CXO
BY NTT DATA

The Intelligent Organisation

Every organisation's survival is predicated on its ability to adapt and respond to changes in the environment. By leveraging the power of data and automation technologies to empower each and every employee and decentralise control, organisations can redefine themselves – and become truly intelligent.

INSIDE ISSUE 5: Brains Over Brawn: How Intelligent Technology Creates Competitive Advantage Steve Niesman, NTT DATA Business Solutions US // **Leading Inclusively in a Covid-19 World** Anjali Bindra Patel, author of *Humanity at Work* // **The New Connectivity** Dan Albright, Global Head of Consulting, NTT DATA Services // **Adaptive, Diverse and Cyber-Effective: The Elements of an Intelligent Organisation** John Beckford, President at the Cybernetics Society // **And more…**

Hello.

Welcome to the fifth issue of CXO Magazine.

Continuous innovation used to be enough to drive growth. However, today's organisations also must innovate at speed and scale. Indeed, a frequent question we hear from CEOs around the world is: "How can my organisation adapt and move faster?"

This issue of CXO Magazine looks at how Intelligent Organisations – the theme of this edition – leverage technology and decentralise decision-making to thrive in disruptive environments. Such enterprises realise that speed and flexibility are more important than mass. Yet even when large organisations recognise the importance of speed, decisions and accountability for outcomes frequently rests with a mere handful of senior managers at the top.

Compounding this centralisation problem is the paradox of real-time data available to modern organisations: the unimaginable volume of internal and external data available is often inaccessible and incomprehensible to human beings.

Enter AI and robotics – technologies that can instantly access, organise and analyse vast amounts of data and automatically make informed decisions about a wide range of high-volume issues. The most complex problems can then be delegated to people at the edge where enterprises and their customers/ constituents meet. Intelligent organisations disperse empowerment and accountability to accelerate and improve decisions. Otherwise, vital opportunities are at risk of being missed.

NTT DATA's focus on data, analytics and intelligent automation is predicated on helping organisations thrive by freeing their people to handle the most complex tasks and add greater value to end users. The limited skills availability and incredible competition for talent, coupled with continued fallout from the Covid pandemic, makes it more important than ever to make the best use of people.

As individuals are empowered to use their skills, time and knowledge in the most efficient and effective way possible, organisations can adapt exactly where, when and how they should. The result will benefit all stakeholders.

Enjoy the read.

Bob Pryor
CEO, NTT DATA Services

Issue 5 Contents

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Brains Over Brawn: How Intelligent Technology Creates Competitive Advantage

By Steve Niesman, Executive Vice President, Americas Region President & CEO, NTT DATA Business Solutions US

What safeguards do organisations have against the constant tide of disruption? Those that are smart are taking full advantage of technologies like cloud, AI and big data analytics – and doing so with one focus in mind: giving their people what they need to leverage the full power of their collective intelligence.

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When viewed as an interconnected system – rather than a linear collection of parts – the organisation itself becomes more aware, more intelligent.

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Frictionless, fast and integrated transactions between vendors, employees, and customers are as important as good data itself.

In an age when industries can be born, unrecognisably changed or destroyed in a day, organisations have to be pretty hardy. To withstand the disruption coming from every angle, today's businesses must use everything in their armoury – not just by taking advantage of the latest technology, but by understanding, changing in line with, and empowering their people.

Complexity is rife in our current commercial environment. Decisions need to be made faster, products brought to market quicker, as organisations strive to keep pace with the changing needs and behaviours of customers (not to mention deal with global threats, both natural and man-made). Fast adaptation is clearly crucial. A recent study from the IBM Institute for Business Value showed that the CEOs of outperforming organisations were putting a clear focus on technology – in particular cloud, AI and the Internet of Things (IoT) – to increase their company's adaptability and resilience, and secure the future.

Another CEO study, which surveyed 305 chief executives of Forbes Global 2000 companies, looked into how the major challenges faced by today's leaders have operated as a platform for growth and opportunity. Director of Global Insights at EY's Research Institute, John de Yonge, said of this research: "We believe a new DNA for successful enterprises is emerging, built around human-

centred transformations that break down silos."

The old, traditional way of running a large organisation is no longer fit for purpose. The only way to combat the complexity outside the company is (perhaps paradoxically) to match it with complexity inside the company. That is to say; when viewed as an interconnected system – rather than a linear collection of parts – the organisation itself becomes more aware, more intelligent. By acknowledging and then using to full advantage the relationships and connections between all the parts, an organisation can enjoy the free flow of knowledge, ensuring the right people have the right information, just when they need it.

Defining organisational intelligence
In understanding what makes up an intelligent organisation, it's helpful to consider systems theory – the study of interrelated, interdependent parts as a cohesive whole – and its application to organisational design.

An article from The Systems Thinker explains it neatly as "With systems thinking, managers and designers learn how the parts of their organisation interact, not how they perform independently. Otherwise, unintended consequences may emerge as changes made within one part of the system may adversely affect other parts."

To understand what is going on around us,

our minds use different methods of reasoning: **deductive** – based on facts; **inductive** – based on observation; and **abductive** – drawing a likely conclusion from known information. The article continues: "Abductive reasoning is the act of creatively thinking about what can be done with the data in order to orient it to the current environment …neither analytic nor intuitive thinking alone is enough to sustain competitive advantage since each, while providing tremendous strength, also creates systemic weakness if applied in isolation."

What does this look like for real-world businesses? Our definition is that, by viewing itself as a system, the intelligent organisation combines a decentralised culture with data-led decision making, augmented networks and operational automation to deliver intelligent customer experiences at every point of interaction.

The true power of information technology
Crucially, the balancing act of centralising around a clear strategic direction with creating an autonomous workforce is made possible through the integration of automation and self-learning technologies – and clever use of data – into the overall model of management.

The world of business has never been as fast as it is today, and it will never be this slow again. So, for the intelligent organisation, frictionless, fast and

integrated transactions between vendors, employees, and customers are as important as good data itself.

Friction and disconnects – from inconsistent data between departments, slow interfaces and clunky transfers, to insufficient reporting capabilities and lack of access to critical data – ultimately move outside internal departments and adversely affect the customer experience, product development and business interactions. Embracing technology, and using it to its fullest advantage, is not a nice-to-have: it's crucial for any company looking to survive.

"Cloud is the enabler, data is the driver, and AI is the differentiator."
In a recent Fortune interview, Julie Sweet, CEO of Accenture, hit the nail on the head when she discussed what drives businesses today, with the above quote being "a truism that has redefined the digital landscape."

With the cloud's potential to unlock $1trillion in business, it is not surprising that most enterprises aim to have the majority of their IT hosting migrated by 2024. First, however, it is essential to understand the entire digital 'cloudscape' and the roles of the technology within.

Lower costs with scalable cloud infrastructure
First, the cloud provides lower technology costs via scale – either through a hyperscaler (e.g., AWS)

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> **No longer is IT a standalone department of the organisation; it is the key to unlocking the potential within the minds of employees and the masses of valuable data the business processes every day.**

or through dedicated cloud providers such as NTT DATA. Cloud solutions allow more frequent updates than most companies do on their own, strengthening security. The cloud also keeps customers current and allows them to leverage technology faster and cheaper.

Accurate data at your fingertips to pivot quickly
I cannot overstate the importance of data as the driver of business decisions. To behave intelligently, an organisation's data must be consistent, allow high-speed transactions, and give real-time information to everyone in the business. Simply put: the better your data, the faster you can spot trends and manoeuvre the business. The intelligent organisation will leverage integrated and robust systems to ensure real-time, accurate, single-source-of-truth data.

Using AI to continually improve experiences for customers and employees
There are many misconceptions about AI, but its utility is unquestionable. Many people are unsure of, or even intimidated by it. I have found a useful way to think about AI is to define it as simply 'automated assistance'. For me, this means mundane and repetitive business transactions can be automated to reduce friction for customers and enrich the experience for employees.

One example is allowing customers to review their order status via a system (with no human intervention). This reduces customer service costs of course, as well as improving the experience through real-time access for customers, and freeing up employee time to focus on more rewarding and creative tasks.

In sum, the more a company can automate their business processes via AI, the lower their costs and the higher their customer and employee satisfaction. And the quicker they can become an intelligent organisation.

Creating competitive advantage
Intelligent organisations deliver more value, to all stakeholders, at a lower cost. With 86% of companies struggling to manage the data within their business, according to recent research, those organisations that can get ahead now – leveraging technology to fully enable their workforce – will have a clear and powerful advantage.

Being an intelligent organisation means that you are able to respond strategically to changes in the market, big and small. The Covid-19 pandemic has, throughout the world, sped up the need for businesses to digitally transform, with reports of several years' worth of technology changes introduced by intelligent enterprises in a matter

of months.

Amongst the rapidly-adopted changes were: a surge in buying online; the need for better supply chain planning and execution; face-to-face selling and marketing going virtual; and a drop in demand for physical office premises. These 'Covid effects' are here to stay – and will continue to change at rapid speed.

One way in which we manage this internally is through cloud-based software which allows us to continuously monitor our customers' needs and buying patterns. Using SAP's Analytics Cloud, we have accurate data with which to steer NTT DATA Business Solutions' own business, and that of our clients.

The future, today
Becoming a truly intelligent organisation requires CEOs to accept that the commercial landscape has irreversibly changed, and that fundamentally different ways of managing large organisations are called for.

Technology is the enabler for this intelligent transformation, and no longer is IT a standalone department of the organisation; it is the key to unlocking the potential within the minds of employees and the masses of valuable data the business processes every day. By helping employees to share knowledge – through real-time data,

intelligent technologies and a flat, open culture – the organisation can use that knowledge strategically to respond to threats and opportunities. Structured in this way, even in the most disruptive environments, savvy businesses will stay the course.

As part of the NTT family, we keep a constant view of what is on the horizon – both in business and in society – so we can better plan for it today. Those who are leading today's best-performing organisations recognise that action must be taken right now, if you want to shape the future.

For all references, please go to cxomag.com/steve-niesman-brains-over-brawn-how-intelligent-technology-creates-competitive-advantage

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Adaptive, Diverse and Cyber-Effective: The Elements of an Intelligent Organisation

By John Beckford, Partner at Beckford Consulting, President of the Cybernetics Society, professor and author

We need to rethink the organisation. We must break from the traps of historic convention, stop managing the wrong things and embrace an adaptive synthesis of people, behaviours and processes enabled by effective information. In doing so, intelligent organisations will deliver greater value to all stakeholders.

An intelligent organisation is purposeful, proactive, creative, pre-emptive and reactive; it co-evolves with its environment, influencing and being influenced[1]. An intelligent organisation is adaptive, realising the individual and collective capabilities of the diverse people who give it life, celebrating their diversity and building from their varied insights. An intelligent organisation is underpinned by high cyber-effectiveness: extremely capable in capturing, codifying, curating and compiling data. It utilises the resulting information to sustain itself in harmonious interaction with its social, economic, political and physical setting. Intelligent organisation emerges from this informationally-enabled synthesis of values, behaviours, processes and structures when and only when we, its human actors, create the conditions under which it can.

The trap of historic convention
Still the dominant variant by volume if not performance, the mechanistic, classically hierarchical, positional power-based organisation designs that arose during the coal-fired, steam-
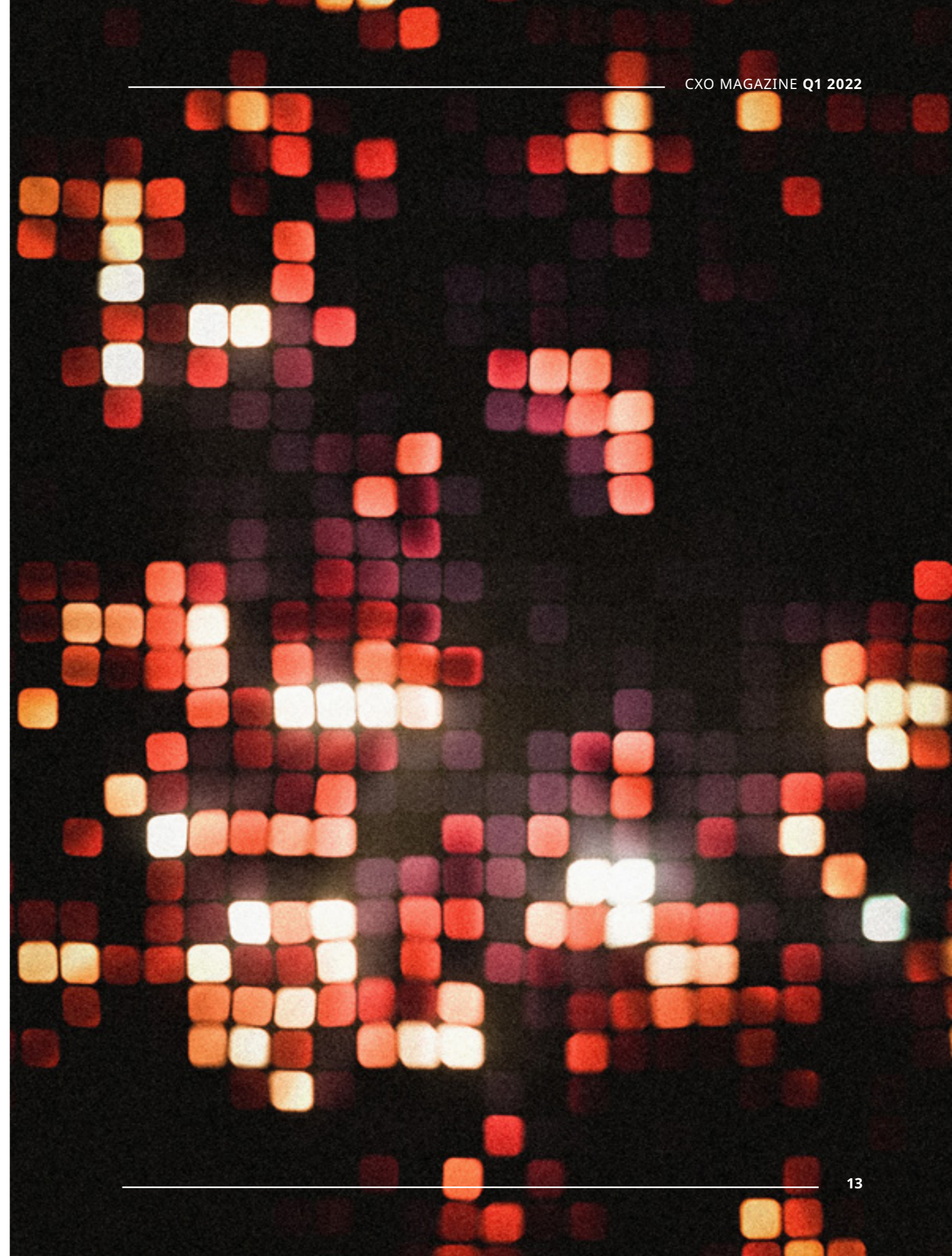
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> **It is stark to realise in 2022 that while there has been so much change, so little has changed.**

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> **Commonly our information systems are bolted on rather than integrated, and consequently, both data collection and reporting are expensive, time-consuming and often wrong.**

powered first industrial revolution, or 1IR, will not suffice for the information-powered fourth industrial revolution (4IR) or beyond[2]. They hold us back, trapped in historic conventions[3].

Organisations still pursuing the Weberian bureaucratic 'system of offices' cannot keep up with rapidly changing clients, services, products or technologies. Those that thrive through 4IR and beyond – whether for services or manufacturing and in the private, public or third sectors – will do so by distributing authority, empowering those closest to the clients and users, making effective use of information. They will encourage people throughout the organisation to exploit relevant, synchronous information, to decide and act on things in the moment (and not as they were when a report was compiled!).

I wrote 30 years ago of organisations as perpetually failing problem-solving engines[4], with managerial decisions lagging the evolving situation because information was not moving quickly enough. Such organisations fail to deliver value to their customers, staff, owners or other stakeholders, being wasteful of resources and with such latency in their actions that they must always fail. It is stark to realise in 2022 that while there has been so much change, so little has changed.

Stop managing the wrong things

Recent necessities of working from home notwithstanding, organisation design and decision-making continue to be constrained by a philosophy of presenteeism; managing where people are rather than what they achieve.

There is, of course, performance management in our organisations, much of it primarily concerned with compliance to outdated norms and expectations, accountability for resources ('we made budget') and delivery of outputs – not achievement of outcomes for clients. Commonly our information systems are bolted on rather than integrated, and consequently, both data collection and reporting are expensive, time-consuming and often wrong.

Simply, our constrained thinking about organisations means that we waste much of the investment that we make in information (and the systems that provide it) because we do not adapt the whole organisation to the new reality.

Delivering intelligent organisation

We must challenge conventional assumptions about people, organisations and information, and consider how they can be reinvented to capitalise on breakthroughs in our understanding and appreciation of people, their behaviours and the

liberating potential of information technologies.

That means rethinking and redesigning our organisation to be adaptive so that it changes itself, and creating and building a shared identity on a foundation of agreed values, beliefs and a sense of belongingness.

A shared identity will also require effective collaboration between the managers and managed – with respect for the knowledge, skills, insights of every individual and self-management integral to the architecture of every role.

Rethinking will mean recognising that data is as valuable (if not more so) than the goods in the warehouse and the cash in the bank. Data, while necessarily always incomplete, is the raw material of information and is the enabler of adaptation.

Information systems will enable amplification rather than attenuation of the capability and contribution of each individual, while the incompleteness and dirtiness of data will mean exercising judgement in decision-making. Judgements, while sometimes wrong, are the basis of individual and collective learning.

Effectiveness of the organisation will need to be redefined and expressed not just in financial performance but in its ability to adapt to meet the changing expectations of all stakeholders.

Developing cyber-effectiveness: a beginning

I suggested at the outset that an intelligent organisation would be highly cyber-effective. Space precludes a full elaboration, so here are three questions you can ask to start testing the cyber-effectiveness of your organisation today.

1. Is data regarded as a generator of cost to be minimised – or value to be maximised?
2. Is data collected and performance monitored as a functional activity or an integral part of the work process? (And how do you know?)
3. Do you recognise the distinction between the information infrastructure (networks, devices and the soft/firmware that runs them) and the information architecture (operational and business applications, reporting, decision capture) that run on it?

In pursuing cyber-effectiveness, we move away from the siloed 1IR trap of brute-force computing to integrated, process-oriented intelligent computing. Doing so means comprehending that investment in information is never 'finished'.

Effective investment will rest in developing evolutionary systems with value realised through the achievement of outcomes, not functional (and often marginal) savings on cost. Evolutionary

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information systems will always be a work in progress!

The impact

Overall, we need to shift our thinking from doing things better to doing better things.

Through purposefulness and shared identity, the intelligent organisation will become sustainable – being more thoughtful, societally legitimate, systemic.

Adaptation will be embedded in the organisation, while information will enable decisions. An intelligent organisation will have a hierarchy rooted in and given legitimacy by information, with power distributed accordingly. It will maximise the autonomy of the individual and maintain coherence and integrity while generating and responding to changes in its environment.

An intelligent organisation will be adaptive, lean, agile and deliver more value at lower cost – in all dimensions.

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[3] – Beckford, J. (2022) Quality Management: Reconsidered for the Digital Economy, Routledge, UK

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For all references, please go to cxomag.com/john-beckford-adaptive-diverse-and-cyber-effective-the-elements-of-an-intelligent-organisation

John Beckford is partner in Beckford Consulting and a Non-Executive Director of three social enterprises. He is visiting professor at University College London and Loughborough University. John is author of *Intelligent Organisation: Driving Systemic Change with Information (Routledge, 2020), Intelligent Nation: How to Organise a Country (Routledge, 2021)* and *Quality Management: Reconsidered for the Digital Economy, 5th Edition (Routledge, 2022).*

In Depth

NTT DATA takes a deeper look into critical areas of organisational change.

History Made Faster: Why Automation Often Fails, But Doesn't Have To

Business norms have been swept away by the Covid-19 pandemic; because of this disruption, change had to go deeper and faster than conventionally thought possible. Instead of "returning to normal", we must now refocus technologies, working practices and business models to create an environment that will be starkly different to the old ways of working.
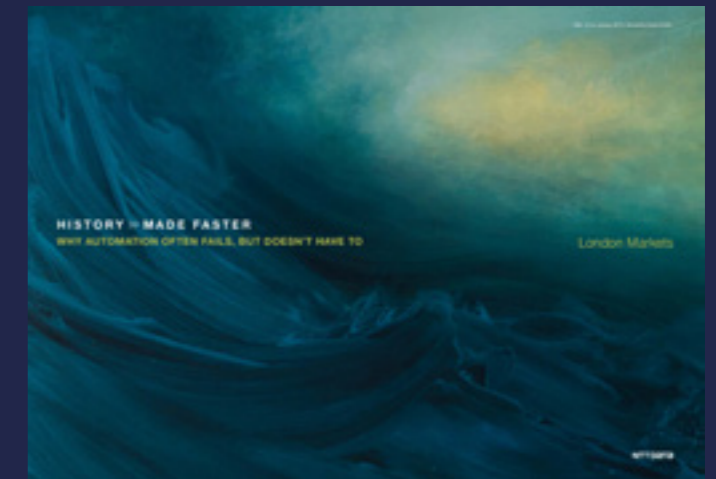
Scan the QR code with your smartphone camera

Intelligent Organisations: A Systemic Approach

By Markus Schwaninger, Professor of Management at the University of St. Gallen and author
of *Intelligent Organisations: Powerful Models for Systemic Management*

Organisations can be designed to behave intelligently and sensitively, and indeed they must if they are to master the complexity of our current environment. Drawing on Systems Theory and Cybernetics, we can understand the prerequisites of organisational intelligence, and create the conditions for our organisations to flourish.

If there is a key to mastering complexity, it is in the design of intelligent organisations. For that purpose, a precise set of conceptual tools is available, which goes beyond pragmatic recipes and anecdotal insights. Systems Science is the basis for the new approach.

Perspectives on organisational intelligence

In popular language, 'organisational intelligence' is associated with a multitude of concepts: artificial intelligence, computer systems, business growth, intelligent employees and leaders, agility and so on. This arbitrariness may reflect many different points of view, but it offers little insight.

Hereafter, I will offer a more focused concept of intelligent organisations. It is based on Systems Science, or more generally, the 'Systems Approach'. This approach is based on Systems Theory (a formal science for the explanation and design of systems of any kind) and Cybernetics (the science of control and communication in and of complex dynamic systems).

It is not a trivial question to ask: How should organisations be conceived so as to be capable of behaving in an intelligent and sensitive way?

From a systems point of view, the basic faculties that distinguish intelligent organisations are the abilities to:

1. **Adapt to changing situations,** i.e. to change as a function of external stimuli or requirements;
2. **Influence and shape their environment;**
3. If necessary, **find a new playing field ('milieu') or to reconfigure themselves anew** with their environment, and finally;
4. **Make a positive net contribution** to the viability, development and sustainability of the larger entities in which they are embedded.

These faculties can be developed purposefully. As social – and especially socio-technical – systems are at stake, the set of capabilities enumerated here goes far beyond the criteria of intelligence as established by diverse disciplines such as psychology or information technology, wherein 'business intelligence' has been defined as a set of technical instruments which support decision-making.

It also transcends those theories of management in which organisational performance is conceived of and measured in terms of criteria such as profit, efficiency or shareholder-value only. In turbulent times these short-term indicators are of limited value. A long-term perspective becomes more important: the focus shifts to a broader view with distinct orientations – the viability of the organisation, with the pertinent attributes of sustainability and development. It is a matter of definition if these attributes are subsumed under 'viability', as they are here. Viability, as we understand it, reaches beyond mere survival.

The concept of viability has been defined as "the ability to maintain a separate existence" (Oxford English Dictionary) – i.e. maintenance of identity – and is widely considered the ultimate criterion of organisational performance. Accordingly, the question "how can the viability of the organisation be ensured?" is critical to managerial success.

Designing intelligent organisations

The literature provides us with a conceptual tool for answering that question: the Viable System Model (VSM), which goes back to Stafford Beer, the father of Organisational Cybernetics. The VSM is a very strong theory. Indeed, it claims to specify not only the necessary but the sufficient preconditions for the viability of organisations of any kind. In other words, if these preconditions are met, then the respective company, or other organisation, is viable.

This bold assertion has been corroborated over the last years empirically, and the VSM is increasingly

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The structures outlined here are abstract frameworks, but people are at the centre. Autonomy and participation are the salient features.

convincing in meeting the complex organisational challenges of companies and public institutions.

To outline the model, here is a high-level explanation: according to the theory, an organisation (or any other social organism) is viable if, and only if, it has a management system containing the following components:

- **System 1 (S1)** – Local operations, i.e. basic units with their management. Optimises daily business.
- **System 2 (S2)** – Coordination. Reduces oscillations.
- **System 3 (S3)** – Operative, executive management. Assures an optimum global performance.
- **System 3* (S3*)** – Auditing. Complements information flowing over the channels S1-3 and S1-2-3.
- **System 4 (S4)** – The intelligence function, also strategy and development. Stands for the long-term orientation and relationship with the environment.
- **System 5 (S5)** – System identity and ethos / normative management. Establishes an equilibrium between present- and future-orientation. Embodies the supreme values, principles and norms, which govern the organisation (see graph).
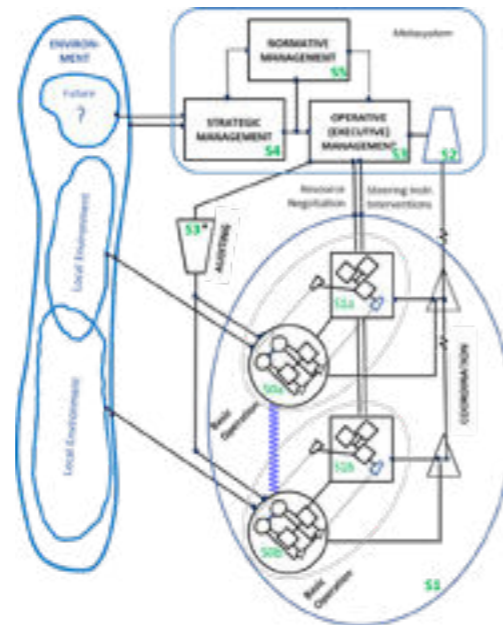
Figure: The Viable System Model (after Beer)

This description is only complete if the relationships between the components of the model are taken into consideration. For example, diagnostic evidence often reveals imbalances between Systems 3 and 4 – that is, operational management overwhelms strategic management, so that strategy is at risk. Or vice versa: strategic ideas are valued higher

than operational efficiency until financial substance is undermined. In many cases, there is also a discrepancy in the channel from System 3 to 1, in that executive management gives instructions that are then not implemented.

This model is applicable recursively to different organisational levels, e.g. the company as a whole, a division, a business unit, etc. It is potentially highly effective for purposes of both diagnosing and designing organisations. The structures outlined here are abstract frameworks, but people are at the centre. Autonomy and participation are the salient features of VSM-based organisational designs.

The model has been successful in a wide variety of constellations. Practical examples of applications abound, but they would overstretch this article. Several books have been written about the VSM. A volume that gathers more case studies of pertinent applications than any other recent publication is Angela Espinosa's The Viable System Model in Practice (see references below).

Intelligent organisations are designed for viability, including sustainability and development. In this sense, the model presented here provides a theory of the systemic architecture of organisational intelligence. The VSM opens up a high potential for progress in business and administration. This

potential for improvement has only been realised to a small extent and is ready to be tapped.

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For all references, please go to cxomag.com/markus-schwaninger-intelligent-organisations-a-systemic-approach

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Leading Inclusively in a Covid-19 World

By Anjali Bindra Patel, Director of DEI at Winrock International and author of the bestselling *Humanity at Work*

Inclusive leadership is more critical than ever as we continue to navigate through the Covid-19 pandemic. Leaders are working to maintain productivity, collaboration, and innovation during these challenging times. Those who can also address amplified issues around inclusion and belonging in a distributed workforce will be primed for superior organisational performance in the future.

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Digital connections thrive the same way in-person connections do: through communication, trust and honesty.

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How would *your* headline read if you took a collective pulse of your organisation today? Would you be proud?

In the first ten months of 2021, America's workers handed in nearly 39 million resignations, the highest since tracking began in 2000. As organisations struggle to keep their employees, leaders across the country have emphasised the importance of community as they reimagine what inclusion means in an increasingly distributed workforce.

With no end in sight to the Covid-19 pandemic, working from home is now the norm in many industries. In advanced economies, 25-30% of the workforce is expected to work permanently from home, but building a distributed workforce is about way more than allowing people to set up an office at home. It's about promoting a sense of inclusion, community and collaboration in a highly digitised world.

Whether humans are in an office or working from home, one thing remains constant. What people crave most, and research increasingly shows to be the hallmark of the highest performing workplace cultures, is a sense of authentic connection with others.

But what creates an authentic relationship? Research suggests that our brain (usually

unconsciously) scans all the possible information to determine whether a person is trustworthy when we meet someone. If we see the potential for trust, we open the door to connection. But in a world of Zoom meetings and Teams calls, can digital relationships still be authentic? Of course. Digital connections thrive the same way in-person connections do: through communication, trust and honesty. The key is making sure that we use technology equitably and inclusively.

Using technology to enhance inclusion
In a world where so many of us work remotely, it's critical to ensure everyone has equal access to technology. Access to technology can make or break an employee's ability to innovate and thrive. You must ensure everyone has access to a steady internet connection, a device and any other software or hardware. Don't assume everyone has access to these provisions; ask and accommodate as often as needed.

Second, we can make virtual meetings more inclusive by turning on closed captioning and sending agendas in advance to accommodate various cultural norms and personality types. Not

everyone feels comfortable speaking up on issues with little to no notice, and our meetings need to reflect the various working styles employees bring to the table.

Finally, start meetings by acknowledging everyone in the room, not just those with high status or privilege. Make it okay to talk about the fact that our circumstances and lives are in unprecedented territory and that we all have unique challenges and vulnerabilities. At the end of each meeting, encourage cross-pollination of ideas to allow employees to discuss thoughts and questions. Don't dismiss other people's ideas just because you've always done things a certain way. On the contrary, innovation finds its roots in differing perspectives.

Inclusive actions like the ones listed here, along with an organisation's behaviours, policies and practices, are the ingredients that build an organisation's culture. But like any recipe, to do it right, we need to iterate and evolve – doing the right thing means revisiting and revising regularly.

Doing good is good business
In their book, *Conscious Capitalism*, John Mackey and Raj Sisodia talk about doing what is right

because it's right. Conscious businesses, they say, have a simple but powerful belief: the right actions undertaken for the right reasons generally lead to good outcomes over time. They treat their employees well because it is the right, humane and sensible thing to do and because it is also the wise business practice to do so.

The authors take this analysis a step further by asking, "How would I feel if what I'm doing right now is written up on the front page of the New York Times or the Wall Street Journal?"

Honestly, it's a solid question to ask. If you looked at your company's levels of inclusivity, what would you see? What would your workforce say about the inclusion of its people? Knowing that almost 7 out of 10 people feel disengaged at work, did you ask your people how they are and what they need? How would *your* headline read if you took a collective pulse of your organisation today? Would you be proud?

In an increasingly remote workforce, we are no longer confined to searching for the best people in the radius closest to our company. We can, and should, search for the best people – period. Those people will be from varying backgrounds, ages,

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abilities, races and cultures. Systems can be put in place to make collaboration, creativity, and communication part of the organisation's DNA. All of this doesn't happen on its own, though. It happens by choice.

Conscious compassion

As the pandemic continues to throw us curveball after curveball, no one will have all the answers. Still, we know the path forward requires continuous and honest conversations with each other. We have to make the conscious decision to value inclusion, and we need to live our missions. We need to honour and celebrate our differences because that is what the successful, compassionate cultures of tomorrow will do.

Reading about inclusive practices is great. Publicly stating our commitment to building inclusive cultures at work is laudable. But this article, or hundreds of others, can't change a culture. Only people can do that. Only action can do that. To build and sustain a genuinely inclusive culture, we can't just educate ourselves and leave the rest to chance. We need to connect, and we need to listen.

As leaders, we need to ask why someone under our watch would feel unheard in the first place because it's rarely just an 'inclusion' problem: it's

a business problem, a management problem, a leadership problem, an empathy problem, a culture problem or a mix of these factors. We can address these problems by forming channels to connect, listen, learn and hold people accountable.

Whether in person or remotely, inclusion and belonging are good for business. More importantly, they're the keys to building humanity in the workforce.

For all references, please go to cxomag.com/anjali-bindra-patel-leading-inclusively-in-a-covid-19-world
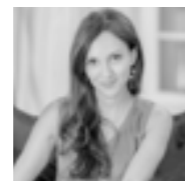
Anjali Bindra Patel is Winrock's Global Director of Diversity, Equity, and Inclusion (DEI). Prior to joining Winrock, Anjali was Founder of Sweatours LLC, a leadership consulting firm specialising in DEI. Anjali is a lawyer, Certified Diversity Executive and author of the #1 Amazon best-seller *Humanity at Work,* discussing DEI within distributed workforces. Anjali has a Bachelor's in Business Management and a J.D. from Ohio State University College of Law.

VIDEO

An Introduction to Conversational AI

Interview with Diego Ventura, Raj Koneru and Umesh Sachdev – by Tanvir Khan, EVP Service Delivery NTT DATA Services

Scan the QR code with your smartphone camera

Tanvir Khan, EVP Service Delivery NTT DATA Services, talks to the CEOs of three rising stars in the world of artificial intelligence – noHold, Kore.ai and Uniphore – diving into the topic of conversational AI: what it is, how to use it and where it will have the greatest impact on our lives and our businesses.

To build and sustain a genuinely inclusive culture, we can't just educate ourselves and leave the rest to chance. We need to connect, and we need to listen.

A Practical Guide to Getting the Most From Intelligent Automation

By Pascal Bornet, Intelligent Automation expert, bestselling author and member of the Forbes Technology Council

Intelligent automation is a business imperative: not just making organisations more efficient but enriching customer and employee experience – not to mention helping to identify new business strategies. To successfully transform your organisational culture to one that embraces automation, there are five key steps (and a few basic tenets) to ensure you get the most from IA.

Intelligent automation, or IA, is a combination of software technologies that automate or augment knowledge work to improve speed, efficiency, or accuracy. Its goal is to achieve improved business outcomes through automated processes. And its benefits are diverse and far-reaching.

IA is a business imperative. It makes your company's processes more efficient, improves your customers' and employees' experience, and helps you find new business strategies.

Benefits for customers, employees and the organisation

Companies often lose customers due to frustrating and unresponsive customer services. IA can help by automatically routing queries to the right person, responding to simple queries using chatbots (to free up human agents for the more complex ones), and sharing information between agents and systems to provide a seamless, omnichannel customer service experience. For example, the hotel chain Wyndham uses a robotic process guidance solution to pre-fill agents' screens with real-time instructions and customer data to help them in discussions with clients.

You can also use sentiment analysis to monitor perception of your brand on social media and respond accordingly, or use data analytics to improve products and marketing campaigns, tailoring them based on customer demographics and purchasing behaviour (as Netflix has done – their personalised recommendation algorithm has saved an estimated $1 billion in cancelled subscriptions).

Businesses that seek to improve the experience for employees are four times more profitable. IA can improve morale and reduce employee turnover by freeing workers from the most tedious and repetitive aspects of their jobs, allowing them to spend more time on creative or relational tasks that are more fulfilling and higher-value. IA can also reduce workload and pressure by speeding up processes and automating time-consuming tasks. One hotel chain with over 20,000 client interactions per day reduced employee turnover by 70%, and improved service quality by 40%, by using a cognitive agent.

By automating and streamlining business processes – reducing or removing the need for human intervention – IA makes organisations much more efficient. It can also improve accuracy, reduce losses due to administrative errors, and improve transparency and compliance by logging its actions.

Finally, IA can reduce losses due to fraud, both because automated processes are more resilient to deception than human ones, and because insight from machine learning can detect suspicious transaction patterns to flag for investigation.

The capabilities IA offers

Intelligent automation technology can be divided into four main capabilities: vision, language, thinking and learning, and execution. Some of the most powerful IA applications link two or more of these capabilities together.

Vision

Computer vision is the ability to detect and interpret information from images or video footage. It's used in intelligent character recognition, to scan documents and identify information – for example, extracting payees and amounts from a batch of invoices. Other applications include self-driving cars, medical diagnostics (detecting disease from scans and X-rays), retail store automation (using camera footage to automate check-out and inventory management), and biometrics (such as facial recognition).

Language

Computers are rapidly becoming better at

"

Businesses that seek to improve the experience for employees are four times more profitable.

"

Show workers the benefits that IA offers them personally, so they welcome it as a tool to augment their capabilities and save them time, not resent it as a threat to their jobs.

understanding and generating human language, using statistical models rather than a set of rules. This capability is used to power intelligent chatbots, to transcribe speech to text, to automatically translate or summarise documents, or for sentiment analysis: inferring emotions and opinions from written text.

Thinking and learning

The thinking and learning capability is about analysing data to create insights, make predictions, and support decision-making. Applications include detecting patterns of transactions or insurance claims that suggest possible fraud, assessing loan applicants for credit risk, or analysing sales data to identify the highest-impact promotions and marketing campaigns.

Execution

This is when software interacts with digital systems and performs tasks using them, such as logging in, filling forms, or routing data between systems. The execution capability includes robotic process automation (RPA), which can automate the mouse clicks and text entry performed by a human, and low-code platforms, which enable users to build automated processes without needing coding skills.

The execution capability connects the other capabilities together into a touchless automated pipeline. For example, it could collect data that the vision capability has scanned from documents or images, convert it for the thinking and learning capability to analyse and generate insights, and automatically update a database or scheduling programme based on these insights.

How to get started

Based on helping hundreds of companies transition to IA, I've identified these key steps for ensuring your IA transformation is successful.

1. **Identify and prioritise use cases**
   Identify IA use cases across the largest scope of divisions or entities – the broader the scope, the higher the potential benefits and the capacity to invest. Prioritise these based on feasibility and impact. Start small, think big, and scale fast. Plan an achievable but high-impact pilot so that you can demonstrate the benefits of IA to colleagues.

2. **Build the business case**
   Calculate the estimated costs and benefits to build a business case and create buy-in across your organisation.

3. **Get top management support**
   The IA transformation is more than just a

technology project: it's a deep restructuring of the whole business, involving people and processes as much as technology. It must be supported and sponsored by the top levels of management. They need to set the vision and release the financial and human resources.

4. **Build capabilities early**
   Assemble the right talent very early in the process, including business and operations as well as IT. Identify internal candidates, with knowledge of your business, who are interested in IA and train them up. Make sure the IT infrastructure is in place in advance.

5. **Build your roadmap**
   Use the insights gathered from the previous steps to build an agile, iterative roadmap, including launch, preparation, scaling, and change management.

Develop a company culture that embraces automation. Show workers the benefits that IA offers them personally, so they welcome it as a tool to augment their capabilities and save them time, not resent it as a threat to their jobs. Encourage workers to identify opportunities for automation in their day-to-day work, and you'll be able to get the most from intelligent automation, making the lives of everyone – from customers to staff to shareholders – happier, easier and more prosperous.

For all references, please go to cxomag.com/pascal-bornet-a-practical-guide-to-getting-the-most-from-intelligent-automation

Pascal Bornet is a global expert in Artificial Intelligence and Automation, and author of the bestselling book *Intelligent Automation*. Pascal has published articles in Forbes, Bloomberg, McKinsey Quarterly and The Times. He is a member of the Forbes Technology Council, and a Board Member or a Senior Advisor for several organisations, startups, and charities.

Why the Time Has Come to Reimagine the Employee Experience

By Emma Bridger, Employee Engagement Expert and bestselling author of *Employee Experience by Design: How to Create an Effective EX for Competitive Advantage*

Getting your EX right has the power to transform, making a fundamental difference to your people, your bottom line, and your organisation's ability to deliver a positive social impact.

The psychological contract at work is changing, and with it, employees' expectations. It's no longer enough to receive payment for a job well done; we look for purpose and meaning at work. We want to move beyond satisfaction to be motivated and engaged, with a focus on our development. We look for managers who will coach us to be our best, rather than simply telling us what to do. We expect more than the annual performance review. We want ongoing conversations that focus on our strengths, as well as our development areas. In short, employees are fast becoming consumers of the workplace.

Before the Covid-19 crisis, the business case for employee experience and engagement predominantly focused on competition for talent, with studies indicating that employees were actively looking for other openings. Fast forward to 2022, and "The Great Resignation" is fast becoming a reality for many organisations.

Getting it right with your people is no longer a nice-to-have but a critical enabler of business success. And yet many organisations still approach this challenge with outdated ideas and practices. To differentiate and enjoy a competitive advantage requires a more intelligent and innovative approach to your people and culture. But what does this look like?

Intentional culture
We need to change our approach to culture and people if we want to get a different result. If we want to attract the best people, encourage them to stay and enable them to thrive, we need to be intentional in the design of our employee experience (EX).

Every employee has an experience of you as an employer. Their experience starts before they join and lasts as a memory long after they've stopped working for you. The question is, to what extent is it the experience they want and need, and how aligned is it with your intended EX? Only by being intentional about how you craft the many significant and everyday experiences people have of your organisation can you hope to architect the larger, overall employee experience. That all comes down to what we call EX Design.

EX Design uses design principles, first to understand people and their needs and expectations, and then to develop, test and iterate solutions to make the experience the best it can be. 'Best' is a loose term – and deliberately so. Because EX is not one-size-fits-all and, in reality, it involves compromises. What best looks like is a balance between three competing and shifting demands – your organisational context, the requirements of the work, and your people.

Seen in this way, it is clear EX Design is not a phase in a development process. Neither is it making the intranet or any other tool, product or service look nice (although aesthetics may play a part). Rather it is a continuous focus on, and intentional evolution of, the many small, medium and large experiences an employee has with you – and, consequently, the cumulative impact of those experiences.

Designing an exceptional experience
So EX Design is about intentionally curating an EX that is right for:
- People's needs and expectations – what makes sense to and for people;

> **Getting it right with your people is no longer a nice to have, but a critical enabler of business success.**

> **EX is not one-size-fits-all and, in reality, it involves compromises. What best looks like is a balance between three competing and shifting demands – your organisational context, the requirements of the work, and your people.**

- Requirements of the work – the technical or other requirements of the work (e.g., where people are located, what equipment they have and what processes they need to follow);
- Organisation context – commercial objectives as well as requirements of the culture, brand, purpose, values etc.

We borrow and adapt from design thinking with pride. And when it comes to EX, the word design is apt. Because it is intentional, and it is markedly different to other more traditional approaches to human resources and related people-focused activities, such as L&D and recruitment.

When applying design thinking to our culture and people approach, it's easy to focus on a set of tools and activities. However, design thinking is much more than an innovation recipe with steps and ingredients. Design thinking is also a mindset with curiosity, empathy and experimentation at its core.

1. **Curiosity:** Being insatiably curious about people and what makes them tick as well as what is possible;
2. **Empathy:** Putting people and their experience at the heart of the process;

3. **Experimentation:** Constantly learning and iterating – testing multiple small solutions or prototypes to understand better what might solve a problem or realise an opportunity.

EX by design borrows these three principles – principles that are inherently optimistic, rooted in a belief that it is possible to understand human experience and to design solutions to improve it. This is why we bring together tools and approaches from both the world of design thinking and positive psychology.

The right time to rethink EX

The relationship between EX Design and organisational culture is two-way: each impacts the other. A culture rich in empathy, curiosity and experimentation will support an EX Design approach. And by adopting an EX Design approach, the people involved and broader culture will become more empathic, curious and experimental.

Organisations get started with EX Design in different ways and for different reasons. It often goes hand in hand with another transformation, typically an agile transformation.

And without (or even with) sponsorship, pioneering EX Design activities can meet resistance as they draw on the thinking skills of designers to challenge the status quo to look for new data points and to new possibilities. This can feel very different and uncomfortable. Starting small and securing quick wins can help.

The future of work has never been more uncertain, but our hope is that organisations are open-minded about how they can function to benefit their people, their customers and society. Getting your EX right has the power to transform. It can make a fundamental difference to your people and deliver a positive social impact. But to do this, we can't go back to the way things were before. We need a different approach and definitely not a superficial rebrand of the HR function. The time has come to reimagine our employee experience, our culture and the difference this can make.

For all references, please go to cxomag.com/emma-bridger-why-the-time-has-come-to-reimagine-the-employee-experience

Emma Bridger is one of the world's leading employee engagement and experience experts. She helps companies of all shapes and sizes to make work a positive experience. She's a best-selling author, and one of HR Magazine's most influential thinkers of 2021. And she is passionate about making the world of work better for everyone.

How to Use Data Science to Make Faster and Better Decisions

By Daan van Beek, Founder and CEO of Passionned Group and author of *Data Science for Decision-Makers*

Could it be possible to make your organisation twice as agile? When businesses behave intelligently, they use data science to facilitate a culture of continual, democratised decision-making, which can cut response times in half.

Traditional organisations may make a decision sporadically, but intelligent organisations make decisions continuously, on all levels, including across the organisation's official borders. Intelligent organisations also use data science to cut down the response time by as much as 50%, essentially doubling the organisation's agility. In this article we outline the contours of the intelligent, data-driven organisation.

Managers often have to use 50% of the knowledge to make 100% of the decisions while being responsible for the results. Meanwhile, the volume of data keeps growing. Just dropping all of your structured and unstructured data into a data lake is usually not the right solution.

Organisations are typically slow and reactive when it comes to making decisions. This isn't always a bad thing, but a dynamic environment demands not just an agile organisation, but decisive leaders and flexible employees.

Intelligent organisations create an environment where employees' work is data-driven. They develop a collective intelligence, make the right
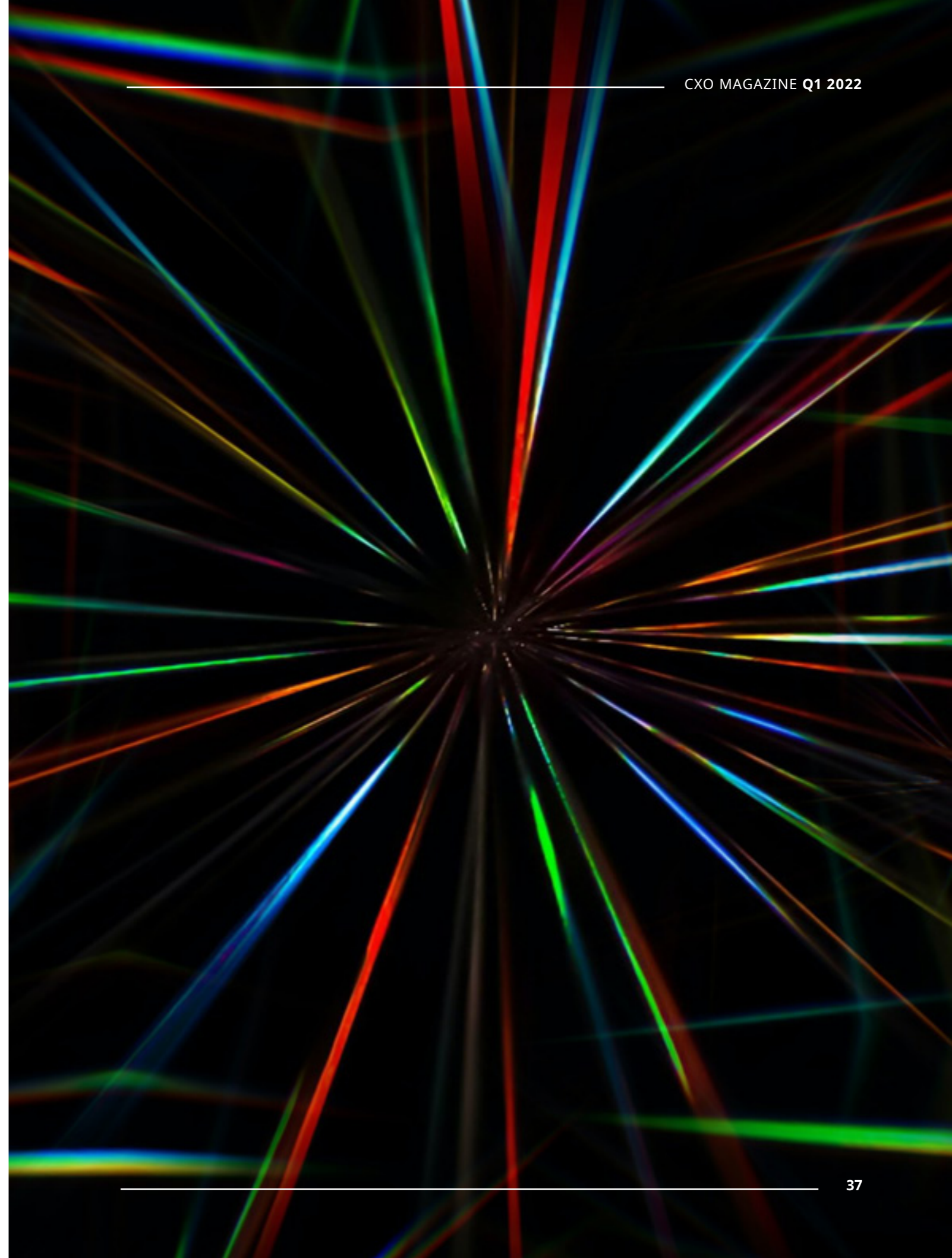
> "
> **A dynamic environment demands not just an agile organisation, but decisive leaders and flexible employees.**

> "
> **An algorithm can easily replace 100 reports.**

decisions faster, and continuously implement process improvements and innovation. They design algorithms for complex, repeating decisions, especially when it comes to operational decisions. They also think from an AI-first perspective.

So, organisational intelligence is about perceiving and responding to high-quality signals within the organisation and the environment faster and better, and processing data with the goal of continuously improving performance.

Highest values
Based on four concepts, organisations can measure how intelligent they are. These are the highest values that all CXOs should manage and strive for if they want to keep growing and improving.
1. **All-round vision**: does your organisation have an all-round vision, and is it sensitive? Is management aware of what's happening in its environment, with its competitors, in society, and in the workplace? Can they translate this into a clear vision and powerful mission?
2. **Analytics:** how extensive is the organisation's analytical capacity? How deep does it go? Is data from various structured and unstructured sources (automatically) combined and consistently analysed by managers and business analysts? How accurate is the predictive value of machine learning models?
3. **Agility:** is the organisation agile? Can it quickly

make decisions and respond to changes in the market in a timely and adequate fashion? Can it quickly develop new products and services and launch them flawlessly?
4. **Alignment:** is the organisation capable of creating alignment between various departments, disciplines, and teams?

The major ingredients of an intelligent, data-driven organisation
Data science is most effective when all disciplines actively work together in concert, which can release a lot of positive energy in your organisation. Continuously improving, innovating and refining or changing your strategy is driven by reliable and relevant data. The right decisions can be made quickly based on facts, whether they be strategic, tactical, or operational. Doing better than yesterday and better than your competitor, supported by professional data management, data science and algorithms. Add to that a culture that stimulates knowledge sharing, continuous improvement and innovation, and you have all the ingredients of an intelligent, data-driven organisation.

The future of data science
The data warehouse is still the beating heart of the intelligent organisation. But times are changing. The world of AI and data science is still changing rapidly. These are exciting times. Algorithms and

(software) robots are penetrating the workplace and taking over tasks that used to be executed by people. The following developments are unmissable to anyone working on creating an intelligent, data-driven organisation:
- **Artificial intelligence enters the mainstream** The number of AI success stories are beyond count at this point, and mainstream media is paying attention. The story of the winner of the Dutch BI & Data Science Award 2022, Pon's Datalab, for instance, speaks for itself. Self-learning algorithms are increasingly making independent decisions and intruding on the private and public domain. Decisions made by governments, credit card companies, and banks can be completely based on algorithms.
- **Auto machine learning (AutoML) is taking off** As many tasks that fall under the remit of data scientists are being picked up by machines without human interaction, frameworks and tools that enable users to develop their own machine learning models are on the way. For data scientists, developing deep learning models will be all that's left, in the end.
- **Report builders are on the brink of extinction** We've already predicted that AI will make many report builders redundant. An algorithm can easily replace 100 reports. Why? Because reports are mainly about looking back; algorithms help you predict the future and

prevent negative events. The more mistakes you prevent, the less valuable it is to look in the rear-view mirror. There's a reason why the traditional market leaders in the reporting field (IBM Cognos and SAP BusinessObjects) are no longer on top of the world.
- **Data discovery, visualisation, and storytelling are hot** These are becoming increasingly popular, appearing at the top of most trend-watching lists in 2022. The story behind the numbers has to come alive to convince the decision-makers of the facts, make decisions on a granular level, and secure the implementation of data science.
- **Good, scalable data infrastructure is crucial** AI has entered the mainstream, data discovery is the norm, and the volume of data is growing exponentially. All these developments make high-quality, scalable data infrastructure (in the cloud) essential. Microsoft Azure, Google Cloud, and Amazon AWS are the market leaders in this field. IBM recently split itself into two public companies to focus on cloud computing and artificial intelligence.
- **Data quality is more crucial than ever** Fortunately, many organisations have already realised that they can't make reliable predictions using poor data. Reliable data has become a hygiene factor that directly impacts operations. Using low-quality data in

AI applications is asking for trouble: it leads to impure algorithms that should not be taken into production. In the case of a traditional report, there's always a human eye that can spot any errors. An algorithm lacks that human perspective and common sense, so bad data can go undetected with potentially disastrous results.

- **The CDO enters the boardroom**
  Every data-driven organisation needs a Chief Data Officer (CDO) in the boardroom. While the CIO is often very cost-conscious, the CDO is more focused on value: how can data best be used to create value? More than 50% of all large organisations have a CDO according to Forbes, a percentage that is sure to increase. And a 2018 study by McKinsey shows that organisations with a CDO are almost twice as likely to complete a successful digital transformation.

- **Data governance gains a place of prominence**
  Thanks to (digital) developments like AI, data science, privacy legislation, and blockchain, more and more organisations are realising the importance of 'putting their data house in order'. From data input to big data creation, from master data to metadata, from data acquisition to data selling, and from data structure to data culture. The difference between big data and normal data will fade

over time. The key is to properly manage, clean, structure, and use data.

...

Autonomous, entrepreneurial employees, well-crafted and data-driven strategies, and agile structures shape the contours of the intelligent organisation. That requires sublime integration of systems based on standards, open cultures, a professional and first-rate organisation, and proactively sharing information, knowledge, responsibilities and results. With leaders fully equipped to make decisions fast, and employees given flexibility and influence, the intelligent, data-driven organisation has the agility to cope – and thrive – amid the dynamism of today's business environment.

For all references, please go to/cxomag.com/daan-van-beek-how-to-use-data-science-to-make-faster-and-better-decisions

Daan van Beek is founder and CEO of Passionned Group. He studied Information Science and attained his Master of Science in AI. Passionned Group is a 100% independent international consulting agency and training institute. Daan is author of the management book "*Data Science for Decision-Makers & Data Professionals*", hosts AI and BI masterclasses around the world and teaches at various universities.

In Depth

NTT DATA takes a deeper look into critical areas of organisational change.

The Big Pivot: From Disruption to Digital Transformation

No industry has been left untouched by the pandemic. Since its onset, companies have been in a constant state of heightened flux: adjusting, recovering or strategising for the future, and all eyes have been on the technology that has helped carry them through. As the economy starts to recover, organisations must pivot to meet any challenge head-on.

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The Big Pivot
From Disruption to Digital Transformation

AUGUST 2020

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An Intelligent Organisation Starts and Ends With People

By Jan Bock, Head of Operations in the Connectivity Business of Giesecke+Devrient

Nature shows the way: those who adapt, survive. This also applies to organisations, especially against the background of enormous challenges, such as accelerated technological evolution, pandemics and climate change. To achieve this, organisations must leave behind linear-hierarchical structures and move towards networked-intelligent ones. But how can this be achieved?

> " **In an intelligent organisation people become more important, and so too do their relationships to one another.**

> " **There I learned what matters: a leader must be able to communicate with everyone, no matter what job they do in the company.**

Coronavirus, demographic change, globalisation, climate change, nationalism – the challenges seem to be bombarding us faster and more severely than ever. Unfortunately, there is no 'stop' button or magic wand; we have to adapt. And the faster, the better – just as nature has demonstrated to us for millions of years. As the ever-logical Mr Spock astutely noted, "Change is the essential process of all existence."

This also applies to companies and all kinds of organisations. They need a kind of intelligence that makes them continuously adaptable to internal and external changes (digitalisation, home office, shortage of skilled workers – at present, there are many such problem areas). Leaders increasingly recognise this imperative: 87% of chief data officers surveyed for an IDC report said their top priority was developing an intelligent organisation by 2025.

A people-focused organisation

But when is an organisation intelligent? The definition is subjective. Time and again we read about agility, adaptability, self-organisation, flat levels of hierarchy, creative freedom and a culture that also condones mistakes and learns from them. In an intelligent organisation the people and their relationship to one another are at the centre of everything.

This is not about each and every person doing what they please; intelligence has nothing to do with anarchy. Rather, the actions and adaptations of employees and their teams must be in alignment with the company's goals. An intelligent organisation accepts that in cases of differing opinions it is the management that makes the final decision after carefully having listened to people and their different positions and opinions. One can, indeed must, talk about everything beforehand but then a decision is reached. And then everyone works towards this goal.

No silver bullet

Just as there is no such thing as the archetypal intelligent organisation, there is no silver bullet or one-size-fits-all solution for achieving this state. The starting point is different in every organisation, but no organisation starts from zero – I have never experienced a completely non-intelligent organisation and I do not believe there is such a thing. Knowledge, skills, initiative, motivation and commitment exist everywhere – only sometimes it is hidden, perhaps because it was not wanted or encouraged by specific managers.

Instead of honing on the weaknesses, better results are achieved by unearthing and promoting the good with trust, support and coaching. This is not always so easy, especially when it comes to people. We all prefer to watch the Premier League rather than the district leagues and likewise when it comes to job applicants we want to have the best, or at least the ones we think are the best (and who think themselves they are the best). You find the outspoken ones immediately, but what about the quieter ones? They exist in every organisation.

It is like football scouting. The next Messi might be playing for a club somewhere in the back of beyond and is just waiting to be asked to join your team. Or he is already playing in your team, but you have ignored him so far because he doesn't deliver special tricks. He, however, is silently keeping things together in the background. Look out for this type of person; they may be in a key position that is important for the development of an intelligent organisation.

Hearts and minds

An organisation cannot be shaped by force. People are the very essence, and an organisation is only as intelligent as the people who work within it (if, indeed, they want to work there at all). The war for talent has turned the job market upside down within just a few years. Employees have more choice than ever before – and you, as manager, must offer them something enticing, otherwise young talent will not be attracted, or want to stay very long. I observe that with my two grown-up sons that they are far more likely to question today those decisions which I might have simply accepted when I was in my mid-twenties. As a manager, you need convincing answers.

But it is not enough to only satisfy employees' minds. You also have to reach their hearts. I became aware of this when I started at Giesecke+Devrient. For the first time in my professional career, I stood there in a factory; before that, I worked exclusively in IT. The shift workers at our factory in Neustadt appreciated the direct engagement. "It's good that the managing director gets an overview of our issues personally," my colleagues told me. They took me seriously because I took them seriously. There I learned what matters: a leader must be able to communicate with everyone, no matter what job they do in the company. Empathy, and an understanding of human nature, is vital.

Beware of too much promise of salvation through technology alone. Everyone is talking about AI and Big data, and these technologies are certainly important for the future success of many companies. But they do not make an organisation intelligent – only people do that.

Jan Bock has worked in the telecommunications industry for many years, including Unitymedia-KabelBW and Telefonica (collaborating with NTT DATA on major projects). For the past three and a half years he has been Managing Director at Giesecke+Devrient (G+D), a global security technology group. He is responsible for all operational units of the Connectivity Business and is a member of the management board. The solutions provided by G+D secure data, identities and a wide range of digital transactions. This includes smart cards with secure digital payments in the banking sector, solutions for safe access and identity management as well as IoT and digital connectivity solutions and services. In his career Bock has actively supported and shaped many change processes.

The Evolution of Buying Habits in Enterprise IT

By Brian Madden, Distinguished Technologist, VMware CTO Office

The way enterprises are buying IT is changing, and so are the characteristics of the buyers. Several big trends are driving this transformation, from the need for agility to different expectations of time to value and the liberating possibilities of the cloud. Now, IT departments can stitch everything together to meet their exact needs much faster than ever before.

There have been several transformational changes in my nearly thirty year IT career. The most profound was the rise of the internet – the precursor to the significance of the cloud as enterprises became comfortable with paying for software on a subscription basis and having their internal data stored in public data centres. While there's starting to be talk around whether AR/VR, the metaverse or Web3 may be the 'next big thing', to me, those are all logical evolutions from the changes we've seen over the past few decades.

Instead, the biggest change to enterprise IT revolves around how the IT buyer is changing and how software will be sold, purchased and consumed.

- To understand these impacts, we have to dig into and unpack a few converging trends:
- The global pandemic demonstrated that even the stodgiest enterprises can be 'agile';
- The shift in worker demographics is changing what buyers look for and how enterprise software is consumed;
- 'Everything-as-a-service' and 'everything from the cloud' are transforming how enterprise platforms are architected.

Taken together, the next five to ten years will lead to an enterprise software environment that would have been unimaginable just a few years ago. Let's drill down into each.

Every enterprise is agile now

Everyone reading this knows the value of agile development and how important it is in our SaaS and cloud-based enterprise environment. The concept of doing single, massive software releases once a year is as anachronistic today as the idea of someone finding out who won last night's game by reading it printed on a dead tree the next morning (i.e. 'my childhood').

The agile software movement was so successful – and so transformational – that business leaders recognised these agile concepts could revolutionise entire businesses. This 'agile enterprise' is such a critical topic that CXO Magazine dedicated an entire issue to it! Of course, the fact that people are still writing about its importance in 2022 means that not every enterprise believes in or has adopted this approach yet. Plenty of enterprises are still far from agile. Or are they?

One of the interesting ways the pandemic affected the enterprise was it forced everyone to be agile. We all remember That Week in March 2020, where we were talking about 'that coronavirus thing' on Monday, figuring out how we were going to move 95% of our knowledge workers out of the office on Wednesday and doing it on Friday.

Did we have 100% success by Friday? No, but we probably had 70%. By the next Friday, we were at 90%, the next 95%, and after a month or so, we had 100% success with a fully dispersed workforce. We took one of the largest and most profound technological transformations of our careers from 'never even considered it' to 'fully implemented' in a month. Now that is an agile enterprise!

This new-found agility didn't stop last March. The past two years of the pandemic forced enterprises to rethink and re-implement their product designs, marketing, talent management and nearly every other aspect of their business. So in 2022, every enterprise is agile whether they realise it or not.

The shifting worker demographic

The second trend affecting how enterprise software is bought and implemented relates to the shifting demographics of the workplace. Millennials, now in their 30s and 40s, are moving up the ranks in corporations, and everyone entering the workforce now is Generation Z. Even older workers, like me (I can't believe that my own Generation X is now an 'older worker'), are used to the consumer world where we get everything instantly. Apps delivered

> **The agile software movement was so successful – and so transformational – that business leaders recognised these agile concepts could revolutionise entire businesses.**

> **These generations are accustomed to things being faster and easier, meaning they expect to see real and immediate value from their spending. In enterprise IT, they're less willing to accept spending millions of dollars and years of work.**

in seconds. Groceries in two hours. Air fryers and snow shovels in 24 hours. These buying and consumption habits – and the related compressed time to value – are pervasive regardless of demographic cohort.

IT practitioners are notoriously risk-averse and prefer staying in the comfort zone of what they know. "No-one ever got fired for buying IBM" may be a relic of a different era, but the sentiment still holds. Not only do they buy what they know, they buy how they know it. Gantt charts, consultants, RFPs, proofs of concepts, pilots, phased implementations – this is their comfort zone.

Or at least, this was their comfort zone. Gen Z and Millennials now make up the majority of workers in many enterprises, and if you figure the average career is 40 years, every year their share of the workforce demographic goes up by 2.5%. These generations are accustomed to things being faster and easier, meaning they expect to see real and immediate value from their spending. In enterprise IT, they're less willing to accept spending millions of dollars and years of work before a new IT system proves it's going to meet their needs.

These younger generations are also less willing to blindly accept what some random sales team at a vendor tells them. The classic, "Yes, our product can do that. We just have to bring in professional

services who will spend six months integrating everything," doesn't work as well as it did 20 years ago. Today's buyers are more comfortable saying, "Give me your API specs and a week, and I'll build all the integrations I need."

The impact of cloud services

The final trend has to do with the cloud and software-as-a-service (SaaS). In the 1990s and 2000s, even after the x86 server revolution, IT systems were still monolithic, closed and massive. Customer lock-in was a key part of vendor sales strategies. (Seriously, entire books were written about this!)

A great example of this was Oracle in the 2000s. Larry Ellison believed traditional enterprise systems were expensive. The customer had to start paying right away rather than when the project was done – and they'd have to spend millions of dollars to 'finish' everything. Oracle's avant-garde approach was to tie every business system – CRM, SFA (sales force automation), HR, finance – to the same backend, unlocking insights and efficiencies never seen before. The catch was that individual modules might only deliver 80-90% of the functionality a customer was accustomed to, but it was a worthwhile trade-off for the overall business.

Over time, the cloud and SaaS started to change the conversation, both in terms of how software

was capitalised and implemented and around how companies thought about time to value. When a customer pays for software by the month, they're not going to pay if they're not getting value. They start paying only after the value is there. This was a huge mental shift.

The larger effect of this was that IT buyers started to become more sceptical of large IT systems implementations that cost millions of dollars and take years to fully implement with the hope they'll get value when it's done. What they really wanted – even if it wasn't possible – was to break the implementation into lots of little pieces that could be implemented quickly and easily with fast ROI. This led to a resurgence of best-of-breed type solutions that solved a single particular need. Each individual component shrunk down what it did, but it did it well.

But how does an enterprise get the 'enterprise-ness' out of a rag-tag collection of disparate systems? Via custom integrations via all those systems' APIs. We even saw vendors and products (available via the cloud as a service, of course) that rationalised and translated APIs, and in order to be competitive in the market today, everything now has an API.

This massive customisability of nearly everything meant that enterprises could build and integrate just the specific things they needed. In the old days, if

you wanted to update your employee badge system that unlocked doors, you had to get the facilities, security and IT teams to agree on a standard and then replace all your door locks. But in 2022, every building access system has an API. If you want a digital badge system, there are dozens of software vendors with solutions that work with all the door lock vendors. Same goes if you want to extend the door entry so it checks with your learning management system (LMS) to ensure an employee has Covid-training before it unlocks the door. Or extend it to your hot desk reservation system to ensure an employee has a valid reservation before you let them in the building. Or to your VPN to ensure that an employee doesn't have an active VPN session open remotely. All those systems have APIs that can be integrated by the customer.

And thanks to the ability to run code as native functions in the cloud (such as AWS Lambda, etc.), these integrations don't require on-site servers and infrastructure like they did ten years ago. Customer-built integrations mean they know how they work, how to maintain them and how to quickly add additional functionality as the business needs.

The result is that individual business units can each make their own decisions about what's best for them. The enterprise can choose any door lock system, any learning management system, any

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When a customer pays for software by the month, they're not going to pay if they're not getting value.

building reservation system and any VPN they want. Every group is happy, and the integration is built for exactly what they need.

The march of progress is lowering the barrier of entry to this as well. Ten years ago, this type of integration was out of reach for many people. But now we are witnessing an explosion of the 'citizen coder' as the market is inundated with low-code or no-code solutions and robotic process automation products that make such integrations almost trivial.

People tend to think this would be a nightmare. It's spaghetti code! How do we know what's what? How do we ensure everything is secure? Fortunately, there are ML- and AI-based security and API mapping systems that can watch over everything. Diagrams for how everything is linked together are drawn automatically. And for everything the enterprise wants – executive dashboards, data analytics, SaaS app management, employee experience management, mobile app – there are cloud-based solutions for all of these, ready to be consumed and provide value from day one.

Putting it all together
If we look at all these together, we see that every enterprise is an agile enterprise; IT buyers expect quick value from their investments; and the cloud, API and a 'maker attitude' mean that individual IT departments can stitch everything together to

meet their exact needs much more quickly than the larger monolithic platforms and IT systems that enterprises have been buying for the past 20 years.

The days of expensive vendor conferences at exotic locations, products being chosen based on fancy dinners and years of implementations that never seem to go right are numbered. The IT buyer of today (or the near future) will buy what they need, as a service, from as many different sources as necessary, and they'll handle the final wiring together of everything themselves. Even if they don't get full functionality after a week, they'll iterate until it's right. They'll have the freedom and flexibility to swap out individual components on the fly as the needs of the business change. And they enjoy a level of experience and capabilities that old-timers like me only dreamed about.

For all references, please go to cxomag.com/brian-madden-the-evolution-of-buying-habits-in-enterprise-it
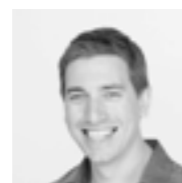
Brian Madden is a distinguished technologist in VMware's EUC Office of the CTO. Prior to joining VMware, he was known world-wide as an independent EUC expert and founder of BrianMadden.com, the BriForum conference series, and author of six books and over 2000 articles and blog posts.

5 Minutes on....

Business Process Automation in the Intelligent Organisation

Vicente Peirotén
Head of Automation, NTT DATA
Europe & LATAM

5 Minutes On… combining technology and human talent in the right way to build a culture of excellence within business operations, and the benefits that automation promises now and in the future.

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Revolution: The Path to Intelligent Transformation

The revolution is here. Processes, systems and organisations are evolving, changing to meet the new shape of business. The Fourth Industrial Revolution weaves digital into the very fabric of the organisation, wielding automation and interconnection. Yet challenges remain.

By Alessandro Scozzi, Associate Director, Business Service Line Consulting, NTT DATA Italy

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The road to excellence is characterised by an increasingly close and coordinated interconnection and interaction between processes and people.

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The most consistent benefits are often found when connecting RPA with machine learning capabilities.

Organisations face very real challenges in the current economic and operational climate. Despite the potential of the Fourth Industrial Revolution (4IR) and the technologies that define it, there are complexities limiting business success across multiple touchpoints. Some are legacy challenges that have impacted digital transformation from the outset, while others are new blockages thrown into the business mix by recent events. All are limiting the organisation's ability to fully realise strategic digitisation.

The first is perhaps the most topical right now: new models of work. Virtual offices, distributed offices, co-working, hybrid frameworks and radical shifts in wellness and working methodologies are all contributing to comprehensive changes in mindset and digital investment. This is further complicated by increased diffusion of digital culture within corporate companies and the need to upskill and reskill employees to ensure the retention of talent within a highly competitive marketplace. The latter is also complicated by the need to ensure that existing talent is future-proofed with skillsets that can handle the increasing digital load and that align to business strategy.

And every one of these boxes has to be ticked at the same time as ensuring that the organisation

prioritises social responsibility and its impact on the environment.

Turning buzzwords into value
Automation and interconnection may be buzzwords today, but they soon must be a reality that's capable of generating value for the organisation. This value lies in digital providing the organisation with the insights and capabilities it needs to find new avenues of growth, reduce the employee admin burden and streamline efficiencies. To achieve this, organisations need to take an integrated approach to digital, one that doesn't just focus on quick-win actions.

An integrated approach ensures that the technology is leveraged as a key instrument of support, providing improved decision-making capabilities and process efficiencies over the long term. It gives people the space and insights they need to drive product innovation and service delivery, and amplifies knowledge sharing – skills that are in high demand and that can be curated within the right ecosystem. It also promotes new workflows and skills training that are designed to continually improve performance. In cohesion, all these factors come together to create a value chain that connects multiple touchpoints throughout the organisation.

The road to excellence is characterised by an increasingly close and coordinated interconnection and interaction between processes and people. This facilitates automation solutions that are capable of improving performance by focusing resources on higher-value activities. It is only with such an integrated system that we can achieve the flexibility required to proactively respond to the challenges of the future.

Finding the right route
The first step on the ideal roadmap requires that the business identify those areas that generate value, the processes through which these values operate, and their priority.

Data-driven techniques and diagnostic tools can shine a light on any inefficient processes or practices that may be impacting the business while also identifying areas ripe for automation. This will allow for the business to identify two areas that may require intervention: corporate processes that need to be redesigned along with organisational changes that need to be implanted and skills development; and processes and activities that could benefit from automation.

A solid automation strategy should outline various levels of intervention that range from consolidated

solutions, such as robotic process automation (RPA), to the use of artificial intelligence (AI) and hyper-automation. RPA offers the business nifty improvements. It minimises human error, recovers efficiencies, increases corporate flexibility, and benefits productivity. The most consistent benefits are often found when connecting RPA with machine learning capabilities. This creates a self-improving system that's capable of constantly analysing processes and providing updates in real time. This combination is often the first step towards the use of AI.

Of course, AI is another much talked about digital innovation that offers the business immense value. It can be used to analyse vast quantities of data with zero lead time and to identify patterns in the data that would be otherwise hidden to people. With AI, organisations can embed even greater visibility into operations and transform decision-making agility.

AI allows for industrial solutions to learn from the choices made by human beings. It allows the system to become progressively smarter, improving the quality of the entire production chain.

A map to the future
There are two clear trends that analysts have identified on the horizon: hyper-automation and

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> **As these solutions continue to evolve and adapt to changing market demands, so do organisations need to find ways of implementing and scaling at speed so they can rapidly take advantage.**

augmented intelligence. Both offer immense value to the organisation. Hyper-automation helps the business to rapidly identify, control and automate processes at scale using RPA, low-code application platforms, AI and more. Each of these technologies is powerful in its own right, but when used as building blocks in a greater framework, they are transformative on a foundational level.

Augmented intelligence is a design framework that puts people at the heart of interaction and that delivers measurable value in training, decision-making and the evaluation of new business models. It puts itself at the service of people and improves their reach and scope. Both these pathways to business success are further shaped by the business risk appetite and its strategic focus.

The success of investment into digital transformation rests in the organisation's ability to fully realise the potential of these technologies in a very real, very measurable way. As these solutions continue to evolve and adapt to changing market demands, so do organisations need to find ways of implementing and scaling at speed so they can rapidly take advantage of the new use cases they offer.

Of course, while the IT component is crucial to digital transformation, the real success of such a

transformative path is linked to the organisation's ability to consistently evolve, and this requires change management, skills development and a commitment to people. The technology revolution demands employee engagement as this radical transformation will have a lasting impact on how they work. So, add onto the investment a commitment to ongoing skills development and improving employee quality of life. All these factors combined then provide your business with the foundation it needs to take an intelligent approach to transformation.

For all references, please go to cxomag.com/alessandro-scozzi-revolution-the-path-to-intelligent-transformation

Alessandro Scozzi has worked in Consulting for 20 years. As part of the Operational Excellence and Employee Management Practice, he currently focuses on developing business model design services and optimising business process intelligence.

The Digital Supply Chain Network in the Company of the Future

5 Minutes on....

Romain Cical
Industry Senior Manager,
NTT DATA Europe & LATAM

5 Minutes On... how companies can navigate the operational obstacles that are on the horizon, and how digital supply networks get past the rigidity of traditional supply chains to equip staff with valuable insights and get competitive advantage.

Smart Learning: The Positive Effects of Digital Training on EX

By Sara Manocchio & Michela Romeo, Senior Consultant & Employee Experience Lead, HR Transformation Practice, NTT DATA Italy

Many things are shaking up the labour market at the moment, with added pressure to stem the flow of the 'great resignation'. In our current context, employee experience (EX) is more important than ever. Here's how organisations can use digital training and smart learning to keep employees happy.

Different workspaces are changing the way we live, our relationships with colleagues and the concept of work itself. New personal and professional paths are emerging and within this hybrid ecosystem, the idea of growth and development is changing irreversibly.

HR functions now have a vital task: managing resources, starting with rapidly evolving assumptions in search of effective answers to a series of fundamental questions for the company's growth.

Learning programmes in the era of hybrid working: from tactical to systemic

Over the last year, the health crisis had a significant impact on the labour market, as well as training programmes. The new hybrid working models involve an immediate need to offer professional development remotely, with elearning increasingly becoming the go-to solution.

Initially, HR teams put a special emphasis on the use of digital tools by figuring out which courses to offer and how to improve employee engagement, particularly improving programmes that could be delivered online, so that individuals could continue to access services despite the restrictions to social contact.
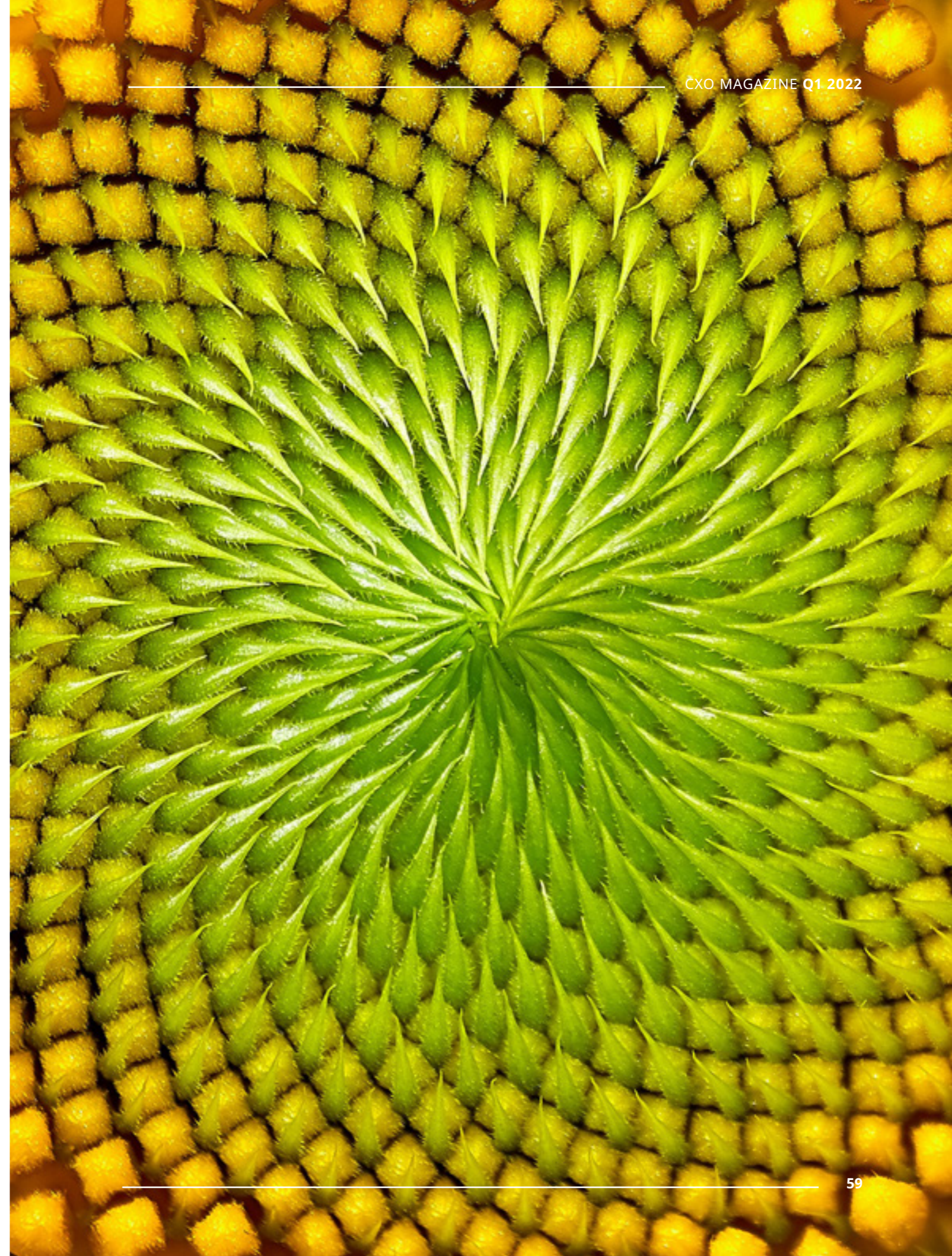
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This strategic approach to training allows talent to acquire new skills so that they can change jobs without changing companies.

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91% of HR managers believe that the key to tackling digital transformation lies in skills development.

According to the Cegos survey 2020 (based on a sample of 250 HR managers and 1,780 employees across Europe), as a result of the pandemic 89% of HR specialists report that they have adapted the company's training offerings to the elearning model. 41% said they had converted projects that started as classroom training to online training, and 32% have instituted new training courses following the Covid-19 emergency.

The transition to new ways of learning involves moving from a tactical view of training to a systemic one. Training modalities are becoming more integrated with each other, creating a real training path consisting of different content and modes of delivery. For example, you can alternate webinars, short mobile-based learning modules (learning pills), and a digital or physical laboratory.

This is made possible through the implementation of a Learning Management System (LMS). The LMS has become an essential support for course planning, production and digital content distribution within companies. The diffusion of this technology allows HR to accurately monitor the level of employee's engagement, productivity and return on investment.

Innovative devices like facial recognition are used to monitor participants' level of engagement during courses. Other significant monitoring parameters are the number of interactions, including the shared comments on specific channels, that the employees have with the learning platform, as well as traditional techniques such as multiple-choice tests and satisfaction surveys.

The acceleration of digital training programmes: smart learning
The labour market evolution is provoking an acceleration of digitalisation programmes by companies. According to the Cegos survey, 91% of HR managers believe that the key to tackling digital transformation lies in skills development, which is considered a strategic lever by 84% of employees too. In particular, companies have highlighted the need for upskilling in the new digital skills like digital communication and digital thinking. 35% of those surveyed believe that digital skills are the key to winning work challenges in the future.

Therefore, a smart learning approach includes a more immersive and appealing educational experience for employees by taking full advantage of what technology and digital capabilities have to offer:

- **Intuitive fruition inspired by 'Netflix-like' entertainment:** AI-related solutions can capture and analyse the users' preferences in order to suggest the most appropriate courses based on their needs.

- **Self-directed learning:** employees apply for specific courses by creating their own training path and reversing their role from passive to active. Many HR specialists consider this modality crucial for the training evolution in order to make it more personalised.
- **Synchronous digital content,** to make training usable every time, everywhere and always accessible from every device.
- **Social learning platforms:** to share knowledge and experience without barriers within the company. After an evaluation by a subject matter expert, anyone who possesses skills with qualitative content can share them with others through the social community.
- **Gamification tools:** the development of learning methods through game mechanics. In order to increase the degree of employee engagement and act as an accelerator of learning. There can be several types of gamification, including role-playing games, puzzles and flashcard games.
- **Virtual/augmented reality tools:** these new virtual technologies allow practice in safe virtual environments, avoiding field exercises that strongly include logistical and cost aspects. Moreover, with VR you can integrate new people into the company, develop new skills, and speed up internal production processes.

How digital training can alleviate the 'great resignation' phenomenon
In Italy, as was seen worldwide, almost half a million people opted for voluntary resignation in Q2 of 2021, in favour of finding a hybrid working position. Compared to 2020, that number has increased by 85%. According to the statistics of the Bank of Italy, at the end of October 2021, 40,000 more people have left their jobs in comparison with the pre-pandemic period.

In response to the proliferation of people resigning their jobs, HR must pay more and more attention to employee attraction and retention. The labour market is figuring out that a high salary or other economic benefits are no longer enough to keep hold of good talent. Employees require a structured management policy, and an offer of career and growth paths based on up-to-date skills.

Savvy companies are taking steps to introduce non-monetary benefits, such as the improvement of employee experience, wellbeing, work-life balance, and continuous training.

Organisations are realising that they need to continue guaranteeing 'institutional' courses, useful for the development of specific skills, but also consider the expectations of talent based on the new skills development in line with the job market.

Moreover, the acceleration of digitalisation programmes by companies has highlighted the

> " **The transition to new ways of learning involves moving from a tactical view of training to a systemic one. Training modalities are becoming more integrated with each other.**

need for new skills, both technical (training in tools, thinking about big data and analytics first) and soft (communication, inclusive leadership, project management, agile and digital thinking, and sustainability).

This strategic approach to training allows talent to acquire new skills so that they can change jobs without changing companies. The purpose is to allow the individual employee to define a self-directed training path by choosing from the different courses offered by the company.

Better for your employees, better for your bottom line

Employees today are looking for companies that allow them to not only build and strengthen the skills needed to perform their role, but also have opportunities for development, acquiring new skills that can enable new roles and new horizontal growth paths.

Organisational training must therefore reinvent itself to understand the desires and demands of its employees, making available courses of various kinds and in various formats (traditional training, coaching, training on the job, onboarding, shadowing, and so on). Companies who are being smart about developing their employees ensure

that whatever the format, training is always up to date – and most importantly, that individuals can define their own learning path, having everything at their disposal to become an autonomous and empowered (and therefore happy and engaged) member of your workforce.

For all references, please go to cxomag.com/sara-manocchio-michela-romeo-smart-learning-the-positive-effects-of-digital-training-on-ex

Sara Manocchio is a multilingual management Associate Manager, specialising in designing and delivering strategic HR and learning transformations to multinational clients.

Michela Romeo leads the HR Transformation & Employee Experience consulting practice at NTT DATA Italy, with 10+ years of experience as a manager in a range of market sectors.

Investment Priorities for Intelligent Organisations

Eric Clark
Chief Digital & Strategy Officer,
NTT DATA Services

5 Minutes On....

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5 Minutes On... mission-critical priorities for organisations today, the importance of placing data at the centre of strategy, and what leaders can learn about digital investments from NTT DATA's Innovation Index.

Amplifying Employee Satisfaction With Analytics

By Silvia Lippi, Consulting Engagement Manager, NTT DATA Italy

Covid has changed almost everything about how we work, and now HR is undergoing a revolution. HR's most important role, arguably, is improving the employee experience – in turn contributing to profitability, competitiveness and, of course, the happiness of the workforce. Here's how data and analytics support this aim.

The pandemic has subverted the old work paradigm. The sense of belonging to one's company is weakened by the distance from the office and by the lack of physical interaction with colleagues. At worst, belonging has been stalled completely for those who joined the workforce during the pandemic period. The spread of collaborative methods has also imposed an always-on connection, leading to increased burnout.

Remote working, the new balance between private and professional life, travel restrictions and the ongoing fear of new variants of Covid has produced a YOLO (you only live once) employment culture. Many workers have questioned their jobs and career paths, abandoning them altogether (as we saw with the 'Great Resignation') or clashing with employers over the return to the office.

On top of this, the recovery of the labour market, especially for junior players, is making it complicated and difficult to retain and attract talent. Furthermore, the generation coming out of university now is very demanding and selective: they want transparency, consistency and strong company values.

> **Actively engaged workforces translate to big business benefits.**

> **Every single touchpoint for every employee – all information must be collected and considered. In this way, the resulting insights are truly representative of the organisation's EX.**

The importance of the employee experience

These trends have strengthened the importance and centrality of the employee experience (EX), from attraction to retirement, not only for the HR department but for the entire company.

EX drives performance by enhancing psycho-physical wellbeing and involving the employee in co-creating value as one with the company. Actively engaged workforces translate to big business benefits, with recent research reporting 21% higher profitability for those organisations scoring in the top quartile on employee engagement, as well as higher sales, productivity and customer satisfaction.

Companies are investing in improving the experience for staff from the very beginning, starting with the candidate journey. For example:

- With clear, compelling job requests;
- Making chatbots available to answer any initial queries about the company;
- Providing apps to monitor the progress of the application process;
- Using gamification in interviews to understand if applicants gel with the values of the company.

Once employed, companies must continue and augment this support of the individual by:

- Respecting their expectations, values and diversities;
- Maintaining engagement and job satisfaction with effective support and training;

- Identifying where complexity can be taken out of processes and interactions;
- Recognising and acting early in burnout situations;
- Continuously examining the manager-employee relationship, including communication styles, learning and development programmes, and performance evaluation.

This cannot be done without having a holistic view of each employee, defining their needs not by looking at 'dull' demographics (age, job role, etc.) but by the nuances – their generational preferences, their attitudes, their health, their home situation – and how these interrelate.

The HR revolution

It is evident that the role of HR must evolve and become increasingly strategic. It's on the journey from humble payroll manager to Operational HR, onto innovator of attracting, acquiring and developing talent, and finally provider of 360° employee care.

For this reason, traditional, quantitative KPIs – personnel costs, turnover, training costs and so on – are no longer sufficient to support HR in understanding the workforce.

Data is the key. Every single touchpoint for every employee – all information must be collected and considered. In this way, the whole experience, through all phases of the employee lifecycle, is

captured, and the resulting insights are truly representative of the organisation's EX.

Within the HR department, a dedicated team, with data analyst experts, should be created to become the data owner: able to collect, cleanse, organise, analyse and report all the data to fix those indicators that enable effective, accurate monitoring of employee feelings and behaviours.

From people analytics to analytics for people

People analytics – using data about the workforce to solve organisational problems – offer HR teams a vehicle through which to greatly improve employee satisfaction, and therefore, competitiveness. Below are a number of ways in which businesses can use this valuable resource to boost EX.

Map and collect

Map all sources of information and feedback from and about employees that already exist in the company, probing all the moments within the employee lifecycle. This may involve feedback on the individual's experiences with:

- Company reputation and presence on social media or specialised sites (such as Indeed or Glassdoor) or in offboarding emails (from candidates, the current workforce or former employees);
- Onboarding provided during induction;

- Performance evaluation management, with an indication of the growth paths given by the manager, coach or mentor;
- Managers during the interviews (360° feedback);
- Company learning and development services.

In addition, information can be gleaned from digital collaboration tools and methods, such as the planning of meetings and calendars or email volumes.

Carefully plan additional collection tools such as annual surveys and pulse surveys, choosing the frequency and the most suitable channel depending on the specific purpose and employee preferences.

Collect all data in one unique place, and perform a data cleanse to ensure quality.

Analyse and identify

As well as quantitative, analyse qualitative data using AI and NLP to systematically (and automatically) investigate any written information. This will create a mind map providing all the keywords and main concepts you aim to investigate, helping you to examine written texts to find moods and behaviours, identify the sentiment about a particular topic, benchmark against competitors, or just summarise the results and insights.

Through specific use cases, identify the most suitable indicators for evaluating employee experience, engagement and satisfaction, and for enabling data-driven decisions. This can be done

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Disseminate data, analyses and results through the company – and put these insights at the service of people.

using existing enterprise tools; for instance, from Microsoft's 365 environment, organisations can analyse:

- The distribution, by function and location, of meeting participants or email recipients – to highlight the teams who often collaborate with each other in order to define priority returns to office, schedule compatible calendars, set the capacity plan of your sites and choose which services to be reactivated;
- The volume and duration of collaboration meetings (especially those exceeding the set time slot or with too many participants) – to improve work habits and find best practices or models, not only to allow for necessary periods of uninterrupted focus but to protect against burnout;
- The nature and frequency of one-on-one meetings between employees and managers as well as team meetings – to avoid email overwhelm or 'mail bombs' from the management and ensure the manager-employee relationship is effective for both parties.

To monitor KPIs, create reports and dashboards that allow management to obtain insights into current and likely future situations, and intercept negative events.

Disseminate and launch

To turn these analytics into value for your employees, disseminate data, analyses and results through the company – and put these insights at the service of people.

This deep dive into the organisation's EX creates the foundation and roadmap for improvement plans. Launch these plans effectively by clearly and enthusiastically explaining the drivers behind – and aims of – the improvement programme to the workforce. Carefully monitor progress, and as you continuously evaluate scenarios based on EX data, keep a watchful eye out for what could act as a lever to enhance your EX even further.

For all references, please go to cxomag.com/silvia-lippi-amplifying-employee-satisfaction-with-analytics
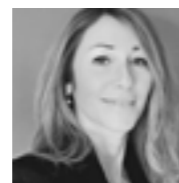
An expert in employee experience and Human Capital Analytics, **Silvia Lippi** has spent 20 years as a Consulting Engagement Manager operating in the Telco sector. She is passionate about meeting employee needs with effective data strategy, and as part of the HR Transformation practice in NTT DATA Italy she aims to continually improve the experience for her colleagues.

In Depth

NTT DATA takes a deeper look into critical areas of organisational change.

Accelerating to an Intelligent Enterprise

What does it take to build an intelligent enterprise? The combination of human intellect and the computer's proficiency in performing rules-based tasks creates a hybrid ability far better than man or machine can achieve alone. To become a digitally optimised organisation, and sustain it, companies need a clear understanding of what they hope to gain, plus a cohesive plan to bring technology and people together for the maximum benefit.

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POINT OF VIEW | DATA INTELLIGENCE & AUTOMATION

Accelerating to an Intelligent Enterprise
In the organization of the future, technology and employees will work as one to create unprecedented value

OCTOBER 2020

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Cybersecurity: The Fabric of Any Intelligent Organisation

Does today's need for cyber vigilance conflict with the move towards organisational intelligence and its need to share data? We believe the opposite is true – robust cybersecurity can be a powerful enabler of progress.

By Haroon Malik & Kiam Cameron, Security Consulting Director & Principal Security Consultant, NTT DATA UK

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Intelligent organisations differentiate themselves by aligning their internal ideologies around working smarter, not harder.

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Rather than firefighters, intelligent organisations see cybersecurity personnel as enablers of safe data-sharing.

For any intelligent organisation, data is king. Facts, figures, numbers, case studies, and countless other pieces of information contribute to sewing up success. How, though, do we keep everything secure as threat levels rise? As leaders within NTT DATA's UK Security Consulting business, this is an issue close to our hearts.

Most large corporate organisations face highly competitive environments driven by complex regulatory and compliance landscapes. Dealing with challenges while at the same time maintaining value is far from easy.

One of the ways intelligent organisations differentiate themselves is by aligning their internal ideologies around working smarter, not harder. To enable this way of working, they make information and data freely available. When responding to recent global events, they also increasingly allowed staff to operate flexibly and access data remotely.

These daily activities present increased security risk, especially with servers being accessed offsite. Despite this, we argue that the current model of cybersecurity is evolving to help foster and drive this flexible, smarter-working 'intelligence'.

The cybersecurity challenge
Cybersecurity risk levels have never been higher.

The CyberPeace Institute reported 309 'major incidents' in 35 countries between June 2020 and December 2021.

Hacking, phishing, malware, ransomware and denial of service attacks have all grown in scale and complexity, impacting all industry verticals and market sectors. The very organisations there to protect us – IT and communication leaders, governments and regulatory bodies – have also been victims of cyberattacks.

In June 2020, a global IT managed services giant announced hackers had stolen customer information in a ransomware attack. Another global hardware supplier reportedly paid $50 million to the REvil cyber-gang earlier this year.

The sensible frame of mind is now planning for when you are attacked, not if.

How intelligent organisations deploy cybersecurity
We have always assessed business security risks; it's why we lock our office doors each evening. Despite this, cybersecurity still feels like an immature science, sometimes bolted onto existing operations as an afterthought. Siloed in this mode, it becomes inherently reactive. Some security professionals report 'swivel chair fatigue' as they spin inefficiently

to glare at a myriad of constant alerts struggling to identify real active threats.

Rather than firefighters, intelligent organisations – more usefully – see cybersecurity personnel as enablers of safe data-sharing. Proactively adopting best practices can be a transformative experience that drives businesses towards organisational intelligence, not away from it. Let us look at how.

Considering costs
We tend to think of replacements when making security value judgements at home. Does it, for example, make sense to spend £250 on a state-of-the-art bicycle lock for a bike that would cost half that to replace? At C-suite level, security cost-optimisation is at the forefront of everyone's minds, but how to demonstrate value? As with bikes, some business functions may have lower costs associated with them. Do they deserve less cybersecurity?

We would argue focusing on replacement and loss doesn't necessarily fit with intelligent organisations; the success of cybersecurity needs to be measured differently. Does it act as a barrier to strategy or an enabler? That's the real question.

Built from the ground up
In an intelligent organisation, security-by-design

needs to be a key driver of business enablement, customer trust and innovation. For this to happen, cybersecurity needs to be seamlessly integrated across people, processes and technology. Developing a strong culture of security awareness and vigilance plays an important part in driving a risk-focused culture and promoting cyber-resilience.

As organisations continue to adopt a hybrid working model, the cybersecurity of data should be front-and-centre during the development of all business processes.

When considering doing this within intelligent organisations, it's clear that two cyber technology trends will dominate.

1 – Automation
Cybersecurity benefits from a reduced need for human intervention, making a whole series of processes more efficient. Today, assessing threats from incoming emails often happens before they reach user inboxes. Such automated detect-and-respond tools are set to grow in use significantly as technology improves.

2 – Artificial Intelligence
All security judgements depend on context. Leaving the windows open in your house is considered

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As organisations continue to adopt hybrid working, the cybersecurity of data should be front-and-centre.

acceptable if you are home. Go out, and you've created a risk. The windows have, of course, not changed status.

Through artificial intelligence, understanding context is increasingly being automated too. Your team's routine can be learned, so it's not just out-of-hours logins that are flagged, but unusual and harder to define out-of-character behaviours too. For example, AI can quickly spot logins that don't make sense geographically, such as someone logging in in one part of the world but logging off two hours later on another continent. This activity can be flagged as suspicious.

AI means dizzying quantities of threats can be simultaneously tracked, measured, assessed and acted on. Judgement calls can be made, and, perhaps most usefully, false alerts and alarms can be identified. Knowing systems are being monitored intelligently 24/7 leaves people free to be more productive elsewhere.

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Security risks will continue to increase while the threat landscape evolves. Intelligent organisations need not see this as a barrier to success but rather can harness the opportunity that comes from it. This can be achieved by building cybersecurity into the fabric of your businesses.

For all references, please go to cxomag.com/haroon-malik-kiam-cameron-cybersecurity-the-fabric-of-any-intelligent-organisation

Haroon Malik is a Security Executive with over 15 years leading international teams and serving as a trusted advisor to management boards and executive teams. Haroon is a respected cybersecurity thought leader and has delivered multiple keynotes with appearances on BBC Radio, The Sunday Times Raconteur and SC Magazine.

Kiam Cameron is a cybersecurity professional with a huge interest in cyber risk & strategy with expertise around governance, risk and compliance and enterprise security architecture across multiple industries.

VIDEO

The Intelligent Organisation

A film by NTT DATA

The only organisations able to keep pace with changing market demands are those leveraging both the full power of modern technologies such as cloud and AI, and the collective knowledge of every employee. This synthesis of information, infrastructure and people has seen the rise of The Intelligent Organisation – one which is fuelled by data, enabled by technology and empowered by democratic decision-making.

Scan the QR code with your smartphone camera

Blockchain Will Change Everything: Here's How to Spot the Opportunities Early

By Benjamin Matten, Technology Innovation, CTO Team, NTT DATA DACH

Remember when people thought the internet wouldn't catch on? Forward-looking people and organisations quickly adopted networked technologies, understanding the possibilities they offered. The same is true of blockchain – and just like the internet, blockchain is all about finding the patterns and acting early.

There was a time when we didn't comprehend the full potential of the internet and opportunities were only visible to those who looked ahead. Blockchain is at that point now.

For many, the internet was once just a mysterious desktop shortcut. It promised access to some ethereal new realm in computers that had something to do with connecting people. You double-clicked, listened to the modem play its crunchy melody, and arrived in the digital new world. Back then, the potential of the internet wasn't immediately clear. Those who sensed opportunity had to look beyond the pixelated webpages of faraway strangers and imagine the possibilities that lie ahead.

Some innovations come fully formed. We understand and want to adopt them immediately. Most people were rightly excited to receive running water for the first time. Back then, it was money, lack of infrastructure and other very real barriers that stopped them from turning on the tap. In the digital realm, it can be the complexity of innovations that makes us slower to act. Many people hear 'blockchain' or 'NFT' and relive their experiences with those first pixelated webpages,

wondering what all the fuss is about. (In basic terms, a blockchain is a digital ledger that links 'blocks' of information between different computers; an NFT – non-fungible token – is a uniquely identifiable unit of data in a blockchain.)

Blockchain will reshape our lives in ways that are hard to comprehend right now – just like the internet did. The ability to adapt has always been essential for the survival of humans and businesses alike, but the speed of change is increasing, narrowing the window of opportunity each time. For example, back in 1994 only 10% of people surveyed in US households used a mobile phone. By 2020, that number had risen to 96%. Likewise, tablets went from 0% to 50% adoption in just five years.

Blockchain basics
A blockchain is a decentralised, ultra-secure and reliable database (though some prefer to refer to it as a ledger). It was originally devised as a currency and accounting system, accessible to anyone with an internet connection and allowing users to operate under a pseudonym. It's distributed around the globe with self-regulating mechanisms that guarantee availability and security. The system takes care of itself.

Blockchain can be used to transfer information, exchange value, automate processes, and eliminate the need for data translation services between organisations.

Users are essentially anonymous and can safely make transactions without a central entity to oversee and act as the source of truth, so it guarantees security without the need for a trusted third party.

It doesn't cost much because the infrastructure already exists. It's accessible to anyone with the internet, and removes information obscurity. It creates data points you can trust, which can then be analysed, modelled and used to create further value – for example, identifying points along the value chain that are ripe for cost-saving, spotting and improving inefficiencies in a supply chain, or finding opportunities to increase trust in finance without using intermediaries.

Trading, reimagined
I was working with a brand recently that was experimenting with using blockchain to replace their paper-based verification system. Previously, when buying a luxury watch, customers receive

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Blockchain will reshape our lives in ways that are hard to comprehend right now.

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The infrastructure already exists. It's accessible to anyone with the internet, and creates data points you can trust.

a paper certificate that confirms the watch is genuine. This brand wanted to safely make this process digital.

They were satisfied with solving the problem of forgeries. But then I spoke to them a bit about what tokenising a watch actually means, and what they could do with it if they brought NFTs into the picture.

If a watch is tokenised, you can trade it without it ever moving, because the digital token is easy to transfer. To understand NFT trading, it's often easiest to think of art collecting. If the Mona Lisa was tokenised by the appropriate authority, that token could transfer ownership to the highest bidder, all while the original painting remains on show at the Louvre. With the watch, the buyer could instantly and officially own the watch with a digital verification far more robust than a paper certificate.

It's quite easy to put this technology on marketplaces, convey the value and approve changes in value over time. And as long as you, the creator, agree that the token actually certifies the ownership, then you can go to Switzerland and get the watch from their safe by proving you have the token.

By tokenising the watch, you've created a secondary market by essentially creating digital shares. People could buy 1/10,00th of a luxury

watch, in order to participate in the value increase over time. Why not? It's the same as buying gold and it's the same mechanisms.

It's a strange concept, but it's already happening across the capital market. You can trade things that were not tradable before.

How to spot opportunities for blockchain

If blockchain seems complicated – it's because it is. I've been working with blockchain since 2012, but I'm currently reading a book that goes deep into the technical details and my head still hurts. But you don't need that level of detail to use blockchain any more than you need to understand the technology behind the internet to run a business online.

The important question you should be asking yourself is: where do I find patterns of interactions in my daily business?

The transition to e-commerce was all about finding the patterns of information exchange. In classical commerce, you entered the shop and searched for the product. On the internet, the information exchange happens in search engines. You search for the product and then you enter the shop.

You need to look for patterns with blockchain too. You need to search where you transfer value between participants of different value chains. Good examples of this can be found in international trade.

Transport insurance companies need information and events to be shared by the logistics company transporting the insured goods and vice-versa. When does the container leave the factory? When does it arrive? Were there any incidents during transportation? The logistics company needs to know the policy contents and when to post events to the insurance company – and it needs a channel to do this in.

You should also search for points where you translate information from your format into someone else's format. Transporting a container from A to B involves a lot of parties that need to share information about the original order, the contents of the container, processes to follow, and so on. In international transport, this is traditionally done by a plethora of players that communicate this data to each other and along the supply chain, but with blockchain a good many of these processes can be simplified and automated. If you find similar patterns in your business model, then you have a compelling reason to investigate blockchain further.

Be ahead of the curve

Whatever the innovation, we're all on the adoption curve somewhere. We resist and resist, until eventually we join the current and sweep up everyone who hesitated even longer than we did.

For businesses, this means giving advantage to competitors.

But blockchain isn't something to be feared. It'll undoubtedly become a concept we all understand and use habitually, just like the internet. The question is, who will make this happen and show everyone else its potential? Right now, it's free rein for anyone with a good idea, a basic understanding of the infrastructure and the vision to look ahead.

For all references, please go to cxomag.com/article/ blockchain-will-change-everything-heres-how-to-spot-the-opportunities-early

Benjamin Matten is an IT architect specialising in enterprise and solution architecture for financial institutions. Benjamin leads the blockchain initiative for NTT DATA DACH and is the lead chairman of the Blockchain working group at Bitkom, Germany's largest industry association for IT.

TX Marks the Spot: The Strategic Value of Total Experience

By Sebastian Solbach, Head of Business Consulting and Solutions, NTT DATA DACH

The past ten years have seen the evolution of expectations, from what customers expect from brands and what employees expect from employers, to what the organisation expects from itself, its own culture and reputation. Combined, these expectations define the concept of the Total Experience (TX) – a concept that's reshaping corporate strategy, interaction and engagement.

Industries are taking note of Total Experience (TX). A recent Gartner Survey highlighted the concept of TX as one of the top strategic technology trends for 2022. Defining it as the integration of "employee experience, customer experience, user experience and multiexperience across multiple touchpoints", Gartner believes that TX is the next engagement X-factor designed to drive engagement, loyalty and advocacy for the organisation. It's also an essential component of the intelligent organisation, one that's capable of leveraging changing technologies and human capital capabilities to stay ahead of the competition and market uncertainty.

TX pulls together the multiple disciplines of customer experience (CX), employee satisfaction and corporate culture into a common strategy to create a cohesive roadmap that's transparent and accessible. The goal is to create the perfect all-round experience – across every channel and touchpoint – from the very first contact with a potential customer right through the entire customer lifecycle. It enriches engagement at every stage, for every stakeholder, so that experience becomes not only entrenched within the fabric of the organisation but is both sustainable and long-term.

Why is TX important right now?

TX has evolved to this point thanks to multiple internal and external factors. While the pandemic played a role in accelerating its adoption and growth, it's only one cog in a complex corporate gearbox that's been shifting steadily over the past ten years. It started with organisations recognising the importance of engaging with the customer – to always be one step ahead, pre-empting needs – so that they could meet and deliver to market expectations. Whether the customer sat in the B2B or B2C space, streamlined and exceptional customer experiences have become a competitive differentiator.

Until now, this CX has been enough. But recent events have forced companies to think outside the experience box, and create new channels of engagement and interaction. CX is rapidly evolving towards multiexperience, as organisations become increasingly adept at creating engagements across multiple channels and touchpoints. The reality is that customers want more. The fact they can access a company across a variety of different touchpoints, devices and channels isn't a wow factor anymore.

Customers and stakeholders expect companies to review their CX in a broader context and to enhance it by adding new perspectives, which is where the idea of TX comes in. It's a strategic approach that seeks to add value along the expected touchpoints – and the unexpected.

The value of TX

A solid TX strategy ticks four very important boxes. The first is transparency. If information is available to every customer, investor or employee, then the company is serving up a commodity that's very much in short supply today – trust. TX that blends CX, employee satisfaction and corporate culture into a common strategy and maps them in such a way as to make interactions completely transparent is invaluable.

The second ties in perfectly with the TX ambition of providing a perfect all-round experience across all channels and touchpoints. If experience is

> **While the pandemic played a role in accelerating TX's adoption and growth, it's only one cog in a complex corporate gearbox that's been shifting steadily over the past ten years.**

> **TX is about understanding how every dimension influences the other and the need for a coherent balance to ensure long-term company success. The key word is 'holistic'.**

the beating heart of customer strategy, then the customer is held at the centre of every engagement and interaction. Experience is the golden thread that runs throughout the customer lifecycle. Companies must be available to customers any time, anywhere, across the internet, mobile devices, apps, social media, live chat, call centres and so much more. After all, what's the point of the perfect online shopping experience if it's marred by an unfriendly call centre or poor customer service? By the same token, the company's reputation in relation to how it treats staff is becoming increasingly important. A strong corporate culture with an employee-first attitude has become crucial in attracting both talent and customers.

The third important aspect is the company's people. TX is focused on customer end-goals, but it recognises that to succeed it equally needs to focus on employees: the people that make up the heart of the business, deliver the customer service and create the customer engagements.

Finally, the fourth value add is the fact that TX is about understanding how every dimension influences the other and the need for a coherent balance to ensure long-term company success. The key word is 'holistic', which encapsulates the essence of TX and the move away from a focus on optimising individual experience areas as standalone functions. Instead, TX focuses on interactions across multiple, interlinked touchpoints and how these can impact positively and negatively on the company.

Remove the disconnect

A clearly defined TX strategy is undeniably an advantage for businesses today. However, in many organisations, disconnects between the various silos and departments impede the ability to realise TX's full value. And this is why TX must be a priority for the CEO.

TX is not just CX. It's not exclusively an investment into front-end technologies and optimisations, or CRM and marketing activities. TX looks at the business value behind the customer – at how to refine products, serve up innovations, drive human potential and transform the supply chain, then pulling every one of these threads together to create a cohesive picture and strategy.

If the CEO, supported by the rest of the C-suite and executive leadership, is committed to embedding TX into every crevice of the corporate culture, this will remove the disconnect between silos (and between expectation and reality) to create a more holistic view that will deliver a measurable competitive advantage. Ultimately, TX is about finding and fixing suboptimal touchpoints and being aware of their interdependencies to ensure the business remains competitively and ethically ahead.

Companies that commit to a clear and robust TX strategy are more likely to develop lean, consistent and uniform processes that interlink the facets of CX, employee satisfaction and corporate culture and to deliver substantial added value to all stakeholders. TX leverages integrated and intelligent technologies that enable cross-discipline teamwork and provide transparency, insights and excellence. It's a holistic and cohesive ecosystem that's shaped by strategy, technology and collaboration and that will create enduring memories for the customer.

For all references, please go to cxomag.com/sebastian-solbach-tx-marks-the-spot-the-strategic-value-of-total-experience

Sebastian Solbach is Senior Vice President responsible for Business Consulting & Solutions at NTT DATA DACH. In this role, he combines deep interdisciplinary integration knowledge with innovative foresight. He is driven by his passion to advise clients on how to create maximum value.

The Rise of Collaborative Leadership

By Maria Metz, CEO, NTT DATA Romania

The collaborative approach to leading teams is best suited for today's complex workplace, where newer, less-defined problems need agile solutions. Through collaborative leadership, executives can create an inclusive environment that energises teams, releases creativity, and cultivates a company culture that is both productive and joyful where information is exchanged organically, and everyone takes responsibility for the whole.

Collaborative leadership is based on the premise of harnessing collective intelligence to solve complex problems and drive innovation. Collaborative leaders step firmly away from the top-down, command-and-control style of management, encouraging knowledge sharing and decision-making within their team, crushing silos and building up their people in the process.

This teamwork-oriented style of leadership supports cultural transformation since everyone shares information and collaborates daily, nourishing their skills and allowing them to grow and evolve. However, for collaborative leadership to succeed in the business, it must be reinforced and revisited, expectations and ambitions must be clear. And leaders must continue to grow as individuals, refining how they support their staff.

My recent experiences have shown that collaborative leadership significantly accelerates the organisation's culture, communication and employee engagement. With the disruptive environment we live in, a collaborative approach to leading teams and organisations could help businesses overcome some of their most difficult challenges.

Here are some practical ways in which leaders can promote a culture of collaboration and help their organisations behave more intelligently.

Nurture diversity
Collaborative executives constantly seek out a diversity of viewpoints and ideas among teammates while developing strategies and solving problems. As a result, employees are more engaged, feel more trusted, and are more willing to take responsibility for their work.

Play the role of connector and catalyst
Connectors are essential facilitators of collaboration in the workplace. Leaders provide energy throughout the ecosystem by fostering connections across the organisation, assisting others in connecting, and linking teams, people, ideas and resources.

Engage talent and foster cross-functional collaboration
Diverse teams, when well-led, consistently achieve more significant results. Consequently, leaders must bring people together from various backgrounds, disciplines, cultures, and generations and leverage everything they have to contribute. Cross-functional teamwork relies on this.

Keep communication lines open
Collaboration requires an organisation's entire workforce to adopt open communication techniques.

Begin by training employees in the specific skills needed for cooperation, such as appreciating people, having purposeful dialogues, and modelling such behaviour. Leave your door open and invite them to come to you with problems.

Leverage your organisation's collective intelligence
Leaders can make better decisions by using the entirety of their organisation's intelligence. Collaborative intelligence enables more productive, orderly, and engaging discourse on the most pressing challenges and decisions. The goal is to help people gain a more holistic view of challenges, which will lead to new perspectives and better ideas.

While making the decision to move away from command-and-control is a crucial first step, change requires time and work. The following tactics have shown to be successful in helping our organisation in Romania migrate to a more collaborative mindset.

- **Embrace the collaborative leadership model** in which executives shift from having all the answers to identifying the most relevant questions.
- **Focus the organisational culture on all-around strategy based on the 3C synergy**

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> **Leaders provide energy throughout the ecosystem by fostering connections.**

– **the client, the colleague and the company.** Establish alignment, think and work in an agile way and build an environment that nurtures collaboration and a positive climate that fosters personal development.

Use the right digital tools for the job
With the growing number of digital solutions available, choosing the most appropriate technologies to aid people's decision-making is critical. Colleagues from various parts of the business can easily communicate whenever they need aid or assistance in addressing an issue or completing a project, thanks to several tools (Microsoft Teams, Slack, Skype and Zoom to name a few) that make cross-functional collaboration easier.

Make decisions based on data
Thanks to digitisation and big data, organisations no longer have to count on intuition and guesswork in decision-making. All of the data relevant to your business operations and the smart tools you can use to extract essential insights are now available in a digital format.

Value more individual abilities and strengths
"We don't need heroes; we need radical

interdependence," says Lorna Davis, a business executive and leadership coach in a recent TED Talk.

Contributions to debate should be measured and recognised. Leaders must establish an environment in which successful deliberation improves employee engagement and motivation and a sense that employees' opinions are respected and translated into swift and decisive action.

Show a strong hand
When leaders encourage people to collaborate, they run into a new issue: overdoing it. Too often, people want to collaborate on everything and end up in lengthy meetings, disputing ideas and unable to reach an agreement. They find they can't make timely decisions and implement them. Collaboration becomes the sand that grinds the wheel to a standstill rather than the oil that greases it.

Influential collaborative leaders play a significant impact in team direction. They keep their flexibility by establishing and disbanding teams when opportunities arise. Collaborative efforts are fluid and do not exist in silos inside companies.

Increase the collaborative capacity of the organisation
For mobilising intelligence throughout the

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> **Collaborative efforts are fluid and do not exist in silos.**

organisation, networks – which are most often built on strong, trustworthy connections – are critical. They make effective use of complicated knowledge, encourage people to use their unique skills and abilities in ways that contribute to the overall success of the organisation and encourage creativity via the contributions of many.

Today's leaders must be able to draw on ideas, people and resources from all around the world. This necessitates a rethinking of their talent strategy and the development of strong internal and external partnerships. To encourage all of the various stakeholders to cooperate effectively, they must recognise when to use influence rather than authority to move things forward and when to put an end to ineffective debates, squash politicking and make final decisions.

The collaborative approach to team management is ideal for today's increasingly complicated workplace, where newer, less-defined problems necessitate quick responses.

Collaboration efforts are inevitably complicated by differences in convictions, cultural values, and operational conventions. But diverse opinions do, however, enrich, innovate and bring value to those efforts. Collaborative leadership is all about getting that value.

For all references, please go to cxomag.com/maria-metz-the-rise-of-collaborative-leadership

Maria Metz With over 20 years IT&C experience in developing strategic business lines, Maria became CEO of NTT DATA Romania in May 2021. Throughout her career at NTT DATA Romania, she has actively contributed to building relevant structures and shaping the specific business processes by developing and integrating markets and portfolios to meet the constantly changing requirements. She implemented the collaborative leadership style and is actively promoting communication transparency, people involvement and clearly defined strategy.

Why Intelligent Applications Build Better Relationships With Customers

By Dragoş Cătoiu, Head of Private Sector, NTT DATA Romania

With skilful use of technology and data, businesses today can create intelligent customer experiences that outclass anything that was previously possible. Intelligent applications – those that use AI and predictive analytics to provide personalised, actionable outcomes – cannot be overlooked for those wanting to get (or stay) ahead.

Every company wants to improve their customer experience. In 2022, the most effective way to do this is with technology.

Intelligent applications learn from existing interactions and optimise for future ones. For enterprise organisations, this is creating intelligent customer experiences that outclass anything that was previously possible. But it's not easy to make clear decisions about which technologies to adopt and which should be given top priority, considering the multitude of new innovations in recent years. It can be helpful to think of intelligent applications in three categories.

1. The first type to be developed was **robotic process automation.** This type of application allows businesses to automate steps in their workflows. For example, opening PDFs, supplying products, processing invoices, inputting data, or transferring data into other systems. Or it can combine these steps into an entire automated workflow, for example, sending triggered emails.
2. Later, we started to see **technology that replaced some human activities.** For example, Alexa, Jarvis or chatbots that work with structured text and data, such as emails, job adverts or product descriptions. These applications don't replace all cognitive tasks, but they partially replace some actions. They're useful because they collect a lot

of input data and can help humans improve their performance in an area.
3. Finally, we have the most evolved category: **apps that create new products and experiences based on artificial intelligence.** This includes things like self-driving automobiles, which create the need and market for completely new vehicles. They create business models and services that would not be possible without machine learning technologies. They replace human activities and often even whole processes.

The advantages of intelligent applications shouldn't be ignored

Intelligent applications are action oriented. They're not waiting for the end users to make every move. They study our behaviour and actions, and then use artificial intelligence and predictive analytics to provide personalised, actionable outcomes.

They're also a rich source of data. These technologies enable you to have a more analytical deep dive than a traditional data model. You can collect information in real time through websites, mobile apps and so on. The possibilities for data analysis, and increased competitive advantage, are huge. This data can inform actions to take to improve retention, reduce pain points and attract new customers.

Intelligent applications provide a switch from traditional marketing to contextual marketing: intelligent applications can easily distinguish between data that is specific and appropriate for a customer, and data that isn't. Does the customer want to see clothing for men or women? Are they interested in football or kayaking? Do they have a car? When's their birthday? With intelligent applications, customers only receive the information that is valuable to them.

And perhaps one of the most important benefits of intelligent applications is that they're omnichannel. You have to build a superior, end-to-end experience for the customer, no matter what channel they're using. According to Trusted Shops, companies with a strong omnichannel strategy retain an average of 89% of customers, compared to an average customer retention rate of only 39%. Building with omnichannel in mind can save organisations a huge amount of time and money.

Customer experience data is the key

Customer experience data reflects every interaction between a business and its customers – even if it's only brief and doesn't result in a sale. It's about the feelings of the customer towards your business. By collecting specific, relevant data about your customer, you can help ensure a long-term

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I saw business people with years of expertise in their industries who chose not to use intelligent applications, because they felt they knew the customers better than the data. But it wasn't enough.

relationship with them. This is the most important trigger to continue your existence as a company.

This was my experience when I worked in sales. I saw business people with years of expertise in their industries who chose not to use intelligent applications, because they felt they knew the customers better than the data. But it wasn't enough. Even though the competition didn't have the same level of expertise they still performed better, because they had access to prospects' interests, their current situation, deeper insights into their pain points and more.

Good relationships are always about both parties

In the early days of automation, businesses were extremely focused on improving their own operations and collecting data. But businesses found that even with all the operational data collected, every process automated and all systems working together seamlessly – it wasn't enough. Operational data only reflects one half of the relationship with your customers.

You might have rich data on the operations of your business. Perhaps you have an invoice in your workflow and you know where it is at every moment, but this doesn't help very much with the relationship with the customer. For this, you have to collect the data from the customer's side.

Customer experience data shows you how the

customer feels about your products, business, and most importantly, their interaction with your company. Even if it's a brief interaction that doesn't end up with a purchase, experience data is coming from these interactions and it tells you what you need to change to do better. Intelligent applications are predictive. If your customer doesn't like something about your product or your relationship, intelligent applications can take action to prevent them from leaving.

There are two halves to every good relationship. You can't only focus on yourself, nor can you only focus on the other party. For businesses, this means splitting their focus between operational processes and the customer experience. It's about finding the right mix between operational and customer data. In 2022, the only way to do this competitively is with intelligent applications.

For all references, please go to cxomag.com/dragos-catoiu-why-intelligent-applications-build-better-relationships-with-customers

Dragoş Cǎţoiu is the Head of Local Market for the Private Sector. He started his journey at NTT DATA Romania in 2019 as Business Development Manager for SAP. With ten years of expertise in selling SAP Solutions, he added many key accounts and built long-lasting partnerships along the way.

5 Minutes on....

Driving Systemic Change with Information

John Beckford
President, The Cybernetics Society

John gives CXO 5 minutes on why leaders must prioritise adaptability above all else, what cyber-effectiveness is and how it relates to organisational intelligence, and why doing things differently is critical to our survival.

Delivering Intelligent Innovation: A Change in Mindset

By Klaus-Christoph Müller, Director Business Development & Implementation, Department of Global Innovation & Products, NTT DATA Business Solutions

Change is everywhere across business, society and technology today. In many ways, we're better placed to respond than ever thanks to big data, IoT and Artificial Intelligence. To manage innovation in this new world, though, the answer may lie with thinking more broadly, and more intelligently, than technological solutions alone.

If it is your role to respond to change in your business, you'll recognise the continual need to innovate. Innovating for the sake of it will not, however, take you anywhere at all. To be successful, innovation has to have a purpose and must be intelligently driven. This means having an idea of what you want to achieve before you start, and knowing where your starting point is. Whatever the roadmap for your company looks like, success will come from making sure it has a broad focus, driven by people and social sciences rather than technology alone.

If you're an IT professional, like me, this might mean taking a wider view of the innovator's role than you're used to. This is a challenge that will not only reap rewards, but feel affirming and engaging in the process.

An era of disruption
Recent history tells us disruption of industries and markets is best viewed as an opportunity rather than a barrier. Looking back to 2004, we see Microsoft as the only digital player in the top-ten list of high-value businesses. By 2019, traditional brands such as ExxonMobil, Walmart and Pfizer had lost out to Apple, Google and Amazon. Today, Apple is the world's first $3 trillion company. It has certainly paid to innovate in the early 21st century.

VUCA, the term originating from the US Army meaning volatile, uncertain, complex and ambiguous, has become a commonplace acronym to describe these times. Wait for perfectly planned solutions to appear in a VUCA world, and you risk remaining fatally behind business, societal and technological curves. This has led to questioning certain IT truths. Defining problems in ones and zeroes and creating easily-replicated fixed processes seems, frankly, last century. Embracing VUCA means moving away from straightforward, predictable goals. It's better to focus on the big picture while accepting success won't necessarily be what one expects.

Lessons from history
Streaming powerhouse Netflix began as a 'snail-mail' DVD rental business. YouTube likes to keep the fact it started as a dating website quiet. Going much further back, Henry Ford's early 20th-century revolution evolved not from the car industry but automated slaughterhouses of the period. Rather than radically redesign his product, Ford's innovation was a step-change in production line technology that created a new mass market. As Henry Ford said, "Be ready to revise any system, scrap any method, abandon any theory, if the success of the job requires it."

Examples from the past prove that disruptions, despite narratives we're often sold, rarely come about from a single idea. The process typically involves evolution, trial and error, missteps and pivots.

Tools for intelligent innovation
Before starting intelligent innovation, you need to establish what tools you have to hand and what you might be missing. Asking the below questions about your organisation will help.
- **Core business:** What is your business for? What must it deliver to customers?
- **Decision-making:** What data and analysis do you have at your fingertips?
- **Efficiency:** Who does what, when and how well?
- **Connectivity:** Can you access everything you need?
- **Communication:** Are you talking to, and listening to, the right people?

The detail of each organisation's toolbox will, of

> **Wait for perfectly planned solutions to appear in a VUCA world and you risk remaining fatally behind business, societal and technological curves.**

> **A return to the start, at any point, is not failure: it is a natural feature of the iterative task at hand. Of course, you need a high degree of energy and freedom to deliver this over time.**

course, depend on its unique situation. Some of the answers may feel outside an IT professional's normal sphere of influence, but there are clear benefits to working across different business units. For example, a machine learning innovation process that led to 10% power savings for an NTT DATA client touched on a range of their maintenance business functions. It is unlikely the project would have had the same impacts if it had been considered solely an IT initiative.

Virtuous cycles

There are various innovation models you can adopt, from the formal UK Defence Industry 'CADMID' Acquisition Cycle to Mark Zuckerberg's prosaic 'move fast and break things'. As you would expect, NTT DATA has put a lot of thought into our own best practice, too. The commonality between them all is their iterative, cyclical nature.

However you label them, intelligent innovation requires working through defined stages of activity. For simplicity, I have chosen a four-step process here: inspire, involve, implement and integrate.

It is perhaps easy to see why innovation projects lacking inspiration, leaving team members unengaged, might fail. Any implementation phase

may also fail if integration into the real world hasn't been properly considered. This doesn't mean diving deep into time-consuming scenarios; rather, just keeping a checklist. Failure happens when only technical implications are considered and other factors are off the radar screen.

But even if you get caught out, a return to the start, at any point, is not failure: it is a natural feature of the iterative task at hand. Of course, you need a high degree of energy and freedom to deliver this over time. This, in turn, requires engaged and enthusiastic leadership. Ways in which the leadership can keep themselves and their teams motivated include articulating a constant clear vision, publicly recognising hard work and creating a strong sense of team ownership of the results.

A key benefit of agile, highly-motivated innovation teams is speed. As an example, through skilled leadership, NTT DATA was recently able to move a client's AI image recognition concept to operation in just one month.

Keep focused on the destination, and enjoy the journey

The need to innovate, digitally or otherwise, is unlikely to go away in our VUCA world. The future

belongs to organisations that apply the lessons from history intelligently. This means investing in innovation processes, understanding and engaging with the tools they have in their organisations already and supporting the cyclical nature of invention with the right motivational culture.

You'll note none of the above is necessarily dependent on technology. Despite being an IT professional, my key point is that searching for a single technological solution seems outdated thinking in 2022. The alternative – intelligent innovation as I've described herein – might feel imperfect and outcomes might be harder to predict, but I guarantee you won't regret starting.

Klaus-Christoph Müller is Director in the Global Innovations and Products department of NTT DATA Business Solutions, turning innovative technologies into new products and services. Based in Berlin, he has a long track record in business development and strategic consulting, as well as in solution development and presales. Before joining NTT DATA Business Solutions, he worked in the automotive industry in various expert and management positions at Volkswagen and Daimler.

Three Questions Every CEO Should Ask About Automation

By Enrique Pantoja, Head of Intelligence Automation, NTT DATA UK

Most descriptions of the role automation plays in an organisation are wrong. Automation is not just about alleviating mundane tasks. It's tied to the cultural and workplace transformation we're experiencing today because it's about enhancing the human experience, both for our customers and our employees.

Most of the time, automation is seen as an end rather than a means. Ask someone who specialises in this area what the key purpose of their role is, and you may expect to get the obvious answer of 'we automate manual tasks' – but this is far from the end of the story. I suggest the answer should instead be 'we make everything more efficient and improve the experience of our customers', or even 'we turn tedious tasks into easier ones – making our people happier'.

Considering automation as simply a technical function to alleviate time and labour-intensive tasks indicates, to me, poor strategic thinking – a lack of vision, of understanding the benefits, and of effective culture. This is a perfect formula to end up leading unsuccessful automation programmes (the failure of which is subsequently blamed on the technology).

CEOs and CIOs need to understand that the success of an automation programme starts with a good strategy and vision that they need to put on the table with C-level sponsorship. When an organisation decides to get started on the automation journey, or is already taking the first steps, it would be wise to ask themselves and their teams a few questions to make sure they are on the right track.

> " There are as many scenarios (and opportunities for creating advantage) as departments by company. Organisations must find their own automation mission by uncovering their own pain points and being determined to solve them.

> " The more people it helps, the more interesting, powerful and cost-effective the use case for automation will be.

#1 Why are we running this automation programme?

This question has nothing to do with automation and perhaps is the most important and difficult question to ask. This question touches the core of the company and involves understanding ourselves, our needs and our problems as organisations.

This is one of the reasons why the C-suite needs to be involved in answering this question: they convey the vision of the company to the team. By doing this, the Head of Automation (or whoever is in charge of the automation programme) can ensure the automation strategy directly supports the overarching strategic aims of the company and understand the specific challenges their organisation faces.

A common misconception about automation is that the goal is to reduce the headcount of the company by mechanising previously manual tasks – and if this is the only driver for putting an automation plan in place, this is a flawed approach. To succeed, automation programmes need people: their talent, skills and knowledge.

To get people on board, start with all the things that automation can do for them – and for the company – such as improving their experience at work by removing repetitive, low-value tasks. Companies who apply this approach are able to retain talent by increasing work satisfaction, as their

staff can focus on rewarding, high-value activities. In terms of organisational benefits, companies can lose money and credibility because of unreliable (or missing) data, which could be easily solved with some automations.

A compelling use case for any company is improving customer services. Who doesn't want immediate answers to a request or service, or just to provide a service 24x7 to their clients? This means more business with better quality services. Perhaps some key operations are outsourced to a remote company, and we want to recover control without necessarily expanding local teams. There are as many scenarios (and opportunities for creating advantage) as departments by company. Organisations must find their own automation mission by uncovering their own pain points and being determined to solve them.

Keep the vision for your automation strategy front and centre. As much as you can, try to ask the question of 'why are we running this programme?' with a people-centric approach. Ask yourself how you can identify and address an individual's daily issues within the organisation, and outside it, the client's issues.

#2 Is this a good candidate for automation?

Identifying the pain points and areas of improvement will give us a reason to work on those areas, and the enterprise vision will give us a direction, a higher goal to achieve. It sets where we want to be. With all this done, the next natural step is to find a solution for those problems, but how can we be sure that a particular problem is real and that its best solution is automation?

In my experience, incorrectly choosing which functions to automate is the most common mistake that leads to project failures (and the main friction point between the business and the IT team, when the solution can't meet business expectations).

Many things can be said here about how to identify the best candidates for automation. There is a lot of documentation on the matter, but to cut a long story short – and in keeping with my previous recommendation about taking a people-centric approach – the more people it helps, the more interesting, powerful and cost-effective the use case for automation will be. This simple rule will help you to prioritise opportunities, and even identify how powerful the opportunity pipeline is.

This rule helps us to avoid spending time focusing on candidates for automation that end up only easing the processes of one individual. Unless somebody says this is the most critical task in the company, applying our rule, this doesn't look like a good candidate for automation. If you analyse the investment made to implement the case versus

the efficiency saving, the benefit and return of investment won't be positive. Unless you're looking for a pilot candidate, you should deprioritise this use case.

#3 Is our team ready to take on the challenge?

Especially in organisations at an initial level of maturity or taking the first steps in automation, your teams will have a lot on their mind, questions without answers, mostly because of lack of information about the strategy and knowledge in automation.

The first thing we need to admit is the fact that automation is a new paradigm, a new way of working, and it involves a new way of interaction between a virtual worker – or robot – and a human. So the questions the people may have are fair ones. If the strategic vision is not clear, some will fear being replaced by a machine, some will ask about the way their activities will change, others will have odd expectations about automation. Whatever the question, we, as leaders, owe all of them an answer.

In this phase, it is critical to address this issue and communicate, clearly and consistently, what the aim of the project is to the teams. At this stage, the backing of the C-suite, as well as goals, benefits and vision, must be crystal clear.

The initial communications need to come from

> " **Some will fear being replaced, some will ask about the way their activities will change, others will have odd expectations. Whatever the question, we, as leaders, owe all of them an answer.**

the top management level in order to connect people with the global strategy of the company and to prove the company supports the programme. The goals should infuse automation culture in the teams and main stakeholders. In the same way, the feeling of working with a spreadsheet nowadays is a commonplace thing, we need to create enough automation awareness in our teams for them to realise that automation is one more tool in their day-to-day working lives.

Every technological revolution has entailed cultural and workplace transformation, and in this case, it is no different. We need to reskill our teams, guide them into the transformation, and steer the organisation to embrace the journey.

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With these questions, any CEO should know if their organisation is prepared to address the challenges about to come. It can be considered a self-assessment, a list of tasks that any company should have in their priority list, and a call to minimise issues and blockers along the way.

Automation without a purpose is pointless, but is even more pointless when we don't put people in the centre of our automation programmes. Automation, ultimately, is about enhancing the human experience – about not just making our workplaces more efficient, but our society stronger.

For all references, please go to cxomag.com/enrique-pantoja-three-questions-every-ceo-should-ask-about-automation

As Head of Intelligence Automation at NTT DATA UK, Enrique advises and designs strategies across areas to deliver and improve operational efficiency, creating a positive impact on enterprises, culture and society. He implemented and grew the practice for the UK market and now he helps other companies to build their own automation structures and strategies.

Tech for Good

NTT DATA uses its technology and innovation capabilities to help its communities and clients.

VIDEO

Smart Reactions: Reducing energy costs by bringing new functionality to an iconic technology

How do you optimise processes when performance depends on rapidly changing weather conditions? Integrated machine sensors with predictive technology could change the way we do business. Learn how NTT DATA Business Solutions upgraded 100-year-old tech to 21st-century functionality.

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Driving Intelligence With an Automation Strategy That's Right for Your Business

By Felipe A. Bustos, Senior Business Manager, NTT DATA Europe & LATAM

Instead of allowing technology to drive business decision-making, intelligent leaders must thoroughly examine how automation and other market-changing technologies can best complement their business strategy – not define it.

Automation methodologies in technology currently present themselves as a one-approach-fits-all solution, but this is a highly ineffective strategy. Alongside this, vendors of various technologies offer their solutions as the great panacea to drive performance in customer experience and bottom-line improvements.

A sales agent for a software development company will present their technology as the ultimate solution to an organisation's problem, but this is a limited view. For example, commonplace in large corporations, Robotic Process Automation (RPA) has a particular niche of application in manual, repetitive, high-volume tasks. However, it is far from the solution to automate end-to-end business operations and still requires the concurrence of other technologies to orchestrate the processes and improve their control. Despite the benefits, it would be a mistake to think that RPA can provide complete coverage of a process, at least at the level that managers should demand from their operations. In the words of Abraham Maslow, "if the only tool you have is a hammer, you tend to see every problem as a nail".

Intelligent leaders must ensure their business objectives guide technology and automation strategies, not the other way around.

Redefining the problem

It is imperative to start with a deep understanding of the problems in an organisation or project. For example, where cost-cutting is an objective, how can you ensure you are not diminishing high-value activities? Or, when migrating from legacy systems, which tasks do you need to include to provide value, and which can go?

Two of my favourite methods to reach this understanding are:

- **Design thinking** – a problem-solving methodology that starts at the point (and perspective) of the user and systematically moves towards a solution while re-examining assumptions and identifying alternative strategies.
- **Lean thinking** – the process of evaluating the tasks involved in a system or procedure to ensure a process of continuous improvement and elimination of waste.

For example, one of NTT DATA's clients, a fund distributor taking their company public, faced enormous challenges, including the need to take on the workloads of a growing business in multiple regions around the world. The regions had highly manual processes whose execution and control depended almost exclusively on the knowledge of the staff.

This was not scalable at the pace that the growing demand required. To help them through the process, our first job was to take a problem-solving perspective to the massive task at hand, with special attention to supporting back-office customer operations. This approach involved identifying the following:

- **Business objectives:** such as digitising activities to reduce menial work and allowing focus on decision-making, control and customer service;
- **Aspects of the operation that we could eliminate:** such as manual report generation, data search in various legacy systems and rework due to manual typing errors;
- **Aspects of the operation that should remain:**

"

The focus of technology transformation initiatives should always be to enhance human capability for the benefit of the employees, customers, shareholders and society.

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This synchronised coexistence of the physical and digital worlds opens the door to new ways of generating and capturing value.

continuous improvement activities such as root cause analysis of errors and rework, timely decision-making and providing the right customer feedback at the right time.
- **Aspects of the operation that still needed to be addressed:** in general, those that represent bottlenecks that, due to technological complexity or budgetary limitations, cannot yet be solved as automation of decision-making tasks, such as understanding of customer messages without human involvement and their digital processing.

In the case of this client, we were able to achieve an overall 10x improvement by beginning with alignment of the automation strategy to business objectives and applying the above analysis. We created a roadmap to match the technology and automation to objectives, and we uncovered some interesting findings by starting with these questions.

Like many organisations, the client had already invested in powerful user experiences through their web portals and several in-house legacy systems. This resulted in tremendously complex solutions that were difficult to implement in a timely and effective way.

Although financial savings were an important

driver for the exercise, there was no need to reduce personnel. Instead, we empowered them and reorientated their mission towards higher value-adding tasks. We minimised their manual and repetitive task load while increasing operation control and traceability based on intelligent digitisation.

The focus of technology transformation initiatives should always be to enhance human capability for the benefit of the employees, customers, shareholders and society. This will result in greater engagement of lead users in the design of solutions and their subsequent testing, facilitate adoption and mitigate people's natural resistance to change.

How to use technology to empower your business

Most CXOs understand their need to digitalise and exploit technology, but many don't know exactly how – or are not prepared for the changes to come. Alarmingly, 70% of digital transformations fail, with many falling foul of 'silver bullet' frameworks (that promise to solve everything) and a lack of alignment with business goals.

Only once a team understands their requirements should they consider possible technology implementation scenarios, and then couple this with

workforce training and change management.

In the example of our fund distributor client, thanks to the design thinking approach applied to their organisational challenges, the results were phenomenal. With a new technical roadmap, we identified users' needs and transformed them into technical requirements. The client experienced drastic improvements in productivity, traceability and control of operations. Some users reduced their need for legacy systems from 13 consoles to just one by utilising low-code intelligent business process management solutions.

Automation capabilities allowed employees to eliminate low-value tasks and instead focus on making faster and better decisions to benefit their customers. The system allowed us to hit the transformation and financial objectives while empowering, rather than disenfranchising, the workforce.

Synchronising digital and physical operations

Another essential aspect to consider in the realm of intelligent digital transformation is how it gives way to emerging opportunities concerning the rich information that physical operations yield.

One of the best examples is the transformation

of supply chains. Due to the endless search for simultaneously improving efficiency and customer experience, technologies oriented to the automation of traditionally human tasks are gaining a special place.

On the one hand, the automation of goods transportation functions, manufacturing, operations in distribution centres and last-mile delivery – in which autonomous vehicles, drones and manufacturing robots are already being used or explored by prominent companies globally – are gaining relevance.

A second aspect is the use of digital information to achieve companies' strategic objectives. Already present and of value to organisations here are:
- Enterprise Resource Planning (ERP) software, which can offer a competitive advantage through cost savings and improved productivity, amongst other things;
- Transport Management Systems (TMS) and Warehouse Management Systems (WMS), allowing the collection and analysis of data to streamline the movement of goods;
- Low-code technologies for the digitisation of processes, such as intelligent Business Process Management Suites (iBPMS) which provide a

> **The possibilities are infinite. The only limitations will be imposed by the inventiveness of a new generation of leaders.**

single tool through which to exploit analytics, AI, etc.;

• Intelligent Process Automation (IPA) technologies, which combine different technologies (e.g., RPA and AI) to automate end-to-end business processes.

Here we see the connection of physical and digital distribution flows in one synchronised space. Furthermore, the link of transport and goods along the entire distribution chain – facilitated by sensor technologies connected to the Internet of Things (IoT) and by wireless communication technologies (5G) – will allow real-time monitoring of all orders and direct transmission of instructions.

These developments will enhance the concept of the 'logistics control tower' as a tactical command centre for operations, where logistics managers can make timely decisions based on reliable information and supported by robust mathematical optimisation, simulation and scenario analysis engines.

This synchronised coexistence of the physical and digital worlds opens the door to new ways of generating and capturing value. For example, it will be possible to re-route shipments in transit, so they can be diverted to different destinations to meet demand, based on advanced analytical forecasts. Thanks to a combination of accessible blockchain and mobility technologies, it will also be possible to access better prices to accept deliveries of products at off-peak times, or change 'on the fly' the delivery

point of a product.

Although we can already foresee many of the options, the truth is that the possibilities are infinite. The only limitations will be imposed by the inventiveness of a new generation of leaders and professionals for intelligent use of a new digital world that is connected to, and embedded in, the physical world.

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Meeting the needs of the business in this century involves throwing away the old hammer and taking a new look at how technology and automation can serve us, not the other way around.

For all references, please go to cxomag.com/felipe-a-bustos-driving-intelligence-with-an-automation-strategy-thats-right-for-your-business

Felipe A. Bustos leads Intelligent Business Process Management at NTT DATA's Smart Business Operations. He holds a master's degree in Engineering and Management from the Massachusetts Institute of Technology, is a member of the MIT Technology Review Global Insights Panel and a strategic advisor in how technology might improve the operations of large companies.

CXO
BY NTT DATA

VIDEO

Anticipating Change and Intelligent Operations

Cathy Ward, Chief Operating Officer Asia Pacific Japan, SAP

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SAP's Cathy Ward talks about going through the largest global transformation in the history of the company, the changing nature of the COO's role, and why anticipating and driving (instead of resisting) change is how businesses can grow and prosper in the new post-Covid world.

Data-Driven and Intelligent: How SAP Helps Organisations Perform at Their Best

By Ricardo Langa, SAP Value Proposition Head, NTT DATA Spain

Actionable intelligence from rich data gives you immediate competitive advantage. Once you trust these insights enough to devolve some decision-making to automated systems, then you are on the way to being a data-driven enterprise.

"

Data is vital in companies' efforts to positively contribute to the UN's Sustainable Development Goals.

"

We want our technology marketplace to be hyperconnected, but it has to be rigorously protected. Security must be, by default, in the design itself.

The data-driven enterprise has intelligence built into its fabric. It can think for itself, respond fast and act wisely, often before human decision-makers even know exactly what is happening. Information, and the ability to act fast (and automatically) on the insights derived from data, makes the enterprise intelligent. So how do we create, manage and maintain such a structure? To help organisations on their journeys, SAP tools can help get the most out of data to not only support transformation but help fulfil corporate social responsibilities.

The key to being data-driven is to interrogate data quickly and efficiently to find the insights that make a positive difference to the business. That is not easy. We have to govern, manage and secure the data, which comes from many different sources, in different formats and with different levels of detail and complexity. We need to implement new tools for rapid analytics, machine learning to accelerate our processes and automation to act fast on key insights.

Data is also vital in companies' efforts to positively contribute to the UN's Sustainable Development Goals and meet other corporate social responsibility (CSR) regulations. On top of that, any organisation looking to transform itself to become more agile relies on intelligent use of data.

For many businesses, the fastest way to achieve quick wins lies in making efficient use of SAP's user toolkit:

- High-performance in-memory database to improve and accelerate decision-making, based on real-time data (SAP HANA);
- Machine learning, to help users explore data in

a targeted way (SAP Analytics Cloud);
- Monitoring and correcting potential data quality issues (SAP Master Data Governance);
- Enabling teams to optimise the integrated process for data collection, organisation and management (SAP Data Intelligence).

This toolkit helps enterprises that already use SAP to move a long way towards being data-driven, and fast.

A sustainable enterprise: meeting CSR goals

The recent IPCC report has made it dramatically clear that sustainability is now the highest of all business priorities. Shareholders, employees, partners, politicians, activists – they all expect businesses to be part of international initiatives such as the UN Sustainable Development Goals (SDGs). Business leaders want to know how to use IT capabilities to deliver better sustainability performance.

At NTT DATA, we are testing and implementing a range of ideas aimed at using data-based insights for driving enhanced environmental performance. In our CSR practice, we have solutions that increase transparency between clients, partners and employees, measuring all activities using real data to identify where and how we can drive fast improvements. This extends to the Paris Agreement's Scope 3 provisions (emissions in the value chain that are not under an organisation's direct control) as well: using SAP-based tools, we help track and analyse activities, transport movements, production processes, identifying

issues, emissions, pollution events. This enables fast intervention, either by insisting on better practices or even by finding new suppliers.

With regard to cloud services, our focus is on making cloud technology green so that improved operational efficiency does not involve higher emissions.

A roadmap to agility: executing transformations

In every sector, we see a trend towards greater customisation, precision targeting of individual customer needs, the need to be responsive and agile in every process, every system. If this kind of highly flexible, alert, rapid response business approach is the end goal, what does the journey look like?

When considering the transformation roadmap for your business, ensure the following are focal points:

- **Organisation.** Large enterprises carry not only legacy debt in technology but also in structures, methods and culture. Data-driven organisations are, by their nature, very agile. That means every process, working method and structural component in the business should be critically examined and potentially reformed.
- **People.** We are helping enterprises become 'digital native', but digital native businesses are built by digital native people. Many enterprises find they do not have the right mix of people for their needs. They have to become more attractive to digital talent, which is not always easy.
- **Ecosystems.** The key to agility is ecosystem

working, as that is how we can approach every task with great flexibility and speed. But ecosystem working can be a challenge to existing business rules and structures. They need to be examined and potentially rethought.
- **Security.** This is the non-negotiable basic requirement for becoming the more agile, largely automated, data-driven enterprise you want to be. We want our technology marketplace to be hyperconnected, but it has to be rigorously protected. Security must be by default, in the design itself, and not seen as an add-on or standalone service.

There are SAP tools that can help with this roadmap to the future too. S/4HANA (SAP's ERP platform for large enterprises) can optimise core backbone processes, while Hybris and Qualtrics help improve customer understanding. Employee engagement can also be improved with the Success Factors Suit.

New approaches and tools in action
Working together with employees, customers and ecosystem partners, organisations can transform to operate in a way that's more beneficial for every stakeholder – leaders, employees, customers, shareholders and everyone in the organisation's local and global society through better CSR practices.

We're striving to embed sustainability at the heart of every initiative, and the years ahead will see a steady growth in the tools and solutions NTT DATA offers. Some of the sustainability tools we've developed so far include:

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To become an intelligent enterprise, businesses need to apply new tools, capabilities and attitudes to turn data into actionable insights.

- Umbiombu, an SAP-based tracking platform that allows companies to manage CSR projects and track them against the UN Sustainable Development Goals;
- Environmental and CSR certification management, based on blockchain, helps clients with CSR accreditation processes and compliance;
- IoT Trace, another blockchain-based solution that provides traceability of any product from production to sale, with sustainability factors reported;
- Carbon Credit Registry and Marketplace, to support carbon credit transactions for projects that measurably reduce emissions.

By using the suite of tools already available in the market today, like those above, organisations can support this drive for sustainability with real results.

Looking ahead to a data-driven future

Most data, wherever it comes from – as a by-product of production assets, gathered from sensors and IoT devices, or through statistics derived from supply chain actions, sales and online feedback – ends up in your core systems of record. For a very large number of businesses, it's already there in SAP. Organisations must take this asset and deliver the added value that it promises.

To become an intelligent, data-driven enterprise,

businesses need to apply new tools, capabilities and attitudes to turn data (much of which is overlooked or treated as of limited value) into actionable insights.

By using other tools – to automate some decision-making, improve responsiveness through machine learning, and train data analytics processes to become more accurate – and having a clear roadmap towards agility, organisations will have a solid foundation for their journey to enterprise intelligence. Then, the process of exploration can begin.

Ricardo Langa holds a BBA & MBA in business administration. He has 25 years of SAP-related consultancy experience, working for customers from different industries in Europe and Latin America. He joined NTT DATA in 2005 and was promoted to partner in 2012, and is currently in charge of the SAP Value Proposition.

In Depth

NTT DATA takes a deeper look into critical areas of organisational change.

The Road to Smarter Manufacturing

Manufacturers are dealing with fundamental changes in every part of their operations, with a growing demand for higher product customisation, making traditional manufacturing processes no longer fit for purpose. It's time for manufacturing to undergo a new stage in its transformation: Hyper Automation.

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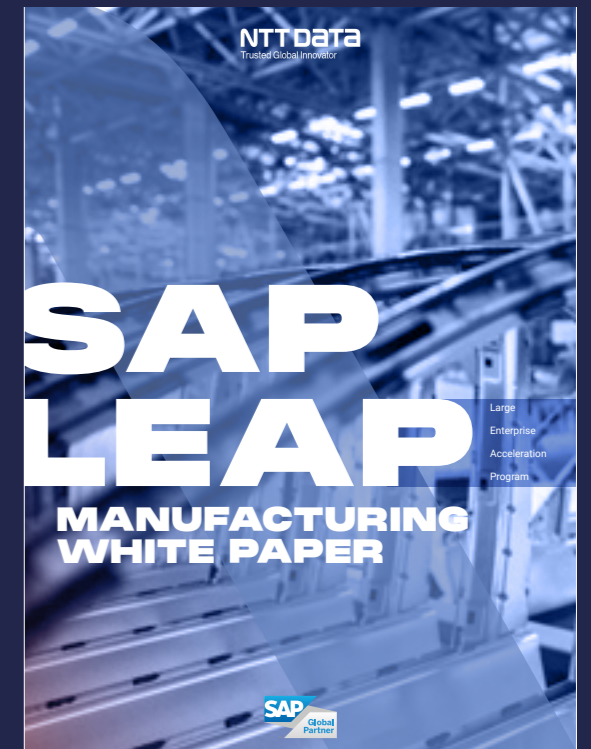
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The Compassionate Corporation: A Pragmatic Approach to People-Centric Transformation

By Michael Goodman, VP of Business Insights, NTT DATA Services; Kim Curley, Workforce Readiness Practice Leader, NTT DATA Services; Lisa Woodley, VP of Customer Experience, NTT DATA Services

How can businesses change and grow in a way that's both practical for the organisation and empathetic to the individuals that make it up? The first step is understanding that people are always the drivers, as well as the agents, of change. Leaders must now rethink their growth strategy and take a humanity-meets-pragmatism approach to driving their business forward.

Businesses and society alike have been hit with massive disruption from every angle, from social upheaval to marketplace uncertainty and supply chain woes. Events such as the Great Resignation and the seismic jump online have left leaders exhausted and struggling to keep up with the pace and scale of change. So, how can leaders stop the wavering, regain traction and move toward a more agile and proactive state that thrives on change?

The very first step is to recognise the driver of change. It's not technology or even the pandemic; it's people. Change is catalysed by the way people react to the world around them, their expectations of leaders and each other, and ultimately, their actions.

Whether they are your customers, employees or partners, proactively understanding who they are, what they need and delivering on that is paramount to success and survival. One of the first steps to doing this is by focusing on the many sources of data that companies have available

> **The workforce and customers need to be viewed as interconnected players in the business ecosystem – fed and watered by data-driven decision making.**

> **The right tools and data to make that magic happen put the levers that determine customer experience in the employees' hands.**

to them today and using it to signal course corrections or new ways of doing business.

As we define it, an ethos of pragmatic, human-centric, data-powered technology means leveraging the data ecosystem to understand the people who impact your business, and how their needs intersect with your business goals, then setting out an iterative and measurable technology implementation roadmap that focuses on that intersection.

The workforce and customers need to be viewed as interconnected players in the business ecosystem – fed and watered by data-driven decision making. One example of this fusion of players is the transformation of Cintas's user experience. Cintas, a Fortune 500 workplace logistics company, wanted to modernise the platform used by staff for first aid and safety. They needed to create a safer and more productive workplace for employees who were visiting customer sites by implementing a mobile app that gave field representatives real-time data. Whereas the common approach is for companies to focus on the customer experience in the process, we took a step back and incorporated everybody involved in the delivery of the app – frontstage and backstage.

Aligning the players
The first step to driving a pragmatic and data-driven environment is identifying your business agents, including all roles and a detailed understanding of their drivers.

Traditional ideas such as 'the customer is always right' cannot cut it in an age where data knows more about a customer than they do themselves. Furthermore, the agents driving change – your workforce – cannot be ignored either.

In 2021, employees accelerated up the priority ladder, with organisations recognising for the first time that the workforce held the ultimate value in a company. We saw this shift get started a few years ago when the conversation about customer experience became a conversation about employee experience as well.

The workplace composition of age, diversity and location has shifted significantly over the past couple of years, recognising that technology often reflects the people who create it and their view of the solutions required – and that a company's problems can manifest themselves in their products (as Elon Musk said, "product errors reflect organisational errors").

We've long known that the customer experience is strongly linked to the employees they interact with – whether that's a direct interaction or an interaction powered by something an employee is doing in the background.

Our changing generational demographics, the demand by workers for the increased flexibility of all kinds and the need for the right tools and data to make that magic happen put the levers that determine

customer experience in the employees' hands.

Diversity drives innovation. It is the job of the intelligent leader to lay the foundations for collaboration and innovation by recognising the key players that contribute to operations, getting them around a table and listening to what drives them.

Ensuring that the core values of inclusivity and empathy are delivered throughout design thinking workshops was one method that we used. In these intensely end-user focused sessions, we identify problems through close observation, building empathy by role-playing activities (i.e. understanding pain points by being in others' shoes) and collaborating to find innovative processes or technical solutions.

Prioritisation
After getting the buy-in from all of the critical agents in your organisation, you can start a data-driven process of prioritisation by setting up the following metrics:
- High priority initiatives;
- KPIs;
- Schedule;
- Cost-benefit against each initiative;
- Lessons learned.

A pragmatic attitude is, by its nature, iterative, continuously seeking to find a better way. The only way to measure the practical success of an initiative is to allow the time and space for a process to be tested. Here we come to humanity. Are you allowing

your teams the freedom and resources to thoroughly test an initiative?

Data is not always where you expect it. Voice recording can be a great source of data. Another big source is emails, particularly in the employee space, to get an honest understanding of the company culture. We have found that it can be a crucial indicator of how people really interact with each other. A good example of this is when bots are being used to help solve problems: software can now predict and flag when people are getting angry so that a human agent can intervene and de-escalate the issue.

Nothing is wasted in the pursuit of pragmatism because data can be collected, even if the cost-benefit does not materialise, to inform the next initiative.

Action
One of the biggest inhibitors of organisational innovation and progress is siloed thinking and action, and this is also one of the biggest drains of energy, creativity and efficiency. This also ties back to aligning the players so that all relevant parties have a voice at the table.

This limited thinking occurs when teams do not share knowledge or resources, or when they don't challenge convention (and instead act on 'muscle memory'), which is all too common when people are operating within a silo.

Here we call on the need for approaching teams with humanity in pursuit of pragmatism. A leader

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We call on the need for approaching teams with humanity in pursuit of pragmatism. A leader pursuing this path needs to ensure siloes are replaced in favour of an interconnected approach.

pursuing this path needs to ensure siloes are replaced in favour of an interconnected approach to organisation, as well as mitigate resistance to change in the workforce. There is a need to recognise the uniqueness within the familiar, which presents itself in data and the individual.

...

In this post-Covid period of disruption, corporate leaders can only achieve their business objectives by stepping back and taking a humanity-meets-pragmatism approach to driving their business forward. They can do this through an unwavering focus on people as the heart – and the main vehicle – of any transformation; aligning stakeholders and teams through activities designed around inclusivity and openness; prioritising with relevant KPIs; and using data as it truly should be used – to help the organisation as a whole (and everyone in it) become more intelligent, more resilient and more productive.

For all references, please go to cxomag.com/the-compassionate-corporation-a-pragmatic-approach-to-people-centric-transformation

Michael Goodman brings a mix of analytics, data, technology, financial institution, and consulting experience to NTT DATA Services. He works with individual clients to identify how NTT DATA can improve client capability and performance, while helping ensure that optimal practices and resources are applied to each client opportunity.

Kim Curley has spent her career focused on the human side of business, enabling leaders and their organisations to do more, do better, and to thrive through change. As the Workforce Readiness Consulting Practice Leader for NTT DATA Services, Kim leads advisory consultants who deliver people-side consulting solutions that help our clients solve their most complex business challenges.

Lisa Woodley has spent 20 years bringing technology and business together to design new experiences. As VP of Customer Experience for NTT DATA Services, Lisa brings the human perspective to technology innovation to create digital experiences that elevate brands and drive business value. Lisa was a Computerworld Top 100 Technology leader in 2017 and is a Women in IT Digital Leader of the Year finalist in for 2020. In addition to her role at NTT DATA, she is an adjunct at Rutgers University where she teaches User Experience Design as part of their Masters of Business and Science programme.

5 Minutes on....

Leading Inclusively

Anjali Bindra Patel
Director of Diversity, Equity and Inclusion, Winrock International

Scan the QR code with your smartphone camera

Anjali gives CXO 5 minutes on overcoming inclusion challenges in a distributed workforce, and explains how the benefits of bringing more humanity into the workplace can be achieved by understanding that 'technology belongs to all of us'.

The New Connectivity

By Dan Albright, Global Head of Consulting, NTT DATA Services

A new kind of connectivity has emerged from the global health crisis and ensuing economic challenges of the last few years. Advancing technologies coupled with new ways of living and working have changed our needs for connection. With these changes, the corporate landscape must be reimagined.

Reimagining the corporate landscape in line with new forms of, and demands for, human interaction involves understanding the needs of employees as much as customers. Whether in person or virtually, we all have an innate desire to connect with other humans. The 'new connectivity' is about the need to secure existing paths of connection, and identify new ones. For businesses to thrive, they need to develop this new connectivity; it requires innovation, agility and humanity – or businesses risk losing everything.

Businesses unable to modernise simultaneously their thinking and their technology have been shuttering for decades, such as the well-known parable of Blockbuster's decline from over 9,000 US stores in the late nineties to just one today. Recently, Covid-19 has hastened the demise of major brands, such as Global Brands USA (which licenses All Saints and is a wholesaler to major retailers including Macy's, Bloomingdale's and Costco) and Lorna Jane (the Australian activewear retailer), who both filed for bankruptcy in 2021.

Other companies, however, have quickly adapted to the new market conditions. Pet brand Chewy, for example, reported a growth of 24% in their Q3 earnings report in 2021, with their shareholder letter noting a mission to be the 'most trusted and convenient destination for pet parents and partners'. Looking beyond the traditional focus on customer experience, Chewy has adopted a broader lens to grow the connections between the pet owner, their brand and partners. Remarkably, Chewy has been successfully in a model that previously failed during the dot-com boom.

Who will rise and who will fall in our current (and future) marketplace will be determined by the ability to forge new connections.

New challenges

Today, businesses operate in a patchwork set of working norms, with leaders adapting to a changing landscape. Hybrid, safe, flexible work solutions are here. Just two years ago, no-one would have believed that entire workforces would be working from their homes instead of offices, on virtual video calls for endless hours.

Habits have changed, but the need for connectivity remains a constant. Having the digital tools in place is not enough, though; understanding holistic customer and employee engagement is essential.

A 2020 study into consumer preferences in times of distress revealed that from mid-March of that year, the number of phone calls with customer service agents jumped from 12% to 100%. As leaders directed customers to work from home and in isolation, their need to interact with another person skyrocketed.

Similar challenges have been reported in the workforce. Fatigue from long spells in front of video calls can have real, lasting physical and mental effects. Employers must recognise and work to alleviate these new workplace risks.

There is also a call for leaders to understand the need for higher connectivity – a cause, a purpose, a mission. And with the new frontiers of boundaryless working, organisations can build truly diverse teams with surprisingly impactful results.

> ❝ **Habits have changed, but the need for connectivity remains a constant.**

> ❝ **Digital tools and powerful analytics drive collective empowerment across the workforce and customer base.**

Keeping your people connected

The 'great resignation' is a prevalent example of the damaging disconnection between employees and organisations. In 2021, some 38 million workers quit their job in the US alone, with the largest reported resignations in the tech and healthcare industries. One survey of those who resigned last year cited a toxic workplace culture as the primary reason for their resignation, followed by job insecurity and reorganisation. Promisingly, these reasons are very much within an organisation's ability to solve.

Building the connection between the workforce and leadership means:

- Allowing for diverse thought by reducing vertical hierarchies and creating platforms for inclusion and lateral movement;
- Understanding the emotional touchpoints of the workforce;
- Understanding the interplay between the customer and the employee.

Understanding the needs of the multigenerational workforce

The generational composition of the workforce is approximately 5% Generation Z (born 2000s onwards), 35% Millennials (early 1980s onwards) and 33% Generation X (mid-1960s onwards), with Baby Boomers and Traditionalists (or 'the Silent Generation') making up the remainder.

Gen Z, perhaps unexpectedly, are the most pro-office, whereas the now mid-40s and older

Gen X prefer working from home, as do the Baby Boomers. Much research has shown that the younger cohorts, Millennials and Gen Z, are the significant players in the great resignation.

Understanding the differing preferences amongst the generations is crucial to ensure the connectivity between all employees is designed with fairness and inclusivity in mind – or else engagement will quickly suffer.

To grow connectivity amongst a workforce with multi-dimensional requirements, leaders can:

- Build a diverse, multigenerational workforce that creates policies based on real user needs;
- Effectively capture and share knowledge across all teams;
- Foster an ethos of open collaboration;
- Implement flexible working arrangements to suit the needs of all generations.

Sharing knowledge and power through technology

Naturally, there is another critical ingredient for effective connectivity: technology and data. Digital tools and powerful analytics drive collective empowerment across the workforce and customer base. In choosing tools, purpose must be at the heart of the decision.

Intelligent organisations choose their technology wisely. Useful questions to ask are:

- What's the connection between technology and customer satisfaction?
- What's the connection between the technology

used in day-to-day operations and employee wellbeing?
- How can technology be used to deliver training across the workforce that minimises or eliminates the effects of Zoom fatigue?
- Which systems get a positive response from your employees (and which do they avoid like the plague)?
- Could employee wellbeing software be used to help?

For businesses to grow, this new form of connectivity is essential. In practice, this means rising to the new challenges faced by workers today and helping them through, such as recognising the effect of remote working on employees' lives and changing processes to reduce stress any way possible. It also means keeping your workforce connected – with flat structures and an open, respectful culture that accounts for differences in age and background – and enterprise tools that are chosen wisely.

The success and survival of organisations today hinges on people and fostering the connections between them. By behaving intelligently and sensitively, organisations will not only combat the great resignation, but defend, grow and thrive in the new, post-Covid world.

Dan Albright leads a team of 1,500 industry, business and technology advisors, spanning nine countries and seven industries. Dan has over 25 years of experience as a change agent and strategic advisor, partnering with leaders around the world to envision and enable strategic improvements. He has worked in various industries, functions, and countries driving performance of professional services organisations.

Opinion

**Opinion pieces from NTT DATA's
subject matter experts.**

Why it's not too late to resolve bias in AI

**By Dina Alvarez
Head of Strategic Talent Management &
Transformation, NTT DATA**

From picking up on our tendencies toward exclusion to offensively grouping characteristics, AI is learning (and scaling) our worst habits. Luckily, awareness and a desire to take action is growing across many organisations. It's not too late to resolve this problem. So, what do businesses need to know and do to prevent it?

Artificial intelligence is one of the most transformative technologies of our time. It's improving decision making, automating mundane tasks, finding answers to complex issues, lowering human error, cutting costs, facilitating the development of life-changing applications and disrupting nearly every industry.

But while AI technologies offer so many different benefits and are advancing at a rapid rate, they're not without flaws. A major problem undermining the enormous potential of AI is the fact that automated systems can sometimes show signs of prejudice, bias and stereotyping.

Even though our society has come a long way in becoming more diverse and inclusive over the past few decades, humans are far from perfect and can be implicitly biased and prejudiced towards others. Crucially, these unconscious biases in human developers can very easily creep into the creation of AI technologies.

Although bias in AI is a significant issue facing the technology industry today, awareness and a desire to take action are growing across many organisations in the sector. As a result, it's not too late to resolve this problem. But what do businesses need to know and do in order to prevent AI bias?

Human bias in AI

In recent times, there's been a lot of discussion around biased AI systems and how they need to be overhauled. But what's important to realise is that this isn't a new issue. When you go back a few decades, you soon learn that unconscious bias has long existed in computing.

A notable historic example of how human bias can affect technology occurred at a British medical school in 1988. The UK Commission for Racial Equality found that one of the school's computer programmes, which was used for screening applications from prospective students, put women and people with non-European names at an unfair disadvantage.

Subsequently, it found the school guilty of "practising racial and sexual discrimination in its admissions policy". By training the computer system to (within a 90-95% degree of accuracy) replicate the trends in historic admission policy of the school, the computer system replicated long-running biases

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The impact of this flawed educational computing system was huge, with 2,000 people estimated to have lost out on interviews for a place at the school as a result of their sex or ethnicity.

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As humans we are far from perfect, and as such, AI developments might not always go to plan the first time around. However, by regularly testing new AI systems and collecting customer feedback, you should be able to identify any instances of AI bias and resolve them immediately.

in how human members of staff screened applicants. The impact of this flawed educational computing system was huge, with 2,000 people estimated to have lost out on interviews for a place at the school as a result of their sex or ethnicity.

An increasing issue
With new AI innovations constantly emerging and more organisations adopting them, this issue has skyrocketed in the past few years. And there are countless examples of bias in AI today.

In early September, Facebook issued an apology and vowed to fix its underlying AI technology after an automatically generated tag asked viewers of a 2018 Daily Mail video featuring black men whether they'd like to "keep seeing videos of primates".

Facebook has also come under pressure over how its algorithms target people with job adverts. Global Witness, a global human

rights organisation, found that mechanic job adverts were mostly aimed at male Facebook users while female users were more likely to see job adverts for nursery nurse positions on their feeds.

Other technology giants have also been affected by AI bias. Twitter admitted in May that its image cropping algorithm was flawed, preferring white people and women over black people and men. Two years ago, Amazon abandoned automated recruitment software because it turned out to be sexist towards female job applicants.

The flaws: data sampling
AI bias has clearly become prevalent in modern society, but what factors are causing this problem? A major reason why AI technologies can be discriminatory is that the underlying data used to train them is often inaccurate and doesn't reflect different groups of people.

For instance, it's been claimed that facial recognition technologies are accurate 90% of the time. But the Gender Shapes project, conducted in 2018, shows that this isn't always the case. It discovered that facial recognition frequently produces inaccurate results for black female users, whose error rates are 34% greater than those of white men.

Of course, it's not just inaccurate datasets that result in AI algorithms and technologies producing biased results. Our own unconscious bias as technology professionals can also lead to the development of AI technologies that are fundamentally flawed and alienate the people they are supposed to help.

This is simply not good enough and must change. If AI continues to produce racist, sexist or other biased results, people will become increasingly wary and mistrustful of this technology. Such effects could derail AI's

potential to build a more connected and innovative society in the coming years and decades.

Confronting the problems
To stop AI bias from spiralling out of control and damaging progress in such an exciting field of technology, it's crucial that businesses take note and solve this issue. However, how can they do this in practice?

When it comes to developing AI products, technologists should ensure that the datasets, processes and models that power them are as inclusive and diverse as possible. AI technology needs to treat everyone fairly, regardless of gender, ethnicity, sexual orientation, age, disability or social status, and developing AI technology with this in mind is paramount.

Effectively communicating the ways in which unconscious bias can affect AI technologies and how to mitigate these will help technologists ensure their

creations treat all users the same. NTT DATA is leading the way in this area with our AI ethics guidelines.

They set out how AI should be used to empower people and created with the input of different AI stakeholders. The guidelines also stipulate that AI must be fair, reliable and explainable while being safe and secure. NTT DATA is taking steps to boost people's understanding of AI and its contributions to society, too.

Another way to resolve AI bias is by increasing diversity in the teams designing, developing, testing, deploying and refining automated technologies. Having technology experts of all backgrounds on your IT team will ensure AI technology suits the needs of every community and isn't biased in any way.

NTT DATA is also taking a number of steps globally to improve diversity inside our organisation. Initiatives currently under discussion include omitting

personal names from CVs to solely focus on an individual's ability during the hiring process to setting up internal diversity and inclusion schemes and providing employees from marginalised backgrounds with dedicated resources.

It is worth remembering that as humans we are far from perfect, and as such, AI developments might not always go to plan the first time around. However, by regularly testing new AI systems and collecting customer feedback, you should be able to identify any instances of AI bias and resolve them immediately.

Crucially, everyone has a personal responsibility to identify their own bias and look to help others address their own. By being more aware of people of different backgrounds, we can hopefully stamp out unconscious bias in all walks of life – which includes AI – and ultimately make the world a fairer place for all.

How RPA Bots Help Chatbots Get Smarter

By Adrian Kostrz,
Innovation Manager, NTT DATA Business Solutions

Imagine if process automation was a matter of simply typing what you want. Well, this just became a reality. At a recent hackathon, an NTT DATA team demonstrated an innovative approach that integrates RPA bots and chatbots. The result was a tool that freed users from time-consuming, repetitive tasks, allowing them to focus on adding value while using natural conversation capabilities.

At a recent SAP Hackathon, NTT DATA Business Solutions and its NTT DATA sister company, everis, applied an innovative approach to existing technology – and won second place. The team integrated chatbot and RPA (Robotic Process Automation) bots in a solution that streamlined some of the administrative work that an HR colleague might face when onboarding new employees. The solution helped SAP discover new ways of running a process within SAP SuccessFactors, but it has use cases that go far beyond HR.

Conversational AI and Intelligent RPA integration

Chatbots are seemingly everywhere online. They're a convenient tool for supporting users by answering questions and providing contextual help. RPA bots also serve important functions in today's technological spaces. RPA bots automate repetitive, rule-based tasks, like certain kinds of data entry and search functions, for example. Though these are both familiar tools, integrated solutions that enable these bots to work together are uncommon.

A first step towards intelligent applications

Solving monotonous, time-consuming administrative tasks is something that can bring value outside of HR and SAP. In an e-commerce setting, for example, such a solution could help streamline both the ordering and fulfillment processes by allowing users and customers to carry out transactions via a chatbot – then triggering the RPA bots to do their work in the background, such as filling out order forms, printing package slips and receipts or sending out email surveys to measure customer satisfaction. But e-commerce is only one example of the many potential use cases.

For the hackathon, NTT DATA Business Solutions designed just such a solution. It enabled a chatbot – developed with SAP Conversational Artificial Intelligence – to trigger a series of RPA bots (using SAP Intelligent Robotic Process Automation, or IRPA) that automated tasks inside SAP SuccessFactors.

Those RPA bots generated lists of new hires, scheduled meetings for their continued onboarding and compiled relevant support documentation, among other things.

Our solution turned a number of previously time-consuming tasks (searching, scheduling meetings, preparing documentation) into duties that weren't just automated but could be triggered through a single iteration with a chatbot agent. Everything could be accomplished from a single UI, requiring no specific commands or keystrokes to set the RPA bots in motion.

It doesn't matter if it's ERP, email, Word, Excel, or another application – these integrated bots can make a difference.

The result goes right to a company's bottom line. By freeing users from mundane jobs, they're free to focus on more high level duties. Doing so also reduces the possibility of human error, for example when filling out a work order. And let's not forget the importance of user experience.

By removing mundane tasks from to-do lists, employees are able to focus on the areas where they feel they bring the most value. Their work lives, as a result, take on greater purpose. Working with purpose brings greater work satisfaction, productivity and happiness.

What's the future for automation?

Already, there is wide potential for chatbot and RPA bot integration. The next step is to apply voice recognition and speech components. Such a step would free users from the need to be at a workstation altogether. It could also further enhance the user experience, as the vocal component brings a more personable, empathetic feel to the human-technology interface. As NTT DATA Business Solutions showed with its Kia Mia project, this voice-enabled technology already exists.

Chatbots and RPA bots are nothing new, but with the right approach existing technology can help solve daily challenges and tedious tasks. At the SAP hackathon, NTT DATA Business Solutions developed its solution in a short timeframe, relying on remote workers in three different countries, combining innovation with worker flexibility.

It was a big surprise how a distributed team could productively work together. But our Spanish, German and Russian colleagues supported each other throughout the competition, and we achieved a big result.

Artificial intelligence tells brands where to invest

**By Ruggero Di Benedetto
Head of Media Consulting, NTT DATA Italy**

AI is maturing. One of its newest uses can help advertising match the most relevant content to the viewer, touching gaming, TV. Here's how.

Artificial Intelligence has found particularly fertile ground in the world of advertising and media platforms. Most notably in content planning and cataloguing, as well as logo and brand placement in games, films and TV series.

One game, two sponsors

AIs are able to insert a specific brand on the t-shirts or billboards on-screen, based on the specific geographical position of a game-player or viewer. In fact, knowing the type of audience, you can select the content that is the most commercially suitable. It is also possible to click and be redirected to an offer linked to the advertised object or service.

The insertion of layers will also be possible in old films or advertisements: for example, a specific logo may appear on the anonymous cup held by a TV series protagonist.

Thanks to the transposition of an image or a face on other contents, deep fakes can bring missing actors back to life or create memes for commercial or entertainment purposes.

Brand visibility and relevance

Artificial intelligence not only provides tools to rework or modify media content, but also takes care of the entire analysis and investment phase of the product placement. It does this by providing a scoring based on the monetisation opportunity, visibility and size of the brand, and the ideal contexts in which to place it.

The opportunities, however, are not limited to the sports or cinema world. In culinary programs, just click on the dish, pot or knife that you would like to buy to open its Amazon page.

One of the most common problems in virtual advertising is the relevance of advertisements. Here, the AI can scan images and texts to ensure alignment between advertising and the content shown on a web page, with brand safety in mind.

The need for these services has arisen because of the moment in history we are in. The need to create captivating content increasingly pushes advertising experts to take advantage of the opportunities offered by AI, the real engine of segmentation and personalisation of data.

The CXO Podcast

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Episode 6: How the Intelligent Organisation will Win the Disrupted Future

John Beckford, President of the Cybernetics Society and author of The Intelligent Organisation, and Edoardo Tealdi, VP of Digital at NTT DATA Services, talk about how distributed decision making combined with automation technology will allow the intelligent organisation of the future to successfully navigate constant market disruption and build competitive advantage.
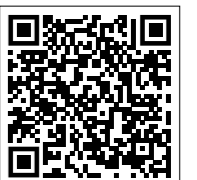
Don't Sleep on Data:
Three Steps to Diving In

By Shamlan Siddiqi
Vice President, Data Advisory & Transformation
Group, NTT DATA Services

Data steers companies away from poor decisions. For organisations to harness that powerful resource effectively, it needs to be contained, organised – and used. With a proactive approach, you can turn data into knowledge and knowledge into insights.

Nearly everything in my daily life revolves around data: checking a weather app, tracking the school bus, logging steps, ordering groceries, booking travel, and the list goes on and on. Once I log into work, data is there to solve business challenges for my clients. From helping companies understand the data they already have to assisting organisations in developing new ways to use their information, every day brings new opportunities and insights to simplify my life. Data takes the drama out of my day.

Data is also a two-way street. As consumers, it gives us the energy to keep pace with a modern, digitally-enabled world. It helps us maintain our lifestyle and thrive by keeping track of everything from health and wellness to financial growth. On

the other hand, organisations are accumulating data to help make informed business decisions. They're efficiently using data to increase their ability to offer consumers like us faster, reliable and more interactive products and services.

Data is where business concepts and technology come together. Technology powers data generation and collection, but it's the day-to-day interactions of an organisation – like logistics, planning, finance, marketing, supply chain and customer support – that need to utilise data to maximise efficiency. But when data isn't used properly, it can rain on your parade.

As a member of the technology office, business operations or data team at your organisation, do you feel your data is working as hard as it should or could? Is

data at the centre of your digital transformation strategy? If not, it should be. Let's take a look at why.

Data's importance: something's brewing

First, let's look at data access because you can't analyse what you don't see — not knowing what type of data you have, how to access it, or how to use it is problematic. If your data is disconnected and stored in siloes within different operational divisions, it has little meaning except to a select few leaders.

For example, if tracking consumer data across social media platforms is stored in one program and purchasing history in another, they're not working together to create a cohesive picture. The sales team might be excited that your new product sales are climbing, but they do not have access to the negative online comments from end-users the marketing department is collecting. That's one simplified example of a data disconnect.

Data is here to give you the insights you need to make better decisions. When data is all over the place, it seems like an overwhelming and complicated

Is data at the centre of your digital transformation strategy? If not, it should be.

process to corral it. But when you take a proactive approach to uncovering all its hidden gems, data becomes the shining star in digital transformation.

Data as fuel: pour the coffee

Second, how do you simplify all this data and make it central in your digital transformation? You start with looking at the big picture and then creating a collection, analysis, and governance process. Different types of data have different meanings for business leaders. With so many businesses generating, analysing, integrating, and leveraging data, it is critical to see how they can improve. This is where the 'drama' of connecting all the disparate data points with a seemingly endless combination of data tools comes in (and where transformation happens). But it doesn't have to be dramatic, frustrating or painful. Streamlining the process with the best modern data platforms and tools to drive automation, data intelligence and advanced analytics will be key here.

Also, remember that embracing data is typically a cultural shift

within an organisation. In a recent survey, we found that executives are struggling to make their organisations data-driven. Only 10% of all the organisations we surveyed are using data to transform digitally. Why? Many cited a lack of leadership support for using the data that they have. They also cited data quality, integration and security as challenges they face.

Being a data-driven organisation hinges upon viewing data as a valuable asset, and data needs to be cured and protected. Data governance is a critical aspect of the overall strategy.

Data strong: keeping it hot

Keeping data accessible and secure is the last area of importance. Legacy transformation and modernisation of the data ecosystem to the cloud maximises all the possibilities for data. For cost and scalability, cloud migration offers a modernised alternative to legacy systems.

Data that is accessible anywhere, anytime, in real-time, allows your business to be prepared for anything, from a power outage to a global pandemic. Accessibility

also fosters internal collaboration. And during a time when remote work is proliferating, this is a critical factor in creating flexibility and agility.

Moving data to the cloud solves for data stuck in different divisions that don't normally communicate with each other. Quick data sorting and analysis leads to new insights, enabling innovation to flourish. Another key factor is cost savings. Moving data to the cloud reduces storage costs, freeing up financial resources for other key areas of your business.

Digital transformation with data optimisation at its core is a lot less dramatic than it sounds. With the proper planning, support and strategic data partner, you'll turn data into knowledge, knowledge into insights and insights into industry leadership faster than you can say: pour me another cup of data!

How to implement an automation strategy that actually works

By Chris Coles
Solution Director, NTT DATA UK

Leaders want their automation strategy to deliver long-lasting value and an attractive ROI. To achieve this, you need a data-driven strategy and a unified IT landscape, plus the courage to forge into new automation territories.

New technology is a proven way to boost business productivity. Yet implementing a technology, especially into large-scale operational processes, is not always easy. Get it wrong, and the results can fall far short of expectations.

Take automation. In many Communication Service Providers (CSPs), automation solutions have been deployed piecemeal to improve specific processes. This has led to a disjointed environment that is hard to scale up as demand changes, and costly to update to cope with evolving IT and business operations. The result? Automation loses its shine and management can become unwilling to spend more on what they see as an inflexible technology.

Get it right and intelligent automation will deliver huge benefits by simplifying IT processes and ways of working to help achieve the flexible, fast time-to-market capabilities and sustainable cost structure that allows an organisation to thrive. In a previous blog post, NTT DATA sketched out the "spectacular" potential gains from intelligent automation long term, helping businesses "eliminate countless routine tasks, while creating new jobs that are more stimulating as well as better paid than those that will inevitably be replaced."

So, how then do you implement an automation strategy or develop your existing automation landscape that will deliver long-lasting value and an attractive return on investment (ROI)?

Follow a business-led, data-driven strategy

It is crucial to begin by deciding what you need to do to improve customer experience. Rather than starting with the technology, look at what problems your users or business currently have. Otherwise, you risk ending up with a technology solution looking for a problem.

Accurately identifying current issues is important, whether it may be multiple ticketing systems, an increase in data due to 5G or complex ecosystems. This work will allow you to integrate technology into your business with capabilities that help your customers and users, such as intuitive interfaces and other features enabled by Artificial Intelligence (AI). Technologies like these provide an improved quality of service by redefining the minimum business requirements to service a customer; something that new technology companies and challengers are already doing.

Combining intelligent automation with a focus on unifying IT platforms will deliver even greater benefits. Often, as a business expands, its IT Service Management (ITSM) becomes more complex because piecemeal implementations of platforms are added across functions. In the telecom world, it is not unusual for an operator to be running several instances of the BMC portfolio of ITSM platforms.

Such fragmentation is difficult to manage and makes it harder to automate processes, requiring the automation to be deployed for every siloed system, instead of just once.

Expand automation into new areas

Although most companies begin their automation journey to reduce costs, intelligent automation will be essential for future business success. In the telecom sector, growing network and system complexity, accelerated by the roll out of 5G, is putting services management beyond the capability of humans. Only automation of processes across the BSS (Business Support Systems) and OSS (Operations Support Systems) domains can effectively orchestrate the provisioning and management of services to ensure the highest quality end-user experiences.

Intelligent automation and platform unification will deliver new levels of productivity and innovation. It will allow employees to focus on higher-value tasks and ensure the highest quality and consistency of processes. Furthermore, by going far beyond merely automating menial tasks, intelligent automation can create an ecosystem that is smarter and capable of delivering more advanced operations in onerous processes. This will enable sophisticated forms of digitisation, data extraction, imaging and machine learning.

360% ROI

The sheer scale of the potential benefits of intelligent automation and platform unification was revealed recently by a Forrester Consulting study commissioned by BMC. Forrester interviewed decision-makers from 11 organisations and found that by adopting BMC Helix for IT and enterprise service desk needs, they could achieve a three-year, risk-adjusted net present value (NPV) of $10.6 million and an ROI of 361%.

In one use case, a global telco saved an estimated $300,000 USD a year just with the end-to-end automation of password resets.

Automation is evolving. What began as simple, repetitive tasks are now intelligent systems that can perform cognitive, perceptive functions – making automation a crucial tool to compete and succeed. At NTT DATA, our intelligent automation solutions are delivered in an open ecosystem for sustained value and continuous business outcomes, using a combination of best-of-breed tools, frameworks and platforms.

NTT DATA is working in partnership with BMC to provide insight into how intelligent automation and platform unification are best applied in highly complex business and IT environments. We partner with clients across their full journey – strategy, design, build, run and support. The approach is collaborative, ensuring that we always deliver against business objectives. We work with clients across industries to quickly identify areas for automation, so that they can do what they do best – create and innovate.

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Although most companies begin their automation journey to reduce costs, intelligent automation will be essential for future business success.

How workload automation can be a game-changer

By Stefan Schwieger
Senior Managing Consultant, NTT DATA DACH

> **" If processes that can be automated remain analogue, companies in dynamic environments quickly lose touch.**

Most companies use workload automation software to automate business processes. However, reality also shows that a patchwork of different solutions quickly reaches its limits if end-to-end control across applications, data and infrastructures cannot be guaranteed.

Digital transformation without automation is not only difficult to imagine, it's impossible to do; in constantly changing markets, automation is the only way for companies to be efficient and agile.

In addition to digitising business processes, companies must also automate them across applications, data and structures, as a foundation for digital transformation. Regardless of whether they are in their own data centre or in private or public cloud environments, if processes that can be automated remain analogue, companies in dynamic environments quickly lose touch.

Integrated vs isolated

The typical response today, drawing on the spirit of innovation and modernisation, is "Of course, all this is necessary and absolutely must be done – we'll use RPA (robotic process automation) and AI." Whilst not wrong, this approach runs the risk of creating an isolated solution.

Building your own RPA-based solution for each business process is very tempting – specific use cases can be automated quickly and easily. On the other hand, this creates a 'wild growth' of specialised automation solutions that will have to be further developed and maintained in the future.

Segmented and fragmented automation solutions therefore quickly reach their limits in highly volatile market environments, and no longer meet today's requirements in the long term.

End-to-end automation

Using a solution that considers and controls workload automation end-to-end – across all applications, data and structures – and can also be embedded in the software development process and thus enables 'automation via code', we have come a clear step closer to achieving optimum efficiency and agility.

Far from being uninspiring or boring, automation solutions can overhaul a company's operations – especially if that solution has been successful for over 30 years and is the global market leader. Control-M from BMC, for example, enables companies to automate their IT and business processes across applications, data and infrastructure not only in their own data centre, but also beyond. This type of solution offers robust and well-tested automation for all applications, data and infrastructures – from the mainframe to multi-cloud environments.

Benefits from employing Control-M or other workload automation solutions include:

- Accelerated production of new business applications, by integrating workflow orchestration into the CI/CD pipeline;
- Better and greater collaboration between development and operations, with the jobs-as-code approach;
- Simplified workflow across hybrid and multi-cloud environments with AWS, Azure and Google Cloud platform integrations;
- Faster achievement of data-driven goals through scalable management of big data workflows.

Find out more about NTT DATA's partnership with BMC, the leading software company specialising in creating autonomous digital enterprises at de.nttdata.com/ueber-ntt-data/partner/bmc.

Overcoming Automation Anxiety

By Deana Rhoades
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There is a popular misconception that when automation arrives, people disappear — when in fact, intelligent automation can empower existing human workers to do their work better.

From data privacy to employee job security, there are a number of reasons why businesses might be anxious about automation. NTT DATA looks at how it has helped various health insurance companies overcome their fears and live happily (and profitably) alongside automation.

Most health insurance companies understand that automating tasks can help them save time and money. However, they may be hesitant to adopt intelligent automation if they are experiencing anxiety about making the shift. If they are feeling fearful, their fears probably lie in one or more of the following areas:

- Security and safety of systems and data;
- Perceived impact on employee job security;
- Achieving transparency with digital employees or bots;
- Ensuring that their initial investment will live up to IT industry hype.

It is important to understand that the same security measures that apply to the human workforce apply to bots, which are also known variously as "automations," "digital agents," and "digital workers."

Some companies in the health sector worry that when they permit an IT provider like NTT DATA to build their bots, they will lose control over where their data resides. They also wonder how their systems will be accessed. NTT DATA assures our health clients that their bots will work in their environments on their premises; they will not be moved offshore. This is important to remember as we build the roadmap for intelligent automation. It must work with

its security team to ensure that user credentials for automation are in place; these automations, or bots, need them just as human workers do. Arranging for non-human access often requires a shift in mindset.

There is a popular misconception that when automation arrives, people disappear – when in fact, intelligent automation can empower existing human workers to do their work better. For example, a member services agent can be paired with a virtual cognitive agent to help the human worker provide better service to members. The virtual agent can listen and do behind-the-scenes research, supporting its human counterpart with relevant member information in real-time, as well as suggesting next steps. It can even automate the transcription of the call. Thus, the member services agent becomes better supported than ever, which positively impacts service delivery and happier members.

Additionally, robotic process automation provides man/machine intelligent automation in the front, middle and back offices, enabling the client's business to grow organically and increase revenue. For example, during the Covid-19 pandemic, health insurance providers have seen a massive expansion of Medicaid claims, and it has emerged as a new line of business for them. With intelligent automation, they can eliminate human labour and allocate employees to this new endeavour without hiring more people – doing more work with the same number of employees and preserving jobs.

This evolving nature of work brings the possibility that some people won't adapt to the change, so NTT DATA has created a powerful organisational change management practice to help work this crucial human element into the implementation process. We empower health insurance companies with strategies that improve employee acceptance

of intelligent automation; these strategies include incentivising employees with new jobs and monetary rewards when they suggest workflows that can be automated. Ensuring employee buy-in helps establish an automation-first mindset across the enterprise.

Keeping tabs on digital employees

It is important to manage digital employees in the same transparent manner that their human counterparts are managed, so managers can remain aware of what they are doing. That is why NTT DATA created a patented, hybrid command centre exclusively for automation management. For example, suppose a nursing supervisor is managing a 40-member staff. In that case, 20 of whom are human and 20 of which are automations, they need to be able to evaluate their capacity and quality of work at all times.

Our hybrid command centre provides key information from the workflow engine to enable the supervisor to keep a finger on the pulse of what the nurses and bots are doing. In addition, upfront operation analytics help the business owner of the transactions stay "in the know." With our hybrid command centre, the nursing supervisor can own the supervision of the bot (just as if it were human by seeing the entire business in real-time) and maintain a complete understanding of who – or what – is performing which tasks.

The care management team continues to make the decisions, but the bots can take care of repetitive administrative tasks, such as researching records or doing predictive modeling. For example, in the past, nurses could spend as much as 20 minutes researching member conferences, but the bot can now accomplish this task in advance and free the nurse to spend more time conferring with the patient or

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consulting with another one.

Health plans are sometimes afraid they may not achieve the value they're hoping for with an intelligent automation implementation. However, using a benefits modelling methodology before implementing factors in the plan's strategic objectives creates an accurate expectation of return on value and total cost of ownership.

This methodology quantifies return on investment (ROI), and the unique roadmap we create for each plan is aligned with the healthcare provider's business strategy. It establishes a reliable way to measure the consumer experience and all values impacted by intelligent automation. A dashboard, such as we have in our hybrid command centre, gives health providers visibility into their business

processes to accurately measure productivity and generate more revenue and profit.

Getting past the fear and making the leap
NTT DATA has 15 years of experience in making the shift to intelligent automation. We have learned many valuable lessons while undergoing the experience with our organisation, and we coupled that knowledge with the expertise we've acquired in our organisational change management practice. As a result, this experience has enabled us to develop the best practices that now benefit our clients.

Tech for Good

NTT DATA uses its technology and innovation capabilities to help its communities and clients.
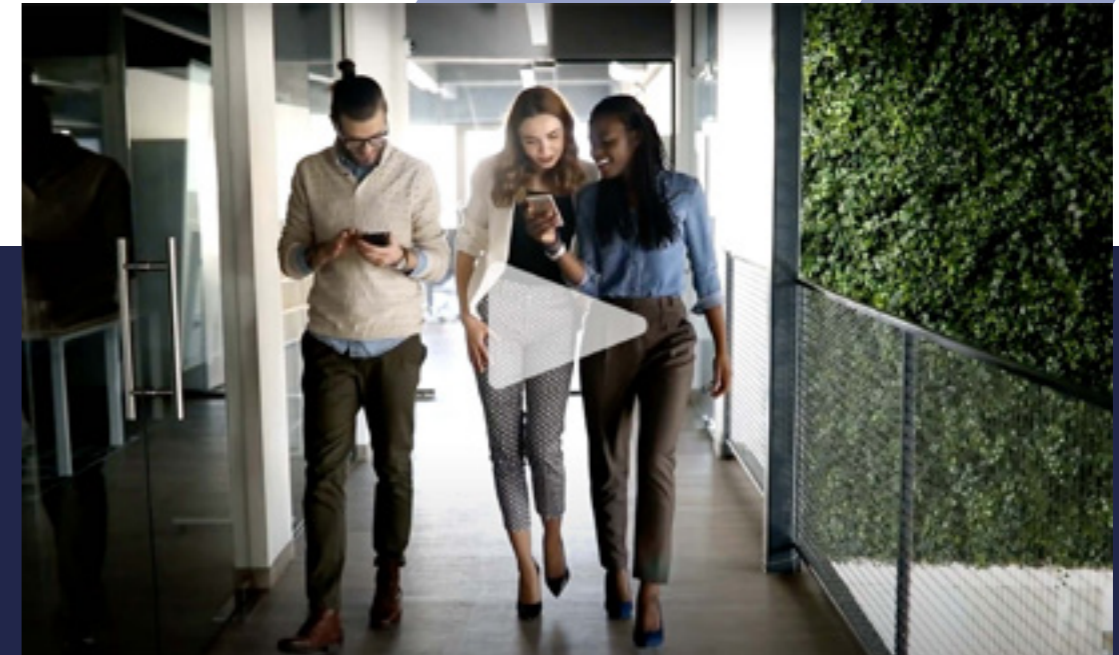
VIDEO

ASHRAE: Creating a blueprint for the intelligent building

ASHRAE is setting the standard for the future office. As a global company pioneering industry trends in office systems, their new building provided the opportunity to showcase the optimal environment for employees and visitors, ensuring that they have access to the facilities they need while complying with all health and safety regulations.

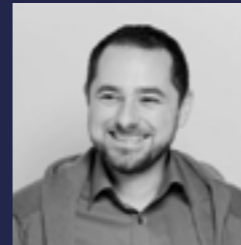**Scan the QR code with your smartphone camera**

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