

Embracing Digital Evolution

A DLA PIPER REPORT



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Introduction

Purpose-driven, values-led organisations, with Industry 4.0-aligned cultures, skillsets and mindsets, will have the greatest success in our digitalised world.

This report gives a macro perspective on how to prosper in the Fourth Industrial Revolution – from a business perspective.

We've worked with digital revolutionaries around the world. Organisations who've mastered the ability to create and deliver superior value in their markets. Our report is based on insights from them and our partners.

We live in a volatile, uncertain, complex and ambiguous environment. Climate change. Waxing and waning globalisation. Incessant regulatory reform. COVID-19. You must account for all these when formulating, executing and adapting your strategy.

But the macro factor with the broadest, longest-term influence on strategic decision-making is the Fourth Industrial Revolution, or Industry 4.0.

This isn't a single point in history. Like previous industrial revolutions, it will play out over many years, until the next paradigm-shifting conditions emerge from human ingenuity and endeavour.

With new and emerging technologies redefining what's possible, ***you can't afford to merely transform. You must continuously evolve digitally.***

Higher share prices, greater profits, improved customer satisfaction and better employee engagement are all prizes for embracing digital evolution.

After all, the tech giants now account for 17.5% of the S&P 500. These masters of digital evolution didn't exist 50 years ago.

If you can adapt and evolve faster than the competition, put yourself ahead of the opportunity, and delight your customers, you'll thrive and lead. ***If you can't, you'll become obsolete and, eventually, perish.***

Different organisations will embrace digital evolution in different ways, but their strategies will share similar foundations. Our report brings together current thinking on how to succeed. It will help you start your journey or assess whether you need to change course.

Digital evolution is an enormous opportunity to supercharge your activities, boost profits and engage employees.

You should be excited by what lies ahead.

| [Steven Worrall, Microsoft](#)

“Culture is at the heart of our transformation, our digital evolution – and it's also a reflection of our journey.”

| [Simon Levine, DLA Piper](#)

“Some businesses don't even see the platform smouldering, let alone burning. They think they can behave the same way forever.”

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Seven principles for digital evolution

Lead through innovation

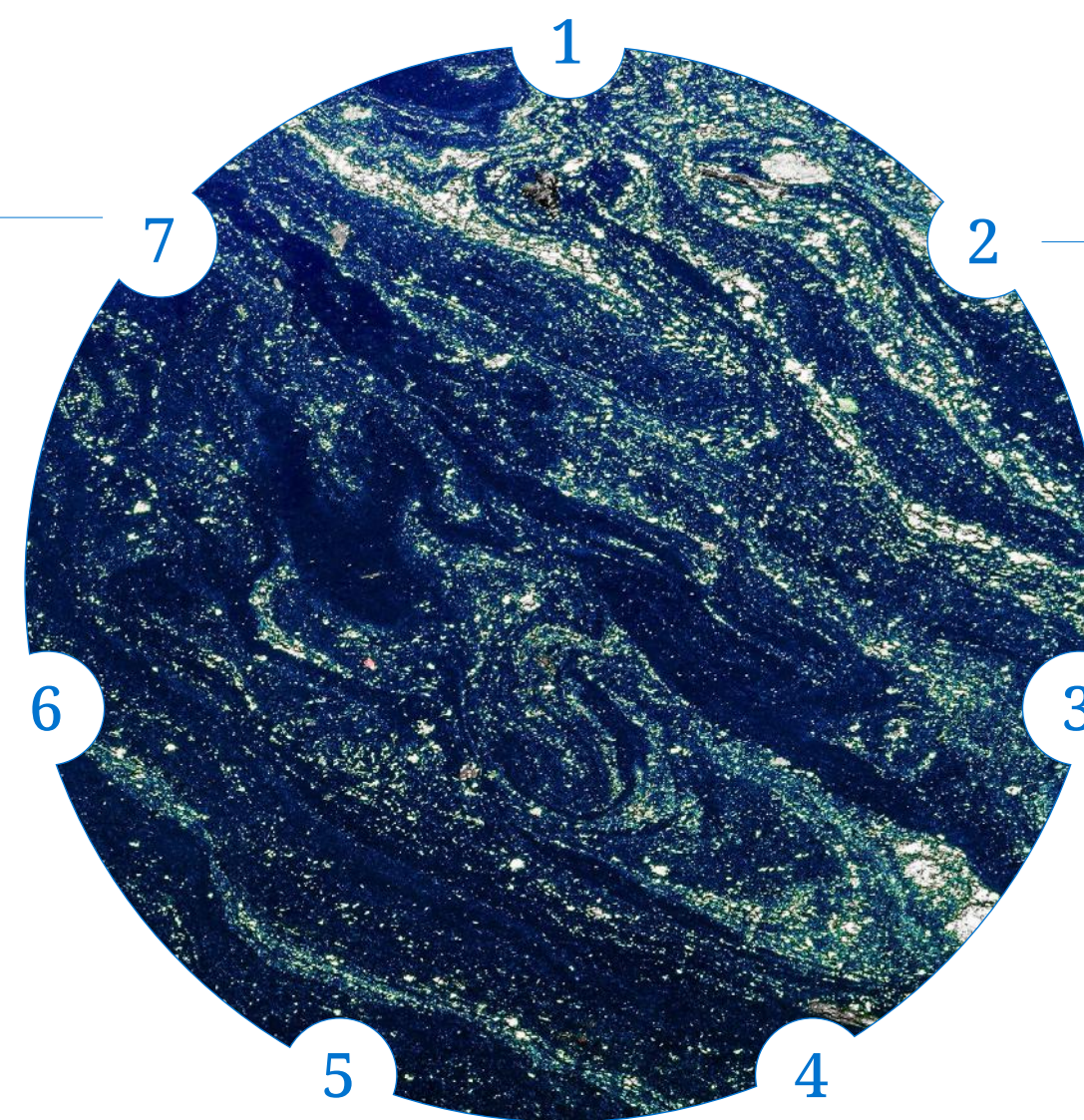
Today's bleeding-edge technologies are tomorrow's legacy systems. Your competitive advantage will depend on your ability to access and leverage new and emerging tech – and even create your own.

Technology problems are people problems

Customer and employee expectations are always changing: more speed, personalisation and availability. Technology is part of the solution. But the problems you're solving are ultimately human ones. So you must cultivate a talented, invested and diverse workforce.

Partner where you can

Digital evolution requires agility. One approach is to focus on your core objectives and work with partners for everything else. Whether it's with suppliers for cloud storage, or a sensor manufacturer to create an IoT product, the result is greater flexibility, because you're doing less yourself.



Embrace your evolution

In the face of unprecedented technological change, accelerated by the pandemic, you must embrace digital evolution: ongoing organisational adaptation to the market that takes advantage of Industry 4.0.

Digital evolution is more than just technology

Technology is crucial. You can't digitally evolve without it. But your ability to create a sustainable competitive advantage will depend on far more than what technology you use.

Have a purpose and a positive culture

Employees and customers are drawn to organisations with a clear purpose and a culture that aligns with their own values. Become purpose-led, not just profit-led. Your purpose must be driven by a leader who believes it, can communicate it, and can fulfil it.

Be customer-obsessed

Your purpose, strategy, culture and innovation must all meet customer needs and exceed their expectations. The most successful companies don't just please customers – they delight them. They think about what customers will want in the future, and execute accordingly.

SECTION 1

The drivers of digital evolution

As humans, our unique ability to imagine and innovate has created the societies we live in today. Curious and ingenious, we find the boundaries of possibility and break through them. And with each technological leap forward, our expectations grow.

Consumer value is one example. Tonight, you can stream virtually any movie you want while enjoying your favourite takeaway meal, having tracked its delivery to your door. All without leaving your couch. Those expectations spill over into all aspects of our lives and societies, incentivising businesses to raise their game.

Our environment is also constantly changing, through our own doing or otherwise, giving us new problems to solve and opportunities to seize. There's no better – or worse – example of this than COVID-19. But there are plenty of others, such as the climate crisis, an ageing population, and a wider recognition of the importance of mental wellbeing.

These challenges are also major drivers of innovation, and have played their part in accelerating DLA Piper's own digital evolution.

| [Simon Levine, DLA Piper](#)

“The pandemic has reinforced the necessity for digital evolution. At our firm, people are now more accepting of the need for change, for doing things differently and committing to that.”

| [Steven Worrall, Microsoft](#)

“Businesses need to do a better job of creating psychologically safe workplaces.”

READ ON:

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- [1.2 Accelerated change](#) →

1.1

Steam-power to STEM-power

The first, steam-powered industrial revolution of the late 18th century was followed by a second, a century later, when electricity powered mass production.

In the late 20th century, the Third Industrial Revolution ushered in the era of digital transformation. Computers and electronics enabled the digitisation of information, the digitalisation of processes, and the commercial advent of the internet.

The Fourth Industrial Revolution – Industry 4.0 – is the era when embracing digital evolution is unavoidable.

In 2018, USD1 trillion was spent on digital programmes worldwide. That's expected to increase to USD2.3 trillion by 2023. In the past 30 years, every dollar invested in digital increased GDP by USD20, while each dollar of non-digital investment increased GDP by only USD3.

As digital technologies leap forward, organisations and entrepreneurs are inventing entirely new business models and displacing incumbent operators.

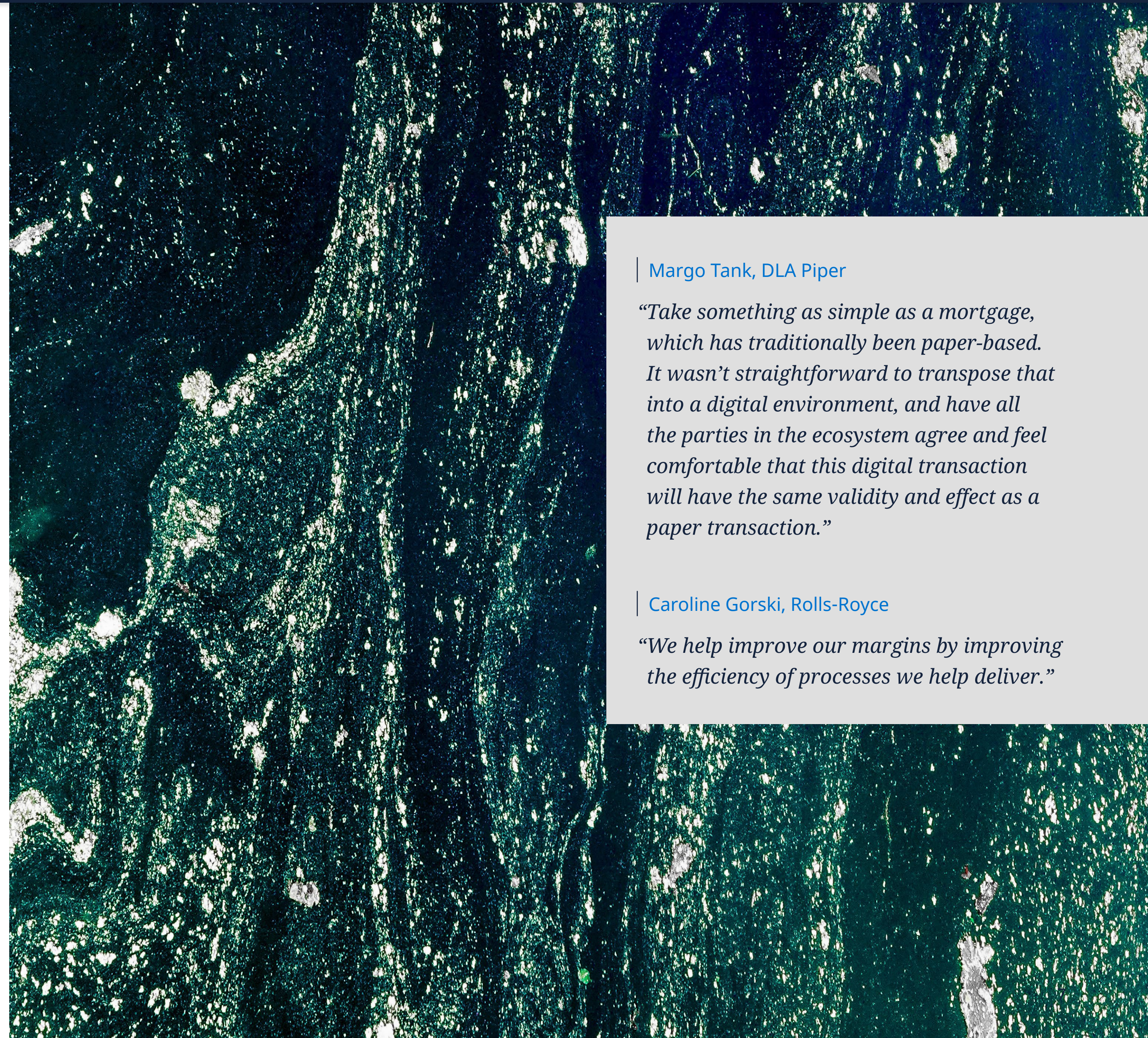
Take the now-familiar ridesharing model, where a smartphone app depends on connectivity to track the location of passengers and taxis. The emergence of this business model, impossible until recent years, has inspired businesses and entrepreneurs to ask how they too can convert the Industry 4.0 opportunity. Answering that question involves understanding the key enabling technologies.

| [Margo Tank, DLA Piper](#)

“Take something as simple as a mortgage, which has traditionally been paper-based. It wasn’t straightforward to transpose that into a digital environment, and have all the parties in the ecosystem agree and feel comfortable that this digital transaction will have the same validity and effect as a paper transaction.”

| [Caroline Gorski, Rolls-Royce](#)

“We help improve our margins by improving the efficiency of processes we help deliver.”



Today's changes are underpinned by computing power, storage capacity and connectivity. In 1985, the Cray-2 was the world's fastest computer. Occupying 16 square feet and costing millions of dollars, it had roughly the same computing power as the pocket-sized 2011 iPhone 4, which cost from USD199.

Storage capacity has been similarly boosted. Today's highest-capacity smartphones have a terabyte of solid-state storage – around 200,000 times the capacity of the first commercial mechanical hard disk drive, introduced by IBM in 1956. **But the real enabler is connectivity.** Ultra-fast broadband, fast Wi-Fi and mobile data connections allow data to be stored in the cloud until it's needed.

We haven't reached the limit of our already-hyperconnected world. Faster speeds and better connectivity are coming. Researchers have achieved optical fibre data transmission rates of almost 180 terabytes per second, equivalent to downloading the entire Netflix library in one second, and more than five times faster than the current state-of-the-art.

In line with the United Nations Sustainable Development Goal on sustainable industrialisation, both Google and Facebook are funding subsea cables that will greatly enhance connectivity between Africa and the rest of the world.

These foundations – **powerful computing, big data and hyperconnectivity** – make possible the transformative technologies of digital evolution: AI, data analytics, distributed ledger technology and augmented reality.

| Simon Levine, DLA Piper

“We’re seeing some less-economically developed countries doing more of the cutting-edge projects, because they’re starting from a lower level and skipping the status quo.”

| Margo Tank, DLA Piper

“Distributed ledger technology is going to lead to better efficiencies. Businesses will be traceable, trackable, auditable.”

| Mance Harmon, Hedera Hashgraph

“Centralised systems that are in the market today, that have well-developed business models and revenue streams, will be able to improve certain parts of their workflow with distributed trust through distributed ledger technology. It will help them differentiate their products in the marketplace, and that’s how distributed ledger technology will become ubiquitous throughout each enterprise infrastructure system.”

1.2

Accelerated change

COVID-19 has accelerated the digital evolution of our societies and economies. With physical stores closed and offices empty, digital solutions rapidly emerged to meet new demand and changing market conditions.

People who, pre-pandemic, had never banked online, ordered groceries on an app or worked remotely were suddenly forced to do so.

Many will never go back to how they did things before. The sheer number of these digitally evolved people is already driving profound changes in economic behaviour and working practices.

The healthcare sector has evolved digitally at a rapid rate. At the Boston Children's Hospital, telehealth visits increased from 20 per day to 2,000 as staff sought ways to treat patients while minimising the spread of the virus. Governments and regulators have also responded. In China, tight regulatory restrictions on telehealth services have been relaxed as remote health solutions became necessary.

The technology had existed for some time, but clinicians and patients preferred face-to-face consultations. **Now they've experienced the speed and efficiency of virtual consultations, many will likely continue using them.**

Designed in three days and clinically approved within eight, LEITAT 1 is a ventilator made from 3D-printed parts. Created at Spain's Leitat Technological Center early in 2020 as hospitals struggled to cope with COVID-19, up to 100 can be produced every day. They cost one-sixteenth the price of a conventional ventilator. Within days of the first being completed, 200 were being used in hospitals across Spain. The design was made open-source, allowing the ventilators to be made anywhere in the world.

| [Helen Colquhoun, DLA Piper](#)

“With COVID-19, we’ve seen this huge working-from-home experiment foisted on many people. The reliance on digital frameworks and platforms has been essential to business continuity and changed how people are working.”

| [Marco de Morpurgo, DLA Piper](#)

“We’re now seeing digital therapeutics solutions that governments are willing to pay for. Tech businesses can learn from life sciences about how to interact with the public sector.”

This is just one example of 3D printers being used to produce medical equipment during the pandemic. And the principle works for all kinds of products, from running shoes to houses. Rapid design, prototyping, testing and sharing of a product can turn any 3D printer in the world into an ad hoc factory.

Fifteen years ago, DocuSign pioneered the use of online electronic signatures. Originally its market was real estate. ***But the simplicity and efficiency of its product aroused significant demand in many other sectors.***

During the pandemic, DocuSign worked with healthcare clinics in Texas to remove paperwork from the COVID-19 testing process. Patients could be tested at clinics faster and with much less physical contact, reducing the risk of spreading the virus. It was also quicker and more accurate than the pen-and-paper method it replaced.

Each industry has been affected in different ways. Banks experienced increased credit risk from corporate and retail customers whose income declined or disappeared.

Like retailers, they had to ensure their digital channels held up as more customers began managing their money online. With banking already under pressure from shrinking margins and newer, more agile competition, the pressure to digitise became immense.

| [Steve Krause, DocuSign](#)

“What changed was how technologies like eSignature and videoconferencing became central to getting things done. Previously these were technologies innovators used; now they’re increasingly relevant for everyone.”

| [Margo Tank, DLA Piper](#)

“How do you digitalise a process? It can’t be done overnight. It takes time, people, commitment and money.”

| [Dr Anuchit Anuchitanukul,
Kiatnakin Phatra Financial Group](#)

“It’s on the list of every bank right now to enhance and upgrade the system constantly.”

These changes were underway before COVID-19. Physical retail was already declining. Volatility caused by factors such as trade tensions between nations was affecting innovation and global collaboration. The pandemic merely accelerated a time of uncertainty, ambiguity and national interest-driven policy agendas.

Businesses that embraced digital evolution not only challenged their competitors but also set the bar high for customer experience.

Consumers increasingly expect technology they can pick up and use without training, as they do with smartphones. And these consumer experiences set their expectations as employees, patients and clients.

No matter the cause, change is ceaseless. It threatens companies that don't grasp the change, and offers tremendous value-creation opportunities for those that do.

To thrive, you must nimbly move beyond digital transformation and embrace digital evolution: an ongoing process of organisational adaptation to the market that takes advantage of Industry 4.0.

Let's look at how you create a digitally evolved business.

| [Phil Richardson, Salesforce](#)

“Businesses with a seamless digital experience are often far more attractive to consumers.”

| [Marco de Morpurgo, DLA Piper](#)

“Agile startups can force large institutional businesses to adopt digital trends and come up with their own digital solutions.”



SECTION 2

Creating a digitally evolved business

Traditional organisations are increasingly vulnerable. They're typified by bureaucracy, hard-coded three-year strategic plans, reluctance to change, and cultures built solely on delivering existing products and services to achieve financial targets.

We've seen great national and global brands wither and die, unable to compete with businesses that can quickly bring superior products and services to market. Through continuous innovation, digitally evolved businesses delight their customers with incredible convenience, personalisation and affordability.

What separates those two types of organisation? A combination of characteristics that lead to an engaged and empowered business. One that understands itself, the market it operates in, and how it can continuously evolve to create, deliver and capture value in that market.

Digitally evolved businesses have five key attributes:

1. A market-aligned purpose that defines what the organisation's doing and why.
2. Values that inform and align with the purpose.
3. Behaviours that create a culture that fulfils the purpose.
4. Leadership and innovation management practices that reflect and encourage a growth mindset.
5. People with the necessary skills, talent and diversity to fulfil the purpose.

Like any effective strategy, integrating these characteristics to positively reinforce each other creates a competitive advantage that moves the business ahead of its competitors.

| [Steven Worrall, Microsoft](#)

“The only KPI that really matters is our client’s success.”

| [Margo Tank, DLA Piper](#)

“It’s not really about technology. It’s about people and process, the intersection of the law and technology, and the need for companies to move ahead and create legal precedent.”

READ ON:

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- 2.2 Culture and values →
- 2.3 Strategy →
- 2.4 Leadership →
- 2.5 People →
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- 2.7 Innovation →
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2.1

Purpose

What does your organisation do, and why? For many businesses, the answer is simply “we exist to make money for the owner or shareholders.”

But purpose-driven organisations have 30% higher levels of innovation and 40% greater staff retention – critical elements for digital evolution – so just making money is no longer enough.

It’s not easy to explore and arrive at your purpose. And it’s not something you pluck out of thin air.

You find your purpose by reflecting and experimenting. By considering both intrinsic issues, such as strengths and values, and extrinsic ones, like opportunities and threats. ***It’s about defining an identity for your business that allows it to grow and thrive over the long term.*** So your purpose also has to be relevant to your organisation and, crucially, the market itself.

When you’ve found that purpose, formulating corporate strategy, objectives, metrics and systems should all involve one question: “will this help us achieve our purpose?”

Your purpose can be broad (“creating a sustainable planet”) or focused (“making email secure”). A good purpose is clear and simple. And it must matter to your customers.

“Helping children be creative” is a great purpose for a toy brand, but irrelevant to a freight haulier. Cloud-based software company Salesforce, for example, draws its purpose from four key values: trust, innovation, customer success and equality.

Finally, your purpose must be sincere. Any organisation can say its purpose is “to reduce greenhouse gas emissions,” though customers and employees must see it being done, or trust in the organisation will be undermined. But when established, belief in and commitment to a purpose is irresistible.

With a deep understanding of your purpose, the right choices on many other strategic and operational factors are clearer.

| [Phil Richardson, Salesforce](#)

“Increasingly, employees of all ages are looking for businesses that have purpose. Value of trust is very important for a software-as-a-service provider. We need to be continually on the bleeding edge of innovation, but not in a way that’s counter to our customers’ success or trust.”

| [Steve Krause, DocuSign](#)

“We want to do business with less risk, with a better experience for our customers and employees, and with less effect on the environment. If you’re doing digital transformation and aren’t improving those metrics, something has gone wrong.”

| [Paul Allen, DLA Piper](#)

“We have the clear purpose to make business better, and with that we can understand what choices we have.”

2.2

Culture and values

In 2015, Microsoft CEO Satya Nadella [told shareholders](#), “our ability to change our culture is the leading indicator of our future success.” Since then, Microsoft’s stock price has increased fivefold.

Values serve as key cultural signposts outside and inside your organisation. Just as businesses are becoming more values-led, so are employees.

A quarter of people [look for a company with values that match their own](#). That rises to [88% among millennials](#). Your ability to hire and retain the best talent depends hugely on your culture and values.

No business should copy and paste their values from elsewhere, but some values tend to be shared by the most digitally evolved organisations.

These include being customer-obsessed. Because, ultimately, **everything a business does must serve the needs and expectations of the customer.** Even if that means making decisions in the short term that might not please shareholders immediately.

| [Steven Worrall, Microsoft](#)

“We needed to listen very carefully to our customers’ requirements and then move away from the notion we had all the answers, to become ‘learn-it-alls’ instead of ‘know-it-alls.’”

| [Paul Allen, DLA Piper](#)

“People call it different things: customer-centricity, customer focus. I think customer obsession is the best way to describe it.”

Businesses with these types of values are more concerned with creating value for customers than the next quarterly results. And they see the direct connection between this value creation and contributing to the wider community they operate in.

Values connected with sustainability and ESG goals are increasingly important.

Governments around the world are encouraging businesses to prioritise them. Many have adopted some element of the [United Nations Sustainable Development Goals](#) into their broader mission, not for purely philanthropic reasons, but also because they're connected with value creation for their market.

Often, digital projects can solve some of these problems. In Thailand, the financial services sector set up a digital payment system that was then used by the government to distribute welfare payments. This meant payments could not be stolen, as cash had been.

The right values make a difference, but the wrong values have consequences. Two-fifths of consumers [will walk away from a brand](#) that doesn't match their beliefs, and half of them won't return. This principle is equally important for B2B organisations.

Corporate customers are people too, and want to buy from businesses that make a positive difference.

Seven out of ten B2B buyers say they [will buy from a company that reflects their personal values](#).

| [Phil Richardson, Salesforce](#)

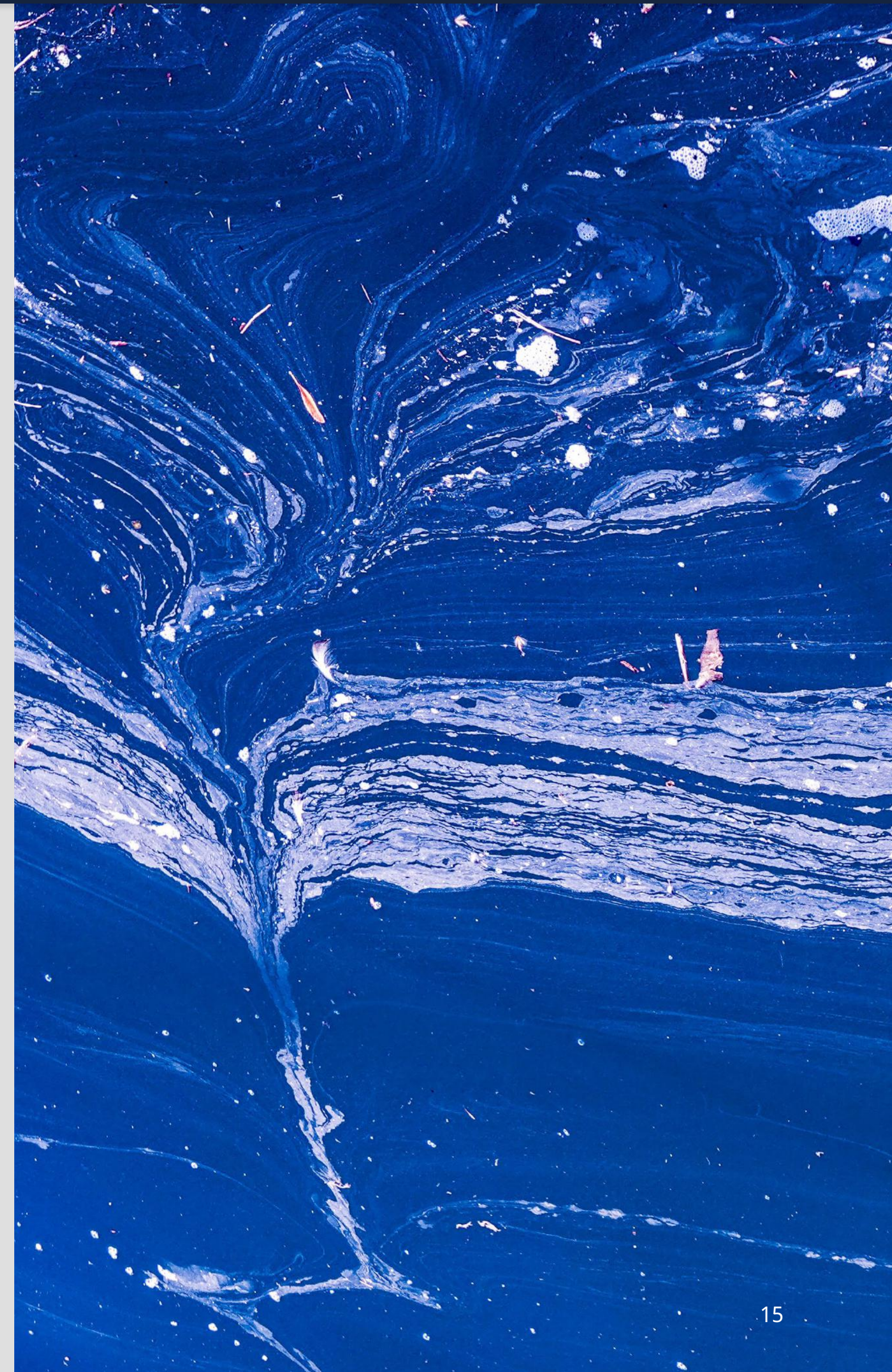
“In any business, purpose-led, values-driven companies will survive good times and bad.”

| [Dr Anuchit Anuchitanukul, Kiatnakin Phatra Financial Group](#)

“Thailand’s new digital payment system is designed to solve a lot of the social issues in the country.”

| [Tan Bin Ru, OneConnect Financial Technology](#)

“Governments are pushing for ESG capabilities, so we’re applying AI and blockchain on ESG solutions.”



2.3

Strategy

An organisational strategy that embraces digital evolution isn't so much about what technology to buy; the right technology will flow from your strategic decisions. It's more about bringing the right people together, creating the right mindset, listening to your customers, and pursuing learning and development so organisational capabilities stay relevant.

No digital evolution strategy is complete without a strong plan for fostering innovation. As we've seen, companies that don't embrace digital evolution, that aren't prepared to innovate, will fall behind.

Change is imperative. But simply embarking on digital evolution doesn't guarantee success. Research suggests only 30% of such plans succeed.

Your chances of success are higher if you build your strategy on a clear purpose and embrace key aspects, such as the right leadership and empowering people to work in different ways.

DocuSign says establishing and maintaining trust are crucial to its strategy. Customers must trust it to deliver. It does this by investing in infrastructure to deliver 99.99% uptime.

All companies want to be trusted by customers. So your strategy must consider the processes and services that trust depends on and how they might benefit from becoming digital.

What works for one organisation won't work for all. Insurance Company A might digitalise its claims process and see customer satisfaction boom, inspiring insurance Company B to follow suit.

But if Company B's process is archaic and unwieldy, making it digital won't bring benefits. **Digitalising a bad process just shifts the problem.**

Identify which processes you can digitalise, which must be rebuilt before they are digitalised, and which you could outsource or stop altogether.

Just as your business's purpose will be deeply individual, so too will the strategy deployed to fulfil that purpose. With your strategy in hand, you must implement it effectively, and leadership must be prepared to adapt it as your market develops.

| [Helen Colquhoun, DLA Piper](#)

“Companies are needing people to be a lot more adaptable. As technology has evolved, so have their roles.”

| [Steve Krause, DocuSign](#)

“Trust isn't about what you say; it's about what you do. We invest heavily in infrastructure and processes to set the trust standard in our category.”

| [Phil Richardson, Salesforce](#)

“Increasingly, many products are highly commoditised and the differentiation between companies is purely customer experience.”

2.4

Leadership

Businesses are more likely to succeed in digital evolution if they have digital-savvy leaders who can communicate purpose and strategy. Leadership sets the tone for everything that follows.

It starts at the top. The CEO must embrace digital evolution and articulate its importance, but other leaders in the organisation also play a critical role. That could fall to a chief innovation officer. This role emerged in the late 90s, and around [a third of Fortune 500 companies](#) now employ one.

At Rolls-Royce, digital cultural transformation is owned by a specific innovation unit, called R² Data Labs, with a presence in customer-facing business units.

Rolls-Royce has combined responsibility for technological and cultural change, believing it's a mistake to separate them. If they're separate, you can have two visions for change in an organisation, which can be confusing – particularly if they're not perfectly aligned and appear to compete.

Research from [MIT Sloan Management Review](#) suggests changing employee expectations can affect how leaders should carry out their responsibilities.

Today's tech-fluent workers want to work in businesses that reflect their values. This means they expect to see purpose, engagement and fairness from their leaders.

As the MIT researchers said, “successful digital transformation demands that leaders measurably transform themselves.”

Whoever's leading must be customer-obsessed, drive growth and innovation through new technologies such as AI and data capture and analytics, look out for useful ecosystems and partnerships, and nurture talent with new incentives.

However digital evolution is driven in your business, it should be clear who's in charge. **Their role should be to advocate, educate and inspire – not just to develop processes.**

| Simon Levine, DLA Piper

“At our firm, we used storytelling to help our people understand how digital evolution can improve their daily lives. Getting everyone on board was a critical step. None of this works without the right mindset and culture.”

| Caroline Gorski, Rolls-Royce

“It's very important for our success that we aren't just a technical capability acquisition department.”

| Paul Allen, DLA Piper

“The digital heavyweights have a far more agile and organic style of organisation. That removes hierarchical structures. You need an organisational mindset that's adaptable and ready to grow and change.”

2.5

People

The mindset and diversity of a business's people is critical. Digitally evolved organisations are likely to put their people first, recognising they need a highly engaged, empowered and enabled workforce to convert the Industry 4.0 opportunity.

People and organisations with fixed mindsets see themselves as having a certain amount of talent, and believe they can't do much to change that.

Those with a growth mindset divide problems into those they can solve and those they can't solve yet. Employees in growth-mindset companies are 34% more likely to feel committed to the company. A growth mindset can be fostered by leadership focusing on potential and a hiring process emphasising capacity for growth.

Teams that aren't diverse in gender, race, social background or any other aspect tend towards groupthink – disastrous in an environment of constant change. Organisations in the top 25% for gender diversity outperform competitors by 15%, and those in the top 25% for ethnic diversity outperform the competition by 35%.

Your business must reflect where you operate. The era of establishing an office somewhere in the world and staffing it entirely with imported workers is over. Employees must be drawn partly from the local community if the business is to flourish.

Without access to talent, your organisation cannot take a lead in digital evolution. But without the right purpose and values, you won't appeal to the top talent in an increasingly competitive recruitment marketplace. **In an environment of constant change, you must always be upskilling and reskilling your people.** It's no longer enough to hire someone with particular qualifications and have them spend their career in one line of work.

| [Helen Colquhoun, DLA Piper](#)

“What I generally hear from HR is that they need people who are nimble, flexible, adaptable and willing for their roles to evolve over time. The skillsets and mindsets needed now are already different to those required four or five years ago.”

| [Anthony Shiner, EITC UAE \(Du Telecom & Virgin Mobile UAE\)](#)

“Where you have diversified cultures they tend to add more colour, value and flavour, and they evolve much quicker. So your challenge is always to keep a diversified workforce in play.”

| [Steven Worrall, Microsoft](#)

“Just realising culture was the key for our digital evolution was fundamental to us as a business. The key is not the technology; the key is always the people.”



Technologies, processes and business models will change. So must people. A culture of lifelong learning is vital for organisations to keep up. You should place greater significance on soft skills, such as critical thinking and creativity.

These will prove better indicators of success than job experience.

Sometimes, younger staff will grasp an emerging technology first. That allows for reverse mentoring, as junior staff train senior colleagues. Organisations have successfully used this technique for teaching older staff about the internet and social media, and it's likely to become more common.

Generation Z – those born since about 1997, who are at the start of their careers – will be an important catalyst for change. They are the first digital generation, the most diverse generation in history, and they care about social impact and inclusion. They'll consider a company's values before taking a job, and can help spread these values to older colleagues.

The structure, systems and processes of your business can facilitate or impede digital evolution. Bureaucratic organisations with many layers of management, distributed decision-making and competing power structures can be hard to change.

Less hierarchical organisations, where everyone works towards the same purpose-oriented objectives, in an environment open to making business better, can move and adapt faster.



| [Phil Richardson, Salesforce](#)

“Diversity is important to the success of a company in terms of attracting talent and executing at a very high standard. Embracing diversity doesn’t cost you money, and it actually makes your business more successful.”

| [Steven Worrall, Microsoft](#)

“There’s an urgent need to step up efforts to attract more women into the industry, to build better pipelines of girls and women coming out of schools and universities.”

2.6

Partnerships

Today's technology solutions are complex. It may not make sense for your business to divert resources from its core purpose to become technology experts in an area, especially if it's irrelevant to creating long-term strategic value.

Instead, look for partners to provide the non-core solutions and skills needed, whether for cloud migration, customer relationship management platforms, database management or otherwise.

Partnering in these areas not only saves hiring people, but also brings technological improvements as the partner implements them.

There's growing interest in "coopetition": partnering with companies that are, on paper, rivals. This could mean collaborating on a product that offers temporary benefits to both parties, or a chance to increase the size of the market.

Whatever your approach to partnerships and collaboration, it must be true to your underlying purpose and overall strategy.

| Joel Cox, DLA Piper

"By partnering or investing in startups, rather than trying to copy or acquire them, large enterprises can hedge their bets. They can explore the potential of emerging technologies and business models and, ultimately, learn how these may or may not shape their industry."

2.7

Innovation

A digitally evolved business must keep changing. So prioritise innovation and experimentation, and measure success to minimise dead ends.

Innovation can't be left solely to partnerships or acquisitions. Whether the responsibility of an internal team or an external lab, or seeded into the business in some other way, innovation is vital to embracing digital evolution.

Take an entrepreneurial approach. New ideas must be allowed to flourish, with the best developed using design thinking – which centres on user experience – and an agile methodology, so they can be adapted as necessary.

This approach requires patience – perhaps a five to ten-year horizon to reach genuine maturity – and means **your business must become comfortable with failure**. Most companies try to avoid failure, but not every idea will work.

Learning from failure and adapting is part of the growth mindset. Adopting design thinking and an agile development methodology allows your organisation to evolve ideas through small experiments: researching, prototyping and testing. Then you can use lean-startup models to determine quickly if the idea is viable.

It also requires total commitment. **Many tiptoe around the edges of innovation, but the digitally evolved business will embrace it fully** as an essential part of its purpose, values and culture.



| [Caroline Gorski, Rolls-Royce](#)

“Our ambition is to be the world’s leading industrial tech company, and part of that evolution means developing cyber-physical platforms – weaving digital capability into the physical world.”

| [Paul Allen, DLA Piper](#)

“Don’t be afraid of actually trying something and getting it wrong, learning from it. Failing fast will make your product, service or process better.”

Organisations often try to solve innovation problems by acquiring startups.

But it can be difficult to integrate a startup with a large corporation – the cultures can be not just different, but diametrically opposed. Employees who've chosen to work in a startup might not want to stay if it's subsumed into a large multinational.

Some firms acquire startups and keep them autonomous, benefiting from access to their technology and thinking, or simply partner with them on mutually advantageous projects.

Another way to tap into innovative thinking is through corporate venture capital. This involves organisations making capital available to entrepreneurs and supporting them through incubators.

Some businesses even establish a separate company – a “captive startup” – to explore and develop new business models outside the main corporate structure.

Ideas might be developed quickly and fail fast, but the overall commitment to investing in innovation must be long term.

Technology is also playing a greater role in finding innovations in the first place.

AI can play an important role in product development by rapidly considering many new ideas, such as chemical compounds for potential new drugs. 3D printing can be used for rapid prototyping and testing. And augmented reality and virtual reality can transform user testing.

| Joel Cox, DLA Piper

“Startups help larger enterprises to appreciate just how hard digital evolution is, and that it's not just hard for the larger enterprise – it is really hard for the startup as well. Where it has worked out best for our clients is where they've brought in venture capital specialists to run this division in their business.”

2.8

Measurement

Throughout your digital journey, track key performance indicators.

Not everything will succeed, so know when to close a project and move on.

An understanding of what matters and how to measure it must be embedded in your strategy. There might be several such measures, from large-scale, long-term ones, such as progress towards the United Nations Sustainable Development Goals, to more specific ones, such as user engagement with new digital services.

KPIs must change as your digital evolution progresses. Sometimes, KPIs can make people feel their jobs are under threat if they don't meet digital evolution targets. Structure your KPIs to keep people motivated.

Digital evolution is never finished. ***Strategy is a work in progress. This makes it less daunting to get started, because there's no need to have all the answers in advance.*** Success comes from being flexible.

| [Tan Bin Ru, OneConnect Financial Technology](#)

“KPIs drive the right behaviour. A lot of times the KPIs are not set properly and that’s why things won’t move.”

| [Paul Allen, DLA Piper](#)

“People might say, ‘very well, I’ve transformed, now I can take my foot off the gas.’ But companies need to build an environment that’s conducive to perpetual adaptation.”

SECTION 3

The landscape of digital evolution

Those who guided organisations through the First Industrial Revolution did not live to see the Second. Likewise, those who adapted to the Second Industrial Revolution were long gone before the Third arrived. The benefits of those revolutions lasted at least a couple of generations. But the pace of change today is so great that the Fourth Industrial Revolution has begun before the Third has even finished.

While entire sectors are still getting to grips with making processes digital, others are deep into making processes smart. And it's safe to assume the pace of change will only increase.

We live in a world of constant change: devices acquire new features that extend their use, services continually develop rather than being replaced, business models adapt as demand changes, and teams combine and dissolve on a project basis. Embracing digital evolution is the best strategy.

Digital evolution isn't easy. But ignoring it is far worse, as a string of now-defunct household names would tell you. Change is the new constant and you must keep up to survive. How is this playing out in the world today?

| [Simon Levine, DLA Piper](#)

“We’ve seen many examples over the years of businesses that have lost their gloss and relevance because they haven’t embraced digital evolution.”

READ ON:

- [3.1 Evolving sectors](#) →
- [3.2 Evolving organisations](#) →
- [3.3 Evolving regions](#) →

3.1

Evolving sectors

It's over 30 years since the author William Gibson said, "The future has already happened." Futurist Alvin Toffler expressed a similar idea: "The future always comes too fast and in the wrong order."

Predicting the future isn't something most businesses should prioritise – enough of that is out there already. The challenge is to examine new and emerging technologies, figure out how to apply them, and keep evolving your organisation as technology and markets change. Transformative technologies might make an existing business process or model better, or enable a new one.

Often, businesses change only when forced to by competitors, customer demand or external circumstances.

The best see the emerging patterns, anticipate the demand and get ahead of the change, and startups often set the pace.

Regulation has played a critical role in fostering innovation, notably so in the case of fintech startups. Moves towards open banking began about a decade ago, as digital innovators sought to release customer financial data from the grip of legacy financial services companies. They argued that established firms used customer data as a moat around their businesses, stifling innovation. Customer demand was unlikely to force change, because it was hard to switch providers.

In the mid-2010s, European regulators began establishing rules requiring banks to provide application programming interfaces (APIs) allowing third parties to connect to their systems, access data, and build services on top. At the same time, the EU sought to open up mobile and online payments. Similar efforts were happening elsewhere.

Australia announced a Consumer Data Right, launched in 2020, giving citizens control of their banking data, with energy and telecoms data to follow. Brazil, Canada and Mexico – where a third of the population have no bank account at all – announced similar plans around the same time.

| Joel Cox, DLA Piper

"Our startup clients demonstrate how business models for software-as-a-service, fintech and network-effect products can be so innovative. They dominate what VC funds are investing in."

| Tan Bin Ru, OneConnect Financial Technology

"The other verticals have caught up a little bit, but I would think that financial services is still ahead in terms of adopting digital."

| Helen Colquhoun, DLA Piper

"In Hong Kong, startups and technology companies get a lot of support – perhaps more than in some other jurisdictions."

Asia has been particularly advanced. In 2019, the Hong Kong Monetary Authority announced a four-phase plan for open banking and already has more than 500 APIs available, from 20 participating retail banks.

In Thailand, with a population of 70 million, around 50 million people already use mobile banking and digital payments are widely used.

The adoption of mobile wallets in China is so ubiquitous that in retail, physical cash transactions have almost vanished.

These regulatory measures laid foundations for many startup fintech businesses, frequently delivered as smartphone applications. They added features few legacy banks then offered, such as collating the customer's financial information from a range of services, offering spending breakdowns, and making it easy to add products, such as loans and insurance.

Some providers offer AI-based financial advice and predictive decisions; others focus on narrow use-cases, such as insurance for freelance workers or investment management. Legacy banks have started to emulate these services, but it's a challenge to adapt older systems or share data between platforms installed decades apart. There's also a cultural issue: established financial services companies tend to attract a different kind of employee from startups.

The next objective for many regulators is to expand open banking into broader "open finance," giving customers control of any spending data, from online shopping to pensions. As sector-specific barriers to entry are lowered through a combination of Industry 4.0 technologies and regulatory reforms, more startups will challenge existing market players in these and other sectors, and push traditional organisations to further embrace digital evolution, as we've seen in the financial services sector.

**Dr Anuchit Anuchitanukul,
Kiatnakin Phatra Financial Group**

"Thai banks are now closing branches at an alarming rate, because Thai customers are changing their behaviour – they're using mobile banking to do everything."

3.2

Evolving organisations

The technology driving digital evolution can help cut costs and drive efficiency in a business. **But evolution doesn't happen at the same pace even within a single organisation.** One department might be highly advanced, while another depends on legacy systems and lags behind.

Some businesses deal with this through a department that handles innovation – a hub, lab, or digital academy. Others tackle the problem with an external innovation centre or challenger organisation, which launches its own ideas and may, if all goes well, eventually eclipse the legacy business.

In an internal hub, digital evolution expertise can be focused on the organisation's most pressing problems, wherever they originate. Data analytics and AI can, for example, identify potential savings, helping to increase margins.

Businesses can also use these techniques to deliver efficiencies for customers and charge on the basis of innovative commercial models that more closely align supplier and provider incentives.

This approach can yield new products and services. Rolls-Royce uses data from sensors in its products in operation to offer an "as-a-service" model for aircraft power availability and reliability, and in other power-service markets such as rail. The business also shares operational efficiency data analysis with customers on a gain-share basis.

For businesses with a lot of legacy processes and technology, the internal lab model can be a good way to evolve digitally without a Big Bang. Legacy systems can be paralysing if organisations feel they must replace them entirely. Because this is such a major task, they can waste time figuring out how to begin – or never get started at all.

In fact, legacy systems don't need to be abandoned just because they are old. Often, they can be used to create new products and services.

One challenge posed by the internal-lab model is speed and agility. The lab can often only move in the direction of the business, and at the same pace. It may need to follow policies and procedures aligned with those that govern the wider organisation, and so may be bound by the same bureaucracy.

In the external model, innovation is tasked to a separate – but related – entity. It will need to report back to the parent, but will have its own staff, procedures and objectives, all aligned with its specific purpose to innovate.

But the two models need not be mutually exclusive. Combining both may be the best way to create the most value.

| [Caroline Gorski, Rolls-Royce](#)

“People from inside Rolls-Royce and its customers come to us and say, ‘We’ve got this requirement or this problem that we need looked at.’ We try to match that problem to a series of existing experiments. Or we create quick experiments around it.”

| [Paul Allen, DLA Piper](#)

“Think about what legacy assets you have, and how you can use those legacy assets in a digital way that creates new products and services.”

3.3

Evolving regions

Governments have a significant role to play in creating Industry 4.0-friendly ecosystems. Economic, cultural and political factors will all influence the policy and regulatory approach in any particular country or region.

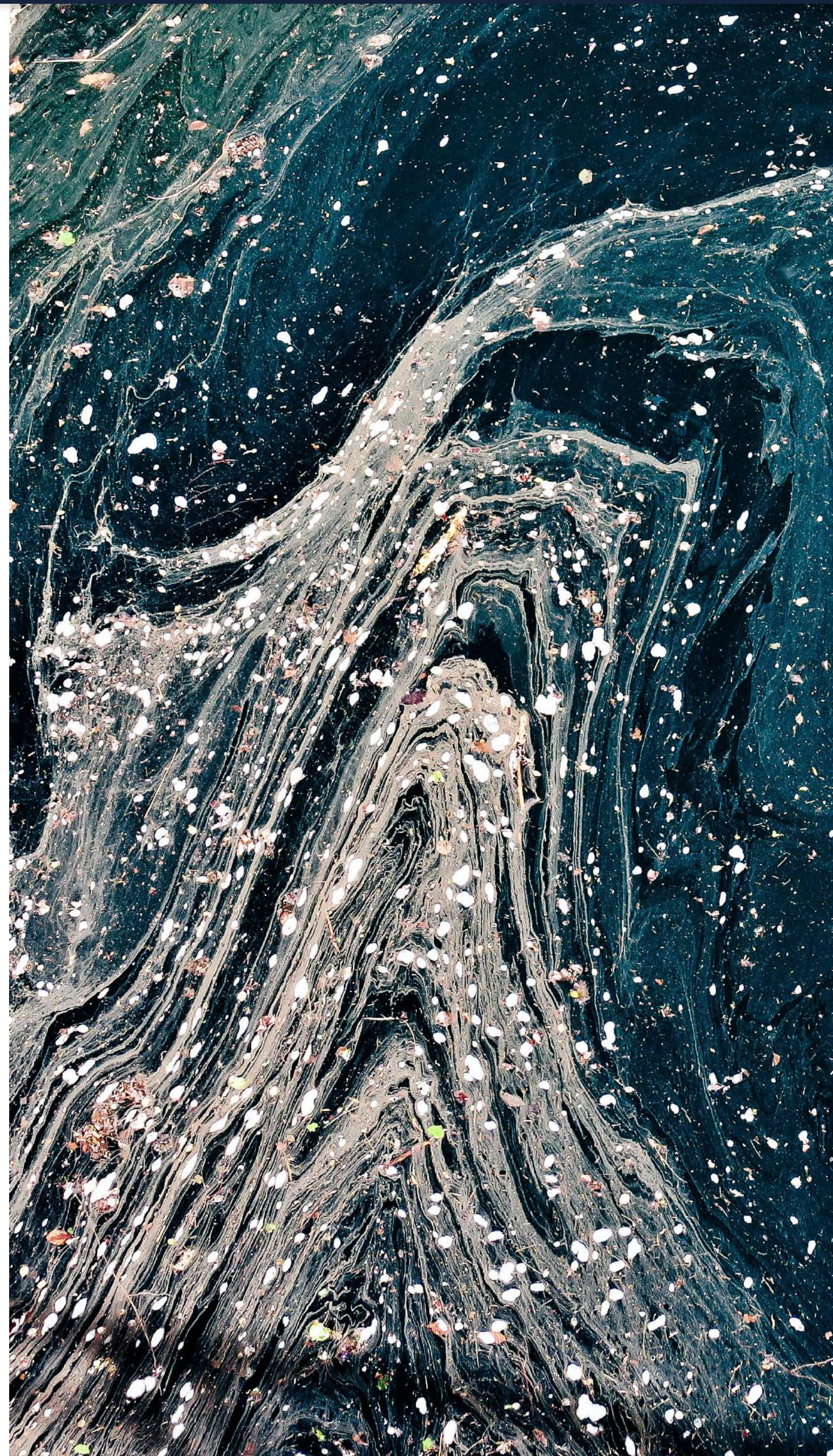
Thailand's extraordinary mobile payment penetration was driven to a large extent by government initiatives. The country had little mobile banking penetration in 2017, but was number one in the world by 2019, thanks in part to the government's e-payment initiative and a new digital ID infrastructure.

Mobile-first regions have an advantage in adopting new technology quickly,

and in Thailand about 92% of devices are smartphones. China, too, might enter a sector 15 years behind some Western countries, but close the gap in three to five years.

This is partly because of technological penetration, but also because of China's underlying culture and political landscape. Its government invests heavily in networks, factories and R&D to gain an international edge and promote its domestic political and economic agenda.

Because technology evolves more quickly than regulation, organisations will often find themselves trying to determine how new products, services or processes fit the regulatory framework.



Anthony Shiner, EITC UAE (Du Telecom & Virgin Mobile UAE)

“Unlike most places in the world, Dubai has a government and infrastructure that are more advanced than industry. Dubai is the shining light in the region when it comes to digitisation.”

Lord Tim Clement-Jones CBE

“If you’re talking about governments and digital evolution, they’re often behind industry. Yet they have such an important role to play. When you’ve got regulations in place, it’s very beneficial, because people know where they stand and can start designing and developing with certainty.”

| [Marco de Morpurgo, DLA Piper](#)

“The slow pace of rule-making is a big issue for companies because it creates a lot of uncertainty. But because the economy goes faster than the rules, there’s usually an area where businesses can decide how much risk they want to take, set against the potential market advantages. Some are better at this analysis than others.”

| [Anthony Shiner, EITC UAE \(Du Telecom & Virgin Mobile UAE\)](#)

“The speed of technology evolution is so much faster than regulatory change, but that’s a problem everywhere in the world.”

| [Lord Tim Clement-Jones CBE](#)

“Governments are having to deal with legislation around AI, digital identity and other emerging technologies, yet from their own experience they know how difficult developing digital solutions can be.”

In practice, businesses must look to meet the regulatory standards of the strictest country they operate in, or sell into. Though there may be a regulatory advantage for businesses operating in countries with more relaxed regulations, the differential regulatory environments can increasingly become an indirect barrier to digital trade.

Businesses must be prepared to embed regulation in their strategies from the outset through “compliance by design,” rather than adding it later. They should take time to follow new laws and look at the impact on their products and services. As the regulatory environment evolves and becomes more stringent, **those who invest in incorporating regulation by design will start to secure a competitive advantage** and edge out those who do not.

Ultimately, there’s only so much businesses can do about regulatory environments. But the forces driving digital evolution also affect governments and regulators. Understandably, and with good reason, they tend to change more slowly than businesses. But they do change too.

Forward-thinking governments are responding to the regulatory challenge posed by rapid technological change by trying to adopt an agile regulatory environment. Governments also acknowledge the importance of dialogue with industry on how innovation should be regulated, and the need to remove barriers to global trade.

Supranational organisations will play a key role too. In April 2021, for example, the European Commission published its long-awaited proposal for regulation of AI. This will have far-reaching implications for the entire supply chain of AI systems, and the lifecycle of how these systems are designed, built and run.

SECTION 4

The features of digital evolution

Every industrial revolution is a reinvention of business processes and organisational thinking, powered by key technologies. The technologies driving today's change can be divided into three groups: connecting and sharing data, processing data, and emerging technology.

| [Joel Cox, DLA Piper](#)

“When it comes to emerging technology or business models, don’t put all your eggs in one basket. A diversified corporate innovation strategy, incorporating labs, corporate venture capital, captive startups, partnerships and in-house R&D supports this.”

READ ON:

[4.1 Technology enablers](#) →

[4.2 New models](#) →

[4.3 Complicating factors](#) →

4.1

Technology enablers

4.1.1 Connecting and sharing data

Organisations have always collected data, whether by storing correspondence in a filing cabinet or conducting customer satisfaction surveys. Technology enhances and accelerates data generation and collection. It is estimated that by 2025 we will generate 463 exabytes of data every day – equivalent to the storage capacity of around 213 million DVDs.

Internet of Things (IoT) sensors aren't just in smartphones now – they're almost everywhere. Shipping containers, vehicles, electrical substations, running shoes, corporate meeting rooms and aircraft engines. These sensors can collect data on anything from the location of an object to its speed, surrounding temperature, air pressure, humidity, light levels and more.

This opens entirely new possibilities. Factory sensors can give information on when a machine is active or showing signs of a fault. This makes planning capacity and maintenance much more precise, which means more accurate delivery dates for customers, improving satisfaction and the bottom line.

Governments also have a lot to gain. For example, with sensors in parking spaces around a city, drivers can find parking more quickly, reducing traffic and cutting emissions. **A smart city requires large numbers of devices connected to the network simultaneously.** As 5G, the next generation of mobile connectivity, is rolled out in a metropolitan area, it will handle around a million connections per square kilometre, compared to around 4,000 connections with 4G.

The huge volumes of data these technologies will generate must be stored, too. That's where cloud storage comes into its own. It allows businesses to access large data centres without major capital expenditure on servers and related IT equipment. Storage is now widely available on a pay-as-you-go basis, with the flexibility to increase or decrease storage and computing requirements on demand.

| [Steve Krause, DocuSign](#)

“When processes are not just digitised but also connected, that’s when the gains really multiply.”

| [Anthony Shiner, EITC UAE \(Du Telecom & Virgin Mobile UAE\)](#)

“There’s often a strong resistance at the lower levels of automation and digitisation, given the perceived impact of that on jobs.”

| [Marco de Morpurgo, DLA Piper](#)

“There’s increasing use of AI and big data in clinical trials, and the pandemic accelerated this trend.”

4.1.2 Processing data

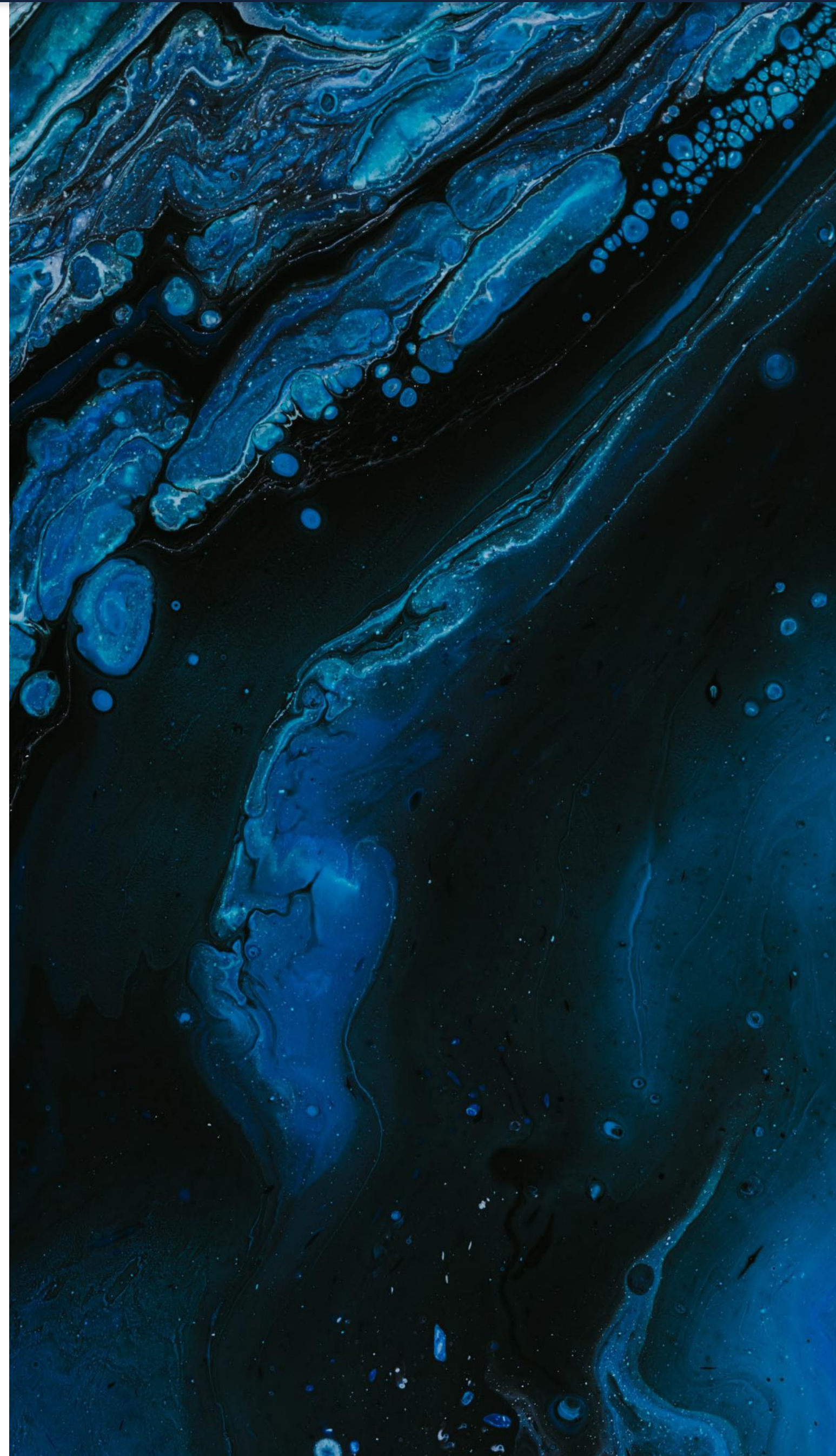
AI is the technology with the most potential to transform our world. PwC estimates it will contribute USD15.7 trillion to global GDP by 2030.

Through the algorithmic pattern recognition of machine learning, AI systems can monitor hundreds of variables in real time to make and implement decisions, paving the way for self-driving vehicles, automated finance approvals, home entertainment recommendations and much more.

Over the last five years, AI has reached a tipping point. It is now on a par with humans for certain speech recognition benchmarks, offering transformative possibilities. AI has moved from exploration to execution, solving problems that were impossible for humans and carrying out automated tasks far faster than manual processes ever could.

AI-enabled applications can extract relevant information from documents, such as a medical report, in seconds, rather than the minutes or hours it would take a human. **And AI is more accurate, because it doesn't get bored or distracted.**

AI can also assist with legal solutions. Since Britain left the EU, law firms have used AI to quickly identify, at scale, contract terms affected by legislative changes resulting from Brexit.



| Margo Tank, DLA Piper

“Regulation of data use will absolutely affect the free flow of data, the monitoring of data, AI use and, ultimately, the reliability of models that predict behaviour.”

| Helen Colquhoun, DLA Piper

“I look back 10 to 15 years ago, and the same tasks were being done but would take me hours and hours. Like reading hundreds of cases online with a relatively unsophisticated search tool. Now you could probably distil that research into two hours.”

AI is now widely used by logistics firms to plan which delivery routes are quickest, most fuel-efficient, or produce the lowest emissions. It's also used in business continuity planning to simulate the potentially disruptive impact of an event like a pandemic, and to [fight COVID-19](#). What happens if part of the business closes temporarily, or there's a need to reduce the amount of stock purchased from a particular supplier? Every scenario can be modelled quickly, allowing better planning and decision-making in a crisis.

When all this becomes automated, it's a game changer.

Automation of robots to fulfil grocery delivery orders, autonomous vehicles and robo-advisors are just some of the innovations already becoming mainstream because of automation.

We'll likely see increased use of robots for repetitive or dangerous tasks. Surgical robots, for example, can operate through incisions too small for human hands and don't experience tremors, no matter how long a procedure takes. Manufacturing robots can take over repetitive tasks in a factory.

And robots don't have to be physical. Software robots can onboard new staff, making sure they have the equipment they need, and complete orientation programmes – all through a natural-language chat interface.

Many traditional jobs and established working patterns will undoubtedly be affected by automation. Jobs will be lost. Can they be replaced quickly enough to avoid mass unemployment? If not, will we need to rethink how our societies are organised?

Some countries and organisations are already exploring shorter working weeks to address the productivity gains, effectively sharing the available work among more people.

At a country level, governments are experimenting with a universal basic income – a state-provided minimum income level for everyone. The effects of widespread automation are still not well understood but are likely, in time, to be profound.

| [Steve Krause, DocuSign](#)

“The first thing you do is you get digital right: you go from paper to digital. The second thing you do is connect up the systems and processes: now that they're digital, they can be connected and automated.”

| [Mance Harmon, Hedera Hashgraph](#)

“We recognise that because these platforms will be used to support billions or trillions of dollars of value transfer, they will be attacked. Making that assumption upfront, we built Hedera with the strongest level of security possible, which is asynchronous Byzantine fault tolerance.”

4.1.3 Emerging technology

While some of the technologies of the Fourth Industrial Revolution are already high on the adoption curve, others – such as augmented and virtual reality, blockchain and quantum computing – are gaining attention for their potential transformative effect.

A new way to unlock the power of data is to overlay it on the real world. That's what augmented reality allows.

Looking through a pair of AR glasses gives the wearer context-sensitive information, such as instructions for how to repair a machine or find an item in a warehouse.

Virtual reality, meanwhile, takes the wearer into an entirely different world and can be used to train people in high-risk jobs, such as oil rig workers, who would benefit from immersive training without danger.

Blockchain and distributed ledger technology provide a way to secure data and create trust between parties who don't know each other, without the need for a trusted central authority. Though the focus so far has been on cryptocurrencies, the underlying technology is versatile and has scope for market-changing applications.

These technologies are ideal when there are multiple stakeholders and trust is low. Any unauthorised change to a blockchain should be immediately apparent to the entire network, which helps to keep everyone honest and prevent fraudulent transactions.

It can also create secure tokens to help guarantee trust. This could be useful for any products where traceability is important, such as verifying that a garment was made without sweatshop labour or that a particular diamond did not come from a war zone.

Blockchains can record each step in the manufacturing process more transparently, making records harder to forge.

Quantum computing is experimental. It uses the peculiarities of quantum physics to perform calculations that classical computers can't do as quickly, or at all.

Quantum computers are ideal for large, complex systems where uncertainty plays a major role. AI, biology and financial forecasting are among the areas that will benefit from quantum computing. Still in its infancy, it promises to be transformative when widely available.

But quantum computers could also create cybersecurity problems, outwitting the defences of traditional devices and encryption techniques.

These are just some of the technologies underpinning digital evolution – and they are interconnected, with many use-cases depending on several at once.

| [Mance Harmon, Hedera Hashgraph](#)

“The importance of tokens in the future economy cannot be overstated. We are just beginning to understand what the future will look like, but it is clear that everything we see and touch, all goods and services, will ultimately have an associated token. We will live in a tokenised world.”

| [Caroline Gorski, Rolls-Royce](#)

“Because of the sensitivity of a lot of the data we work with, we're very reliant on our colleagues in the cybersecurity team to ensure we have the right protections for the environments we work in.”

4.2

New models

New technologies are also changing how we think about business models and organisational structures. The shift to the cloud lets many companies deliver products remotely. Instead of purchasing a suite of office software and installing it on several licensed machines, organisations can buy software-as-a-service, paying for what they use when they use it.

This applies to everything from email and accounting software to freight forwarding systems. SaaS changes organisational finances. Switching from the capital expense model to operating expense enhances flexibility, giving a better idea of future commitments.

The technologies underpinning the Fourth Industrial Revolution are also driving a greater focus on personalisation and customer experience. **Websites, applications and other user touchpoints are now routinely designed to capture large amounts of customer behaviour and preference data to support large-case analytics.** This data is extremely valuable and can now be readily stored and analysed at scale for deep insights.

Many businesses try to create a “segment of one”: a unique experience for each customer. As more businesses focus on experience, customers start to expect the same quality of service from every company, and then from their work technology, creating a new benchmark.

This experience can be designed with analytics and maintained through AI. Mobile applications for investors could include AI chatbots to answer questions and offer advice, providing the kind of specialised, personal service an investor would normally get only from an exclusive, expensive broker.

As previously elite experiences trickle down, organisations offering a premium service will need to adapt if they are to continue providing an experience that differentiates them from AI-powered app competitors.



Dr Anuchit Anuchitanukul,
Kiatnakin Phatra Financial Group

“In Thailand, banks are building up a huge amount of behavioural data on customers, in return for providing digital payment services for free. They’re using that data to cross-sell and work with business partners to offer other products and services.”

Margo Tank, DLA Piper

“To properly advise our fintech clients we need to understand their business model and strategy. Then we can give them a solution for success.”

4.3

Complicating factors

Digital evolution brings challenges that must be addressed at organisational level, and by governments and regulators. Cloud technology can be hampered by data protection and localisation regulations preventing data leaving a certain jurisdiction.

AI and IoT devices also raise questions of ethics and security. If an AI program rejects a mortgage application, can the provider explain why this decision is fair and lawful? AI decision-making needs to be explainable and fair. Sometimes, particularly with machine learning applications that tweak their processes as they go, it can be hard to determine how a decision was reached.

Bias is a particular risk. AI programs' actions are based on training datasets and algorithms provided by the developers. These outputs must be carefully tested to identify and mitigate the risk of inadvertent bias embedded in the AI design.

Lawmakers and regulators are aware of these risks. But technology is moving ahead of regulation, so new problems are emerging while regulators try to apply regimes developed for the last generation of technological issues. The shortfall in regulatory standards will leave more reputable organisations free to set and maintain appropriate ethical standards.



| [Marco de Morpurgo, DLA Piper](#)

“Don’t look at regulation as an appendix, as something to consider at the end. View it as a core part of your business strategy, and consider it from the outset when evaluating the feasibility of a project. Use the rules to develop the most successful business model you can, with digital an integral part.”

| [Lord Tim Clement-Jones CBE](#)

“There’s a requirement for a risk framework for AI, the Internet of Things and other technological innovations. But how do we ensure this regulatory framework will benefit the public? How can we keep it free from bias?”

| [Anthony Shiner, EITC UAE \(Du Telecom & Virgin Mobile UAE\)](#)

“How do we change the way we keep pace with changes required by regulation? That’s what we’re tussling with at the moment.”

Security is the other key risk area. Interconnected devices, IoT and the cloud bring tremendous benefits, but **create a much wider threat landscape than the traditional on-premise server estate**, which can be compromised by criminals, nation-state attackers or other hackers.

So, for example, an energy provider can secure significant efficiencies by deploying connected devices in an electricity substation to enable real-time remote monitoring. But the same technology incrementally increases its risk exposure to threat actors, potentially putting public safety at risk if critical infrastructure is accessed by the wrong people.

Cyberattacks are increasing exponentially, with more attacks taking place and at greater impact and cost each year. Attackers have the tools of digital evolution too, so they can deploy AI to find the best way to attack, share tips online, and even make their tools available in the cloud via software-as-a-service models.

There's a lot to consider, though you're likely already working with some of the tools and technologies described above.

Any business using these technologies must assess the risks, weigh up what their organisation is comfortable with, and deploy security tools accordingly.

| [Tan Bin Ru, OneConnect Financial Technology](#)

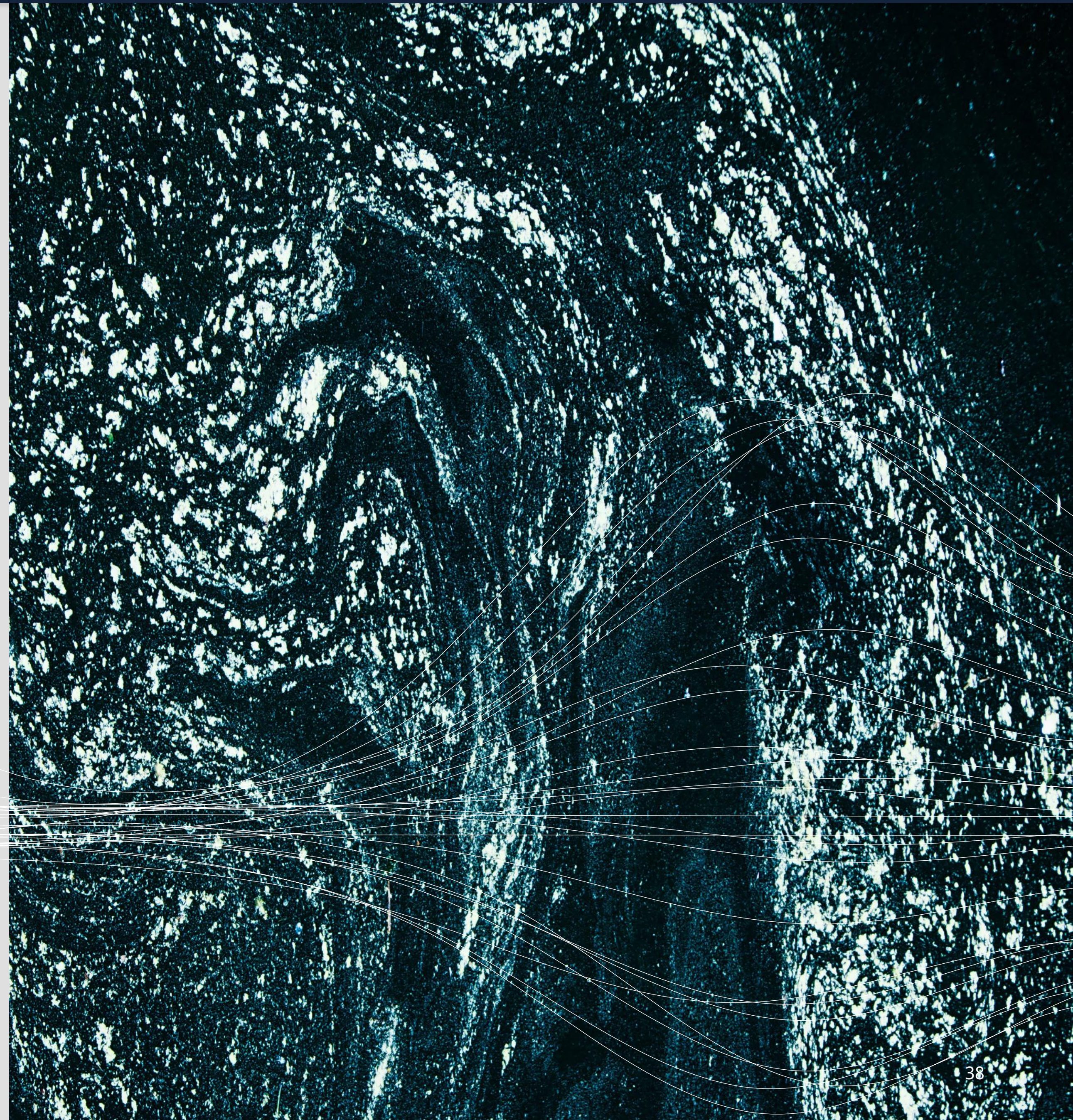
“The way people cheat is universally almost the same, but the level of sophistication varies. So most of the anti-fraud rules we brought from China are applicable here in Indonesia.”

| [Steven Worrall, Microsoft](#)

“Ultimately, it isn't all about what we say and our contractual commitments. It's about how we behave as a business, especially towards our customers.”

Get in touch

To find out how we can help you succeed in Industry 4.0,
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