resources).

Notable statistics
more than 1/3

More than a third of organizations see cloud investments as a top three investing priority, **according to Gartner.**

Current and future use cases

The current maturity of cloud computing allows for robust platform solutions for digital marketplaces. Most notably, these solutions help modernize buying, paying and selling—and release value trapped in legacy supply chain processes and systems. And to be clear, these solutions aren't the ones you were sold on in '99 that only looked good on paper. The technology is here and fully functional.

What to tell your boss

Get a customizable solution that lets you build capabilities into it with plug and play apps. It might be a bitter pill to swallow letting go of that old legacy system, but it has backed your enterprise into a corner. Ditch it for something that can grow and change with you.

Distributed ledger technology

Definition

Application programming interface, or APIs as they're more commonly known, are a set of programming instructions and standards for communication between software. They act as the messenger, delivering requests from one system to another and back again instantly and seamlessly.

Current and future use cases

Despite the hype and backlash to blockchain, the technology is still maturing to try to provide real measurable solutions. Some positive developments involve cross-border payments, traceability in the seafood supply chain, and Santander has estimated that blockchain technology could save banks $20 billion a year. This technology could theoretically bring shared trust and savings in commerce and trade. It has implications for small and medium-sized business financing, collaboration between multiple entities on transactions and savings all along the supply chain.

What to tell your boss

Have a business case ready: if the benefits outweigh the costs and you can accept the risks, consider adoption. Otherwise, keep an eye on it and jump in when the time is right for your business.

Notable statistics

$1.1 billion
Banking, securities and investment services, and insurance industries will invest more than $1.1 billion.

$16 billion
Consumers could save up to **$16 billion in banking and insurance fees a year.**

Why finance professionals should care

You can't not care about DLT. In one way, shape or form it will impact what you're doing— if it hasn't already. But just remember, despite the hype, DLT isn't necessarily the cure to all issues. It's best use cases will probably be in those areas where there is a need to generate more trust and visibility between multiple parties.

Technology background

Distributed ledger technology entered the financial lexicon as the technology underpinning Bitcoin in 2008. Since then, the technology has evolved away from Bitcoin and is used in all manner of financial processes and services from KYC to payments. DLT is the technology that everyone wants to talk about.

Internet of Things

Definition

At the broadest level, the internet of things (IoT) refers to anything that connects to the internet. But in the current cultural understanding, IoT refers to traditionally unconnected items that can now connect to the internet and to other devices. Think of smartwatches, to digitally connected refrigerators, to smart thermostats. When all these things connect to each other, they can collect data, analyze it, and make suggestions based off of that data. Essentially, it's machine-to-machine communication.

Notable statistics

$631 million
Spending on IoT Endpoint Security solutions will increase from $240 million in 2016 to $631 million in 2021, **according to Gartner.**

Why finance professionals should care

The ability to use an entire network of data intelligence to make speedy financial decisions can potentially revolutionize the way you do business.

Current and future use cases

It doesn't matter if machines gather data unless there's a way to analyze that data. That's where cloud computing comes in. It provides the hub and the framework to take that data and use it for decision making. And it doesn't have to be just "machines" talking to each other, it can be any sensor anywhere. For example, shipping containers can contain IoT enabled devices that monitor all sorts of data points. This increased visibility will give finance teams the ability to transform how they finance their supply chain and the price they pay.

Technology background

The idea has been around since the early 90's but didn't really start gaining steam until 1999. It started to gain traction in the late 2000s and has come to be associated with all sorts of "smart" devices in the retail world.

What to tell your boss

Gartner identifies master data management as one of the most productive IoT tools, one worth looking into for your enterprise. But make sure you have a clear focus for using IoT technologies: Bain makes it clear that enterprises spread themselves out too thin and try to do too much with these technologies. Focus on one key area and build your business case around that.

3 More emerging technologies to keep your eye on

While it's crucial to know about the technologies making an impact now, the wheels of technology innovation never stop and the next big hing may be just around the corner. Here are three technologies that you should certainly be keeping an eye on.

Smart invoice

The smart invoice could be a gamechanger for finance teams. By combining a legal document with the coded specification of how and when the execution of payment settlement takes place, smart invoices will greatly reduce the price of cross-border b2b payments and increase efficiency for finance teams. They'll also reduce the risk of invoice fraud, streamline bookings and reconciliation, allow real-time auditing to happen, and transform the value of supply chain financing.

Cryptocurrencies / tokens

When most people think cryptocurrencies they think bitcoin: the famous decentralized crypto asset that made a few people very rich and a lot of people very poor. And while it's probably fair to say that most finance professionals need not think too much about bitcoin, they should keep their eyes on how companies are using the underlying technology and principles in areas such as payments, identity and ownership.

3D printing

3d printing is amazing. There are already numerous examples of 3d printed items, houses, and even pizza. It seems anything is possible. And this could be transformational for businesses and their supply chains. In theory, businesses would no longer have to ship physical goods to one another. Instead, sellers can send data files that enable the buyer to print out the goods they require exactly where they need them. This could dramatically reduce costs, the time to get goods to the end consumer, and the environment impact of supply chains. And it's important finance professionals understand this, because as the physical supply chain evolves so will the financial.
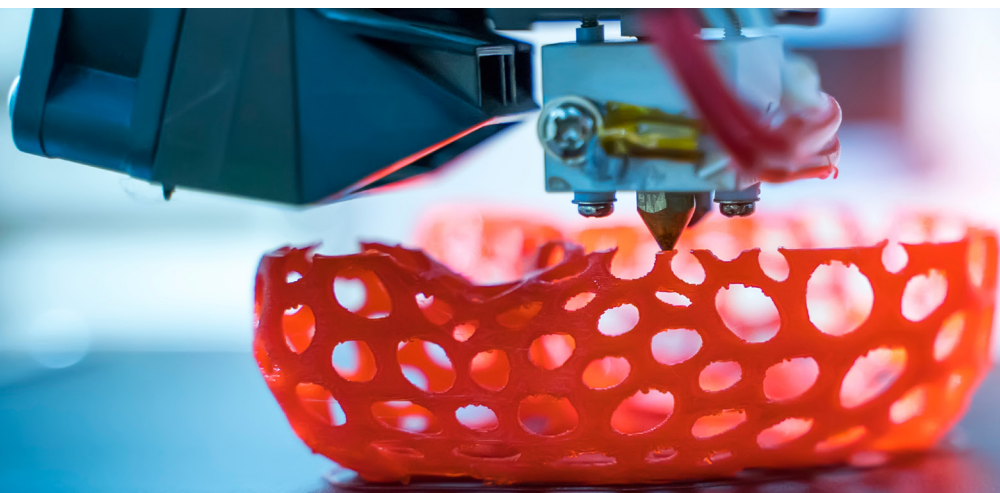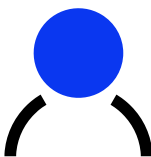
How to keep up with new technology developments

We've given you an idea of the technologies to pay attention to so you can transform your finance department and set yourself up as a chief future officer. But remember, technology isn't static. And as technology trends evolve you must stay up to date with the latest developments. Here are a few ways you can.
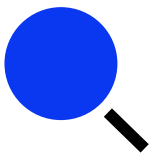
Be curious

Congratulations! By reading this and being interested in new technology you've already taken the first step. But don't stop here: keep reading articles, watch videos, listen to podcasts, and watch webinars. Maybe even arrange a meeting or two with a fintech company to understand how they're using technology and how it'll impact you.

Take a crash course in tech

Why not enroll in a technology course if you fancy a more formal approach to learning? Many of the world's leading universities now offer these courses which provide technical and practical insight into the technologies shaping the future of finance. You'll also get to network with like-minded people.

Bring in top tech talent

If you don't have time to commit to a formal course, why not bring the knowledge to you? Some of the world's leading finance teams are hiring technology and data experts. They can build a technology roadmap for you, lead implementation projects, and be a source of technical knowledge for the rest of the team.

Just try it out

Sometimes the best way to learn is to just give it a go. So, why not play with blockchain, build an app, or learn how to code in your spare time? You can build your skill set and become more familiar with how different technologies work under the hood.

Chapter three: understanding cyber risk

"If you spend more on coffee than on IT security, you will be hacked. What's more, you deserve to be hacked."

— Richard Clarke

With any opportunity comes risk. And technology doesn't escape this fact. Cybercrime is the dark side of technological innovation. It's arguably the biggest threat that all companies face today.

Data from the World Economic Forum's Global Risks Report 2018 shows that cyber attacks against businesses doubled in the last five years. And as companies adopt emerging technology to become more digital, the risk of a cyber attack increases. The same report highlights that the cost of cybercrime to businesses is expected to be $8 trillion over the next five years.

Now, we understand these numbers are worrying, but they shouldn't be a barrier to progress. Yes, cyber risk is a big issue, but there are some simple steps you can take to mitigate the risks which we'll take you through over the next few pages.

Insider insights interview

Nate lee, head of information security, Tradeshift

Nate lee is responsible for the overall security and the strategic operations of tradeshift's platform and infrastructure services which handle half a trillion usd in transactions. Here he provides insights into the latest techniques used by cyber criminals and gives advice on how your team can mitigate the risk of falling victim to a cyber-attack.

What are the biggest cyber threats companies are facing right now?

It really depends on the company. A company like google or microsoft who have lots of user data and company data have to worry about state-sponsored attacks—and because of their outsized position in culture, those cyber threats get all the press. But realistically, those aren't the kinds of attacks that every other company is going to face.

Most companies have to deal with simple security theft from criminal gangs looking for things like credit card numbers and passwords. Small and medium-sized companies are more likely to get attacked with phishing and ransomware.

What kinds of tactics are cybercriminals most commonly using?

The two most common are phishing and ransomware. You can spend a lot of time and money hardening servers and building strong applications, which is undeniably a good strategy. However, all of that won't matter if a criminal can trick an employee into clicking a link that says something like, "see who likes you in your office." If they have an unpatched computer, then the cybercriminals can get on their computer and access whatever your employee has access to. So phishing is certainly the big one.

The second one is using phishing attacks with ransomware. That's where somebody opens an app or downloads a file from a malicious email and suddenly their computer locks and they get a message like, "send me x amount of bitcoins or i'll delete everything on your computer."

In our digitally connected world, how should a business approach cybersecurity?

You have to secure everything. Especially now that people use their own computers and use their own phones at work. The goal is to take whatever the size of your enterprise's security perimeter is and try to make it much narrower so there is less area for hackers to enter.

That involves changing the mindset around security. It's moving away from the thinking of building this moat and then having a firewall and trying to keep everything inside safe.

You need to have a zero-trust methodology. That means you have to assume that everything is untrusted and possibly dangerous.

How does this apply to supply chain cybersecurity? How do companies ensure they stay protected from cyber threats when they do business with so many other partners?

If you're trying to reach out to all your suppliers directly then it's only a matter of time until you get breached by cybercriminals. That's because you have a million different contacts you're trying to manage in a million different systems, and you're getting attachments from random people and opening them: that's a surefire way to get hacked.

Using a digital platform can help because you then get one single place where you're going for all of your transactions. And the platform, instead of you, uses an encrypted authenticated connection to the server. All of the files coming and going are traveling through the same encrypted place. The platform provider is scanning them and checking them for viruses. It lowers the chances of getting hacked because the perimeter for threats is now much narrower.

And beyond cybersecurity, you can address compliance risk. A good digital platform ensures that you're compliant with taxes, it will scan for sanctions, embargoed countries, and all the traditional business risks for you.

How do you get employees on board with cybersecurity measures?

It's about understanding how to talk to your employees. It's helping them understand how it affects them personally, not just professionally. Encourage them to use these tools at home. Because if they don't have two-factor authentication for home and they reuse passwords, it's just a matter of time before their passwords get breached. Explaining it to your employees in a way they'll personally understand helps.

That's why nobody likes the annual security training video from 2009, it's not relevant. How is that supposed to raise awareness? It just makes people think security is an arcane topic that only experts can understand. That's just setting your company up for failure.

And when you can get your people on board with security, then not only are they better protected, but your company is far more secure.

How to secure your supply chain

An emerging cyber risks is the supply chain. A recent study from cyber security firm, Carbon Black, found that 50 percent of cyber attacks against companies use an island hopping strategy. This means the attackers will try to not just infiltrate one network but an entire supply chain for maximum disruption (and profits). So you can have the best cyber security in place, but that might not stop somebody sliding in the back door through your supply chain.

As a response to this growing threat, the UK's National Cyber Security Center has put together a handy document covering the principles of supply chain security. Now while finance probably doesn't have to be accountable for all these principles, it's useful to be aware of them and ensure that they're employed throughout your organization where applicable.

Following these steps and establishing a robust cybersecurity framework will go a long way to protecting your company, but they're not infallible. Mistakes happen. And cybercriminals are shrewd; they exploit any weakness. So stay alert, encourage your team to escalate any suspicious activity, and continue to test your systems and processes to ensure they're watertight.

Here are 12 principles the UK's National Cyber Security Center suggest companies adopt to mitigate the risk of cyber-fraud occurring in their supply chains.

☑ Understand the risks

- Understand what needs to be protected and why

- Know who your suppliers are and build an understanding of what their security looks like

- Understand the security risk posed by your supply chain

☑ Establish control

- Communicate your view of security needs to your suppliers

- Set and communicate minimum security requirements for your suppliers

- Build security considerations into your contracting processes and require that your suppliers do the same

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☑ Check your arrangements

- Build assurance activities into your approach to managing your supply chain

☑ Continuous improvement

- Encourage the continuous improvement of security within your supply chain

- Build trust with suppliers

Chapter four: planning for digital transformation

"Strategy execution is the responsibility that makes or breaks executives."

— Alan Branche and Sam Bodley-Scott

We hope you're excited about the new technologies impacting finance. And we hope you can see the opportunities they create for you to drive outcomes that'll transform how you add value to your enterprise. We certainly believe this a moment you must embrace with everything you've got.

However, we understand that sometimes fintech companies make bold statements that sometimes oversell the ease of adopting new technology. Yes, while modern fintech solutions are easier to implement than those legacy systems you're used to, there are still challenges. After all, the realities of business haven't changed. There's still internal politics, still people you need to convince, still data that needs sorting out, processes that need reviewing, and so forth.

And the fact is, if you don't think through all these things your transformation project is at risk of failure, no matter how compelling the technology.

Don't believe us? Data from the Project Management Institute finds that 9.9% of every dollar invested into a project is wasted due to poor planning. And a study of IT professionals by the Standish Group finds that only 29% of IT projects are successful. 19% are considered utter failures. Again, the major culprit is often poor planning.

So if you want your digital transformation project to be a success you must have a plan. But what should this plan look like? And what are the best practices when putting one together? Let's take a look.

6 Steps to successful project planning

1: Put together a project team

You're not going to drive this project alone so you need a team. You don't need a big team, but it must be highly motivated. It should include you as the team lead, somebody from the implementation side and also somebody from each of the teams that the project will impact. So depending on the project that may include folks from accounting, procurement, and ap etc. You should also include a representative from your chosen solution provider on your team as they'll have knowledge from running hundreds of similar projects.

2: Put together a small plan

Document everybody's roles, the various milestones you're aiming for, your meeting schedule and other similar practical items. The exercise doesn't have to be exhaustive— just a page or two will be fine—but it's useful to document this so everybody is aligned.

3: Understand the approval process

Your project won't happen if you don't get sign off. And as you're more than aware, getting sign off on a project in large enterprise isn't that easy. So make life easier for yourself by actually understanding the approval process you'll go through. Document everyone that must be involved and assign them roles such as approvers, sponsors and blockers.

4: Assess where you are

If you're launching a digital transformation project you have a vision of where you want your company to be. But do you know where it is now? So take the time to fully understand how your business processes work from end to end. Then identify and develop some baseline metrics that you can use to highlight the success of your project.

5: Identify where you want and need to be

Once you've established these metrics you can define where you want to be. You may already have a good idea, but make sure you verify this. So talk to technology providers, other companies and consultants to understand what best practice is and the way the industry is moving. Also understand what senior management have as goals and align your project with these.

6: Determine how to get there

Then build a roadmap for how to get there and who's coming with you. So you want to find the solution providers that can help achieve your objectives by issuing an rfp to a small shortlist (no more than five), evaluate their responses, and ultimately select a vendor.

By following these six steps, you'll be well on your way to launching a successful transformation project. The next step is building a business case. So let's look at what this looks like and what it must include.

How to build your technology business case

Your business case is the beating heart of your entire project. It's sole aim is to provide justification for undertaking a project by evaluating the benefits, costs, risks, and rationale for your preferred solution.

It may seem like unnecessary busy work, but it's not. Your business case is the document that'll get those that believe in what you're doing to believe in it more. And it's the document that'll get doubters aligned with your project.

Now while every business case isn't the same, there are some golden rules you can follow to give yourself the best chance of success. These aren't revolutionary, but it's amazing how many times one or more of these key elements is missed by finance teams when building their business case.

Section	What to include	Pro tip	Complete
Executive summary	This must be your project elevator pitch summarizing what you want to do, why you want to do it, and what the outcome will be.	Keep it short but load it with detail—it may be the only thing your executives read.	☑
Project background	Talk about what's happening in your company right now and the issues that will be addressed by your project.	Make this section sing by using facts and figures from any proprietary or third-party research.	☑
Objectives	This is a data driven section where you must set a baseline using current metrics and set goals you'd like to achieve through your project.	Although tangible data is key here, don't forget to talk about the intangible aspects of your project like employee satisfaction and morale.	☑
Proposed solution	Provide details around the solution you've selected and highlight its features and how these will help you achieve your objectives.	Leverage your solution provider for this section to ensure you clearly and correctly articulate the best features of your chosen solution.	☑
Return of investment	It's time to do the math. Use this section to talk about how much your project will cost in terms of technology, people, consultancy etc. and then highlight the value you expect it to create for your enterprise.	Test the model by changing assumptions and be conservative in what you present.	☑
Disregarded alternatives	Use this space to mention the alternative solutions you looked at and why you decided to dropped them.	Keep this section short but try to juxtapose the solutions you dropped to your chosen solution.	☑
Risks	Talk about the risks around the project and highlight what can be done to reduce these. Also talk about the solution risks by exploring what might go wrong and what contingencies you have.	Put yourself in your executive's shoes when drafting this section. Ask what would their concerns be and make sure you address these.	☑
Project plan	Use this space to outline how you're planning to get the project finished.	Items to always include in your project plan are: • Resources needed • Schedule • Milestones • Core deliverables	☑

Chapter five: going live with technology

"Let's go invent tomorrow instead of worrying about what happened yesterday."

— Steve Jobs

You've done your homework, built your business case, selected your solution, and got your company aligned with your plans. But you're not there yet. You must now focus on implementation.

And after going through all that hard the last thing you want is the implementation to be a disaster. You know the success of your entire transformation project rests on your solution being integrated quickly and as seamlessly as possible. So you need to know what it takes to make this happen. And you need to know the pitfalls to avoid.

To help you make this last step a success, we've sought the wisdom of our best-in-class professionals services team. Here they share the top tips and tricks they've learned from working on hundreds of projects with the world's largest companies.

Getting it right: your quick and dirty guide to a seamless technology implementation

Implementing your new technology solution quickly and seamlessly is crucial. But it's not always straightforward.

Technology implementations are notoriously complex. Things go wrong, deadlines slip, promises break and expectations aren't met. And after all that you could be left with a half baked solution that delivers a fraction of the value it should.

But it doesn't have to be like this. There are plenty of examples of successful technology implementations. And there's no secret to what makes them successful: it's planning and staying focused.

In this quick and dirty guide our professional services team tell you all you need to know to make your technology implementation a success.

Quick

Decide whether you're taking a big bang or phased approach to implementation. Remember to think through this carefully.

Dirty

Work with internal colleagues and your solution vendor to build a robust roadmap. You must define the roadmap of the project from start to finish and include ambitious but attainable milestones.

1: Build a robust Implementation plan

You need an implementation plan. It sounds obvious, right? But how often do we dive into projects without planning fully beforehand. Let's face it, who hasn't started to build Ikea furniture without reading the instructions first. But the consequences of not planning when implementing a new enterprise technology solution are far greater than a wonky shelf.

The first question you need to ask is whether you want to go for a big bang approach and go 100 percent live on day one or whether a phased approach might be more appropriate. While there is no correct answer, a phased approach is likely to be best for most companies.

A phased approach allows you to go live with the solution in certain areas or markets quickly. These 'quick wins' will impress management and start allowing you to show the benefits of the solution. With a phased approach it's also easier to work through any kinks that only appear through operational use as you won't have to unpick the whole system.

So think through your implementation plan before you do anything. Define what you want to tackle in what order. Work out who you must involve in the project and ensure they have bandwidth to meet their responsibilities. And collaborate with your solution provider to establish milestones that roadmap the project.

⏱ Quick

Understand the data you need to sort in order for your project to be a success.

✎ Dirty

Spend as much time as needed to cleanse and standardize your data using all available resources. Getting this right may be the difference between a smooth or turbulent implementation. And it may be the difference between success and failure.

2: Get your data in order

You've heard the saying "garbage in, garbage out", right? It doesn't matter how fancy the solution you're adopting is; filling it with relevant and accurate data is key. So before you start implementing the project, work to get your data in order. We're not talking about all your company's data—that's a huge job. We're talking about the data relevant to what your solution addresses. For example, if you're digitally transforming AP with the goal to approve invoices earlier and take advantage of early payments, you need to ensure your vendor master data is clean and accurate.

Now you probably can't do this alone. So use the resources you have around you. Bring your IT team in to help, and harness the skills of your vendor to help you focus on the data that matters. You could even bring in a third-party to help cleanse the data if that makes sense for your company.

⏱ Quick

Understand that scope creep will happen if you don't put in place safeguards against it.

✏ Dirty

Build out a detailed and robust integration plan and assign a project leader to ensure it's followed and to address any out of scope requests. Remember, always try to keep things simple.

3: Avoid scope creep

Have you ever worked on a project that just seemed to take forever? Were deadlines missed? And did the team end up spending most of its time working on periphery tasks? If you answered yes to all these then you'll already know something about scope creep.

Scope creep is the hidden menace that lingers in every project. If it's unleashed it can escalate beyond control and derail your project. It'll eat your budget, ruin your deadlines, frustrate everyone involved, and limit the effectiveness of your project. And don't be naive to think it won't happen to you. According to a recent study by the Project Management Institute 52 percent of projects suffer from some form of scope creep.

There is no hard and fast method to deal with scope creep; but there are a few things you can do to prevent it happening. For one, you need to make sure your project is well defined and mapped out. When it is, you can easily notice when people make out-of-scope requests and handle them accordingly. Naturally, that means you need someone watching out for these requests. So make sure you have an empowered and fully invested project manager. Finally, try to use a centralized form of communication to easily monitor and audit all requests.

⏱ Quick

Schedule a regular meeting cadence and encourage attendance.

◢ Dirty

Plan what you'll do to celebrate hitting milestones ahead of time and share these ideas with the project group to encourage them to keep aiming towards the targets.

4: Keep the momentum going

It's crucial to keep the momentum going if you're going to meet your integration milestones. And it's easy to forget this. Just because you're fully engaged in the success of the project, it doesn't mean everyone else involved is. They've got other things demanding their attention and it's easy for them to lose focus.

Keeping momentum doesn't have to be a difficult process. Meetings are a good place to start. Ensure there is a regular cadence of check-in meetings with the core implementation team. And have less frequent recurring meetings with the broader key stakeholders in the project. This should be enough to keep most people engaged.

Another great way to maintain momentum is to celebrate success. It's simple, but it's often forgotten. So whenever you hit a milestone make sure you mark the moment. It can be a drink in the office, a trip out, or even a simple thank you email. Just do something.

Conclusion

Your transformation journey starts now

Making change happen is never easy. Even the most basic technology integrations require a combination of vision, skill, desire and courage to get them over the line. But if you follow these steps you'll give yourself the best chance of success and start adding all that extra value sooner rather than later.

There you have it. You've got a reason to use technology to change. You know about the tools that'll allow you to achieve your objectives. You also now have a roadmap for making it happen. So what's stopping you! Let's get out there and make it happen.

New technology is there waiting to be used. You just need to take that first step. We know you've got what it takes to become a Chief Future Officer and we're with you every step of the way.

About Tradeshift

Tradeshift is a market leader in e-invoicing and accounts payable automation and an innovator in supplier financing and B2B marketplaces. Its cloud-based platform helps buyers and suppliers digitize invoice processing, automate accounts payable workflows and scale without limit. Headquartered in San Francisco, Tradeshift's vision is to connect every company in the world, creating economic opportunity for all. Today, the Tradeshift platform is home to the world's fastest-growing network of buyers and sellers operating in more than 190 countries.

Fast Company named Tradeshift to its list of the World's Most Innovative Companies for 2020 and it landed on Forbes' 2019 list of The Most Innovative Fintech Companies.

Find out more at: Tradeshift.com

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