THE FUTURE OF WORK

JOURIK MIGOM

SVP Strategy Acceleration, Global | Endava

SETH CLIFFORD

SVP Strategy Acceleration, North America | Endava

CONTENTS

INTRODUCTION

Recent shifts in technology and the ways in which we think about professional productivity are radically changing how we work and conduct business. While this idea may fill some of us with excitement about the possibilities to come, it's also natural to experience reservations about the pace at which things are changing – and even have some inherent resistance to it.

In this whitepaper we pragmatically explore some of the more profound advances and provide balanced insight as to how and when implementing these ideas makes sense for those organisations interested in exploring them.

Businesses that choose to operate within the confines of existing modes of thinking will struggle to find continued success as work – and the expectations of the individuals doing that work – continue to evolve through the introduction of profound technological and cultural change.

The Data Revolution

" We're using data to dramatically reduce the amount of time it takes to perform a given task successfully. When we built tools for business ten years ago, we made things feel easier by using well-placed user feedback and interface mechanisms. It was almost akin to UI sleight of hand.

Today, given the data and technology available to expedite large portions of the decision-making process for basic tasks, we have the ability to actually reduce the workload of staff by removing a significant number of predictable workflows, successfully automating mundane business interactions, and using probabilistic algorithms and more focused role identification to tailor experiences."

Justin Marcucci | Chief Digital Officer

Data is at the centre of a rapidly changing work environment, and is driving advances in collection, processing and analysis of work output and customer demand. Every discipline in the organisation is affected, and every role must participate to inform the business and agree on the most effective means of adapting to this new need.

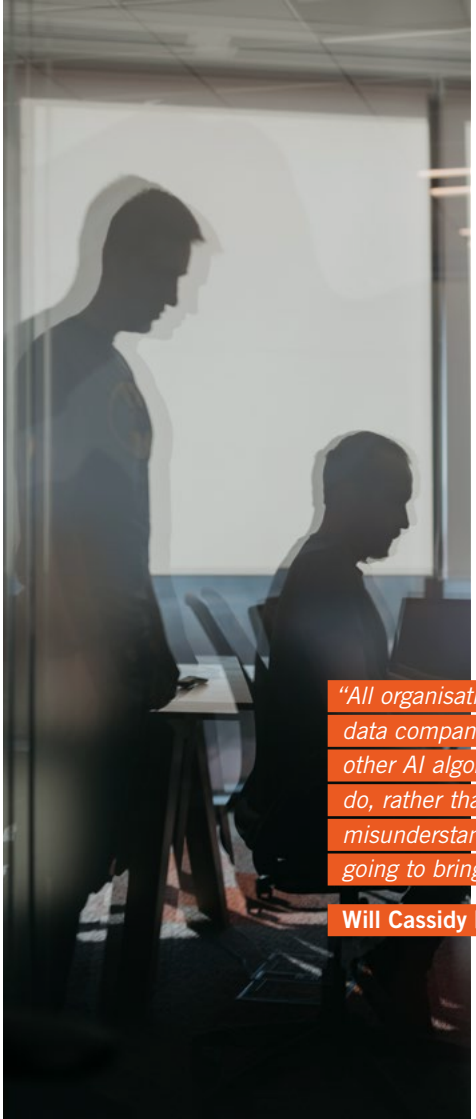
The use of data is changing dramatically in our daily work. Whereas our focus used to be on tracking and monitoring work, advances in capturing and applying the knowledge derived from data back into workflows are allowing many tasks to be automated and optimised in ways barely imagined a few years ago.

STAT CALL OUT:

The United States alone is projected to face a shortfall of some 250,000 data scientists by 2024.

But possessing data is not the same as understanding it – and understanding data is entirely distinct from making decisions with it. As growing data sets provide greater precision for decision metrics and forecasting, specific expertise will be required to improve increasingly data-driven decisions. This is the root of the push toward AI and machine learning development: there is simply so much data to parse that humans are incapable of doing it effectively, and entire fields of data science are emerging to solve this new challenge. In pairing automated collection and analysis with human oversight and decision-making, businesses can realise radical new insights and efficiencies.

Data-led experiences are far superior for customers, employees, and leadership and they represent the future of decision-making and business planning. Digitally evolved businesses know what customers and employees want based on the behavioural data they have collected automatically from users' interactions with digital systems. This information is more granular and more accurate than self-reported information could ever be.



Businesses that downplay the role that data will have in understanding opportunities, mitigating ongoing change, and creating positive forward momentum will not be able to adapt to the new environments ahead.

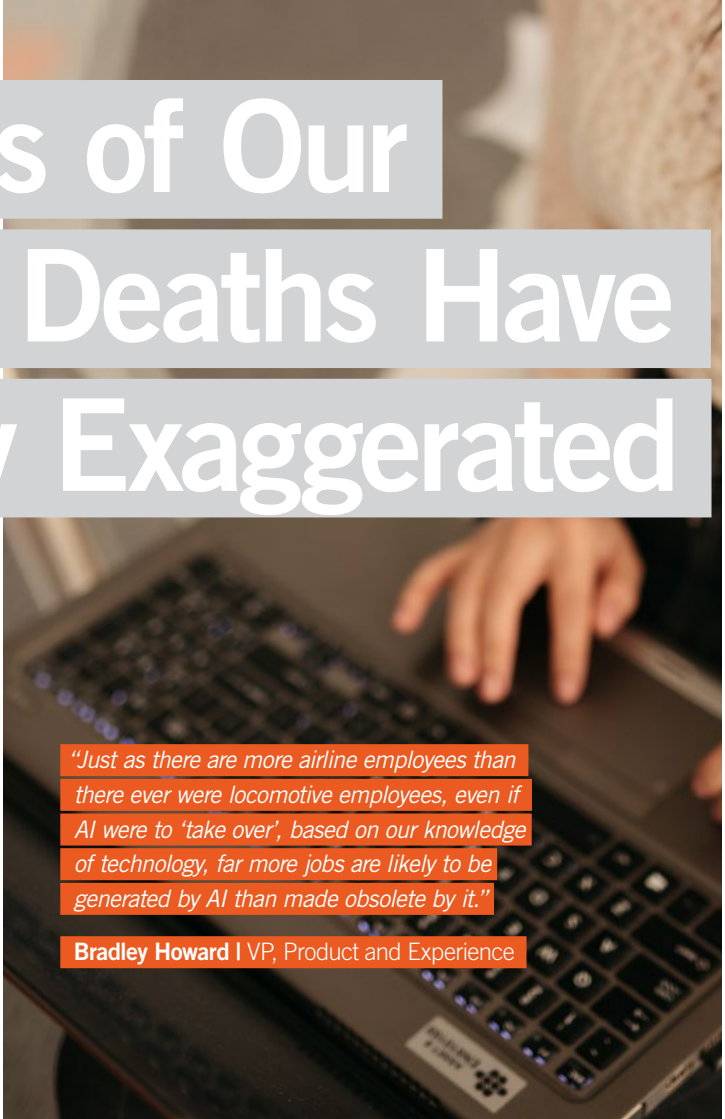
"All organisations are eventually going to become data companies which use machine learning and other AI algorithms to improve what we as humans do, rather than to replace us. That's the big misunderstanding of what these technologies are going to bring to the workforce."

Will Cassidy | SVP Delivery Acceleration, North America

The Rumours of Our Professional Deaths Have Been Greatly Exaggerated

Headlines touting “the death of work” are unavoidable. While titles like “AI is Coming For Your Job” and “Workers Believe AI Will Kill 40% Of All Jobs Within 10 Years” make for compelling clickbait, they routinely overstate the threat posed by new technologies.

There is little risk of a technology-driven work apocalypse across all areas of business, but the nature of work is sure to change in ways we are now only beginning to understand.



“Just as there are more airline employees than there ever were locomotive employees, even if AI were to ‘take over’, based on our knowledge of technology, far more jobs are likely to be generated by AI than made obsolete by it.”

Bradley Howard | VP, Product and Experience

Technologies like AI, ubiquitous broadband connectivity, and augmented and virtual reality create opportunities as well as challenges. As organisations adopt them, they disrupt current markets – and create entirely new ones – revealing new paths to pursue and impacting the future of the work we do each day.

That being said, the skill sets required to perform new roles rooted in the management of these more complex systems are vastly different from those currently required for the roles they will replace. While the total number of jobs available after the markets shift will stay neutral, those displaced staff will struggle to find employment as their supply of skills will not match those of the newly identified demand.

Significant technological change always creates disruption of some kind for some percentage of the working population. The only thing of which we can be certain is that the roles we play as individuals may change, and the skills required to address new needs will need to change with them.

Augmentation and Creation of New Abilities

"I think there needs to be a greater education for people to understand that AI is just 'clever maths' and there still is a part for humans to play, in both identifying the patterns that they want the clever maths to be able to identify, and in validating the outputs created."

Matt Cloke I SVP Delivery Acceleration, Global

As work continues to be enhanced with technological abilities, determining exactly what to do – and when – becomes increasingly critical. The massive amounts of data being collected have provided clarity in some ways, as businesses make decisions about their direction, but have also created the need for more insightful analysis to ensure that those decisions are sound.

While essential to the effective deployment and training of AI and machine learning systems, data alone is not enough to unlock the new potential available to enterprises working in these areas. Insight must be applied to data before it becomes truly useful, actionable information. Many organisations have been holding massive amounts of data for years, but the application of that data has not yet been fully realised.

No matter how sophisticated they appear, for the time being, machines do not think; they simulate, train, learn, and build patterns around data to create understanding for the people working with it. The notion of a general AI capable of advanced decision-making is still far from reality, and far narrower applications of the technology are currently being leveraged – capturing both headlines and buzzword saturation status.

The subtext of these stories is that humans must remain a part of any of these systems to know how and when to apply the output generated. AI can tell us what is happening and what may happen because of it and inform choices humans make about how to best respond to those conditions – but human intelligence, innate logic, and experience are irreplaceable.

While often charged to solve similar problems, humans and machines approach the use of information differently and when paired effectively together, represent a highly complementary set of skills. Near-term focus going forward will be on building successful interaction models rather than choosing one over the other.

The proliferation of AI systems is not a death knell for human work, but a call to arms – to reshape the roles we play, develop new skill sets, and think about the relationship we create between human workers and machine-enabled knowledge.

"Technology allows us to iterate, own ideas, and – if done correctly – to test and validate concepts at scale at less expense. More simply put: to go much faster from idea to reality."

Jourik Migom | SVP Strategy Acceleration, Global

Teamwork Evolves as Organisations Change

"Using Agile – or any management method – as a means of micromanaging on a daily basis, on a task level, can kill the thinking and innovation the organisation is seeking in the first place."

Lóránd Gábos-Szövérdi I VP, Capability Mapping

Agile is widely known as a philosophy for managing IT projects, but as the needs of organisations change with markets, its core mode of thinking becomes highly valuable – and applicable – in areas outside of IT. With a renewed emphasis on team collaboration and rapid, creative problem solving, Agile processes are being seen in a new light.

Instilling the right cultural attitudes to accept flexibility and a willingness to accept change and uncertainty as part of BAU operations is critical to implementing new technologies. In fact, every part of the business needs to become agile – it may start with IT, but Finance, HR, the executive level, and every other component of the decision-making flow needs to understand and embrace these principles to facilitate the kind of change organisations are seeking.

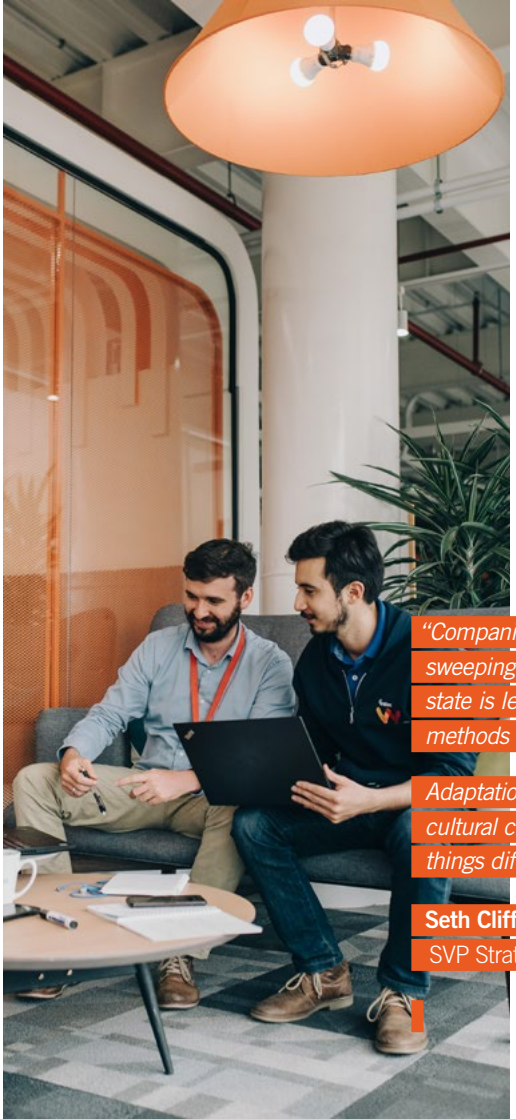
Today, the expectation of stockholders and executive leaders is that employees and vendors will deliver more value in fewer working hours than ever before – while having all the additional skills required to perform at this level. This expectation means working in more cross-functional ways with teams having broader expertise across disciplines to yield elevated results. With a focus on communication and social collaboration, the ability to effectively convey ideas and insight to other team members with different types of mindsets and work experience becomes critical. More than ever before, a team member must be an expert, but also display flexibility and empathy enough to see other points of view and nuance in working relationships.

Recent studies also show businesses expanding the use of contractors doing project-specific work and augmenting internal teams to meet new demands and expectations. In order to do so, enterprises are engaging in reconfiguration exercises to engage workers more flexibly, utilising remote staffing beyond physical offices and newly decentralised operation centres.

Respondents of the World Economic Forum's Future of Jobs report (2018) expect increased job creation in project-based, temporary, and freelancing roles, pointing to changes to contractual arrangements and employment relations as well as occupational profiles. Significant shifts in the quality, location, format, and permanence of new roles will place increased value on meaningful human interaction within those distributed and cross-functional team structures. New tools, platforms, and communication paradigms will emerge to address and advance the changes, enabling more effective collaboration.

The physical spaces in which work takes place are evolving as well. Workplace design takes on new importance. Open seating helps drive collaborative behaviour, while huddle rooms create small-team intimacy. Through the addition of beacons, sensors, and actuators in the physical locations, "smart workspaces" can help shape the way an individual interacts with and engages with a space. An employee might use an app to guide them to the closest parking space and be assigned a workspace and conference room as they enter the building. At the same time, their "smart badge" can track location for security purposes.

Team communication and collaboration will thrive in a combination of meaningful in-person interactions coupled with the flexibility that a decentralised and geographically distributed workforce requires. As with the nature of how data is used, there is not a single, emergent technological solution. Progress will be made as a balance is struck between the ways in which individuals wish to work, and the tools provided to do it most effectively.



As the needs of a business change, so too must the skills displayed by the individuals working to support it. Team collaboration is branching out in new directions, and the right combinations of personalities, expertise, and interpersonal communication are critical to driving products forward.

"Companies are being rapidly affected by sweeping technological change. The current state is legacy systems and management methods that aren't flexible or competitive.

Adaptation requires a significant internal cultural change for a business to agree to do things differently."

Seth Clifford
SVP Strategy Acceleration, North America

A Bold New Horizon of Creativity and Meaning

As ideas become easier to deploy, and work becomes correspondingly more entrepreneurial, the value of creativity and individuals who inspire and engage in this way increases as well. The genesis of a good business idea or strategy hasn't changed much, and computers crunching massive data sets won't replace that ability. They may allow us to see patterns where before we did not, or isolate aspects of information that lead us to new lines of thinking, but they won't think for us. And the storytelling we do to convey our minds' work – that remains a distinctly human endeavour.

As technology becomes more capable and ubiquitous, the value of work will change, and create impact beyond its primary economic contribution. Human talent is in higher demand than ever before, and the most desirable target for employers is a mix of soft skills with technical specialisation and a broad grasp of operational perspective and advantage. Technology will step in to alleviate many of the more manual tasks we've created for ourselves, and we will be free to take on new challenges, creating value in other ways. The type of person needed to help drive direction around new business challenges is changing – and is in ever shorter supply.

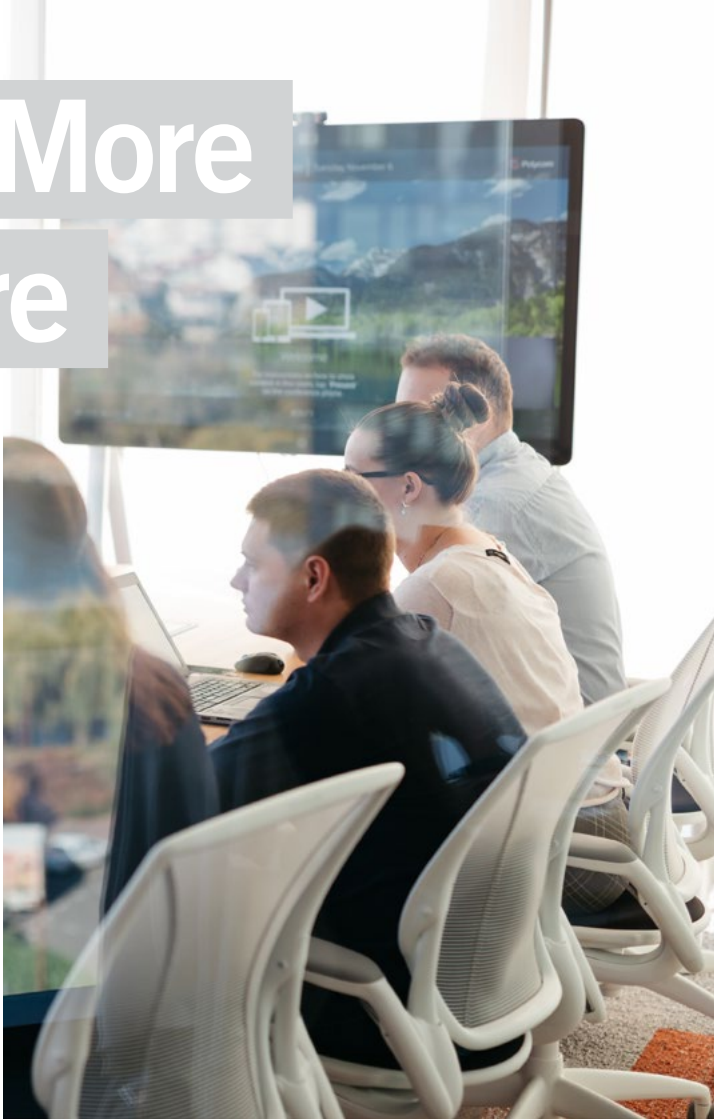
But this, in turn, has an effect on how we view ourselves and the work we actually do. We are evolving from defining ourselves by our titles and employers to being centred on the value we bring to the teams in which we participate. In the future, we're more likely to hear "I'm a python coder working in the financial sector" or "I'm a communication strategist working in public health" as opposed to "I'm VP of Marketing for [Company]." And the more flexible nature of how we wish to work and how organisations operate will afford us the ability to move more fluidly between roles to best match our skills with the needs at hand.

The metric used by a business to calculate the value that an individual provides must take into account entirely new dimensions of both talent as well as intangible qualities that resonate in different areas. To only view contribution through a single lens devalues the net effect an individual can have on an organisation – and will not inspire people to follow that business on its journey.

Innovating a More Human Future

Being first to innovate is risky – most businesses would rather let someone else fail first and learn from their mistakes. However, in today's ultra-competitive environment, waiting to innovate carries risk too.

But innovation is not born solely of technology. Ideas, approaches, and new ways of thinking drive creative solutions to challenging problems. Technology becomes a tool with which to explore those ideas and transforms them into reality. Sharp focus on human values like emotion, life experience, and creativity informs more elegant solutions to business, cultural, and social issues.



The shape of what a business can achieve through technology is changing. New relationships between humans and machines – and between human beings themselves – are redefining what's possible and creating intrinsic value for organisations and the people supporting them. Capturing information, analysing it, understanding it, and applying it successfully will lead to greater insights in operations, as well as collaboration and execution. To succeed in the next phase of business requires a willingness to accept change and follow the natural path of evolution that technology and people will unlock together.

Through insight, ideation, and Agile process, Endava unlocks the digital potential of our partners in new and impactful ways. Combining strategic thinking, creative exploration, and advanced engineering, we focus on delivering innovative solutions to the most vexing business challenges. Endava's true power though lies in our people – and we believe the future of work is ultimately human.

ABOUT ENDAVA

Endava is reimagining the relationship between people and technology.

We accelerate our clients' ability to take advantage of new business models and market opportunities by ideating and delivering dynamic platforms and intelligent digital experiences that fuel the rapid, ongoing transformation of their business.

By leveraging next-generation technologies, our agile, multi-disciplinary teams provide a combination of Product & Technology Strategies, Intelligent Experiences, and World Class Engineering to help our clients become more engaging, responsive, and efficient.

GET IN TOUCH