CXO
BY NTT DATA

Agility in the Age of Disruption

The emerging post-Covid world will show that enterprises without the ability to continually adapt to current and future change through operational, cultural and organisational agility, will be unable to compete effectively.

Hello.

Welcome to the third issue of CXO Magazine. Our theme for this issue is 'Agility in the Age of Disruption'

The current volatility, uncertainty, complexity and ambiguity (VUCA) dynamics we are seeing across all markets due to the Covid pandemic means competitive pressures against large enterprises in most industries have increased exponentially. Not only is the competitor landscape changing at speed, but customer demands for a better, more authentic and personalised service are higher than ever.

Shareholders' needs can no longer be the only priority for enterprises; in this decade, customer and community needs will be of equal importance in order to sustain growth and profits. Additionally, the enterprise cannot take months or years to deliver the experiences and value demand by its customers and communities. That the new enterprise must be hyper-adaptive in times of disruption to survive, is now incontestable.

The emerging post-Covid world will show that enterprises without the ability to continually adapt to current and future change through operational adaptability, cultural flexibility and organisational fluidity, will be unable to compete effectively. Enterprises must change their ways of working by adopting the Agile mindset and principles – and through this can achieve competitive advantage through better customer loyalty, reduced operational costs, less bureaucracy, and increased employee satisfaction.

Enterprise Agility increases the speed at which an organisation can adapt, allowing it to weather the continual disruption of today's and tomorrow's market places. Critically, it allows the enterprise to outperform the competition and drive growth in new, uncertain scenarios by quickly learning and adapting when confronted with crises and complex problems.

The new normal is uncertainty, and this coming Age of Disruption requires enterprises to continually learn and adapt to their changing business environment. NTT DATA is partnering with its clients globally to help them make the transition to a more agile way of working, and through this be ready to capitalise on new opportunities in this new world to drive growth.

Enjoy the read.

Kaz

Kaz Nishihata
Global CEO, NTT DATA

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The Challenge of Continuous Change

By Stefan Hansen, NTT DATA DACH

Adapt or perish. The rate of change in the post-Covid world is relentless. With the competitor landscape and customer demands changing at speed, the new enterprise must be hyper-adaptive, able to flex and adopt the agile mindset and principles to ultimately achieve competitive advantage and build better relationships with their customers, staff and communities.
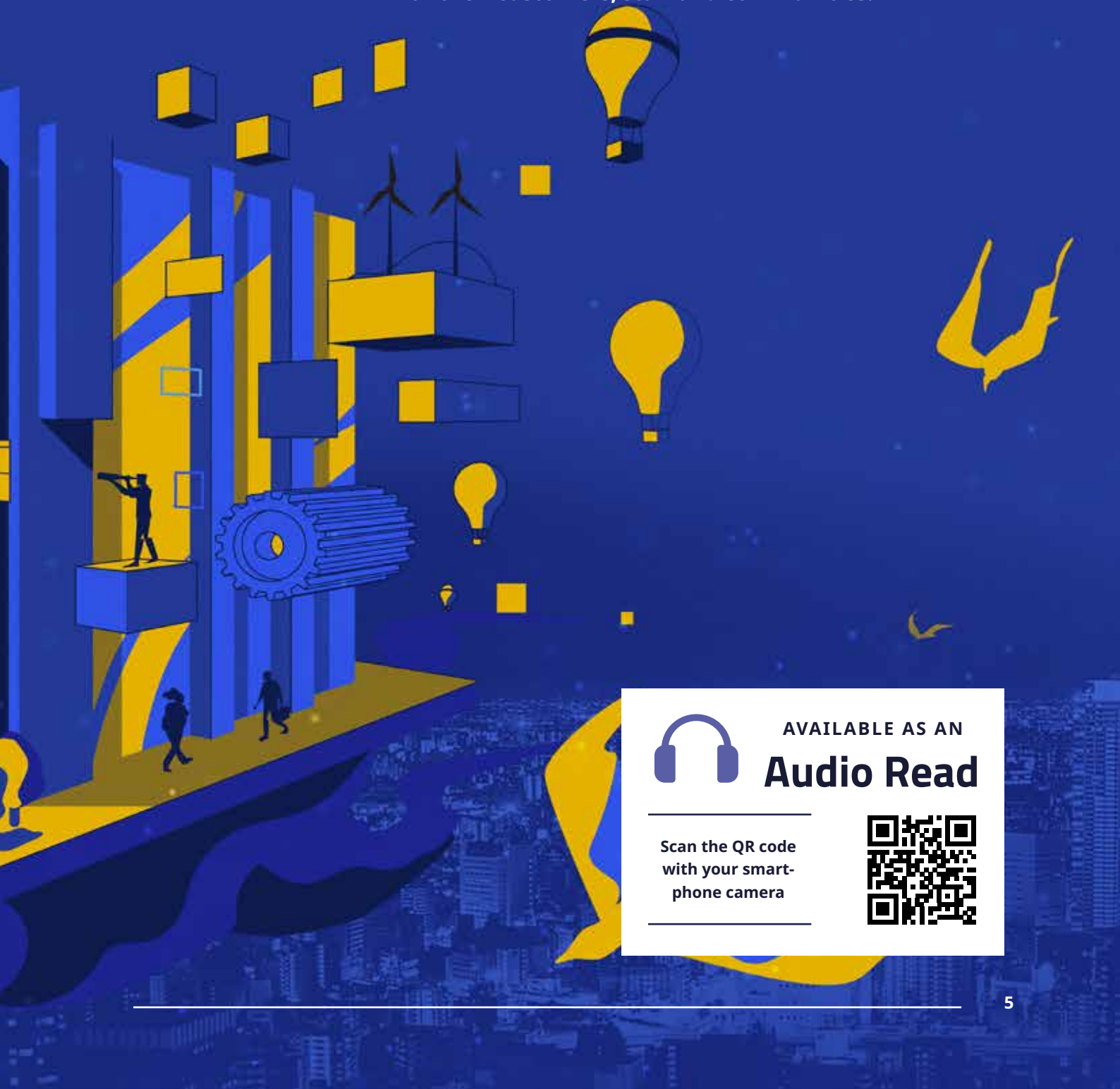
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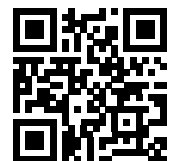
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> ## For decades, survival and success in business was about size; now it is about manoeuvrability. This shift in mindset is one of the fundamental aspects of overcoming the challenges that many corporations face when dealing with disruptive change.

"Adapt or perish, now as ever, is nature's inexorable imperative." – H. G. Wells

Nothing stays the same: as humans, we know this immutable fact of life. And whilst H. G. Wells couldn't have known about the devastating impact of the Covid-19 pandemic when he wrote those words over 70 years ago, his proclamation is perhaps more relevant today than ever before.

Change, and our need to adapt, is indeed relentless. For businesses, the pace of change – due in large part to advances in digital technology – was already so disruptive that long-established companies were struggling to survive, forcing enterprises across the globe to evolve; the past year, however, has accelerated this evolution to unprecedented levels.

With both the competitor landscape and customer demands changing at speed, the new enterprise must be hyper-adaptive. As enterprises look to define themselves in a post-Covid business environment, it's clear they must embrace agility.

Rewriting the rules of business

In the wake of the pandemic, businesses are rewriting their digital transformation roadmaps; but enterprise agility encompasses every aspect of the organisation, from operations to culture.

Also, there has been a fundamental and profound shift in the relationships businesses now have with their customers. Demanding more human-centred products and services, consumers now have the power to direct the future of the brands they wish to interact with.

Indeed, I have witnessed how this shift in this relationship has directly affected how businesses are now re-organising their entire operations to meet these new demands. One client, a major bank, established a user-centric prototyping lab, embracing agile methods and design thinking to rapidly develop, test and improve products.

And in the automotive industry, our research has shown that customer loyalty is changing significantly: customers are willing to change brands if they can get more advanced digital services (47% would be willing to switch brands to access innovative connected car services[1] – NTT DATA Connected Car Study, 2020), compelling manufacturers to prioritise connected services as part of their offering to remain competitive.

Time is also a significant factor here. The disruption Covid-19 has brought to businesses has meant substantial and long-term changes have had to be made at speed. The shortening of product and service development timeframes has pushed businesses to become more agile to meet the new trading landscape's demands.

For decades, survival and success in business was about size; now it is about manoeuvrability. This shift in mindset is one of the fundamental aspects of overcoming the challenges that many corporations face when dealing with disruptive change.

Enterprise agility as the answer to continuous change

Beyond the benefits of being focused, resilient, responsive, adaptable, versatile and able to sustainably innovate, companies that embrace agility as a core part of their strategy are 71% more likely to grow profitably than those who do not [2]The benefits of agility extend far beyond the commercial

> **Agility for NTT DATA always balances technology and the people it enables. We help businesses find that equilibrium.**

impact, significant as this is: agile projects have a 60% greater chance of success than non-agile, and in terms of market share the position is greatly strengthened, with 87% of companies believing that business agility provides a competitive opportunity[3]. From employee engagement to customer loyalty, agile firms are outperforming their peers – and able to cope with continual disruption.

To understand and then implement a programme of change that delivers the level of agility needed today, business leaders need to understand that agility is a multifaceted concept, which in many cases calls upon enterprises to radically alter the fabric of their businesses – the 'fabric' being the culture, and how collaboration manifests as new ways of working.

I am often asked what a business's agility journey looks like. Commonly, business leaders associate this journey with their digital transformation roadmaps. But their agility roadmap is quite different: it is very much about the people of the organisation.

In the Age of Disruption, I believe agility is about a business's mindset. As well as being brave, businesses must be humble – realising that failing is not a bad thing, when it leads to quick learning and quick adaptation. How an enterprise thinks about their customers, the environment, and their place in society all have a profound impact on changing its mindset. Moreover, communicating this adaptive mindset to their workforce is crucial, as employees' day-to-day lives will change too, of course (for the better).

The pillars supporting an agile enterprise
Fundamentally, the pillars supporting an agile enterprise are the elements of a strong

organisational culture – elements which good leadership must ensure they actively promote.

Autonomy, engagement, purpose, collaboration and speed are, for me, the pillars onto which you can build an agile business, able to thrive in the disruptive environment we face today. I also believe becoming agile means that your company has the opportunity to shape these environments. You are not a passive follower of trends, but an innovator.

The leaders I speak to find it challenging to understand the changes they need to make to their business: the new ecosystems that must be built have little in common with their legacy processes and organisation. Indeed, neo business is redefining process, human resources, customer services and competitor relationships.

Technology and external insight as enablers for agility
An organisational redesign is a core component all agile enterprises share. Here, technology can be an enabler: using new collaboration tools to connect dispersed teams, rapidly evolving HR, purchasing, marketing functions, and a complete reimagining of customer services, are all components of an agile enterprise.

I also advocate that agility means looking outside of the business. Supply chains must be agile and flexible; but think, too, about competitors and startups – what can be learned? How could you collaborate in order to capitalise on trends?

These external insights will be vital in creating the agile ecosystem your company's future will be based upon. The value networks your company builds today are the foundations through which your agile

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enterprise will flourish. Remember, agility isn't insular: an open, collaborative mindset is how you create your agile business.

Agility in practice

The conversations we have with businesses that understand they need to be more agile often lead us into close collaborations, and even the development of new ecosystems. A good example is Tangity. As part of the NTT DATA Design Network, Tangity's approach to design has agility at its core. Providing multidisciplinary service design expertise, the business can only serve its customers by moving quickly and upholding user-centricity as its core principle.

The human-focused component of agility, that I believe is so central to creating an agile ecosystem across a business, is encapsulated in our co-creation space, Ensō. It leverages technology yet places the human component of innovation first. Agility for NTT DATA always balances technology and the people it enables. We help businesses find that equilibrium.

Keeping the human aspect front-and-centre, for us, is achieved through each area of innovation, from discovery (with our Foresight reports examining societal trends in tandem with technological) to definition (ensuring the highest ethical standards are upheld, for example in AI solutions) to delivery (human-centred connected services, such as our Indoor Navigation real-time localisation solution).

One industry that is seeing massive change is Insurance. Automation, the extensive use of data, and how cloud services can be utilised to deliver agile customer services, are all elements of how this industry is transforming. NTT DATA works with Legal & General, whose Director of Group Data Sciences, Peter Jackson, commented on how

we were able to take their people on the journey to agility by communication and collaboration, referring to how NTT DATA people "seamlessly integrated themselves into my team". We were able to understand from day one what they wanted and how to bring it alive. Through fluid organisation structures and open networks of communication, we're able to help clients like L&G both understand the benefit of, and implement the practices of, enterprise agility.

Paths to agility

Becoming a more agile company is undoubtedly a journey. The hardest part of that journey is deciding to start. Change – even in small increments – can be difficult for businesses. The often-massive changes needed to become a more agile company can be disruptive; but the conclusion of the agile journey is a new enterprise, fit to thrive in the volatile, uncertain, complex and ambiguous (VUCA) business environment that the Covid pandemic has left in its wake.

I want to leave this discussion with an overview of our vision for a human-centred connected future, Pathfinder. Through three NTT DATA 'perspectives' – the navigator, the creator and the pioneer – we help clients and collaborators navigate the choppy waters of business disruption, and smooth the convergence of technical advancement and social progression.

Central to this vision for the future is a smart, sustainable society – a concept that is encapsulated in Society 5.0, a Japanese approach to addressing societal problems with advanced digital technology. Evolving into a smart society will mean that information systems converge with the physical world, for example in the form of autonomous

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vehicles. And the new society also considers the values and needs of future generations, replacing the unconditional pursuit of profit with a holistic goal which is kind to the planet, as well as everyone living on it.

The three perspectives of Pathfinder's approach to a smart future broadly relate to transformation, service delivery and innovation respectively:

- **Navigators** create the map that will safely take clients to new digital shores, helping them assess the technological landscape;
- **Creators** bring visions to life by translating digital transformation plans into solid, scalable solutions;
- **Pioneers** scout out new horizons, looking deeply at the interactions between technology, business and social life.

Across the board, the Pathfinder perspectives have increased satisfaction for our clients. Recently NTT DATA was ranked as #1 for customer satisfaction among IT providers in Germany (and #2 in Europe overall[4]), with scores for transformation, service delivery and innovation – i.e. those areas optimised by our Navigator, Creator and Pioneer perspectives – exceeding the average:

- 70% for transformation quality (vs average of 61%)
- 84% for service delivery quality (vs average of 74%)
- 72% for innovation (vs average of 64%).

These new approaches for clients have been recognised by the industry as leading the way, such as NTT DATA's award-winning work with Lufthansa. In this cloud transformation project, using the 'Creator' Pathfinder perspective, we brought Lufthansa's vision of improved productivity and streamlined costs and operations to life.

By embodying these perspectives and working in true partnership with our clients, we are able to advocate – and actualise – the agile transformation that's required to remain competitive.

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For us at NTT DATA, the world of tomorrow is not some abstract idea: we take real steps to shape that future. We believe the future should be connected by technology, but at the same time dedicated to people and their needs.

And to deal with the needs of our employees, our customers, our partner ecosystem and the societies we inhabit, agility is not only essential, but the very foundation of our future.

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Stefan Hansen has more than 25 years of experience in management and transformation holding several international management positions, including positions at EDS and at Lufthansa Systems. He joined NTT DATA in 2020, and is responsible for NTT DATA's business in Germany, Austria and Switzerland.

Leading the Agility Shift: Slowing Down to Go Fast

By Pamela Meyer Ph.D, leading Agile Innovation expert and author of *The Agility Shift*

When organisations begin their shift toward agility they soon discover they must help their leaders at all levels of the business make a mindset shift. To make this shift is neither instant nor effortless, organisations must make, model and coach for it to ensure the success of agile initiatives.

The disruptions caused by the global pandemic did not create the need for business agility; they only heightened the urgency for companies that had not yet developed this critical capability.

Organisations that had already prioritised creating a culture and practices in which rapid learning and adaptation could thrive were able to quickly shift to working remotely while meeting their changing customer needs. But those whose ways of working prioritised planning, control, predictability and routine struggled to make the shift, slipping behind their peers during the Covid-19 crisis[1].

Organisations across industries are now urgently working to improve agility across the enterprise. Those seeking to accelerate the process are tempted to approach leading their agility shift as a primarily operational endeavour, restructuring for a flatter, more networked organisation, forming cross-functional teams and often adopting one of many possible agile frameworks. Such enterprise agility efforts are designed to be able to quickly assess and adapt to changes in customer needs, talent requirements, market demand, supply chain

disruptions, geopolitical and economic upheaval, and environmental volatility, to name a few.

The agility shift starts with a mindset shift

In their urgency to improve results, leaders often miss the most important aspect of their role: making and modelling an agile mindset shift. The goal of agile structures, systems and processes is to provide rapid feedback. When leaders receive this feedback without changing their fixed ways of thinking and perceiving, they cannot quickly and effectively learn and adapt, missing out on the value and significant promise of agile and digital transformation.

The agile mindset shift challenges our very understanding of the function of leadership. In *The Agility Shift,* I describe an agile leader as "anyone who effectively responds to the unexpected and unplanned and quickly turns challenges into opportunities." To adopt and lead with this mindset, leaders at all levels of the organisation must develop the capability to shift intentionally from being reactive to being responsive.

Slowing down to go fast

It takes time and intention to make the shift to an agile mindset. Customer-centric companies with similarly high stakes, but operating in as widely differing industries as telecom and pharmaceuticals understood this when they undertook comprehensive, immersive leadership development approaches to improving agility. These initiatives were grounded in leadership development and were separate from the operational mechanics of any specific agile approach, framework or methodology they would adopt.

T-Mobile invited leaders across the organisation to participate in a two-day Agility Shift programme, based on my work and research. This work was part of an organisation-wide imperative to live into its newly adopted brand identity as the 'un-carrier' and grow from 33 million customers in 2012 to the fastest-growing telecom company before the merger with Sprint. Today T-Mobile has grown to more than 102 million customers[2]. The company's ability to pivot was the proudest moment for leadership, as attested by T-Mobile US's CEO Mike Sievert:

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The agile mindset shift challenges our very understanding of the function of leadership.

"The ingenuity of our team to complete the largest wireless merger in U.S. history amid an unprecedented global pandemic while continuing to serve customers at a very high level is so inspiring. My biggest accomplishment, actually, all of ours, was to adapt and deliver our best year ever as a team and as a business — and in the middle of a global pandemic."

In the pharmaceutical industry, the customer is ultimately the patient. At Roche, leaders were invited to participate in a similarly immersive, in-house designed Kinesis leadership programme with a primary focus on developing an agile mindset. "A different approach is possible," says Tammy Lowry, head of talent innovation at Roche. "If you invite your senior leaders to show up personally and to reimagine how they think about business and organisations, and you are genuine about that and sustain it, it is incredible what can happen."

Shifting to an agile mindset is neither instant nor effortless. Leaders and members of the cross-functional agile teams at UCB, a global biopharmaceutical company, engaged in several activities to develop and sustain this critical mindset shift. These activities included participating in a series of highly interactive leadership development sessions throughout their agile transformation. Each of these sessions was designed to help team members become more comfortable being uncomfortable and feel more confident communicating, collaborating and coordinating resources across departmental silos while learning and adapting through iterative cycles of co-creation. This intensive focus on people development is a core

foundational focus of UCB's patient value-driven approach to innovation.

James Hlavenka, then acting as Head of Agility Enablement U.S. Neurology at UCB, shared: "Our commitment to deliver transformational outcomes and experiences for the patients we serve requires us to regularly foster the curiosity and interconnectivity of our people. With an agile mindset, we intentionally prioritise learning and diversity of thought across people and teams, recognising that both are inextricably linked to our ability to unlock innovative value for our patients."

T-Mobile, Roche and UCB are not alone in prioritising an agile mindset shift as part of their overall emphasis on delivering results. The ability to adopt an agile mindset is so critical to overall agile success. A joint study by Forbes Insights and the Scrum Alliance of 1,000 C-suite executives across industries found 83% of respondents cite an agile mindset/flexibility as the most important characteristic of today's C-suite[3]. My research of more than 1,500 leaders across industries found a strong link between an agile mindset and overall agility; there is an especially strong link between mindset and the capability to be responsive and resourceful[4].

Translating agile leadership mindset into action

The value of providing time and support for leaders to develop an agile mindset is borne out by T-Mobile's sustained growth, as well as its rigorous Agility Shift Impact Study. Their analysis found that 78% of leaders could point to tangible business results from

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applying their new learning[5]. Slowing down to go fast does not have to mean delaying results. It means being intentional and providing the resources and development pathways that set your leaders up for success.

At UCB, the impact is both measurable and striking for patients and the organisation alike: within the first nine months of the transformation, the UCB team reduced errors and realised resource efficiencies, cutting average development cycles by 26% and increasing market-readiness by 25%. This translated to an organisational capacity to become even more responsive to the needs of the patients they serve. Moreover, team members remarked how this new way of working positively impacted their team culture and productivity, self-reporting a 75% increase in favorability scores for clarity in communication and effective decision-making[6].

"By embracing an agile mindset that prioritises learning, team members intentionally upskilled one another outside areas of core competencies to enhance their collective team knowledge and ability to work together, better equipping the whole to leverage diverse talents and perspectives to rapidly deliver innovative value to our patients," said UCB's Hlavenka.

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Leading the agility shift in your organisation means making, modelling and coaching for the mindset shift and behaviour to ensure the success of your agile initiatives. As countries, industries and customers begin to emerge from the pandemic, practices that help leaders sustain an agile mindset will be more important than ever. The very human temptation to return to normalcy invites a return to

familiar thinking habits, attitudes and behaviours that favour planning and routine over learning and adapting. Pandemics may come and go, but the age of disruption is here to stay, and with it, the critical need to lead with an agile mindset.

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Pamela Meyer, Ph.D. is a leading Agile Innovation expert for business leaders who recognise they urgently need to shift their way of working to compete in a rapidly changing world. A thought-leader for business success, Meyer is the author of four books on innovation, learning and change, including *The Agility Shift: Creating Agile and Effective Leaders, Teams and Organisations*. Meyer is a sought-after keynote speaker who inspires audiences worldwide with new perspectives and actionable ideas to become more agile and innovative.

The Secret of Enterprise Agility: Where Science Meets Organisational Change

By Erich R Bühler, author of *Leading Exponential Change* and founder of the Enterprise Agility University

Most mindsets or frameworks developed to support an environment where employees can confidently adapt to market opportunities, such as Agile, Lean, and Scrum are not enough. A new framework of reference is required, one that draws on neuroscience, organisational psychology and new types of leadership.

People often believe that moving fast is the same as adapting. Speed plays a crucial role in the evolution of organisations and products, but it can be risky if people can't cope with the evolving reality or realign to new strategies.

Market disruptions affect all companies, and an exponential pace of change is the new reality. Artificial intelligence augments possibilities, short work cycles impact the markets, and big data provides a continuous strategic advantage.

Imagine if you got out of bed every day and found yourself in a different house with different children and a different job. Although some might be happy with this, most would find it exhausting. This is how exponential change feels for many.

Adapting at pace

If you are the leader of an organisation, more and more disruptions are going to affect your plans. You and the people around you will need to adapt roles, ways of working, and products. But how do you build an environment where employees can confidently adapt to market opportunities, even when they do not feel ready to change?

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Most mindsets or frameworks used during the last 20 years (Agile, Lean, Scrum) have helped, but they are not enough. They do not consider crucial aspects that arise during exponential change.

Building a flexible, resilient company is as simple as it is challenging. If the right techniques are not in place, people will have less energy, motivation will decrease, initiatives will lose traction, and customers will see less innovation and business value. You need new models to help people align to new perspectives and strategies, and all this must happen in record time.

Most mindsets or frameworks used during the last 20 years (e.g. Agile, Lean and Scrum) have helped, but they are not enough. They do not consider crucial aspects that arise during exponential change, and they don't contemplate mechanisms to help leaders exposed to employees with higher levels of resistance. As a result, techniques or practices that appear to be ideal may produce subpar results.

Coping with constantly changing environments

When consulting, I strongly support retrospective meetings, the idea that employees need to reflect on work and their interactions with others regularly. We know that people can process only a limited number of concurrent changes every day. Go above it, and they will feel overloaded, and they will resist.

If we try to implement this practice in highly changing environments, teams will need to reflect more frequently on what is happening, and at some point, they will tire. They will give up or follow procedures without any desire to improve them. These not-so-positive effects are heightened in an environment of

exponential change, so broadly used practices have to be reevaluated to avoid counterproductive effects when exposed to exponentiality.

At Enterprise Agility University, we have been working to understand the best ways to address these situations and provide global leaders with enterprise agility models for leading exponential change. A large part of this work involves an advanced understanding of the brain.

The brain and exponential change

Did you know that learning something new or adapting to a unique situation can lead to increased oxygen consumption in the prefrontal cortex (the area of the brain responsible for constructing your reality)?

We analysed studies that involve real-time brain monitoring, including electroencephalography, magnetoencephalography and functional magnetic resonance imaging. We have examined how the energy of thought flows through the brain—just as blood flows through the circulatory system—when people are exposed to exponential change. This has helped us build better ways to deal with the constant alterations of processes, roles and mindsets.

Many of these concepts allow companies to deliver results, even during turbulent times. These ideas enable organisations to respond better to changing market conditions. We developed the concept of Outcomes Agility to provide leaders with crucial skills. Outcomes Agility is based on three important pillars:

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1. Using strategic sensitivity

Leverage the power of the collective, intuition, artificial intelligence and big data to sense what is happening in the markets. Leaders must increase their levels of mental agility to encourage neuroplasticity, or how your neurons connect when you are exposed to a situation, so they can view change from different perspectives and embrace different values.

Several techniques can be used here. It is about more than empathising with clients – it is about temporarily adopting their values as if they were your own to test new hypotheses and ideas.

2. Building a powerful strategic response

Leaders must know how to modify current strategies so that people can adapt, with higher levels of adherence and lower resistance. The secret lies in understanding that people are not physiologically prepared to adapt to exponential change. If leaders want to build a powerful strategy, they must learn how the brain works when exposed to exponential change and how to build a company with higher levels of organisational health.

3. Creating a sustainable market disruption based on your capabilities

When a disruption impacts the market, the organisation must be prepared for the rebound effect of external consequences. Competitors might start playing a different role, or clients might move in a different direction. This will require your

company to accelerate change further.

In addition to evaluating the impact of a market disruption, you should regularly ask, "Will my people be ready if everything changes again?" Any intentional market disruption must take into account the organisation's manoeuvrability in the short term.

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It is no longer a matter of grouping existing agile practices and techniques. We call this practice: Classic Agility. You must consider new frameworks of reference – like Enterprise Agility – to build a better organisation. Employing concepts such as the neuroscience of change, organisational psychology, organisational health and new types of leadership is crucial if you want to build a resilient, flexible and sustainable ecosystem.

Erich R Bühler has created many of the frameworks for Enterprise Agility widely used in world-class organisations. He is also the director and founder of the prestigious Enterprise Agility University.

Business Re-Set: Why Organisational Fluidity is the Future of Your Enterprise

By Ragnar Wachter, Head of Management Advisory Services, NTT DATA DACH

The door has been opened to great opportunities; but to take advantage of them, traditional business structures must be rethought. A dynamic working environment must be achieved through adaptability, speed, innovation and resilience to thrive in constant change.

The pandemic has brought massive change to many businesses. Nevertheless, while Covid was an accelerator for change, evidence of emerging trends was clear well before the pandemic.

These changes will have a permanent impact on some enterprises. More importantly, the pandemic has also opened the door to great opportunities; but to take advantage of these opportunities needs a rethink of how companies are structured. A fluid business is an agile business that can embrace change and develop a dynamic working environment.

Adaptability, speed, innovation and resilience are all important components of a fluid business. These are the pillars your enterprise can use to transition to an organisational architecture that will ensure your company is fit to thrive in a post-Covid business environment.

Fundamental changes are impacting the business world:

- **Information abundance.** We sometimes feel overwhelmed by the masses of information that floods into businesses. However, this torrent of information can provide a feeling of endless creative possibilities, the ability to learn faster and create something new.

- **Speed and interconnectedness.** Our business world is turning faster than ever. If you combine the two factors of speed and interconnectedness, this leads to unpredictability. Covid-19 was totally unexpected. We realised what unpredictability means, and it showed us what we require to manage it: organisational structures that empower us to manage and lead differently.

Becoming a fluid business will mean fundamentally flattening the structures your company currently has in place. I speak to NTT DATA's clients who can see their markets accelerating, but they struggle to keep pace. Decades of bureaucracy have resulted in slow decision-making and layers of complex communications processes – stifling their attempts to innovate at the speed they need to.

Agile organisations can improve their operational performance comprehensively. To cope with the changes in the business environment, then, requires a structural change: a change of values and to the DNA of the company. For organisations to master this structural shift, they need to ask themselves several questions:

- How do we lead?
- How do we create value collectively?
- How do we collaborate?
- How do we budget to be able to change?
- Do we have a vision that unites our firm?

The answer to these questions, in most cases, is that organisations need to change the focus of their business.

Change focus from efficiency to responsiveness

The focus on responsiveness led a worldwide fashion company to decide to run its production lines only around 75-80%. This may initially seem a wild decision to make, but this enables them to take up customer feedback from their stores, have their designers make changes quickly, adapt the product to customer needs, insert the new product lines or product trials in the production quickly based on the capacity buffer, and bring their products to the retailers to test out.

Change focus from control to empowerment

In the past, businesses would create a strategic plan for the year. This approach to planning is no longer valuable if an organisation is to become fluid and agile. Companies must acknowledge that they cannot control everything but that they need to empower the organisation to reach the final

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Clients can see their markets accelerating but struggle to keep pace. Decades of bureaucracy have resulted in slow decision-making and layers of complex communications processes – stifling their attempts to innovate at the speed they need to.

goal. This change in focus requires autonomy and the ability of employees to experiment. Employees need to be encouraged to test and play within a culture of empowerment that also accepts failures as routes to learning.

Making flexibility the norm

How businesses organise their structure is often the fundamental issue with their ability to serve their customers, support their commercial partners and be the innovative company they can become. Agility and flexibility can't be integrated if a rigid organisational structure is in place. The inherent inflexibility won't allow the transition to a fluid architecture.

I am proposing a new organisational paradigm that everyone in the business will need to support. A fluid organisational structure delivers flexible working practices that will become the norm and opportunities to innovate and collaborate in new ways that can often lead to unforeseen benefits.

A lot of what's recommended in this article may be quite a departure from what leaders typically learn from management books. It requires a fundamental change in leadership mindset. Leaders need to step out of their comfort zone to enable the change in their organisation. Their role will be very different; they will be an orchestrator, a coach, a mentor.

The change towards enterprise agility can only be achieved if there is support from leadership directing their organisation and empowering their business to be fluid.

The age of the top-down business structure needs

to be swept away and replaced with new practices, new structures, and vitally, new cultures that embrace the new world we are entering with the tools and mindset to thrive.

Managing fluidity

Anything fluid, by its nature, is difficult to control. When I define what NTT DATA means when we talk about transitioning to a fluid business structure, rather than talk about control we focus on leadership, partnership, and collaboration. These mechanisms can be used to embrace a fluid business architecture.

This new approach to business organisation is not simply the replacement of one form of hierarchy with another. Instead, it is about creating unique ecosystems within businesses that use the traits of a fluid organisation that lead to long-term innovation.

A fluid business can refocus quickly, change priorities towards value-creating opportunities and redirect its people. The organisation, overall, has a high awareness that flexibility and organisational change are essential and inevitable for company success and that employee engagement, as well as innovation focus, is crucial to stay competitive.

A fluid business also has a vital technology component. Fluid ecosystems are created with collaboration tools and data analysis to support the new fluid structures being built. Technology can be used to connect and support the workforce, who will be instrumental in implementing the changes needed to move to a flexible working ecosystem.

When an agile structure is in place, several

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The change towards enterprise agility can only be achieved if there is support from leadership directing their organisation and empowering their business to be fluid.

events occur simply because the condition for their manifestation is available. Projects become dynamic entities that are not rigidly defined. Projects evolve and change as the fluid ecosystem they are now part of allows this to happen. The idea that "permission" is no longer needed releases creativity from teams and individuals. Failure and then blame become archaic. Sharing, communications, and transparency become the norm and not the exception.

People and places
Making what can be significant transformational changes to a business's structure will of course impact the workforce. It's critical to appreciate how moving to a more fluid structure will also mean changing a company's culture. It's inevitable that some members of the workforce may not appreciate, or want to participate in, the practical changes that must take place to embrace a fluid approach to business organisation.

Enterprise leaders face the challenge of uncertainty and how they define future growth. With the four-phases framework (respond, recover, reshape and reimagine), NTT DATA provides leaders with advice and best practices for the future success of enterprise value creation and strength. Leaders who seize the opportunities fast will emerge from sudden changes as long-term winners.

There must be a conscious decision to make the changes needed to create the ecosystem required for a fluid organisational structure. Leadership must

want to change their enterprises.

However, even once cultural agility is achieved, organisational agility needs to be managed to uncover the potential. We need to take a step back, and take a look at our private lives.

People naturally collaborate, ask for help and interact in somewhat fluid private networks supported by technology and social channels such as Facebook and LinkedIn. We find ways to look for the information we need and form teams to achieve our goals.

This is something organisations also need to project to the working environment to manage the increasing complexity. We collaborate with people in our work environment, which is structured like a network. Fluid businesses have information flowing around in interconnected teams. Distributed organisations are also connected.

The focus should not be whether resources are employed in one organisation, but rather on the value being added through collaborative working as a network. Teams will be formed, shaped and then separated again to start a new journey. This will empower businesses to tap into resources around the globe and balance the need for specialists and generalists at the same time. This should also guide integration with customers. The tech industry already has embraced this concept for openness and networks collaborating with open-source projects.

An important factor for organisational agility is the shift from value creation of individuals to value creation in collectives. This also requires a new perspective on what we expect from employees:

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The age of the top-down business structure needs to be swept away and replaced with new practices, new structures, and vitally, new cultures.

- Confidence in their own abilities
- Functional expertise
- Risk-taking, but with a willingness to learn
- Co-operation
- Soft skills.

A paradigm shift

We all have seen enterprises that were not able to adapt at all or to change fast enough. They just disappeared from the market. Enterprise agility is not only necessary for organisations to be competitive but simply required to stay in business.

Agile organisations move faster and stay competitive

If an organisation realises that the outside pace is faster than the inside pace, they are typically in trouble. Agile organisations can move faster and increase their speed versus the external environment, which allows them to stay competitive.

Agile organisations unlock untapped potential

With the development in technology, the increase in data accessibility, and the way people connect, there is just so much untapped potential. Agile organisations can unlock this potential and turn it into a value-creating activity.

Agility positively impacts the bottom line

According to research from McKinsey, agile enterprises achieve a 20-30% improvement in overall financial performance[1], positively impacting their bottom line. This impact mainly comes from improvement in operations performance, increased employee engagement, and improved customer satisfaction.

Agile enterprises cope with continual reorganisation

Today organisations are slowing down their activities as a result of regular ongoing reorganisation efforts. The way to a fluid organisation is agility. As a fluid organisation, the company can constantly change, reflecting fluctuating customer demands to create new value-added services.

...

This new perspective can mean radical change across the business. Still, as companies have reshaped themselves at speed over the past year, making permanent changes to become a fluid business is the last transformational step to take before fully embracing the opportunities that disruption yields – allowing them to bend, not break, in the winds of change.

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CXO
BY NTT DATA

VIDEO

Delivering Agile Decision-making at Rolls-Royce

Interview with Stuart Hughes, Chief Divisional Information Officer, Rolls-Royce Civil Aerospace

Stuart talks to CXO about his career as a CIO in the dot-com boom, how moving to the cloud has democratised decision-making, and why enabling the citizen coder within corporations is the answer to the agility they crave.

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In a World in Flux, You Need a Flux Mindset

By April Rinne, author of *Flux: 8 Superpowers for Thriving in Constant Change*

In today's world in flux, traditional change management is insufficient. Enterprise agility, operational adaptability, cultural flexibility, and organisational fluidity all fundamentally depend on a new way of thinking about and relating to change, period. Welcome to a Flux Mindset: an essential tool for leadership, robust organisational culture, and thriving talent from here on out.

The pace of change has never been as fast as it is today, yet it is likely never again to be this slow. This reality isn't about a pandemic, or any one change, or any one year. The future is in flux. Our new-now-next-never normal is more constant change, not more certainty or stability.

Against this backdrop, traditional change management is not only under strain, nor is it merely outdated. Simply put, change management is insufficient for today's world. In some situations, it is already broken, and in many others, it shows dangerous cracks. It is time to radically reshape how we think about, relate to and ultimately handle change. This is essential for organisational adaptability, flexibility, fluidity, resilience – and of course, agility.

Over the past 25+ years, I've been observing, researching and advising individuals and organisations worldwide on how to deal with seismic change: from disruptive new business models to new ways of working, and from organisational culture shifts to digital transformation. As a futurist working globally, I've seen first-hand how no individual, company or culture has 'mastered' change. However, we've all developed myriad ways of coping with it – and there is a great deal we can learn from one another.

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When you take care of the internal part first — that is, your relationship to change — the external dynamics become clear.

Your relationship to change begins within

One of the biggest mistakes leaders can make is to get their relationship to change backwards. They focus on 'change management strategies" or "investing in uncertainty' in the external world. Yet they fail to recognise that every single strategy, investment or decision you make fundamentally depends on, and is filtered by, your internal world: your mindset.

Pause and consider:
- Do you see change from a place of hope or fear?
- Do you try to predict and control the future and then struggle when things don't go to plan?
- Are you excited by, or daunted by, tomorrow?

None of these reflections relate to strategy – but rather to mindset.

So why do we focus so much on strategy while paying such short shrift to our states of mind? Why do we assume that our strategic plans will work when we haven't considered the emotional and cognitive nuances that are driving them?

Pause for a moment and reflect, really reflect, on these questions. Answer them honestly to yourself. Have you thought about change this way before? Have you ever asked your colleagues or direct reports these questions? Why or why not? Perhaps also consider what's at stake without this information.

Today we have an unparalleled opportunity to change these dynamics for the better. Not only does a world in flux welcome this, organisational cultures and teams most likely require it to succeed. And here is perhaps the most exciting part: when you take care of the internal part first – that is, your relationship to change – the external dynamics become clear. They fall into place in new ways.

This is the beginning of what I call a Flux Mindset. It's a reshaping of how we think about and relate to change from the inside out. It also reflects a new foundation onto which future-forward, "flux-worthy" companies learn to optimise and harness their resources – talent, capital, customer loyalty and beyond – in new ways.

Flux Mindset: The ability to see all change *consistently* as an opportunity, not a threat

Opening a Flux Mindset is your first step of a broader journey to thrive in a world in flux. A Flux Mindset doesn't merely accept change but rather develops an eagerness to use change well. A Flux Mindset can be adopted by individuals and teams alike. When done well over time, an organisation's 'fluxiness'" becomes part of its culture – and a competitive advantage!

One of the first steps you can take on this journey is to conduct what I call an organisational change audit. When an organisation remains true to its values, and roots its culture in them, it is invariably better positioned to succeed. Nevertheless, in my experience, fluxiness is not typically among them. This urgently needs to change.

For example, think back on this past year. No

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> ## A Flux Mindset doesn't merely accept change, but rather develops an eagerness to use change well.

doubt you were forced to adapt regularly to new and unexpected changes. But how much of your adaptation consisted of temporary or stopgap measures to weather a crisis, and how much radical flexibility became permanently integrated into your organisational design?

Or reflect on when you faced your greatest uncertainties. To whom or to what did you turn? My hunch is that you turned to your trusted relationships. Trust is how we navigate ongoing uncertainty; without it, organisations and cultures break. In a world in flux, trust is also your moral compass and differentiator. Trust is what keeps customers coming back (without a marketing budget!). And yet, trust cannot be bought; it can only be earned by showing up and following through, time after time after time.

Organisational design flexibility and trust are two baseline metrics of organisational fluxiness. Other metrics relate to sustainability, purpose, talent engagement, customer relationships and how you 'see' your role and agency in the world. They are also closely related to the eight Flux Superpowers, which a Flux Mindset serves to develop. Several of them enable us to rethink what metrics we're using, to begin with, and how to measure what really matters.

A Flux Mindset and the ability to adapt

When we hear the word resilience, most people think of bouncing back, like an elastic band. But what do we do when what we would like to bounce back to is no longer there? In many respects, this describes the reality we're faced with today.

And yet, resilience isn't merely elastic. It is also plastic: capable of forming new shapes and casting new horizons. The ability to adapt in today's world in flux requires organisations, leaders and talent across the board to boost their plasticity – and a Flux Mindset can help.

The word flux is both a noun and a verb. As a noun, it means continuous change; as a verb, it means to learn to become fluid. It's perfectly suited to your agility. So remember: this isn't about 2020, or any one year, or any one change. Your ability to adapt, flex and flux is your hallmark and defining strength – today, tomorrow and from here on out.

A World Economic Forum Young Global Leader and one of the 50 Leading Female Futurists in the world ranked by Forbes, **April Rinne** is a change navigator: she helps individuals and organisations rethink and reshape their relationship with change, uncertainty, and a world in flux. April is also the author of *Flux: 8 Superpowers for Thriving in Constant Change* (Berrett-Koehler, on-sale August 24, 2021).

Designing Organisation Agility

By Naomi Stanford, author of *Organisation Design: The Practitioner's Guide*

If you want to go beyond the surface-level of this century's buzziest word to design a truly agile organisation, you need to understand the intricacies of agility. Furthermore, it pays to be realistic about whether going agile is likely to benefit your organisation at all.

'Agility' is a word every leader has heard, most likely uses, and certainly covets as an organisational capability. It is becoming one of the most used words in business and organisation design and is well on the way to becoming a meaningless buzzword, surrounded by consultants' hype about the need for every organisation to become agile.

Agility may be jargon, it's easy to knock the movement, but its intent is worth looking at. The model is meant to act in the spirit of the 2001 12-principled Agile Manifesto[1], originally devised for a better way of developing software (if you are not familiar with the Manifesto, take a look). From the Manifesto arose the agile methodology for software development.

The meaninglessness arises on two counts. First, there's a tendency to take aspects of this agile methodology and its Manifesto principles and apply them in a wide range of situations. This is done in the hope that by applying just the selected principles the organisation will become more adaptable and responsive to the operating context (i.e. more agile). However, as a McKinsey podcast[2] pointed out: "Agile is not a menu of things from which you can cherry-pick... you need to think of them in a holistic way. You can't just cherry-pick a few of them; it's a system." Running daily stand-ups – part of the agile methodology – is not

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> **The Covid-19 pandemic was a proving ground for many organisations for their operational agility. Life sciences organisations are forced to re-examine supply chains and urgently develop measures to strengthen resiliency.**

going to develop organisational agility.

Second, meaninglessness arises because too little time and reflective thought are put into defining what agility is and then what it looks like, in day-to-day practice, for a specific organisation.

What is agility?

In terms of what it is, agility usually takes one of three forms[3]. Strategic agility involves the capacity to recognise and seize an opportunity. Perhaps rapidly closing down or scaling up part of the business, jumping into a new market or making a large-scale investment. A current example of strategic agility is Microsoft's bid for Nuance, a speech recognition specialist focused on healthcare. It looks alien to Microsoft's core business, but Nuance provides an infrastructure that Microsoft can exploit, including AI expertise, Interactive Voice Response, virtual assistants, and digital and biometric solutions.

Operational agility involves the ability to capitalise on opportunities to make ongoing and rapid improvement to current operations and processes. The Covid-19 pandemic was a proving ground for many organisations for their operational agility. Life sciences organisations are an example of a sector forced to re-examine supply chains. They are urgently developing measures to strengthen resiliency, ensure local capabilities and capacity, and manage allocations of vital products. The Serum Institute of India is one of several vaccine manufacturers currently experiencing supply chain issues – both materials shortages and issues related to geo-politics.

Portfolio agility is the capacity to shift resources from one part of the business to another. A swift reallocation of resources in response to competitive or other pressures can include cash reallocation, people reallocation and managerial focus. Some car manufacturers are busy demonstrating portfolio agility. For example, Volvo is looking at direct selling to customers (rather than through dealers), and Audi is experimenting with subscription services to move customers from ownership to 'usership'.

These three forms of agility are not mutually exclusive, but knowing and agreeing on what the focus is for the desired agility, and where designing for agility will bring competitive advantage, is critical.

What does agility look like?

In terms of what it looks like in day-to-day practice, it tends to reflect:

- **Self-organisation:** Teams autonomously controlling their work and continuously reviewing their interactions to optimise flexibility, creativity and productivity.
- **Flat structures:** Driving for an organisation that is flat and horizontal with lateral flows, rather than traditionally hierarchical structures.
- **Obvious cross-organisation collaboration:** Where everyone understands decisions and choices made and, ideally, has a voice in contributing to them.
- **Nurtured culture:** Where support, challenge, trust and respect go hand-in-hand and learning from experience (good and bad) is valued and communicated.

The point to bear in mind is that what reflects as agility in one organisation is not the same as in another. Agility is not a recipe. Without leadership consensus on what agility is and looks like for the specific organisation, it is not possible to design agility.

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Factors related to power, status, inertia and an unspoken desire to maintain the status quo mean the path to flattening an organisation is complex.

The truth about going agile

If an organisational leadership team does want to design the organisation to be 'agile' then there are certain considerations to bear in mind. Already mentioned are 'what is agility?' and 'what does it look like?' That step gives scope for discussion on the scale of the design. For example, if the organisation has many management layers and is command-and-control in its approach, how likely and feasible is it to become flatter with more autonomous employees?

Sadly, it is unlikely as factors related to power, status, inertia and an unspoken desire to maintain the status quo mean the path to flattening an organisation is complex: concepts of path dependence come into play.

Path dependence means that the way the organisation was originally established – its purpose, function, operational attributes – limits its design and change possibilities for current and future action. Put simply, established banks can never develop enough agility to compete on the same field with new challenger banks, Volvo may never be agile enough to compete with Tesla, TV stations will not be able to compete with streaming services, and so on.

That does not mean to say that organisations cannot become more agile. It is not a hopeless task. Corporate Rebels suggest five progressive steps that could be taken:
1. Invert the pyramid
2. Introduce autonomous teams
3. Extend autonomous teams across the whole organisation
4. Organise the autonomous teams into networks
5. Encourage the networks to become an ecosystem of companies.

One organisation, Haier, has progressed through all five steps. It has taken them over 30 years, and throughout, the same CEO, Zhang Ruimin, has been leading the journey.

Very few organisations are like Haier. Be aware, there are no silver bullets or quick routes to achieving agility. It takes time and sensitivity, and it requires critical thinking, assumptions testing, identifying what is possible, agreeing where becoming more agile would add real value and proceeding with awareness. Most importantly, it also requires not succumbing to all the hype around the word 'agility'. In my experience, the critical first step is to agree what agility is and would look like in practice for your organisation.

Endnotes
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After an early career in multinationals such as Price Waterhouse, British Airways, Marks & Spencer and Xerox, **Dr Naomi Stanford** moved to the U.S. to work in organisational design for a range of organisations in the government, non-profit and private sectors before returning to the UK. She now consults in organisational design and is currently writing a third edition of her Economist book *A Guide to Organisational Design.* Dr Stanford is also a speaker on organisational design.

5 Minutes on....

VIDEO
Covid and the Corporation

Kaz Nishihata,
Global CEO NTT DATA

5 Minutes On... the challenge of running NTT DATA globally during the pandemic, and how the enforced changes have meant less travel but more interaction with his global staff.

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VIDEO
The Post-Pandemic Office

Carlo Bardone, Chief Institutional Relations and Business Development Officer, NTT DATA Italia

5 Minutes On... the future of the office, and how the 'third way' is a constellation of local satellite offices that fulfil the core needs of employees around creativity, human connection and activities.

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Bringing Everyone Along: A Model for Maximising Adoption in Change Projects

By Livio Selvini, Senior Consultant IT Strategy & Governance, NTT DATA Italia

Change management is an underrated tool in the fight against continual disruption. With a few basic tenets, companies can get a handle on quickly assembling resources – and, crucially, maximising buy-in from the workforce – in response to changing external and internal environments.

Organisational change is happening faster than ever. Considering 99% of enterprises have undergone a firm-wide initiative in the last few years[1], it's safe to conclude that change is now routine. But the new normality of transformation at scale doesn't make it any easier. With only around a third of change initiatives[2] considered to be a clear success, leaders are searching for ways to improve their odds.

Enter change management. Change management ensures that the change is understood, accepted and adopted, by working with tools and techniques focused on the recipients of the change: the people. When an enterprise rolls out a new programme, whether technological (introduction of new tools), organisational (process optimisation), or strategic (evolution of business models), an inclusive change management strategy can help mitigate the risks. When this strategy is implemented with 'open-source' principles, change success can increase by up to 22%[3].

Where many leaders are getting it wrong is that they're orchestrating the change completely from the top. At NTT DATA, we've seen that the success of transformation projects is influenced by the ability

to engage and motivate employees affected by the change. This can be done through a methodological and structured approach based on five key elements: Strategy, Governance, Communication, Adoption, and Measurement.

Building a programme on solid foundations

In most cases, employees have the ability to perform the change, but they need the mindset and guidance to carry it out in their everyday operations. To accomplish this, the change management plan needs to be built with intentional Strategy and Governance.

The Strategy is developed through an analysis of the proposed change. Before the initiative breaks ground, we run some foundational inspections: we analyse the objectives, the initiative's impact on the workforce (including the benefits), the roles involved, and the barriers to the change. This analysis, anchored in an understanding of employee digital attitude, the corporate culture and the overall company vision, informs the most effective way forward.

The Governance oversees the implementation of the strategy. It's the guiding coalition that orchestrates the actions identified throughout the transformation evolution. Governance ensures the project adheres to the guidelines throughout the transformation, including continuous review and optimisation if necessary. Governance monitors the change's progress in two ways: the effectiveness of the change management programme and the ultimate adoption.

In a simplified example, say an organisation is considering changing all employee desktop computers from PC to Mac as part of a corporate digital enhancement programme. The initiative owners carry out an analysis to identify the corporate infrastructure and application impacts, as well as potential barriers to the Mac's adoption. In this example, the change in user habits, like keyboard shortcuts, presents a significant hurdle for the workforce. So the initiative's change management team should develop a plan to educate users on the new shortcuts while promoting the benefits of using a Mac.

The right tools for the job

The main tools through which a change

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Where many leaders are getting it wrong is that they're orchestrating the change completely from the top.

management strategy becomes a change initiative action are **Communication** and **Adoption.**

Communication is carried out through an integrated plan that identifies the storyline, its content, and the most suitable channels to reach the recipients. When designing a communication plan, consider three main scopes with divided ownership:

- **Initiative – executed by the company management or by the sponsor.** This communication aims to share the vision and objectives of the change. It also confirms management's focus on the initiatives during the launch period and celebrates mid-term successes.
- **Operative – executed by the project manager of the initiative.** This communication aims to inform employees about the characteristics of the initiative and the changes it will introduce. It adds a layer of security by anticipating activities that will involve people and guide their development during the life of the project.
- **Engagement – usually executed by management or the sponsor of the initiative.** This communication aims to involve and engage people in the organisation. It creates an identity for the project and a spirit of participation while sharing the objectives and benefits.

Arguably, adoption is one of the most critical components of ensuring transformation success. Helping the workforce to understand the changes through a strategic delivery of initiative-related content can encourage the change's adoption in the long-term. Neglecting to nurture adoption is setting up a fast track to mission failure.

Organisations can cultivate adoption along the change timeline at three key moments:

1. **Before** the introduction of the change – to maximise the effectiveness of a change rollout, organisations must prepare their people for the differences in their everyday operations by introducing knowledge and any missing skills.
2. **During** the introduction of the change – ongoing support to navigate the change as it takes effect is crucial. The knowledge and skills introduced before the change will need to be reinforced.
3. **After** the introduction of the change – to encourage continued adoption and support, organisations can employ techniques to encourage engagement, such as gamification.

Returning to the previous example of the organisation moving from PC to Mac illustrates the ideas behind communication and adoption. To help the initiative be identifiable and memorable, the team develops a consistent identity for all communications about the programme. The communication comprises dripped initiative-branded emails (including emails authored by the CEO to reassure users about the initiative's purpose) and supports adoption through easily accessible user guides, short videos, and an internal community forum.

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Arguably, adoption is one of the most critical components of ensuring transformation success. Helping the workforce to understand the changes through initiative-related content can encourage adoption in the long term.

We measure what we value

Celebrating a successful launch may be in order, but don't withdraw the troops just yet. To understand if the change was successful and ensure its viability, it's crucial to **Measure** the effectiveness of both the change management campaign and the adoption itself. This can be done by tracking and monitoring specific KPIs related to the project before and after the rollout.

If the initiative team hadn't recorded the number of IT support tickets requested while the workforce was using PCs, they may not have been able to declare victory on the objective when computer-related support requests were reduced by 30% after the initiative was rolled out.

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The best change management programmes are tightly focused on the people who will be carrying the initiative forward. Communicating the purpose and benefits of the change at key intervals can help the workforce overcome barriers to adoption, such as changes to their habitual operations. The change programme should also be monitored closely to track and record progress, opening up opportunities for optimisation if needed.

Change is here to stay and organisations must be ready to roll out improvement initiatives. The challenge to enterprise change is hurdling the rate of failure. Through this change management model, we've seen how enterprise employees can adopt and support a transformation, even becoming promoters and change agents. This willing adoption leads to overall initiative success, ultimately amplifying the organisation's ability to adapt to disruption. Secure and confident in change programme victories, organisations can look to the future to realise new possibilities.

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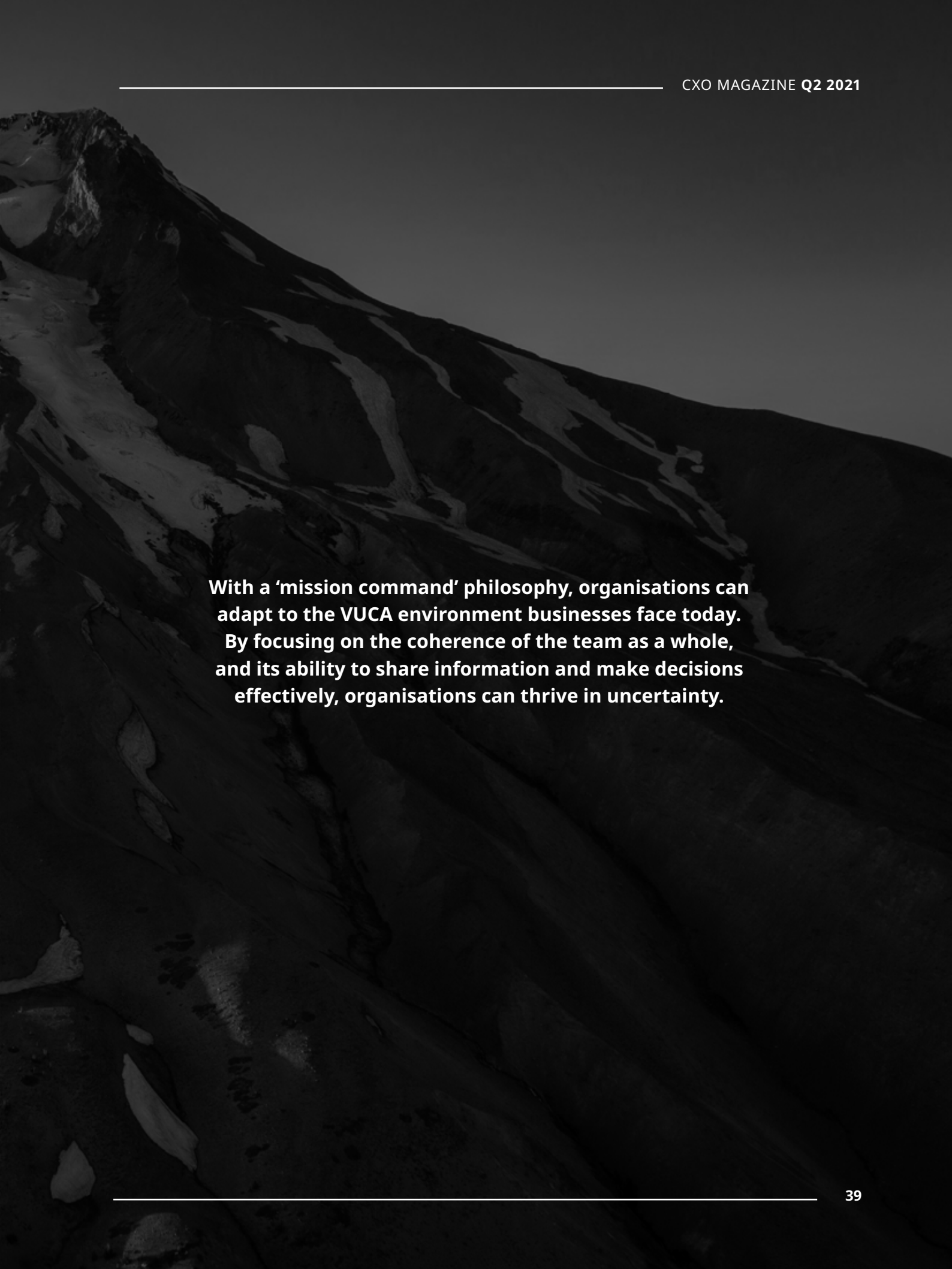
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In his twenty-five-year career he has worked both for consulting firms in CIO Advisory roles and in International Companies in management roles. In the last ten years he has been involved in important Digital Transformation projects with a focus on Innovation and Change Management.

Cultivating Agile and Adaptive Teams the Military Way

By Gareth Tennant, former Head of Intelligence of the Royal Marines

With a 'mission command' philosophy, organisations can adapt to the VUCA environment businesses face today. By focusing on the coherence of the team as a whole, and its ability to share information and make decisions effectively, organisations can thrive in uncertainty.

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If you get to know your team and those individuals who come together to form it, not only does understanding the requirements of leadership become easier, but so too does decision-making.

In my last article for this magazine, I shared my experience of being unable to control the safety of my Marines during a fire mission as a junior commander with the Royal Marines in Afghanistan. I used this incident to highlight the need to sometimes delegate decision-making to those who are better placed to do it. Drawing on the comparisons between corporate decision-making and military operations, it's more clear than ever that this cross-pollination of lessons is especially pertinent as we all come to accept the reality that we are indeed operating in a volatile, uncertain, complex and ambiguous (VUCA) world.

Since leaving regular service in the Royal Marines, I spend much of my life writing and talking about lessons that business can learn from the military. But this is as much about learning from the mistakes militaries make as it is about their success — and it's becoming clear that our comfortable, classic models of leadership don't work in this constantly changing climate. So, what can the military actually teach us?

Using military analogies in the business world is commonplace, and it's not surprising that we turn to great generals for guidance, given the resemblances between the adversarial nature of conflict and that of the competitive market. We're inclined to assume that the military has much to teach us about leadership. When we think of great military leaders, we tend to either think of great generals outwitting the enemy through some mystical combination of strategic brilliance and charisma (think Napoleon on a horse) or inspirational warriors leading death-defying charges in the face of overwhelming danger. These clichéd stereotypes rarely match the realities of what is successful in combat.

From my experience, I think the lessons that organisations can learn from the military are less about inspirational leadership and more about building resilient and adaptable teams when the situation around them is dangerous and most definitely VUCA.

Stop focusing on leadership

Both in the military and the business community, we often concentrate heavily on understanding leadership. This is usually focused on what makes us better as individual leaders within our respective organisations.

However, as the pre-eminent author on organisational culture, Edgar Schein, remarks: "Leadership and culture are two sides of the same coin".

If you concentrate on understanding your organisational culture (and by this I mean the real values and assumptions, beyond the glossy mission statements), and if you get to know your team and those individuals who come together

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The edges of an organisation are the most exposed to the external environment. It is at the edge where an organisation can best sense its surroundings.

to form it, not only does understanding the requirements of leadership become easier, but so too does decision-making.

My experience in Afghanistan taught me that leaders don't need to have the answers; they need to know where to find them. Good leaders don't worry about their leadership but instead worry about culture, strategy and the empowerment of other (often more junior) leaders.

By trying to learn leadership lessons from the experiences of former senior military leaders, I think we focus on the wrong areas and potentially learn the wrong lessons. We should really be learning how the military does 'command'.

Focus instead on command

Command ties management and leadership together because command is all about how decisions are made throughout an organisation. It's about the balance of authority, accountability and responsibility. In essence, command is less about the individual and more about the team's coherence as a whole, including its ability to share information and make decisions effectively.

This is where military teams do three things really well.

Firstly, they work closely together, even when geographically dislocated. They have a common

bond that allows them to work effectively cross-functionally, even if they've never met each other.

Secondly, they thrive in uncertainty, making decisions, responding to changes around them and adapting in the midst of VUCA. In fact, I would go as far as to say that they tend to flourish in these conditions. The more dangerous the situation, the more the team seems to come together.

Thirdly, and this is where the real magic is, they work in teams simultaneously problem-solving and adapting to the changing environment in a coherent manner that over time aggregates and compounds to achieve longer-term goals. They link their current activity (tactics) to the completion of longer-term objectives under conditions of continual uncertainty (strategy).

Cultivating agile and adaptive teams

Paradoxically, military organisations – famed for having an explicit chain of command and very regimented structures – have learned the hard way that in the face of a dynamic, uncertain and complex environment, you need distributed and decentralised command. This is known as "mission command".

Instead of viewing your organisation as a wire diagram that clearly shows a rigid and hierarchical chain of command, we need to start viewing the organisation as a malleable network – as a sphere

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The adaptive middle is the link between the strategic narratives emanating from the core, and the delivery of day-to-day operations out at the edges.

of influence. In this view, executives no longer sit at the top of the organisation looking down over it but instead sit in the centre, looking out all around it.

This starts with forming a 'solid core'. By anchoring your organisation to both a collective vision, and clear values that you subscribe to, leaders set the cultural tone. They must also clearly define what success looks like. Don't underestimate the impact of setting an example from the centre and its ability to radiate out to the edges. Good corporate leadership is essential to reinforcing a good organisational culture. Remember, you cannot create your culture: you can only influence it.

The edges of an organisation are the most exposed to the external environment. It is at the edge where an organisation can best sense its surroundings, and it's also where it is most impacted by changes happening around it. In order to allow those at the edge of the organisation to be responsive to its environment, it is essential that they receive clear direction and purpose, whilst also having bounded decision-making authority allowing them to decide for themselves.

The adaptive middle is the link between the strategic narratives emanating from the core, and the delivery of day-to-day operations out at the edges. To get the balance between a shared strategic purpose and the freedoms to probe, sense

and respond to their environment, the middle must facilitate cross-functionality and effective communication, removing silos and sharing information with evangelical ruthlessness. This takes trust. It takes psychological safety, and it takes judgment. It can't be done overnight. But, if the spit-and-polish regiments of the British Army can do it, anyone can.

Gareth Tennant is the Director of Decision Advantage, and former Head of Intelligence for the Royal Marines. He is an expert in command, leadership and liaison in a range of capacities, from operational planning, coordination and de-confliction to delivery of tactical high risk operations and long -term project management.

CXO
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VIDEO

Securing the Future of Golf with Technology

Interview with Professor Steve Otto, Chief Technology Officer, The R&A

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Steve talks to CXO about his career at Nasa before The R&A, about how data is helping make golf more accessible across the world, and how future technologies will keep golf thriving in 50 years' time.

Sharpening the Organisational Senses: Lessons From Telecoms Data Leaders

By Bill Wilson, Head of Data Solutions, NTT DATA UK

If the modern firm is an organism living through rapid and complex changes in its ecosystem, then data insight provides its sensory information. Using data to drive decision-making, as has long been the case for telecoms companies, holds the key to continual adaptation and improvement.

Data and intelligence has always been central to organisational agility; insight is the principal means by which organisations can feel how both the internal and external environment is changing.

As that environment becomes ever more volatile, the addition of predictive and prescriptive capabilities to complement traditional descriptive analytics becomes increasingly vital. Firms that don't use structured data and knowledge to inform operational decision-making, drive customer service and create new business models, will be lucky to survive business turbulence.

Telecoms organisations have long been seen as exemplars in this area. They are awash with rich data and have been ready to adopt advanced data technologies, such as predictive modelling and cognitive techniques, to drive improved business outcomes. Despite this early advantage, the challenges of enterprise data infrastructures and data governance are no less complex than other sectors – those who have come later don't possess
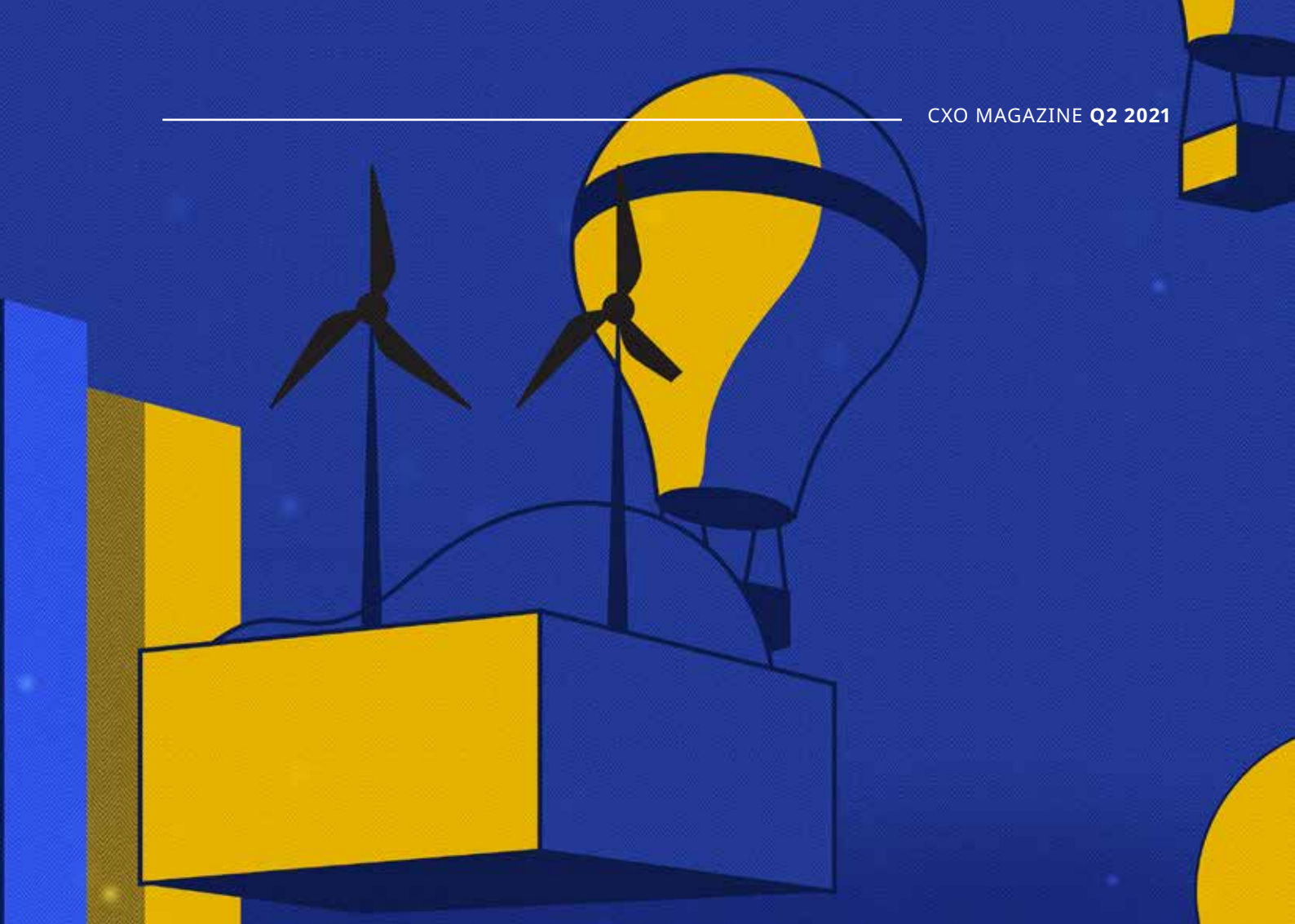
the same legacy technology problem.

I spoke to a group of data influencers across leading telecoms organisations to get a view of reality on the ground. They're a deliberately diverse panel with a range of expertise, some born digital and others who made a successful move into the domain.

Here's what they told me about the practicalities of working with data to fuel continuous improvement.

We need to sense – and seize – opportunities for existing business models

Data as a driver of new business models is nascent and unproven in terms of large revenues, although telecoms organisations have emerging opportunities to play host to new data ecosystems (e.g. in smart cities). For now, data is creating the greatest value in support of current business models.

Using data to enhance basic services is the prevailing priority, whilst tackling technology silos

and landing data in the cloud for exploitation are ongoing activities. Nevertheless, organisations are able to compete in the fast-paced digital environment through advanced levels of personalisation, optimisation and integration that customers are coming to expect. Furthermore, firms are now able to leverage technology with unprecedented velocity, allowing teams to make innovation decisions with confidence.

Significant effort is also focused on building data literacy and a data culture that will ultimately power a company-wide transformation. That comes about when users across the business are able to make full use of the tools and capabilities now available. The different stakeholders I spoke to are trying varied approaches to achieve this, including pairing data analysts with business representatives and empowering citizen data science.

The C-Suite now fully on board

The big technology companies have accelerated

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Many individuals at the C-level did not begin their careers by being data-driven, but they're now recognising the importance of using data to maintain a competitive advantage on the digital playing field.

the digitalisation and democratisation of information. The breadth and depth of their reach have profoundly changed the landscape of user experience, forcing telecoms leaders to reject any previous reservations about data.

Many individuals at the C-level did not begin their careers by being data-driven, but they're now recognising the importance of using data to maintain a competitive advantage on the digital playing field. One leader explained that data is becoming a regular feature in C-level meetings and is regarded by leaders as a key enabler in the long-term plan.

Telecoms organisations have been money-making machines for the past few decades, but their revenues are plateauing and their cost bases rising to satisfy data-hungry customers. Most leaders in these organisations know by now they need to solve this problem by investing in data insights to drive continuous improvement and meet expectations – or they risk being left behind.

We are still in the early days of AI, but don't underestimate its power

AI is in take-off mode. While colleagues can map other data initiatives back to what they know in Excel, AI remains a black box to some. Everyone we spoke to feels there is still a long way to go to harness the full potential of AI, so they're undertaking long-term transformation while delivering incremental value to the business.

To be in a position to respond quickly is crucial in a volatile external environment. Many are making a start by automating the AI development lifecycle (Machine Learning Operations, or MLOps) for internal efficiency and adopting a 'data product factory' approach. One practical outworking is harnessing the power of improved support bots that mimic human interaction more closely. All stakeholders agreed that AI holds unimaginable potential, and it's going to be the key to an exciting future. But for now, most AI use cases are focused on the basics.

Regulatory changes offer opportunities to strengthen market position, and shape the industry

GDPR is now a fact of life rather than a particular burden and because consumer consent is now built into services, this hasn't had a limiting effect on personalisation per se. Data monetisation from bulk data must be done in a privacy-preserving and ethical manner – getting this right is a harder task.

Beyond GDPR, the telecoms sector is used to

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Firms are now able to leverage technology with unprecedented velocity, allowing teams to make innovation decisions with confidence.

operating under high regulatory scrutiny and data is playing a crucial role in helping these organisations prepare for incoming regulatory disruption from Ofcom.

Transforming to an agile, data-led organisation is vital to remain competitive

From the conversations I've had, it's clear that data-led agile approaches are operating effectively on the ground for leaders in the telecommunications industry.

The sensory input from descriptive analytics is enabling continuous improvement of the business organism partly through predictive and prescriptive intelligence. Whilst everyone is accomplishing this with varying degrees of dexterity, all stakeholders strongly agreed that increased business agility equates to a more favourable future – for the business, for the employees and for the customers.

A common theme was the extension of the Digital Revolution into a new era of data transformation. Learning from 'customer-obsessed' industry leaders such as Netflix, Amazon and Facebook, telecoms firms are inspired to embrace the hyperfocus on the customer's perspective. Without the data, they wouldn't be where they are today and it drives them forward through every operational change.

Looking ahead, all industries will be dealing with the challenges of the widespread adoption of AI, and using data to create new business models. These will form a defence against a jungle inhabited by what one contributor called the 'data collection monsters'.

Bill Wilson leads on Data and Intelligence Solutions for NTT DATA. He has been wrestling with data challenges in commerce, government and the third sector for over 20 years – ranging from genomics to hydraulics. He acknowledges the help of his collaborator, Simon Driscoll, in writing this article.

Thank you to all interviewees that took part for this article:
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- **Eddie Short,** Chief Data Officer for Telefonica UK
- **Alberto Rey Villaverde**, Executive Director for Advanced Analytics & Data Science, Virgin Media

Reimagining Work

By Pim de Morree, co-author of *Corporate Rebels: Make Work More Fun*

The time for command-and-control is gone. To cope with the level and pace of change, the rules of business planning and management must be rewritten – with flexibility, robustness and self-organisation at the root. Rebelling against the norm is not only advantageous; it's critical.

AVAILABLE AS AN

Audio Read

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Koldo Saratxaga — sage, business pioneer and founder of K2K Emocionando in Bilbao, the Basque region of northern Spain — has a message about detailed plans: they offer false comfort and no more than the notion of control.

Detailed planning may have been standard practice 100 years ago, Saratxaga told us while researching our book *Corporate Rebels: Making Work More Fun.* But he added: "In our modern world, they are far from ideal."

He's right. We no longer live in an era in which identical Model Ts roll off Henry Ford's production line, and it has become no easier to predict what the next year will bring. As the Greek philosopher, Heraclitus observed some 2,500 years ago: "The only constant in life is change."

He was right, too — our world is very different to that of just a few decades ago. And in many respects, fundamental change has been recent.

Organisations have become more complex, and things have been made worse by unnecessary bureaucracy. Many companies and individuals fall into this trap — and the one of trying to predict the future to wrest control from the chaos. Command-

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> **Organisations have become more complex, and things have been made worse by unnecessary bureaucracy. Many companies and individuals fall into this trap.**

and-control is still the way to go, some people believe.

Spoiler alert: it's not.

Prediction is hopeless

Carlos Gershenson, editor-in-chief of Complexity Digest and member of the Board of Advisers at Scientific American, has a firm view on predictability. "Science and engineering have assumed that the world is predictable," he said, "and that we just need to find the proper laws of nature to be able to foresee the future. But the study of complex systems has shown this is misguided."

Gershenson studies complex systems in urban mobility: traffic jams, metro systems, pedestrian walkways. The many interactions between pedestrians, cars, buses, trains and bicycles in these systems condemn them to be complex. "The problem," he points out, "may be that most engineers are taught traditional methods based on predicting what is to be controlled, and they try to improve on those methods. But for complex systems, prediction is almost hopeless. The moment you achieve optimality, the problem changes. The solution is obsolete already."

Adaptation beats optimisation

Instead of trying to optimise systems that can't be optimised, complexity scientists look to adaptation. Gershenson's research provides accessible examples.

"Traffic-light systems," he notes, "are normally timed and programmed in a way that's supposed to be efficient, but the precise number of cars stopped by each traffic light varies constantly. Even if you're basing it on a traffic measurement that it's around 13 cars per minute on average, one minute there will be 20, and another there will be zero, and another there will be six."

Co-ordinating programmed traffic lights to keep traffic flowing is a tough one. It gets more demanding the more intersections there are to be coordinated — and the picture is constantly changing. Attempts at prediction are futile. "Since optimisation is so computationally demanding, you need to use adaptation," says Gershenson. "Self-organising traffic lights have sensors that let them respond to traffic by modifying the timing of the signals. They are not trying to predict, they are constantly adapting to the changing traffic flow. But if you can adapt to the precise demand, then there is no idling."

The only reason for cars to be stationary is because other cars are crossing. "The traffic light tells the cars what to do. But because of the sensors, the cars tell the traffic lights what to do, too."

Swarm intelligence

That shows the potential of adaptability in complex systems. In the pioneering organisations that we have researched over the years, we've seen similar approaches. Pioneering companies – such as Irizar, Haier and Morning Star – have created their own complex adaptive systems. So have service providers such as Centigo, Nearsoft, Buurtzorg and Vagas.

What they do is recreate a natural phenomenon first observed in ant colonies.

Tom Connor, commenting recently on the work of Eric Bonabeau and Christopher Meyer[1], observed:

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> **Pioneering organisations structure themselves in a way that allows these characteristics – flexibility, robustness, and self-organisation – to flourish. They split into autonomous units, find a balance between co-operation and competition, let go of central control, and value feedback from the various units.**

"Social insects work without supervision."

Bonabeau and Meyer note that insect teamwork is largely self-organised, and coordination comes from interactions between individuals in the colony.

"Although these interactions might be primitive – one ant merely following the trail left by another, for instance – taken together they result in efficient solutions to difficult problems, such as finding the shortest route to a food source among myriad possible paths," say Bonabeau and Meyer. "The collective behaviour that emerges from a group of social insects has been dubbed 'swarm intelligence'."

It's something displayed by flocking birds, hunting hawks, schooling fish and even growing bacteria. Connor has identified some of the common characteristics.

- **Flexibility:** the organisation can adapt to a changing environment.
- **Robustness:** the group can perform even when one or more individuals fail.
- **Self-organisation:** activities are neither centrally controlled nor locally supervised.

Pioneering organisations structure themselves in a way that allows these characteristics to flourish. They split into autonomous units, find a balance between co-operation and competition, let go of central control and value feedback from the various units. The point, however, is that the way we tend to look at management science is as outdated as the use of centrally controlled traffic lights. There was a time and place for that – just as there was for traditional command-and-control management. Note the past tense. That time is gone.

Reimagining work

If 2020 taught us anything, it's that trying to predict the future makes little or no sense. All those carefully crafted corporate plans were swiftly dispensed with as coronavirus spread. But this 'black swan' event didn't break the traditional management model; it was broken well before the pandemic struck.

Think of 2020 as a sneak peek of the ever more complex, globally interconnected and unpredictable future that awaits us. We need to reimagine organisations and reinvent work. We should move from optimisation to adaptation, from top-down stubbornness to swarm intelligence.

The pioneers we learned from, and profiled in our book, have shown us another path: one that leads to a better way of working.

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Pim de Morree is a co-founder of Corporate Rebels. He quit his corporate job in 2016 out of frustration caused by the old-fashioned and outdated ways of working that are still prevalent for many today. Pim's mission was to make work more fun, and today he travels the world to research the world's most progressive organisations. Named as one of the 'new voices re-energising management', Pim and co-founder Joost have won the 2019 Radar Awards well as being rated by Thinkers50 as among the Top 30 Emergent Management Thinkers.

CXO
BY NTT DATA

VIDEO

Delivering a Sustainable Future Through Digital Transformation

Interview with Mario Attubato, Head of Digital Transformation, Saipem

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Mario talks to CXO about his journey from consultancy to the energy transition, about Saipem's vision of a sustainable future, and how digital transformation provides the platform for the cultural changes needed to make the vision a reality.

Why Small Teams Are The Engine For Agile Transformation

By Neil Perkin, author of *Agile Transformation*

In agility, less is definitely more. From communication to productivity to trust, small teams are one of the critical factors in making enterprise agility a reality – and a success – for any business.

3 people, 3 lines | 4 people, 6 lines | 5 people, 10 lines | 6 people, 15 lines
7 people, 21 lines | 8 people, 28 lines | 9 people, 36 lines | 10 people, 45 lines
11 people, 55 lines | 12 people, 66 lines | 13 people, 78 lines | 14 people, 91 lines
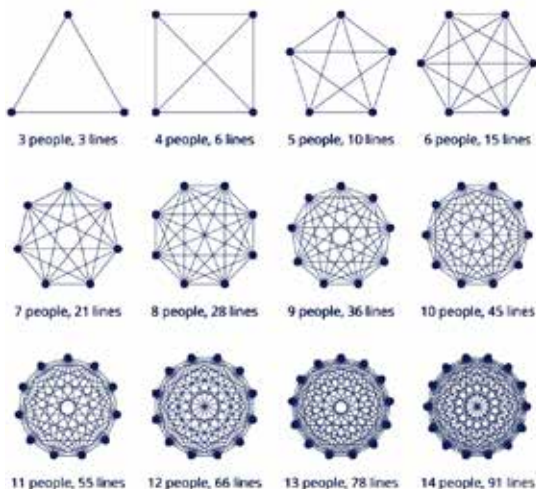
Greater organisational agility comes from empowered teams that perform well in solving the challenges that really matter to the business. But those teams don't need to be big. Small, multidisciplinary teams empowered by digital technologies can generate a disproportionate amount of change and value in transformation programmes and beyond.

There is a temptation in large businesses to throw resources at problems, assuming that more brains and bodies mean better solutions. Internal politics result in people being included in processes who don't really need to be there and don't contribute much value. Representatives of functions that may only be needed at critical points get included in the project team from the beginning and have to attend every update meeting. The result is 20+ people sat in a room trying to move a project forwards. Everything slows down.

The reality is that more is not better for team effectiveness. Harvard professor (and specialist in team dynamics) Richard Hackman has shown that one of the key challenges with large teams is the growing burden of communication[1]. Put simply, as group size increases, the number of unique links between people also increases, but exponentially.

Communication in teams is subject to a combinatorial explosion. In other words, as people are added to the team, the lines of communication are subject to a rapidly accelerating increase. Communication overhead increases dramatically, which very quickly comes at the expense of productivity.

Innovation flourishes in small teams

Small teams have other benefits beyond the ability to align, iterate and move fast. They are also more likely to generate new ideas. An analysis of more than 65 million papers, patents and software projects from science and technology found that whilst larger teams more often develop and consolidate existing knowledge, small teams are far more likely to introduce new and breakout ideas[2].

James Evans, one of the authors of the study and a Professor of Sociology and Director of the Knowledge Lab at the University of Chicago, described how larger teams tend to build on recent successes: "Big teams are almost always more conservative. The work they produce is like blockbuster sequels; very reactive and low-risk."

Small teams, on the other hand, are more likely

to come up with disruptive and innovative research and ideas, and appreciate the potential of the work they are doing.

Hackman defined four key features that are critical to creating an effective team in an organisation:

Common team tasks that work towards fulfilling a compelling vision

1. Clear boundaries in terms of who is in the team, information flow, and alignment with other resources, priorities, policies and teams
2. Autonomy to work within these boundaries
3. Stability.

It's therefore critical that we understand the difference between a real team and a looser 'coacting' group and how a (surprisingly common) lack of clarity, direction and autonomy impairs the ability to move fast.

Big players know the value of small teams

Jeff Bezos, focused on retaining agility as Amazon scales, has famously described how teams in the company should get no larger than the number of people it takes to feed with two large pizzas (6–8 people). An effective small-multidisciplinary team is

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> **The multi-disciplinary composition of the team is essential to achieving outputs and encouraging diversity. We tend to pick like-minded people to work with. Yet performance and creativity improves with greater diversity – including cognitive diversity.**

comprised of the people and skills areas needed to achieve key outcomes and no more.

Assembling smaller teams is important because it avoids not only communication problems, but also team scaling fallacy (the tendency for people to overestimate team capability and underestimate task completion time as team size grows) and relational loss (the feeling that it is difficult to get support in large teams).

The multi-disciplinary composition of the team is essential to achieving outputs and encouraging diversity. As Richard Hackman points out, homogeneity of team membership can often be a real problem in project teams since we tend to pick like-minded people to work with. Yet performance and creativity improve with greater diversity, including cognitive diversity and having a substantive range in views about how the work should be structured and executed: "It is task-related conflict, not interpersonal harmony, that spurs team excellence."

One recent example of how small teams can empower greater agility is how Haier, one of the largest consumer electronics businesses in the world, was able to respond to the Covid-19 pandemic. Haier has a workforce of tens of thousands of employees who are organised into more than 4,000 microenterprises (MEs), many of which have only 10-15 employees. These MEs act as a network of small companies within the larger company, each with their own profit and loss account. They focus on specific business and customer groups and needs, with a high level of flexibility to adapt as required without lengthy, bureaucratic sign-off.

This flat and nimble organisational design enables the company to respond quickly to rapidly changing contexts. After the Covid outbreak in January 2020, Haier was able to fulfil 99.8% of orders throughout February and return to full capacity by the end of that month.

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Digital technologies have transformed the dynamics of team contribution. Small, empowered teams can originate transformational ideas and successfully apply their capability to build and execute those ideas well. It's time we reimagined how we resource value creation in business.

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Neil Perkin is the author of *Agile Transformation: Structures, Processes and Mindsets for the Digital Age* (Kogan Page), and is a keynote speaker and consultant in organisational agility and digital transformation with a broad range of multinational clients including Vodafone, Unilever, Astra Zeneca and Google.

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The CXO Podcast by NTT DATA

Episode 3
with Pamela Meyer
& Carmine Paragano

The Leader's Agility Mindset Shift: Pamela Meyer & Carmine Paragano

CXO speaks to Pamela Meyer Ph.D, leading Agile Innovation expert and author of *The Agility Shift*, and Carmine Paragano, Senior Engagement Manager at NTT DATA Italia – about how the current Covid disruption is a precursor to the continuous change enterprises will need to deal with this decade, and why agility across all functions of the organisation is key to survival in this new world.

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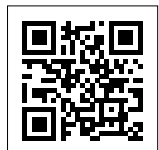
The Surprisingly Simple Formula for Smart Working

By Caterina Limido, Operations & Employee Transformation Associate Director, NTT DATA Italia

As we enter a new era of work, three key elements can help employee and employer alike respond favourably to the shift: communication, learning and a reimagined workplace. Taken together, these elements offer a model for truly smart working.

The recent pandemic is transforming society at all levels, bringing significant changes in our personal and working lives. We are experiencing a completely new dimension of work compared to a year ago; social distancing has led companies to put in place different solutions to allow activities to be continued remotely.

After more than a year of dealing with Covid, what is emerging is a new working model based on a hybrid approach, which allows employees to work 'anytime, anywhere', according to their role and type of activity. When this happens, leaders will face the challenge of simultaneously supporting office workers and remote workers.

This approach completely transforms the way we think about work: from physical presence in the office to the possibility of defining where and when we work; from measuring the performance and productivity of employees on a working time basis to a goal achievement evaluation; and from processes based on interactions, physical collaboration and paper exchange to digital practices, that guarantee high-quality output even when working

autonomously or with digital-only collaboration.

This transition does not concern only the organisational and operational aspects of work, but the whole culture: the engagement, the collaboration and the involvement in the innovation processes of all the employees, who will spend less and less time physically at the company.

According to the global 'Rise of the Hybrid Workforce' survey from October 2020, post-Covid, more than half (58%) of employees will work eight or more days each month from home, and 98% of meetings will include participants joining from home[1]. This means almost every organisation is going to need plans for supporting both in-office and remote workers.

Communication for a sense of belonging and engagement (even remotely)

When working remotely and live meetings are considerably reduced, effective communication to involve and guide employees toward new challenges and new ways of operating while, at the same time, making them participants and 'fans' becomes even more important.

This matter concerns management at all levels, which is called upon to implement clear, transparent, and regular communication.

Communication must give employees a clear view of strategy, purpose and trust while promoting initiatives that help develop a sense of belonging and engagement.

Digital tools such as virtual events, podcasts, webcasts, newsletters and webinars, combined with engagement tools to interact in real time with employees, can help to reduce the constraints arising from the possible distance between people. These tools encourage a new way of experiencing professional relationships and keep the work culture alive.

Smart working also means smart learning

Research conducted by the Fosway Group in May 2020, involving 108 European organisations, showed that 94% of L&D professionals had to change their training strategies in response to the

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> **This approach completely transforms the way we think about work – from processes based on interactions, physical collaboration and paper exchange, to digital practices that guarantee high-quality output even when working autonomously.**

pandemic[2]. Two out of three declared that they had made significant changes with respect to the content and methods of their work activities in the field of organisational training.

This is to be expected, as adopting new digital processes and new ways of working also requires reskilling and upskilling of employees. And whilst training enables employees to acquire or strengthen their soft skills – such as work by objectives, time management, collaboration and delegation techniques, as well as digital skills related to the effective use of available platforms and technologies – training, too, must evolve. It will not be based just on classroom courses with the classic top-down approach. But it will be organised in a "smart" mode leveraging employee engagement, i.e. accessible through self-learning methods and digital platforms. HR will certainly continue to play an important role in directing people towards specific paths of professional growth, but the employee will be able to play a new active role, becoming the protagonist of training choices, thanks to the availability of different contents to choose autonomously, both to fulfil specific tasks and for professional growth.

The introduction of social learning and gamification mechanisms (scores, levels, missions, challenges, achievements and rewards) also encourages involvement as well as increasing

motivation for employees to achieve their growth and development objectives.

Social learning also allows organisations to take advantage of the 'knowledge masters' – employees who, over the years, have acquired a huge amount of knowledge and skills specifically relevant to the company (i.e. tacit knowledge), who can then share this knowledge with new generations.

All this enables the creation of personalised learning paths, varied and adaptable to all changing needs, stimulating not only lateral thinking and the generation of innovation, but also individual involvement – making each employee an active part of their own professional development and, consequently, of the company's growth.

The workplace, reimagined

In this context of hybrid work, where presence in the office will alternate with work elsewhere, the concept of the workplace itself must also change.

In recent months, it is emerging that offices should no longer be considered as places to carry out work activities, but locations where knowledge is exchanged, ideas are shared and professional relationships are established.

A change will occur in the concept and layout of physical offices favouring spaces designed to encourage exchange and collaboration between

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company employees and with customers or partners.

These spaces will facilitate the free flow of ideas with a company's whole ecosystem, leading to solutions and innovations that transcend the boundaries of the individual company. This also allows greater flexibility, as companies will have use of physical spaces (not owned by them) dispersed across geographical regions.

The new hybrid office concept will therefore have to be extended, able to guarantee continuity between the physical place and the digital workplace. It will be a virtual workspace where you can find information of interest, where the services offered by the various functions are available and where colleagues can interact, asking questions, exchanging opinions, proposing ideas and sharing material and documents.

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For organisations, the real challenge at the moment is to be able to drive this transformation of the working environment, keeping in mind that the endpoint, the new normal, is not defined, but it is in continuous evolution.

Every company must set up agile change management models, based on iterative and incremental approaches, and rethink organisation design with communication, learning and a collaborative, hybrid workplace at the centre.

In order to respond to the age of disruption, the readiness – and appetite – for change must be carefully nurtured through corporate culture, eliminating those barriers that the pandemic has shown us are not insurmountable.

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Caterina Limido has more than 20 years of experience in digital transformation, process optimisation and change management projects, supporting different clients across different industries.
Since 2018 her skills in talent attraction, development, best practice, and human capital process have led her to be responsible for Nord Italy Office Consulting Resource Management.
In 2019 she became Head Operational Excellence and Employee Transformation practice in Consulting Italy.

Inspire Organisational Agility, Don't Command It

By Sarah Elk, Darrell Rigby & Steve Berez, co-authors of *Doing Agile Right*

By treating staff as customers, letting go of perfectionism and ensuring teams are both empowered and encouraged to make decisions, leaders are giving their organisations the best chance of success amidst this time of great uncertainty. When people feel part of the change, as opposed to subject to it, the true benefits of agility can be realised.

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> ## By cultivating a mindset of trust rather than control, leaders give their company its best shot at transformation.

For many companies, Covid-19 made speeding the pace of internal change more urgent. Now, as leaders plan for and invest in a future in which Covid-19 becomes more manageable, they are doing so with new insight into their organisations' strengths and weaknesses. Typically, executives are looking to do three things: build needed capabilities, support innovation and accelerate growth.

By taking an agile management approach, including cultivating a mindset of trust rather than control, leaders give their company its best shot at transformation. But leading an agile transition takes work and requires the organisation to become less boss-centric and more customer-centric.

Clear sight

An agile transformation typically begins with the leadership team developing a guiding vision and then using that to communicate the potential benefits of an agile enterprise to the broader organisation. This vision isn't developed behind closed doors and then sprung on the organisation as commandments written in stone. Agile leaders view those who will implement agile activities as customers. So they collaborate with their customers and together create the vision and the strategies for achieving it with full transparency. That's the first divergence from the norm.

Next, leaders and their 'customers' together discuss possible alternative directions. They identify the key questions that must be answered to determine which course of action has the best

chance of success. Then they jointly develop metrics for inputs, activities, outputs, outcomes and purposes that will help them monitor and adapt to the answers to those questions. In an agile transition, hundreds or even thousands of employees attack problems at their root. This can feel quite different for companies used to a small team at the top trying to figure out a company's problems and make the necessary changes.

The agile leader's checklist

Agile isn't a project, so agile leaders don't expect a completion date. The transition is a perpetual improvement process. It is the role of the agile leader to help people make decisions faster and with less information than traditional teams have. To do so, agile leaders typically do five things:

1. **Communicate – even overcommunicate – the strategic ambition to a broad range of people.** Agile leaders will be delegating far more, so they must ensure the people making those delegated decisions are aligned on what to do and why to do it. That's how they are both flexible and faithful to the strategy.
2. **Build decision-makers.** People are afraid to make mistakes, so they bring decisions to their bosses. Strong leaders act as coaches and trainers to expand the quantity and quality of decision-makers.
3. **Strengthen direct communication among their teams.** To avoid becoming a bottleneck, agile leaders develop tools that ensure everyone

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Agile isn't a project. The transition is a perpetual improvement process.

can see what every team is doing at any time.

4. **Emphasise progress over perfection.** Agile leaders embrace unpredictability and understand that adequate approximations will do.

5. **Shift measurement and reward systems to larger teams.** People focus on doing what is best for the individuals they know and trust, often those in their silos. Effective agile leaders enlarge circles of trust and collaboration.

Transformation without chaos

The leadership team determines how far and how fast to go with agile. In keeping with agile principles, the team doesn't plan every detail. The group has laid out a vision but recognises that they do not yet know the answers to many critical questions, such as how many teams they will need, how quickly to add them, or how best to address bureaucratic constraints without throwing the organisation into chaos.

So they test and learn. They launch an initial wave of agile teams, gather data on the value those teams create and the constraints they face, and then decide whether, when and how to take the next step.

A system like this makes it possible to weigh the value of increasing agility – in terms of financial results, customer outcomes and employee performance – against its costs in both financial investment and organisational challenge.

If the benefits outweigh the costs, leaders build on the momentum and continue to scale up agile. If not,

they can explore ways to increase the value of the agile teams already in place. They may accomplish this by removing organisational barriers, upgrading prototyping capabilities or lowering the cost of change by publicising agile successes and hiring experienced agile enthusiasts.

Above all else, good agile leadership teams avoid treating an agile transition as an authoritarian project, commanding their teams to "do what I say, only faster." By approaching an agile transformation with a mindset of trust rather than control, leaders are most likely to get the results they hope for.

Sarah Elk is a partner at Bain & Company, based in Chicago. She heads the firm's global operating model practice. **Darrell Rigby** and **Steve Berez** are both partners at Bain's Boston office. Darrell heads the firm's global innovation and agile practices; Steve is a founder of its enterprise technology practice. They are the authors of *Doing Agile Right: Transformation Without Chaos* (Harvard Business Review Press, 2020).

Learning to Transform: How Collaboration and Care Help Us Deal With Change

By Ram Tandukar, DevOps Principal Consultant, NTT DATA UK

Learning is a critical part of an organisation's ability to transform. The steep learning curve on cloud native migrations offers a useful lens through which to understand how we can improve both training and ways of working, in order to create an agile and future-fit organisation.

In today's business environment, transformation is a constant. With these shifting sands, an organisation's propensity and readiness for learning can be the difference between floundering or flourishing.

My recent experiences show that cloud native migrations acutely increase the learning curve, and that younger employees often learn faster than their more experienced colleagues. With the right engagement and support, a more informed (and more refined) approach to learning can be brought to bear to overcome some of the biggest migration challenges for enterprises.

Helping people make the leap

NTT DATA UK is delivering some large transformation programmes and on-prem to cloud native migrations, all of which involve a significant amount of upskilling and change management as the users adapt to new processes and technologies.

But it is in knowledge transfer that one of the biggest challenges lies. For one client, their transformation journey began with pilot projects,
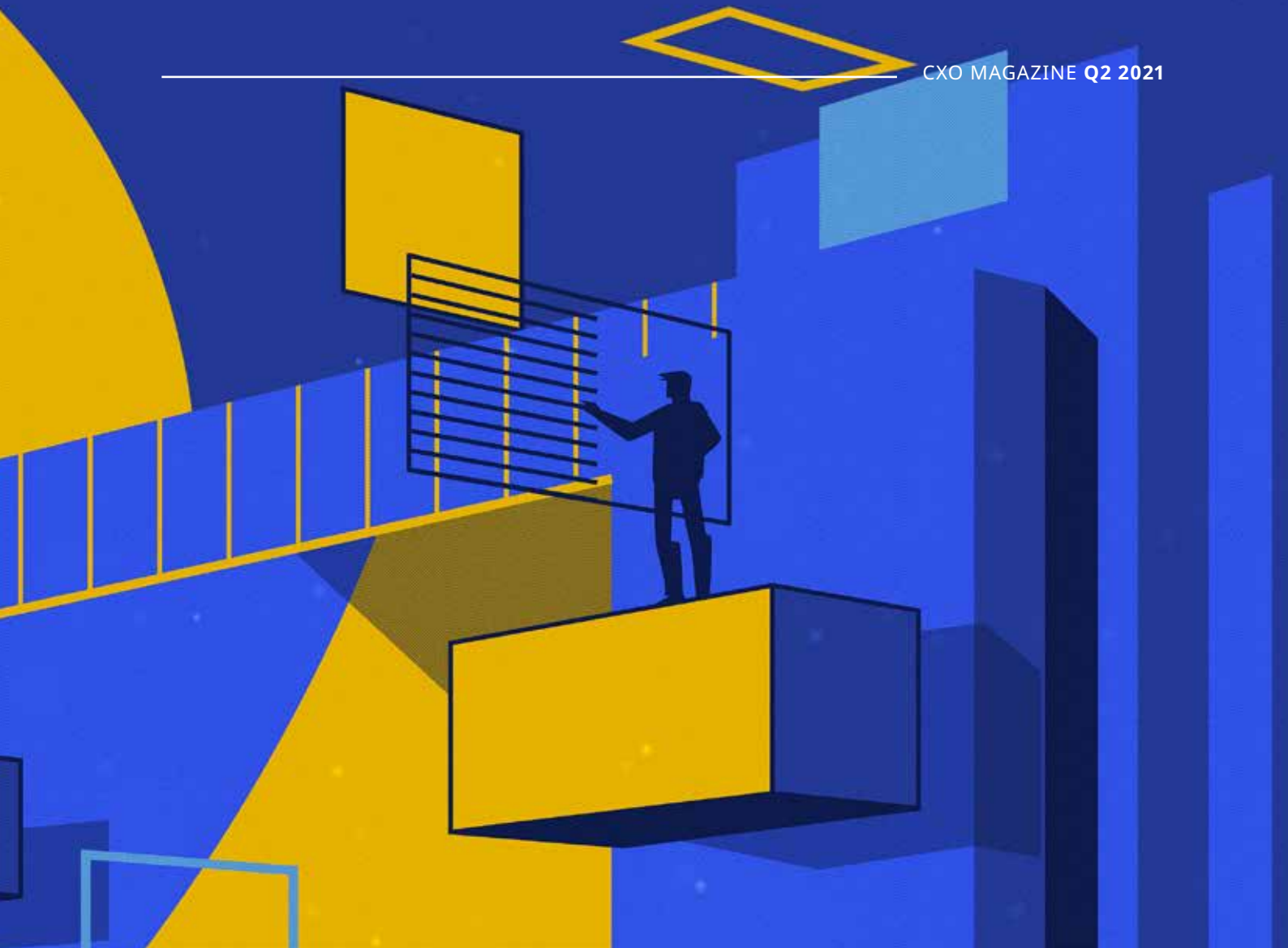
before the larger migration kicked off. Knowledge was concentrated in the platform team, limited to operational staff. Self-guided training exercises were provided along with guidance on using the new platform, but engagement was lacking.

As the pilot continued, we changed tack and started to present the new technologies, demonstrating them in the future target state. But feedback from the client was that their staff were struggling to keep up with topics. Some felt left behind; others felt the leap was too big from their current ways of working. The majority of the staff are highly experienced, professional engineers – it was not expected that it would be difficult for them to learn these new technologies.

The next phase of the migration will only introduce more change into the environment and require a fast rate of learning; we had to refine our approach.

Understanding patterns of learning

Working alongside me at the same client were a number of graduates from the NTT DATA Tech Academy programme. Two were assigned to work with me on a cloud native build-out last year. They had limited IT experience, and little or no experience in cloud or in the Kubernetes platform; so we started with some basic training, but soon moved on to pair programming and working on real-life requests and issues.

Initially, the emphasis was on experimentation and learning – not on delivery. They quickly immersed themselves in the technologies and have progressed faster than their senior colleagues. During this period, the graduates were also asked to constantly reflect on their learning, playing it back to me as their mentor, and their peers in the Academy. This reflective process consistently helped them reset for the next set of tasks, and ensure they

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> # Was it their openness to new technologies and lack of scepticism that helped them progress quickly, and laid the foundation for the next levels of knowledge?

got the feedback they needed.

We considered what it was that resulted in the quicker adoption by the younger cohort than by the veteran employees. Was it their openness to new technologies and lack of scepticism that helped them progress quickly, and laid the foundation for the next levels of knowledge? Perhaps more experienced engineers, overvaluing their existing knowledge, were blocking themselves from letting new information in and potentially 'washing out the old'. All we know is that this phenomenon is very real, and can be crippling to large enterprises unless addressed head on.

Recognising and accounting for complexity

Using the Cynefin framework, if we were to categorise the challenges set out in this cloud native programme, they largely fall into the Complex domain. This is a domain of tacit knowledge – difficult to transfer, difficult to learn. As this domain is also likely to be unclear in direction, there is a greater risk that people will struggle to buy in.

The nature of cloud native technologies is that they are constantly changing. The best solution for the problem at the start of the project might

be obsolete by the end of the project. This domain leads heavily towards collaboration, and encourages prototyping for fast feedback loops to help decision-making. If decisions can't be made now, take a short-term direction and iterate.

This is naturally how the graduates started working. They had the freedom to prototype and feed back with little pressure on them to deliver.

Advocating engagement and reflection

Taking time out to focus on training or a new skill while you are performing your existing role is very difficult. The context switch takes time. Using immersive methods can help engage people when they are on training exercises, so they are more likely to focus and learn effectively.

Similar to DevOps simulators, cloud native simulators and scenario-based learning can enable organisations to play out real-world examples in a safe environment. The next level in immersive learning, in the new remote working world, could very well be VR-based simulation training, which would be ideally suited for simulation style training. Introducing the graduates to a live project early in their training helped them develop their real-world experience.

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Recently on a leadership course, an exercise encouraged us to openly reflect on each other's leadership qualities. It struck me how powerful reflective feedback can be in a learning environment. It is not uncommon in more formal training environments to have these reflective periods to write down or play back what you have learned, but it is rare to find this in a more unstructured learning format.

Taking critical reflection on your work and learning has an important part to play in transformation, particularly in unlearning no-longer-useful old habits. The sheer act of writing it down, and allowing others to critique your interpretation requires humility and courage. Perhaps, the more experienced we are, the harder it can be to critically reflect on our own actions. Straight out of the Tech Academy, the graduates were more open to continuing this style: keen to share, and accepting of feedback.

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The agile organisation is always learning, and with every crisis or unexpected situation comes the opportunity to revisit old assumptions, and make a change that affects everyone positively. Through my experiences, I've learned that when it comes to knowledge transfer, teams must adapt their approach to communications as they go, always taking on feedback and adjusting to maximise engagement, buy-in and ultimately, chances of success. Equally, time and care must be taken to account for the different learning styles of different cohorts. In a complex organisation (and a complex world), distributed decision-making and collaboration is the only way to prevail. And lastly, for learning to be as effective as it possibly can be, leaders must create time and space for reflection and honest self-assessment, if they are to cultivate the environment that best promotes personal – and company – growth.

Ram Tandukar is a Principal DevOps Consultant at NTT DATA UK with a passion for digital transformation, leading both technical and cultural change for clients. A cloud native enthusiast, Ram leads technical teams in their adoption of DevOps principles, introducing new concepts and technologies to accelerate software delivery.

In Depth

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

Lessons from the future

The sudden shock of the changes brought about as a result of coronavirus has passed, and we are now settling into what is likely to be a long period of working from home. Our sister companies, particularly NTT DATA Italia, have been coping with this situation for some time already, and we have benefitted from their experience. We would like to share some of what they have discovered.

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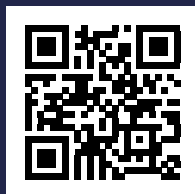
How to make Business Agility a reality

Organisations that are focused, resilient, responsive, adaptable, versatile and able to sustainably innovate are successful. Taken together, these traits are known as 'Business Agility'. The benefits are significant, including better organisational health – the best indicator of long-term performance. Despite this, many organisations struggle, with common challenges holding them back. At NTT DATA, we know it doesn't have to be this way. This paper assesses the underlying challenges and describes our Business Agility framework to help clients thrive in the years to come.

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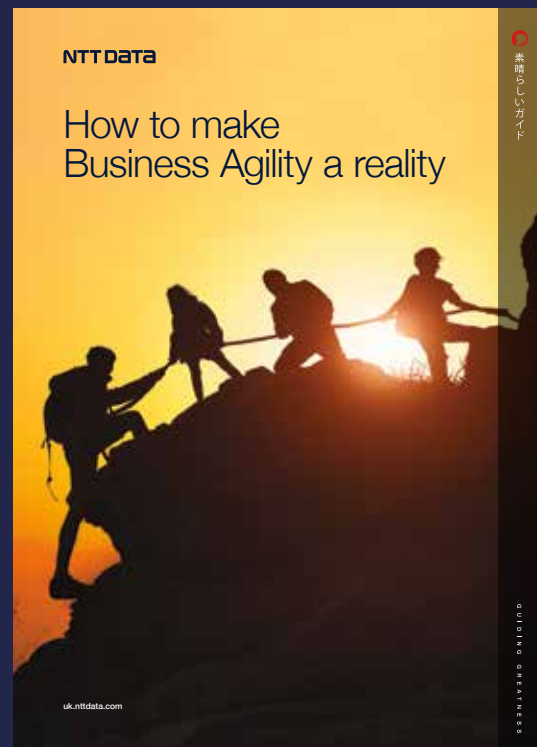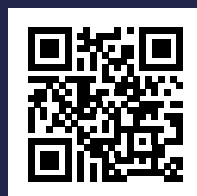
Shaping the change

There are a number of reasons for the pressure to change that many companies are feeling: economic globalisation, unforeseen crises, the rising complexity of business processes, and digitalisation at all levels to name a few. Companies are responding with new structures and processes. In doing so, management has to rely heavily on HR, because every positive change is built on the willingness and skillsets of employees. HR shapes extensive aspects of change and HR managers, therefore, are increasingly becoming change managers – and have to stand the test of this new role.

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Transforming HR

Shaping the Change:
HR Managers as Change Managers

Change is Always an Opportunity

By Radu Iacob, **Head of Project Management, NTT DATA Romania**

Change is the only constant, in life and in business. But change isn't something to be overcome – instead, we should regard it as the catalyst for innovation, agility and organisational resilience. An agile change management approach is the springboard from which businesses can catapult towards optimised processes, better ways of working and a flexible, sustainable enterprise.

From deciding which route to drive to work, to approaching a complex business situation, to navigating a global pandemic – changes are all around and choices we make influence our personal and professional lives on multiple levels, from the granular to the holistic. Change management is therefore a critical investment for any organisation that wants to shift its perception of change from obstacle to opportunity.

Change is a part of life. When it comes to the business, the focus is on how radical change within the business influences employees, processes and ways of working. When a project dramatically changes, how can the business adapt to meet the new requirements at speed? When budgets are influenced by economy or uncertainty, how can the business remain an innovative leader? These are the questions that agile change management will address.

When any part of the business, from project to process, dramatically changes, the organisation has to

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The first step is to embed a flexible and fluid approach to change within the organisation's culture.

adapt. This requires a change management strategy that promotes flexibility and organisational fluidity.

The molecules of the organisation

Projects are the molecules of the organisation. Change within projects is a constant, from timelines to implementation requirements to costs. Delays can, for example, occur because resources were not available on time because the client was unable to address specific issues prior to implementation, or a change in structure or budget allocations. These factors can potentially have an impact on the success of a project, and this is where a robust change management approach is invaluable.

The first step is to embed a flexible and fluid approach to change within the organisation's culture. The ability to flex and adapt to a sudden shift in client approach, stakeholder requirement, or deadline parameter is critical in any environment, and is ultimately only really successful if the culture embraces this ability.

Rigid structures and hierarchies are not designed for the flex and shift that's needed to really adapt to change, or to pivot at speed. This needs to be overcome from the stakeholder level, where change management and flexible approaches to projects and methodologies must be embedded from the top down. Defined by leadership, and delivered by process and transparent communication, agility can become an inherent part of the company culture.

With this approach embedded within the foundations of the organisation, project management and change management will become immediately more agile and flexible in their

approaches. This has the added value of delivering robust solutions to client problems without adding complexity and by mitigating risk.

By allowing people to address the change on a granular level, and to make change where it can benefit the process, the business will be immediately more capable of adapting to the unexpected.

Measured and steady

The past year demonstrated how easy it is to come to a crashing halt when faced with a wall of unexpected change. Budgets were cut, projects halted, businesses ended. Fear drove decision-making. Investments were re-examined and budgets placed under a microscope.

For those companies that had already embraced the volatility of change with agile change management planning, this unexpected global change was less of a hurdle – and more of an opportunity. They were able to adapt their approaches, refine their solutions and find innovative ways of delivering maximum value to customers that were flailing in the waters of uncertainty.

This agility came from a culture that was ready to embrace change and pivot. And from the ability to adapt to the new and the unexpected on demand. Organisations with strong digital toolkits were able to move their people offsite and online purely because they were physically prepared to make the necessary changes to their approaches. There were many companies with solid cloud investments and digital transformation strategies that struggled to make a smooth move to remote

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Defined by leadership, and delivered by process and transparent communication, agility can become an inherent part of the company culture.

working, as they were reluctant to let go of old processes and frameworks. The struggle was mainly to mentally accept the new way of working online and to exploit the features of the online technologies at a maximum.

Today, those companies that clung to the traditional and the known are still struggling to find their feet in a global market that's defined by digital agility. In opposition, companies where people are engaging across multiple platforms and locations, delivering on high-end projects from kitchens and lounges, and ensuring engagement from sofas and settees, are in the front of the market contingent. The where of the work has been replaced by the how, and agile approaches to change have become best practice to ensure sustainable stability.

Developing the 'change as opportunity' mentality

Looking to the year ahead, the factors compelling businesses to adapt encompass working practices (remote working / limited physical interaction), organisational change, and global change. To address these constantly moving goalposts, companies need to focus on change management approaches and methods that allow them to not just build change into the culture, but provide people with the support they need to thrive in mercurial environments.

Ways to optimise this support include:

- Managers engaging with individuals;
- Providing more insight into team structures and the line of business;

- Changing processes to accommodate the lack of physical interaction;
- Transformational coaching that enables and empowers people so they are increasingly open to change; and
- Selecting change agents within the business whose sole role is to drive change.

These simple steps can play a huge role in shifting the dynamic within your business, in order to both change the perception of change, and to reimagine processes and practices. Change can shift from an obstacle to an opportunity, strengthening business foundations. Like buildings designed to withstand the phenomenal forces of earthquakes, companies designed to adapt to change can withstand the force of market (and global) disruption.

Radu Iacob has over 20 years' experience in Project Management managing large programs and projects in IT&C, portfolio management experience, as well as great experience in finance, social development, infrastructure, micro-credits and procurement in World Bank projects.

VIDEO

Enterprise Agility and the Age of Disruption

A film by **NTT DATA**

The new normal is uncertainty, and this coming age of disruption requires enterprises to continually learn and adapt to their changing business environment. The emerging post-covid world will show that enterprises without the ability to continually adapt to current and future change will be unable to compete effectively.

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The Third Way: A Paradigm Shift in the Organisational and Social Models of the Workplace

By Carlo Bardone, Chief Institutional Relations and Business Development Officer, NTT DATA Italia

In Italy, there is an experiment going on to redefine everything we think about the modern workplace. A consortium of corporations is sharing spaces and creating "zero kilometre" offices, designed to promote relationships that transcend generational and sectoral boundaries – and overcome the conundrum of working safely and effectively in a post-Covid world.

Covid has left a profound mark on the way we work. Companies have realised that the presence of employees in the office is not essential. People have adopted working from home as a default, only travelling to the office for very specific needs. In essence, we have experienced a completely new approach to work – one disconnected from physical workspaces and more suited to our private lives.

However, as individuals, we have undergone the negative aspect of physical separation, such as the feelings of loss:

• The loss of a sense of belonging (to an organisation)
• The loss of relationships with colleagues

All of this has also overlapped with another important change in the world of work: younger people are looking for purpose[1]. The majority of millennials – who are estimated to make up three-quarters of the workforce by 2025 – won't work for employers without a strong policy on corporate social responsibility, with 83% saying they would be more loyal to a company that helps them contribute to social and environmental issues[2].

Compared to previous generations, the leaders

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The leaders of tomorrow need stronger engagement: more guidance, but less control.

of tomorrow need stronger engagement: more guidance but less control.

Designing the post-pandemic workplace

How can the business community design a new way of working, and new ways of learning, that avoids the risk of returning to work as before? And what happens in a post-Covid world?

No one has all the answers; but together, by pooling our experiences, ideas and innovations, companies can collaboratively shape the organisational and social make-up of work – fit for the new world we find ourselves in.

The learning curve for businesses has been steep, but just as much so, awareness of the changing nature of work has greatly increased for the individual too.

The workplace, as we know it, no longer needs to be a physical space.

And the physical space, the office, is no longer to be considered as just facilities and coworking places, but also as 'distributed' places, preferably close to home and which promote the creative exchange that is the basis of any innovation.

The Third Way

This is how the Smart Alliance was formed: an agreement of 32 companies in Italy which are part of Elis Consortium and whose president is the CEO of NTT DATA EMEA, Walter Ruffinoni. The goal of the alliance is to identify a new solution to the workplace needs of today – a third way – that is neither wholly office-based nor totally work-from-home.

This third way aims to bridge presence and distance, to make agile work more sustainable over time in physical places shared between companies. These new physical places are called 'relational gyms'.

By 'relational gyms', we mean the places of collaboration that connect people and allow them to work together and learn from each other. These are offices, made available by companies or universities that are members of the alliance, in which human collaboration is facilitated by 'community managers', to generate ideas and thus stimulate creativity. In these centres, people can carry out their work remotely from the company headquarters (distance) without being isolated as they are physically in a coworking space (presence).

Smart Alliance aims to find office space distributed throughout territories so that each company can offer its employees a central hub (i.e. its headquarters in the town), plus a number of 'relational gyms' in the area within walking distance of the homes of employees (so-called 'zero kilometre offices').

In the suburbs of the big cities (at company offices, railway stations, sports centres, schools and universities, etc.) people could avoid travelling to the city centre. And if these spaces were available in rural villages (for example, in Southern Italy), this would reduce the depopulation of these areas.

First steps to a new way of working

How can this new working model be implemented? The Smart Alliance project has four fundamental steps, each lasting six months:

1. **Engagement:** The first step is the engagement of the CEOs to participate in the project. Targeted meetings are held to explain the initiative (approx. 100 CEOs involved from October 2020 to April 2021).

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By pooling our experiences, ideas and innovations, companies can collaboratively shape the organisational and social make-up of work – fit for the new world we find ourselves in.

2. **Pilot:** The second step (after the onboarding of a number of companies that have made their offices available to share) is to carry out a pilot on a subset of offices, in which to test the model. In this phase, we define the model in detail, design the shared spaces and ecosystem. Everything is managed by a technical team made up of resources from HR and Facilities.

3. **Measurement:** The third step will be experimenting and measuring pilot outcomes against KPIs.

4. **Improvement and rollout:** The fourth step will be the fine-tuning of the model and the model's rollout in other parts of the territory.

We have completed the first phase, and the Alliance project is currently in the second phase. Over 30 companies have agreed to participate so far, and our results include:

- Five experimental sites: in Milan (two sites), Rome (two sites), Naples, Catania and the remote city of Trapani, to test the setup in a village.
- The selection of seven 'community managers' (one for each location), responsible for the mobilisation of the 'relational gyms'.
- 300+ ambassadors or 'experimentation pioneers' (approx. 10 per company) who will be equally distributed in the 'relationship gyms' and will champion the integration of these places with the corporate office and the home.
- KPIs identified to assess the impact of these places on the wellbeing of people, including:
  - Overall wellbeing (good physical and mental health)
  - Creativity (ability to absorb and/or generate new ideas, both cognitively and through direct action)
  - Social impact (i.e. positive impact on the local community)

One of the lessons we have learned so far is that, when designing new post-Covid work models which aim to promote wellbeing, it is useful to integrate sports activities into the corporate culture.

The scenario is still fluid. It is necessary to remain agile and flexible and to customise the model according to the specific company and types of activity.

Now, for the Smart Alliance project investigating the Third Way of working, all that remains is to start the experiment...

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At NTT DATA Italia, **Carlo Bardone** ensures the consolidation and development of strategic relationships with Government, Associations, Institutions, and the top management of Corporations.

He is Vice President Energy & Utilities Italy, Head for MU Gas Network and Engineering, President of Innovative Sector and Vice President ICT Group & Services in Assolombarda (Italian Industrial Association). Carlo is also an Italian Delegate in the global Digital Transformation task force for the G20 Business Summit (B20).

Working Without Boundaries and the Enterprise of Tomorrow

By Adela Negru, COO, NTT DATA Romania

Agile organisations are defined by how closely they've looked at costs, technology and digital innovation and leveraged these to survive in times of uncertainty. Learning from this approach, businesses can reap the benefits of cultural flexibility, process agility, and operational adaptability – allowing employees to work without boundaries while still achieving benchmarks of productivity.

Disruption is hardly new: it has always been on the enterprise agenda, and effectively defined the methodology and practices of the hungry startup. But it hasn't been as consistent, as relentless and as widespread as it has been over the past year. Disruption has not been confined to one area or industry, but a global event that has ignited rapid digitisation and accelerated technology adoption.

It has driven the world into an age where data and insight is king, and put pressure on the enterprise to invest into tools and solutions that both reduce costs and help people work more efficiently – in effect, solutions that embed ongoing agility.

The pandemic has redefined the world of work and transformed how both employer and employee engage with business. Now it is time to shape this disruption into organisational agility that has long-term value and gets results.

Equipping employees

The future of work is reliant on the organisation's

ability to embrace remote working and a geographically diverse workforce, and to put the right tools in place that fully realise the potential of that workforce.

Employees, regardless of location or preference, still need to engage with the business and collaborate with one another to get results. Agility lies not just in allowing for this remote workforce to evolve, but in how the business approaches the technologies, frameworks and methodologies that enhance this evolution.

The global pandemic was just a confirmation that the enterprise can thrive working from anywhere. This freedom to work from any location isn't a perk anymore: it's the next normal of work, and it has opened up new ways of approaching how

organisations engage with employees and catching the attention of sought-after talent.

Flexibility across the board

It's very likely that labour contracts and approaches to employee retention will evolve alongside the new ways of working. Currently, contracts and employment engagements tend to focus on the traditional working schedule (the 9-to-5 work day with 21 days of leave).

This will change in the agile workplace. Instead of hours, people will be contracted on services, key performance indicators (KPIs) and measurable objectives. They will be paid according to what they deliver as a service and how well they deliver it. If they can do their work in four hours a day, the rest

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The pandemic has redefined the world of work and transformed how both employer and employee engage with business. Now it is time to get results.

of the day is theirs, not the company's.

It's an evolution in how organisations look at their key resource – people. And how this resource can be more effectively managed to reduce overheads and the HR burden, while simultaneously attracting the right talent.

In the current climate, there are skills that are incredibly hard to find and retain, such as data scientists, cybersecurity specialists, and artificial intelligence (AI) engineers. These are the skills that are most needed by organisations looking to gain an advantage in a hyper-competitive, volatile market. If the enterprise can offer packages that are customised around deliverables and capabilities – as opposed to hours and mandated time at the desk – then they are already ahead of the pack.

This change is not just evident within the enterprise, either. It's a trend shaping how talented people approach their own future and work structures. They are evolving their own skills and packages to align with the service-driven economy, to become as agile as possible in a world that sits constantly on the edge of change.

Working practices as agile as the digital world

Skilled employees will be paid for what they deliver as a service. Companies are paying a lot of money for eight hours a day, forcing people to sit at their machines for mandated periods of time. Imagine if this evolved to become as agile as the digital world? Where contracts, working hours and methodologies are flexible, fitting into the spaces they are needed.

People have tasted the future of work. They've discovered what it means to combine working from home with life. They've found new ways of having meetings and ticking off their to-do lists while spending time with their families and living their lives. Will they really want to go back to a desk when the pandemic dies down?

It's about customisation, too: flexible ways of working will not fit every industry and individual. Some prefer the office, others the home, and others can't do their work from anywhere but the physical place of business. Agile working practices aren't defined just by home or remote work, but by the organisation's ability to adapt its approaches to suit

> " **Agility lies not just in allowing for this remote workforce to evolve, but in how the business approaches the technologies, frameworks and methodologies that enhance this evolution.**

multiple methodologies and requirements, at a time when digital allows this flex with ease.

Intelligent engagement

Companies will have to change their processes on the inside to ensure they are capable of withstanding this change. Processes, structures and procedures will need to evolve to ensure that a company is capable of handling varied employee requirements and working conditions, without compromising on quality or engagement.

Complicated processes with overheads and red tape must be replaced with simplicity, ease of access and streamlined costs. Workflows reshaped and refined to adapt to how people will flow within the business, and every step taken with a clear eye on the ultimate finish line will lead to an engaged workforce that delivers results.

The founding principles of the successful enterprise of tomorrow lie in agility, flexibility and intelligent engagement. By eliminating inefficiencies in both cost structures and processes, enterprises can simplify and at the same time boost engagement

with a company culture that's focused on results.

Organisations have to change at their very core to ensure that their people and processes remain competitively agile in the future, and capable of withstanding whatever uncertainty may lie ahead. This change is not exclusive to the enterprise, either. Clients and employees will have to join companies on the road to achieving agile velocity and efficiency. These are the keys to empowering people and creating a future-proof culture that's more favourable on the bottom line, and faster with innovation and growth.

Adela Negru is responsible for Sales and Delivery. She began her career 12 years ago in HR and has previously held positions such as Integration & Career Development Manager and Head of Workforce Management at NTT DATA Romania.

Culture and Commercialisation: The Best Way Forward For Fans

By Christoph Schindler, Managing Director VfL Gummersbach

The potential for digital technology to revolutionise how people interact with sport has been brought into sharp focus over the last year, with the pandemic forcing the industry to rethink how they provide the best service they can for fans. A German handball club has an inspiring story of how to reconcile old cultural values with new commercial demands.

> " **At the heart of the club's transformation is collaboration: they are now the centre of an ecosystem that benefits not just them, but the fans, the players and the sponsors.**

A small but mighty sports club in Germany is showing the way toward a perfect blend of heritage and modernisation.

The Verein für Leibesübungen (or 'association for physical exercises') from the town of Gummersbach – VfL Gummersbach for short – is best known for the success of its handball team. But as the club grapples with reinvention to match 19th century ideals with 21st century demands, the benefits of embracing digital transformation are becoming abundantly clear.

Past and future

Established in 1861, VfL Gummersbach is the oldest and most prestigious handball club in Germany, but it hasn't been without its difficulties. With serious budget issues threatening its survival, the club has had to face up to the reality of operating as a commercially, as well as culturally, focused organisation.

The non-profit roots of the club mean that its primary goal is (and remains) serving the fans. But with a little help from transformation partner NTT DATA, they have managed to leap forwards in operating as a commercial entity. Technology has been key, as has a collaborative approach to defining how to continue best serving the fans in a new, digital (and socially-distanced) world.

Getting up to speed

For many organisations, the toughest thing to bring in line with transformation goals is culture – processes and operations, in comparison, are easier to mould and manage. Organisational

culture is notoriously difficult to direct, whereas process efficiency can be monitored and prompted by KPIs and automated applications. But for VfL Gummersbach, the problem was reversed: their culture was already excellent (everyone was there for the love of the sport), but they weren't equipped, from a process and technology point of view, to operate as an efficient modern enterprise. They needed a level of 'professionalisation', without compromising their values.

At the heart of the club's transformation is collaboration: working with NTT DATA and the club's other partners, they are now the centre of an ecosystem that benefits not just them, but the fans, the players and the sponsors, all of whom share ideas and knowledge through VfL Gummersbach's platform.

Going from a non-profit sports club to a 21st century commercial organisation required most of all a shift in process and thinking, in order to understand the opportunities in translating customer needs into digital products and services.

As Yannick Rüter, head of marketing and business development at the club, says "It's interesting how you can adapt from the sport, and the emotion in our products, and put it on a tech base". And they're only at the beginning of their journey.

Connecting through technology

One of the most significant changes that has helped the club has been the introduction of digital tools that allows connection with fans. Previously, the options and channels for interaction between club and audience were extremely limited. Now,

> **Observers have noted that what VfL Gummersbach is doing is "not normal" in handball. But of course, that's exactly the point.**

in addition to the increased engagement, there is an abundance of data upon which to tailor and improve services on an ongoing basis.

A critical component of the change the club wanted to achieve was that the club's culture should not be damaged. From the club's grassroots to its ambitions to be more future-focused, a balance had to be struck; but they understood that their business needed to modernise and become more agile, particularly how the club manages its customer services support.

And the investment in new technologies is also leading to reduced costs, through automating many systems that had previously been manual. The adoption of new technologies also enables the small team that operates the club to be more agile, improving their efficiency exponentially.

A complete overhaul of the club's CRM was a critical component to create the new modern customer relationships platform the club needed to move forward. This didn't just mean installing a new back-office system, but understanding the unique aspects of VfL Gummersbach, its history, and, of course, how the club could better support the fans. Collaborative workshops at NTT DATA's Ensō innovation space were instrumental in this.

"Without the fans, we are nothing."

Like any business, VfL Gummersbach must serve its customers. Except of course that VfL Gummersbach doesn't want to be like other businesses: they are transforming to become a digital pioneer in sports.

They are transforming, as Yannick says, "to build a better team, to win titles, and to come back to the first league – that's really important for us." First and foremost, the vision is to invest in the team, for the betterment of the club and the experience for fans.

Seeing how the club is embracing digital technology and new ways of connecting with fans and delivering services, observers have noted that what VfL Gummersbach is doing is "not normal" in handball. But of course, that's exactly the point.

Because, of course, tradition and history doesn't pay any invoices. The club must continue on its journey to digitally-enabled enterprise agility with commitment and resolve, so it can continue to forge a path for the new era of sports.

Christoph Schindler is a former player and captain at VfL Handball Gummersbach GmbH, before becoming Sports Director in 2017 and Managing Director in 2018.

Neo Business: How Enterprises Must React to Social, Economic and Environmental Change

By Klaus Holzhauser, Head of IP & Assets, NTT DATA DACH

As the world adjusts to a post-Covid landscape, enterprises must now navigate a changing business environment, where sustainability, digital tools and cultural change are forcing a rapid evolution. The new reality for business transformation centres around collaboration, wellbeing and education.

The pandemic has radically altered how businesses now approach their digital transformation roadmaps. Indeed, research from Pluralsight[1] indicates that nearly half (47%) of CIOs state the pandemic has permanently accelerated their digital transformation and their adoption of new technologies.

Over the last year, a shift has taken place that is challenging businesses to approach every aspect of their enterprise differently. Before, businesses had expanded their use of IT and considered their company 'transformed'. Today, their customers' changing demands, social issues, environmental concerns and changing relationships with commercial partners impact what it means to do business today.

Businesses have been guilty of not being excellent listeners. Products and services were created and sold with some customer feedback, but this input made very little practical difference to the company itself. Its workers, management, and the broader connections across its supply chain, often didn't factor into the overall strategic planning of the business.

Your company now has a symbiotic relationship

with the global societal fabric that directly influences how enterprises behave. Where companies would leverage the technology they had deployed to gain market share, digitisation today is about changing a company's culture to ensure it's fit to thrive post-pandemic.

At NTT DATA, we see a clear trend as businesses re-assess their products and services and the culture within their companies. For me, change and business evolution is more about looking outward to see how a company's customers and commercial partners have changed. Learning from these changes is the foundation for new business processes, relationships, and, ultimately, next-generation customers.

Power transfer

At no other time in history have consumers had so much power over the businesses and brands they covet. At the same time, the speed of change is accelerating unabated. Enterprises can see how their industries and sectors are transforming.

A significant component of this transformation is how their customers challenge them to become different businesses – companies that place

sustainability, equal opportunities, environmental protection and purpose (as well as profit) at their core.

Experience-by-design is now a core driver for all businesses. Adobe found in their tech trends report that 51% of executives intend to increase their customer experience (CX) spending[2]. This isn't surprising, as many of NTT DATA's clients come to us with a brief to understand CX in the context of their business and how it can be improved with technology.

It is critical, though, to avoid thinking of this as a purely technical solution. CX may have a foundation of technology, but it's how these tools are used that defines their success. Consumers now have massive influential power. Understanding their motivations and meeting their expectations is where a cultural shift within a company is needed.

We advocate democratisation of data, of a workforce, of processes, and collaboration with customers and clients. Value generation is now in the hands of all these stakeholders. Future-facing enterprises realise this and strive to make each of these components integrate into a company that functions efficiently yet also creates vibrant environments for change and innovation.

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Your company now has a symbiotic relationship with the global societal fabric that directly influences how enterprises behave.

Reducing 'tech debt'

Enterprises rapidly remade their companies to survive Covid-19. In the aftermath, many now suffer from high levels of tech debt. Reducing this debt to become a new form of company that is agile and listens to its customers and partners is the key to long-term prosperity.

IDC stated that closely considering the technical fallout from the pandemic should be a priority[3]: "Through 2023, coping with technical debt accumulated during the pandemic will shadow 70% of CIOs, causing financial stress, inertial drag on IT agility, and 'forced march' migrations to the cloud. Smart CIOs will look for opportunities to design next-generation digital platforms that modernise and rationalise infrastructure and applications while delivering flexible capabilities to create and deliver new products, services, and experiences to workers and customers."

Technology can be a great enabler, but it's only the beginning. I often speak with NTT DATA's clients who are searching for a solution. The reality is that they are looking to make what can often be massive transformative changes to their enterprises, yet these changes are not achievable with a technical solution on its own.

Here, technology and culture are closely related. CIOs, CTOs, and CEOs are working closer together than they ever have. They realise the multiple pressure points on their businesses can only be relieved by a multifaceted approach to change – a change that can often be radical.

The new reality

Has the commercial imperative disappeared? Not entirely, though it is certainly tempered by a new kind of relationship with profit. Business transformation is now about collaboration, wellbeing, education and a new way to use the digital tools that have emerged from the pandemic.

New ecosystems are rapidly developing that place the customer at the hub where all other products and services orbit. And businesses are pivoting at speed to become new enterprises that are more crisis resilient and use technologies in new ways.

A new technology agenda is coming into focus. NTT DATA has witnessed the disruption the pandemic has bought across all industries and sectors. "Technology first" became an entrenched mantra. Today, this view has moved to one of closer communications with customers and partners as business leaders realise their investments in purely technical solutions are no longer valid.

Couple technology with the massive changes that have taken place across customer relations, workforce organisation, environmental pressures, and the unending drive to digitise. Business leaders can see they need a new agile culture with unique methods and practices to meet the demands of this brave new world.

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Klaus Holzhauser joined NTT DATA DACH to grow the asset-based and startup-enabled Business Solutions. He uses his digital knowledge to showcase the potential of technologies and solutions to help customers start their transformation story.

CXO
BY NTT DATA

VIDEO

The Future of the Client Experience in a Post-Covid World

Interview with Robb Rasmussen, Global CMO, NTT DATA

Robb talks to CXO about the change in working practices during Covid, how NTT DATA has successfully supported clients during the lockdown, and why the enforced change driven by Covid has changed ways of working for ever.

Scan the QR code with your smartphone camera

Opinion

Opinion pieces from NTT DATA's subject matter experts across EMEA.

Leadership in Lockdown

By Chris Jones
Sector Lead, Government and Social Enterprise,
NTT DATA UK

Understanding how best to care for your employees, as we transition into a post-pandemic working environment, stems from a strong company culture. With culture as the foundation, leaders can protect and promote wellbeing, authenticity and effective communication.

It has now been a year since I was following the news of the impact of Covid-19 on other European countries.

As the days progressed, I came to terms with the inescapable truth that this would soon be impacting the UK and could impact my family. My daughter in nursery school, my son in childcare, my dad on the NHS waiting list for a major operation, my sister in the process of selling her property, my gran needing constant care from my mum, my wife's gran in a care home, a close family member entering into GCSEs, another into A-Levels.

I was also aware of my responsibility to NTT DATA and its people. Schools would surely be impacted with massive effects to those in work with kids, employees who care for their parents will have deep worries, and many of those in house shares could soon be perched on the end of a bed with a laptop.

I considered my business plans. My FY20 business plan hadn't survived a day. At 6:30 a.m. on the first day of lockdown, I sat with a pen and paper:

A. Protect the teams
B. Protect the operations
C. Protect the culture

By 6:35 a.m., I had finished the plan.

I knew the importance of A and B. I knew C would be significant, but I couldn't exactly pinpoint why. It's a point I have considered daily; my conclusion being that when all else is spinning, it is culture that organisations have to fall back on.

Under culture, there are three themes that have materialised through lockdown:

1. Wellbeing

We are only beginning to understand the health and wellbeing challenges created by the pandemic. According to a Mental Health Foundation study, almost half of the UK population had felt anxious or worried in the previous two weeks, and nearly 1 in 5 people reported feeling lonely.

As a priority, we ensured that our teams knew they are cared for, regardless of their location. Sensitivity and empathy were prioritised, and special consideration was afforded to those who were sick, isolated, vulnerable, anxious or caring for others.

From the beginning of lockdown, I was careful not to 'put up a front'. I am open about the challenges of balancing delivering for the company with a young family, ensuring all my wider family are supported and somehow making spare time for myself.

As leaders, the key is to make the time for these conversations to understand people's concerns. A conversation can make a difference.

2. Heightened authenticity

Authenticity is one of the best traits in a leader, and we set this as the culture of our work across Government and Social Enterprise.

Nothing had quite prepared me, however, for hundreds of people

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When all else is spinning, it is culture that organisations have to fall back on.

a month to be beamed into my front room. Home-working has brought heightened authenticity. My smart office blazer became a smart zipper jumper that became a hoodie in the space of a fortnight.

The person on the end of the bed with a laptop and family 300 miles away doesn't value some sterile conversation with someone 'checking in'. What they need most is a leader who is also vulnerable and cares. Being vulnerable doesn't make you any less robust. It makes you human.

3. Communication
From what I see on LinkedIn, companies have generally done this well. However, corporate comms can't replace that water cooler conversation, or nipping to the local sandwich shop with a colleague you've not seen for

a while or when you suddenly 'park' work and have a chat about something funny that happened.

To replicate this in a remote environment is difficult, and after a year of being 'on video' it does introduce fatigue. To address this, we ensure we have team events that encourage non-work virtual social interaction. I encourage team 'Deliveroo lunches' (other services available). It's a small gesture.

We look for ways to replicate the water cooler conversation, as hearing the camaraderie of a high-performing team is wonderful.

Final thoughts
Understanding how best to care for your employees as we transition into post-pandemic will not happen overnight. It is culture that sets the foundation, and as

leaders, we are all accountable for protecting and driving this.

Thank you for reading, and take care.

Design in a Remote World

By Dominic Quigley
Creative Director, Tangity

Even as we return to the physical office as the effects of the pandemic begin to subside, remote working is here to stay. And there are few disciplines which rely on in-person collaboration for innovation as much as design. By embracing new technologies, we can not only facilitate but also improve ways of working.

Remote working became a necessity for a lot of us in 2020. The need for social distancing means many of the ways we used to work and collaborate together are no longer possible, and businesses have had to adapt to this new normal. Few fields rely on in-person collaboration for innovation as much as design. The ability for designers to exchange ideas and encourage each other to imagine new innovations is a core foundation of the field. How then can designers mitigate this loss of face-to-face interaction?

In 2020, NTT DATA launched Tangity, a new design brand encompassing a global network of design studios. Our foundational aim is to foster collaboration between our network of designers and clients, in order to create products and services that can have a positive societal impact. With the launch

occurring in less-than-ideal circumstances, we had to adapt to ensure this emphasis on collaboration remained at the heart of everything we do.

Why collaboration is vital for design
It's crucial to understand just how important collaboration is in the design process. It naturally encourages a culture of scrutiny and improvement, allowing designers to consistently place their work in the context of wider applications.

This view not only applies to collaboration between designers but also with other fields of expertise. A good example of this in action is the process of designing an AI solution. By collaborating at each stage, designers can ensure that the development of the technology always has the needs of the end-user in mind. Likewise, having

an expert voice on AI present during the design process helps guard against implementation issues that might arise later down the line.

The centres of excellence established by NTT DATA help us achieve this outcome. By clustering the expertise of people in AI, design, blockchain and more, we have a global network within which we can correlate the experiences of innovators from a variety of different cultures and approaches.

Having access to this sort of collaboration network can be invaluable to businesses looking to scale up internationally. Launching a design project in different regions can prove tricky, and it's important to consider the expectations of local consumers to ensure the product fits with the location's unique cultural context. A global design network is invaluable for navigating this and other potential pitfalls.

Collaboration in 2020
There's no doubting the challenge that designers face in successfully carrying over this culture of collaboration into a virtual world. Despite this, we are better placed than ever to manage this

> **There is no one-size-fits-all approach here. In order to foster a collaborative environment whilst working remotely, designers need to make use of different toolkits at each stage of the design process.**

transition thanks to the plethora of technologies available to us. It's important to note that there is no one-size-fits-all approach here. In order to foster a collaborative environment whilst working remotely, designers need to make use of different toolkits at each stage of the design process. Here are some examples of how we managed this at Tangity:

- **The Idea:** When conceiving a concept, designers need to be able to exchange ideas and recommendations in real time. At Tangity, we made use of the online visual collaboration tool Miro. It provided a natural workshop arena where we could follow ideas through to their full potential.
- **The Prototype:** This phase called for a different approach. Tools such as Sketch and InVision were more appropriate and allowed prototyping to be as efficient and streamlined as possible. On occasion, we decided to go even further and make use of Axure.

- **Testing:** This stage provides its own unique requirements. When testing, it is vital to be able to observe the subtleties of how users are interacting with a product. It allows designers to pick up on small physical hints that help provide a detailed picture of the product's reception. In order to achieve this remotely, a combination of tools was required. At Tangity we found that Teams, UserZoom and WebEx covered all the bases and allowed us to replicate the physical testing experience as best as possible.

Design in the future

Remote working is here to stay. Even when the effects of the pandemic eventually begin to subside, it is likely that a hybrid of office-based and remote work will become the norm for many. In order to succeed in these circumstances, designers need to be incentivised to streamline their collaboration process and align through a social contract. This is a

very important step in preventing 'remote overload' and fatigue. It also helps create consistency in terms of what software is used, when it is implemented and how often it is needed.

The challenge of designing in a remote world can be equally viewed as an opportunity. By embracing new technologies, inefficiencies in the design process can be brought to light and dealt with. It is often through adversity that innovation is at its most fruitful. By utilising the right methods at the right time, and adopting the right attitude, the design process has the potential to be more collaborative and efficient than ever before.

The Disruption of the Energy & Utilities Sector: Future Scenarios

By Luigi Cardani
SVP Head of Energy & Utilities, NTT DATA Italia

With the radical changes affecting both business and technology, the energy sector has to deal with significant upheaval in the coming years, focusing on the key themes of digital transformation, electric mobility and people.

A profound transformation, both in business and in technology, is impacting the energy sector. Digital transformation, electric mobility and people are the main challenges for Utilities in the coming years.

The Energy & Utilities sector is going through a time of profound change. The contraction in demand, the collapse of energy prices and the impacts of the temporary moratoriums on energy bills announced by the governments of various EU countries to deal with the pandemic are all putting a strain on the investment capacity of companies in the sector, in favour of greater stability of current expenses and liquidity.

2019 was a very positive year for the sector. According to NetConsulting cube market estimates, the digital market in the Energy & Utilities sector in Italy reached a value of over €1.8 billion, showing an increase of 4.9% on the previous year. 2020, on the other hand, is characterised by a significant slowdown in spending on digital innovation, which will grow by only 0.9% and then resume with more sustained growth from 2021.

The scenario

In a scenario in which the contingent situation is giving an unprecedented boost to the digitisation of companies in all sectors, the players in the Energy & Utilities sector will necessarily have to face a transformation, not only technological but also business.

From a technological point of view, innovation is a fundamental enabler of the competitiveness of the sector.

This is also indicated by the intervention lines of the National Energy and Climate Plan (PNIEC), where the IoT and the collection and analysis of data will allow recovery of important efficiencies in terms of energy supply. At the same time, services based on 5G technologies will be able to contribute to better management of grid balancing.

So what will be the main technological areas of investment in the agendas of the sector's CIOs for the next two years? From a NetConsulting cube survey that analyses the technological spending drivers of companies in the sector, the main technologies will be:

- **Cybersecurity:** IT security remains a priority investment area for companies in the sector. Securing IoT and SCADA networks and devices is a growing priority proportional to the proliferation of the number of connected devices, whose complete visibility and

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> **The profound changes taking place are leading companies in the Energy & Utilities sector to rethink their business models: both externally, investing in development of new services for customers; and internally, focusing on people and lean organisations.**

continuous updating constitute an element of potential vulnerability for companies in the sector.

- **Internet of Things:** Utilities are increasingly investing in IoT technologies for monitoring and managing networks. The collection and storage of data from the field, thanks to the use of these technologies, is driving the development of data management and data platform or data lake strategies and projects.
- **Artificial Intelligence / Machine Learning:** 2021 will see the launch of numerous projects involving the use of machine learning, deep learning, neural networks and image recognition algorithms. The main areas of implementation will concern, on the one hand, the search for ever greater efficiencies in the management of core activities (e.g. the development

of predictive models for consumption management); on the other, in the Marketing and Sales field, the projects will address advanced customer clustering initiatives for the creation of customised offers and the reduction of churn.

- **Intelligent Automation:** Investments in process automation technology will also be consolidated in the sector. Robotic Process Automation (RPA) solutions are already widespread, in particular in Administration, Operation and Customer Care, while the Artificial Intelligence engines will begin to be introduced as orchestrators of the same RPA bots.

Changes in the industry
From the point of view of business transformation, the profound changes taking place in the operating environment are leading companies in the Energy

& Utilities sector to rethink their business models, both externally, investing in development of new services for customers; and internally, focusing on people and lean organisations.

Traditional players have to deal with the threats from new potential incumbents from other sectors that see growing business opportunities in the energy sector: car manufacturers like Tesla offering electric services; oil companies like Shell that after the oil crisis triggered by the pandemic, aim to refocus their business on renewable energy and electricity; but also big online players, technology companies and innovative startups.

Suffice it to say that one of the main competitors of Utilities in the coming years could be the e-commerce giant Amazon which, last June, launched its Climate Pledge Fund.

This makes for a very challenging scenario for

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> **The ever-increasing push of digitisation will lead to a change in business management, with increasingly fluid organisations, where hierarchies and organisational charts will leave more and more space for community and collective intelligence.**

utilities, who must review their business model and develop new services to enter new markets. For example, electric mobility, a market that is becoming increasingly attractive for the energy sector: according to a survey by the Boston Consulting Group, by 2030, 50-60% of vehicles sold will be electric.

This will create opportunities for the development of new products and services for Utilities related to the electric mobility ecosystem, which include vehicle maintenance and operation, installation, operation, maintenance and service of charging points, software solutions for energy management and start up of the fleet, consulting services.

The challenge for the energy sector, however, does not only concern the evolution of its business model to attract new customers, but also the transformation of the organisation and its human resources, with a renewed attention to caring for its people.

The ever-increasing push of digitisation will lead to a change in business management, with increasingly fluid organisations, where hierarchies and organisational charts will leave more and more space for community and collective intelligence. I am convinced that within the digitisation process underway in companies, the key is the employees – those who in the future will generate value and resilience in companies. Only companies that invest in people will be able to have an agile, flexible organisation.

In conclusion, pursuing technological innovation in the Energy & Utilities sector is fundamental today. NTT DATA, which has always placed people at the centre of its change, is a partner of companies in digitisation projects, thanks to an offer of products and specific services for the needs of the sector. But technology alone is not enough: only those who are able to rethink their business model and invest in people will be able to face the great changes taking place in the competitive environment and emerge as a leader in the future business and market context.

Accelerating Data Insights to Steer Smoothly Through Crisis

By Michael Gardner
Senior Manager of Data and Analytics, NTT DATA UK

Leaders will do well to remember that crises always present opportunities for improvement and advancement. By embracing agility and using data and analytics to their best advantage, leaders will be in a stronger position to navigate through the near-term challenges that the pandemic has raised.

When faced with a crisis, not all businesses will survive. The past year has highlighted the importance of making decisions that are informed. Arguably, the most prominent example of this is the UK government, who are claiming to be "led by data, not dates". It is a rare occasion that a business executive does not recognise the vast amount of value that is hidden in data.

For a long time, businesses have been on their own journey to fully understand and exploit the value of their data. However, over recent years, many have found that to get the fruits, they must first have the 'roots'. Even some of our own clients tell us they don't fully trust their own data. Huge investments have been and are currently being made to build and nurture data ecosystems that once in place, will allow data to be joined up and fully exploited by advanced analytics and AI to drive maximum (and long-term) commercial impact. Many businesses have data roadmaps that span years.

However, there is nothing like a crisis to shake up the best of plans. As a result of the pandemic, almost overnight, customer behaviours, supply chains, business operations and logistics were transformed, some possibly irreversibly. The need for insights from data to better understand business health and changing customer needs has been heightened without the luxury of time to perfect the foundations first. So, how can businesses accelerate their analytics programmes to deliver rapid, business-changing insights to navigate periods of uncertainty, while their roadmaps continue to support the longer-term trajectory?

This article provides some guidance to business leaders needing to stand up analytics on their data immediately, rather than waiting on the roadmap for large-scale data foundations to be in place first. It is these organisations who will emerge as winners in the 'new reality'. Businesses need to demonstrate the art of the possible.

1. Start with the business priorities

Often, the main obstacle is that companies start from the wrong end of the problem: the data. We have worked with organisations that have, for example, built a data lake before looking for insight. They tend to find gaps when aligning them with their objectives.

The answer is to start with the questions the business needs answering (or the objectives it needs to achieve), then gather the data needed to help answer them. Bring data sets together as efficiently as possible to enable

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It is a rare occasion that a business executive does not recognise the vast amount of value that is hidden in data.

the targeted analysis required to provide the insight that will answer these questions.

At NTT DATA, when we start an analytics project, we hold a collaborative half-day workshop with our client to fully understand, and frame, the business problem(s) or objective(s). Getting this alignment from business leaders up front is the rudder that guides the entire data gathering and analysis approach.

2. Target the 'low hanging fruit'
Once business priorities have been agreed, organisations can start to explore what data they need and what analytics can be carried out to address those priorities. Typically, gathering large and sometimes complex data sets takes time. Therefore, businesses should weigh the time taken to acquire data against the business benefit. When delivering our 'Next Generation Business Intelligence' service to clients, we always start with use cases that can be delivered against high priority objectives in the fastest time, to deliver rapid insights. This immediately brings to life

the power of data in informing decisions, while providing a 'running start' to scale out to the rest of the business.

There were examples of this when the pandemic first hit. Manufacturing plants reopened shop floors by looking at historical machine operating data, to review what aspects of operation and maintenance could be automated. To allow some people back to work, offices combined floorplans with airflow and infection models to redesign layouts.

3. Embrace agile working practices
Siloed data and business functions are some of the most common barriers to scaling analytics that we encounter across industries. Many of our clients express concern about operating models being able to meet shifting strategic priorities. However, the move from siloed work to interdisciplinary collaboration is often highly impactful. Standing up cross-functional teams with a common objective and all relevant stakeholders means that analytics solutions can be delivered in a

matter of weeks, regardless of analytics maturity.

Agile delivery methods can produce minimum viable products in the form of dashboards or models for specific use cases. Incremental development frees teams to test ideas rapidly, gain early user feedback in the process and iterate. Collaboration and communication can be more powerful than the most advanced technology and business processes. The long-term EBITDA growth for truly agile organisations is 16% compared with 6% on average for non-agile organisations.

4. Get comfortable with data imperfections
Leaders need to acknowledge that, while existing data may be incomplete or imperfect, it can still generate useful insights – if used with a healthy dose of human judgment. With data, it can be easy to become fixated on the limitations of the data rather than the end goal. We often talk about the 80-20 rule with clients, who usually prefer an 80% correct answer from data insights, because time is of the essence and waiting for the

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Almost overnight, customer behaviours, supply chains, business operations and logistics were transformed, some possibly irreversibly. The need for insights from data to better understand business health and changing customer needs has been heightened.

additional 20% of analysis usually takes 80% of the time!

Some retail organisations have taken this approach when sourcing third-party data sets to understand more about their workforce availability during Covid. Often these data sets can be large and unstructured, however analyst teams have quickly managed to merge qualitative data, such as how employees would likely commute to work, with internal workforce data. This has for example allowed organisations to anticipate when and where they need to adjust their workforce plans.

5. Don't be afraid to outsource to accelerate
Legacy and cumbersome infrastructure can often hold companies back from undertaking valuable data analysis. If their technology estate is a real barrier to progress with

analytics solutions, businesses should consider using a third party to generate data insights and enterprise-wide reporting for them – at least in the short term. At NTT DATA, we have found that some clients face this challenge, so we created our own analytics managed service as a way of helping them rapidly accelerate analytics and insight generation. This could transition to an internal capability over time. Impactful business insights gained as a result could enable faster, more informed decision-making and be the difference between thriving and just surviving in a precarious global environment.

History often reminds us that crises can present opportunities. Leaders who can make data-driven decisions based on analytics that can be stood up rapidly will be in a stronger position to navigate through

the near-term challenges that the pandemic has raised. At the same time they will gain learnings that can be applied to embed AI and analytics over the long term. The road to recovery is marked with data, and those companies that can best harness it will set the pace.

Driving Through Digital Changes: How the Automotive Industry, from Sales to Service, is Changing

By Pablo Martín
Head of Auto, everis

Digital transformation allows workforces to break free from tradition, improving the end-to-end experience for auto customers. With new concepts and tools such as digital showrooms, online booking tools, and integrated back-office tools, the journey of purchasers is set to be more engaging, enjoyable, and beneficial.

When the car was invented at the end of the 19th century, it was essentially meant to serve as a substitute for horses and carriages. With the help of a combustion engine, a variety of buttons and a steering wheel, drivers could drive their vehicles around, carrying other passengers and goods. Now, imagine if a time machine could bring Karl Benz, Gottlieb Daimler and Henry Ford to 2020 – what would they see?

Electric cars are becoming more popular, and instead of complex combustion engines, these cars only need batteries. Cars are connected to the internet, enabling them to receive automated updates allowing both drivers and passengers to enjoy all kinds of in-journey experiences and benefits.

In recent years digitalisation has changed the automotive industry, particularly with the continued growth in automation and the emergence of new business models. This has led automakers to adapt to the new environment. Drivers, in today's digital age, expect the same level of connectivity from their vehicles as they get from their digital devices such as smartphones and tablets. This level of connectivity involves everything from high-quality infotainment systems for passengers to assisted driving and parking with dashboard payments. This level of digitisation has the potential to rethink how people use transport and how businesses generate value for industry and society.

Changes in customer behaviour and new technologies have led to the digitisation of the car industry. It started with the integration of navigation assistance and infotainment voice-command applications like Alexa and Siri. Now, the automakers' focus on providing direct mobility services and unified experiences throughout the customer journey, even from the moment of prepurchase, has shifted.

The way we purchase cars has changed, in some cases, almost beyond recognition
Ever since the development of IT-based technologies back in the 1970s, we have been promised the dream of technology that will transform the way we live and work, and yet almost 50 years later, we are still selling cars using the same paradigms and sales models. In essence, the automotive industry is one of the only sectors of society that has not undergone a 21st-century transformation. If you reflect on the way you shop, communicate with family and friends, bank and interact with the government – and then do the

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same with the way customers are sold cars, you'll see what I mean.

Of all the digital transformations that have occurred in sales in the first two decades of the 21st century, the one purchasing experience with roots still deep in the 20th century is the car-buying process. Then Covid-19 hit. Operations went from finance, sales and service transactions handled in person to more streamlined processes. While some in the industry had already laid digital foundations, many have not prepared to adopt technology platforms as part of their daily operations.

While the Covid-19 pandemic certainly helped nudge this shift along, long before the virus arrived, it was already well underway. For the past several years, buying anything online has been a creeping trend.

This trend has exploded with the onset of quarantine orders and national lockdowns, with an increased rise in online shopping throughout 2020. Car purchases

are no exception to this. And now, driven by Covid, there is also an increase in overall demand for car purchases, driven by a desire to feel safe and rely less on public transport.

The pandemic solidified the desire that was already there. People are used to digitally purchasing everything now, from groceries to office supplies. Why are cars supposed to be any different?

This is a major challenge for car dealerships as most dealerships are heavily rooted in doing things offline. Until very recently, websites mainly existed as an initial research platform, with the primary objective of getting visitors to come to the showroom and not much more – something which one brand famous for its electric cars had the foresight to overcome with their business model.

Today, as customers are equipped with digital technologies with all the information at their fingertips

before going out to the dealer, they are exploring online for new cars. More and more car manufacturers are starting to join forces with digital transformation companies to find solutions such as creating mobile-based augmented reality systems to allow customers to get to know car models without even having to set foot in the showroom. Auto companies can enable customers to see inside and outside their potential new model using VR capabilities and hear genuine sound effects at 360 degrees. Even better, virtual showrooms allow dealers to save money by reducing the amount of space they need to hold all the models of available cars. It's a win-win overall.

As well as AR, investing in VR technology is also something to consider for dealers. With a VR demo station, dealers can offer customers immersive test drives that can enhance customer experience and help sell more cars to existing customers.

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Moving with the times

Current cars are well known for being able to alert their owners about basic maintenance issues such as low oil or the need to fill up. Imagine if you did not need to stop into your local garage every time a dashboard warning light in your car flickered. Now, you don't need to, thanks to always-on connectivity. Today, vehicles can retrieve a variety of information and send it to the cloud to process, alert drivers to potential future problems, from engine problems to defective brakes or rear lights. Predictive maintenance has proved so valuable that with remote access, manufacturers can deliver technology updates, security updates, information retrieval etc., instantly, without the driver ever having to set foot in a repair shop. Unless you're told to, of course.

It has been tough to make the transition to a digital model, and it's not something that can happen overnight. But the prospective rewards are huge. Auto dealers who can take a digital approach could win a big deal and gain an important advantage.

With digital now more of a necessity than a choice, auto brands and dealers must commit themselves to introducing and integrating digital technologies and strategies into their business.

The key to starting or progressing digital transformation is to have a workforce that understands the fundamentals of digital technology so that they can break from tradition, carry out effective marketing campaigns, influence customers through successful social selling techniques, andunderstand the long-term benefits.

At the end of the day, the aim of these concepts, from digital showrooms to online booking tools, from digital maintenance to integrated back-office tools, should be to ensure that the journey of purchasers is engaging, enjoyable, and beneficial.

One of Henry Ford's famous quotes about the Model T was, "Any customer can have a car painted any colour that he wants – so long as it is black." The Model T only came in black because the production line required compromise so that efficiency and improved quality could be achieved. By shaking up the automotive industry with a wave of digital change for the 21st century, improvements from sales to service would be beneficially immeasurable. Something Ford himself would be proud to see.

The Media Sector Transformed in Covid Times

By Andrea Fravega
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Covid has accelerated the trend towards "digitally-oriented" consumers. Companies in the media sector must be ready to seize the opportunities linked to this evolution, investing in key areas including security, data and blockchain. This will be crucial for companies in the media sector to survive in a hyper-competitive and fragmented market.

The lockdown has accelerated the trend towards an increasingly 'digital-oriented' consumer. Companies in the media sector must be ready to seize the opportunities linked to the evolution of the consumption model. Security, data intelligence, cloud and blockchain are at the heart of IT investments.

In a short time, the global pandemic has changed people's lifestyles and habits, attributing an increasingly central role to digital in consumer experiences. In the Media sector, this phenomenon is translating into the acceleration of a model of use of contents in which digital not only coexists with analogue media (TV, radio and print media) but is beginning to assert itself in a predominant way compared to traditional models. Suffice it to

say that during the period of the first lockdown in Italy (March to April 2020), 32% of the population increased their use of online video content, while 5% used this type of service for the first time.

The increasingly intensive use of digital technology, driven by the travel restrictions imposed by the lockdown, has rekindled the spotlight on a problem now infamous in our country – that of the digital divide. The availability of access to the internet and efficient digital services becomes even more essential in a context in which the 'new normal' has become that of smart working and distance learning.

Accelerating technological investments therefore represents a fundamental step for the country system, which will also generate positive repercussions

on the Media sector: the business component linked to the digital channel will only benefit from the increase in the number of users potentially reachable, thanks to the availability of access to the broadband network.

In the meantime, the competition within the sector is increasingly intense: the pandemic continues to fuel the turnover of video streaming platforms and has further accelerated the transformation of the consumption logics that reward on-demand versus linear. Alongside the established players, new incumbents enter the Italian market (such as the entry of the Disney+ platform in March 2020), making the competitive arena of the sector increasingly crowded.

The players in the Media sector are responding to these challenges by innovating their offer through a continuous expansion of their catalogue with new content and the development of new services. An example is the recent entry of Sky into the world of fixed

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telephony in Italy. Thanks to the wholesale agreement signed with Open Fiber, the television operator is now able to offer its customers all-inclusive packages that include both connectivity services in fibre and the contents of the satellite platform.

Another area on which some players in the Media market, in particular publishers, are concentrating their investments is that of enhancing their information assets to develop new services aimed at companies and professionals: an example of this is a historic Italian publishing house of periodicals. Specialised companies have capitalised their vertical contents on the automotive sector to create services for the B2B world, for example, by providing leasing companies with the information tools to better manage their fleet and keep its residual commercial value under control.

According to NetConsulting cube, in 2020, the digital market in the Media sector in Italy recorded a value of over €1.2 billion, down 3.7% from the previous year. The effects of the Covid-19 emergency led the

Media companies to postpone numerous projects, also due to the drastic drop in revenues from advertising. In fact, in the first nine months of 2020, advertising investments in Italy fell by 15.9% on all media compared to the same period of the previous year. In 2021, investments in the Media sector are expected to restart, although much will depend on the evolution of the emergency situation linked to the pandemic.

So what are the priorities on which investments in the Media sector will focus in 2021?
To respond to the challenges dictated by the pandemic context and the general decline in audience monetisation, companies in the Media sector are concentrating their investments in certain technological areas. Here are the most important:

- **Cybersecurity:** with the multiplication of cyberattacks during the pandemic and the growing importance of the digital channel in people's habits of content use, cybersecurity is a priority for media companies, as they are

increasingly exposed to the loss or counterfeiting of their data and to potential attacks aimed at causing service interruptions. Furthermore, the lockdown period has caused the phenomenon of online piracy to re-explode, particularly in the consumption of video content: it is estimated that Italian users who use illegal IPTV services to watch sports content are at least 5 million. In addition to fighting piracy, companies in the Media sector must also deal with the phenomenon of fake news and guarantee their users the reliability of the content and information conveyed.

- **Data Intelligence and Big Data:** data plays an increasingly strategic role within the Media sector to make effective decisions and support strategy planning. By now, all companies in the sector have embarked on a path to become a data-driven company: this will result in an increase in investments in advanced data analysis technologies, data lakes, artificial intelligence and machine learning to support customer profiling, customer

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engagement, advertising, loyalty and customer care.

- **Cloud Computing:** sector operators have been making investments in cloud technologies for several years, driven by a prevailing goal of cost-efficiency. Cloud platforms are becoming increasingly important for the delivery of video content and services via web and mobile – especially in web streaming mode – as they allow the capacity of the technological infrastructure to be dynamically and automatically adapted according to the number of users, guaranteeing an optimal user experience.

- **Blockchain:** this technology is finding an important space within the Media sector in the management of copyright and intellectual property, with the aim of protecting and guaranteeing the authenticity of content. Even in the context of the identification of fake news, some operators are already experimenting with solutions for the traceability of the origin of the contents published on their properties. The European regulatory framework on copyright is constantly evolving, but it is certain that blockchain technology, and its ability to uniquely highlight each step of the supply chain, can represent, in perspective, an effective solution to guarantee transparency and authenticity to the end user.

In the near future, innovation at all levels will be crucial for companies in the media sector to achieve the 'new normal' and survive in a hyper-competitive and fragmented market. NTT DATA acts as a partner of Media companies in 360-degree digital innovation projects, thanks to a mix of skills capable of supporting the customer not only in the technological realisation of a product or service, but also in the conception and development phase.

Tech for Good

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

VIDEO

NTT and AXA build a software-defined future with hyper-converged infrastructure and managed services

As a leader in the insurance industry in Luxembourg, AXA recognised the need to modernise their core infrastructure to overcome performance constraints and position themselves as a more customer-focused organisation.

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VIDEO

NTT DATA Wall: Unique Digital Experience in The Open

The NTT DATA Wall provides a visualisation of a wide range of data generated by activities at The Open in real time, giving shape to the many hidden dramas behind the numbers. Now, the NTT DATA Wall has fundamentally transformed the fans' viewing experience through its evolution.

Scan the QR code with your smartphone camera

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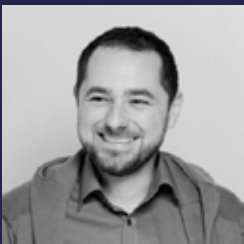**Felice Chierichetti**
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