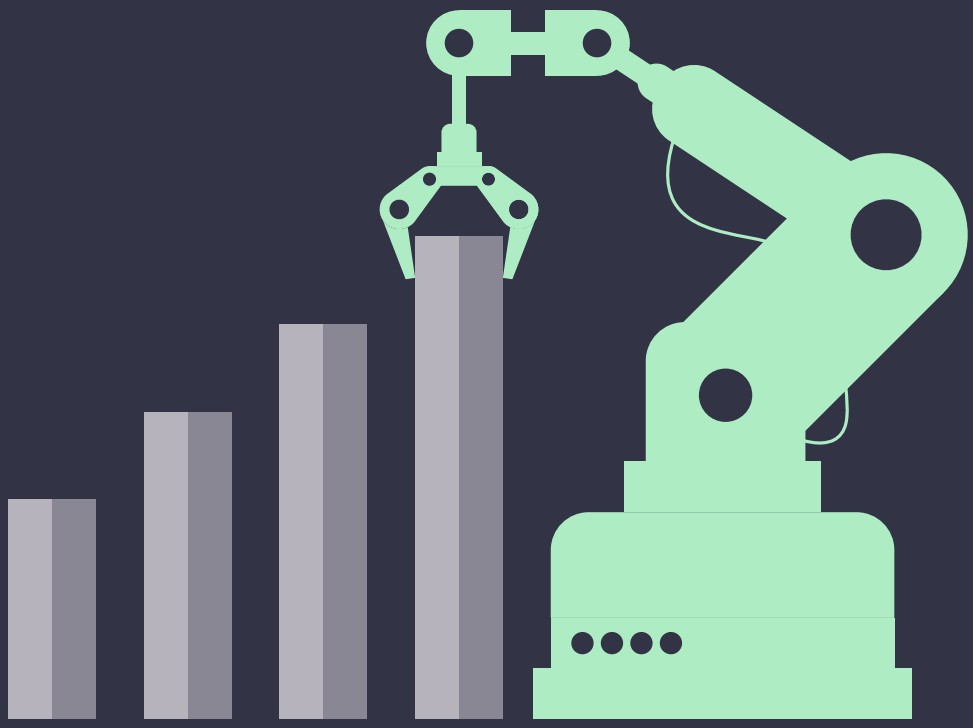
MAXIMIZING VALUE WITH AUTOMATION AND DIGITAL TRANSFORMATION

A Realist's Guide



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Maximizing Value with Automation and Digital Transformation

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palgrave
macmillan

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ISBN 978-3-031-46568-0 ISBN 978-3-031-46569-7 (eBook)
https://doi.org/10.1007/978-3-031-46569-7

This Palgrave Macmillan imprint is published by the registered company Springer Nature Switzerland AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

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Acknowledgements

Our research into service automation, intelligent automation, AI and digital transformation has involved thousands of survey respondents and case research interviewees. Our heartfelt thanks for sharing your knowledge, giving your time so generously and steering us towards an ever-deepening understanding of the technologies, how they are received in organisations and the challenges, risks and success factors. Without you, this research would not have been possible. For the present study, we thank the suppliers, major organisations and customers who generously gave of their time and brains in answering our questions and for providing such wonderful case details.

Introduction

Our general research into IT systems at Knowledge Capital Partners dates back over thirty years, while our focus on new technologies—Cloud, RPA, Intelligent Automation, AI and all of what we call the SMAC/BRAIDA digital technologies (see Chapter 1) date roughly from the emergence of cloud computing around 2010, through the introduction of Robotic Process Automation in 2012, and continuing developments in the major trending technologies, whose adoption will accelerate over the next 7–10 years. We think of these as comprising social media, mobile, analytics, cloud, blockchain, robotics, automation of knowledge work, internet of things, digital fabrication and augmented reality, with a watching brief on 5G, Web 3.0, quantum computing and metaverse. Not surprisingly, we see this as provisional and readily updateable. We research, understand and interpret them in the longer-term context of IT-based innovation and practice as applied to organisations everywhere but predominantly in businesses, non-profit organisations and government.

About the KCP Research Base

Knowledge Capital Partners is an expert research, advisory and communications firm providing independent, evidence-based insight into the impact of intelligent automation and digital technologies on industries, markets and organisations. It develops research-based planning, performance and measurement tools to guide successful technology deployment and navigate organisational challenges faced on the journey to digital transformation. It offers commissioned research services, thought leadership reports, strategy and operational advice and communications development for internal and market use.

We are writing, here, primarily for executives and practitioners and will endeavour to keep the academic apparatus and language to a minimum. Our apologies for when we fail. Nevertheless, readers will need some reassurance that the recommendations and action principles we arrive at are based on detailed, objective, rigorous, independent work. The KCP research base for this book draws upon 935 RPA, 160 Cognitive/AI and 86 detailed digital transformation adoption cases, growing to nearly 1200 cases by mid-2023. This has been supported by annual surveys on these topics across the 2015–2023 period. The cases and surveys cover client and vendor organisations from Europe, the USA, Canada, Australia, the UK, Asia Pacific, South America and Africa. As well as carrying out new research for this book over the 2022–2023 period, we also draw upon our prior publications. In particular, we would mention *Service Automation, Robots and The Future of Work* (2016), *Robotic Process Automation and Risk Mitigation: The*

Definitive Guide (2017), *Robotic Process Automation: The Next Phase* (2018) and *Becoming Strategic with Robotic Process Automation* (2020). There are also multiple work-in-progress papers available on our website, www.KnowledgeCapitalPartners.com. This includes research not published elsewhere and work prefiguring forthcoming books and publications. For those interested in our research methods, full details can be found in Willcocks, L., Lacity, M. and Gozman, D. (2021), 'Influencing Information Systems practice: The action principles approach applied to robotic process and cognitive automation,' *Journal Of Information Technology*, 36, 3.

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About the Authors

Leslie P. Willcocks is Professor Emeritus at the London School of Economics and Political Science, and Associate Fellow at Green Templeton College Oxford. He has an international reputation for his work on automation; the future of work and skills; global business management and sourcing; digital business; digital transformation; adaptive business strategy and organisational change. He worked in consulting and IT project management for ten years, then in business education at Oxford, Warwick, and the LSE and is now research director at advisory group Knowledge Capital Partners, and Editor-in-Chief of the *Journal of Information Technology*, one of the premier-ranked journals in the field, focusing on technological innovation.

Leslie is co-author of 73 books and has published over 230 refereed papers in journals such as *Harvard Business Review, Sloan Management Review, California Management Review, MIS Quarterly*, *MISQ Executive* and *Journal of Management Studies*. His work also appears in major media outlets such as *Forbes* magazine and *HBR* online. In 2023, he was in the world's top three most cited researchers in his field. Leslie has delivered company executive programmes worldwide, is a regular keynote speaker at international practitioner and academic conferences, and for 25 years, has been retained as an adviser and expert witness by major corporations and government institutions.

John Hindle is managing partner of Knowledge Capital Partners. He has an extensive international business background as a senior marketing executive

and adviser to companies in the US and Europe. He is Vice Chair of the IEEE P2755 Intelligent Process Automation Working Group, a multilateral standards initiative for the growing Intelligent Process Automation industry. John holds a doctoral degree from Vanderbilt University and has held Adjunct Professorships in Human and Organisational Development with Vanderbilt, and International Marketing with New York University in London. He is a past Trustee of Vanderbilt University. John has published many papers on outsourcing, reengineering and automation and is co-author of *Becoming Strategic with Robotic Automation* (SB Publishing, 2019).

Matt Stanton is a marketing professional with over 20 years' of experience across fast-moving consumer goods (FMCG), pharmaceutical and biotechnology sectors. His professional experience spans global marketing roles, providing marketing consultancy services for leading international organisations, along with business start-ups in FMCG, pharmaceutical and biotechnology space. His expertise covers conceptualising marketing strategy, helping organisations find innovative customer revenue streams and growth opportunities and 'stress-testing' business models based on the assessment of internal capabilities and external competitive environment using wargaming methodology. Matt holds an International M.B.A. from NIMBAS, Graduate School of Management, Utrecht, The Netherlands. Matt is a partner of Knowledge Capital Partners.

John Smith is Knowledge Capital Partners' communications specialist. He is an advisor and writer with exceptional experience of working with business leaders on communications critical to the outcome of major changes designed to increase the growth, sustainability and value of their organisations. He offers great insight into the challenges facing organisations that must enable employees, customers, investors and the wider community to trust and support their aims. He has led the process of defining the messages and managing communications channels to stakeholders on enterprise-wide transformations, acquisitions, post-merger integration and the deployment of game-changing technologies. He has worked in this role as an independent consultant with both corporate and public services clients, with emerging and mature businesses, across most major markets, internationally.

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Where Are We Now? Where Are We Heading?: From RPA to Digital Transformation

The secret to growth in this new era of disruptive technologies is being willing to learn and relearn even if what you knew previously brought you success.

Nicky Verd

Robotic process automation takes the robot out of the human. Intelligent automation and AI try to put the human into the robot. Digital transformation attempts a whole organization change founded on emerging digital technologies. The difficulties rise exponentially across these endeavours.

Leslie Willcocks

Introduction

Our purpose in writing this book is to provide a realistic and reliable guide to planning and deploying successfully the digital technologies that will improve the performance of businesses. Selecting the technology turns out to be the (relatively) easy part. Putting it to work and gaining full value from it is anything but.

To offer such a guide in a market characterised by contested claims, false starts overstated expectations, and underestimated difficulties seems to us to be a useful and timely activity. We bring to the project expert insight into the ways in which transformative technologies gain traction in the world, and work from a strictly evidence-based perspective.

This introduction provides an overview of our topics and concerns, but in a relatively novel way. Over the last year we have conducted many interviews

L. P. Willcocks et al., *Maximizing Value with Automation and Digital Transformation*,
https://doi.org/10.1007/978-3-031-46569-7_1

with journalists, magazines, online think tanks, and academic journal editors, who have asked for summaries of research, perspectives on emerging issues, and predictions of how things are likely to turn out over the year, and the next five to ten years. Generally the major focus has been automation and digital technologies, with relative neglect of issues like management and organisations, except when the subjects of job loss and skills shortages arise. Business value also seems to escape attention, partly because, as we often find out, few people, including businesses themselves, actually monitor this carefully.

Here we provide a composite of the questions asked, that takes into account the full range of questions, and not those just asked most frequently. The result is a strong overview of our on-going findings, together with a provocative but valid, and hopefully easy-to-read introduction to the later chapters of this book.

Misunderstandings

Most people know the headlines. But are they right? What are the top misunderstandings about automation and digital transformation circulating in the media?

There are all too many! But we will limit ourselves to three:

The first is the hyperbole about artificial intelligence. 'AI' is such a useful shorthand is it not? But it's also very misleading. Somebody observed that if it's intelligent it's not artificial, and if it's artificial it's not intelligent. That's correct, but you could also say that it's not even artificially intelligent. Much depends on how you abuse the word 'intelligent'! The area is pervaded by the seductive metaphor that computers are like brains and brains operate like computers. And, of course, technology companies and the media ramp up the rhetoric to suggest that there is a lot more in the technology than there really is, or likely to be any time in the next 15 years. At base what we have is machine learning, algorithms, natural language processing, image processing backed by traditional statistics and, really, the two key developments—impressive and growing computing power and memory. This can produce hyper-speed and impressive results for very limited applications. But there is no general-purpose intelligence. It is 'weak, weak AI'. Of 18 sets of skills used at work several studies including our own found only eight fully automatable. Humans have eight distinctive capabilities and composite skills (the automatability of three further sets depend on context and use), and these human skills are increasingly valuable because they are unlikely to be replicable in the next 15 years, if at all.

Secondly, having experienced and worked with information, communication, and now automation and digital technologies since the 1980s, we at KCP are still surprised at how people believe that a tsunami of automation will slip easily, seamlessly and at great speed into our work organisations—for good or ill. That is not at all how it seems to work. Generally speaking, when technology hits an organisation, strange things happen. The technology is rarely seamless. Even so, 25 percent of the challenges are technical, in our experience, and 75 percent are organisational and managerial. The easiest way we have found to communicate this is to talk of the eight-siloed organisation. The silos that inhibit the free flow of data, information and knowledge, and application of technology are: culture; process; legacy technology; data; strategy; skills; structure; and the big one—managerial mind-sets. A major reason these silos exist is where organisations are structured in business divisions and functions that have become self-contained over time. Most organisations are, even today, struggling with going digital. If you ask them how they score on these silos from 1 to 10 (with 10 being very siloed), most, even today, will have a significant number against each of these eight areas. And there you have some key reasons why automation and digital transformation are experienced by so many as so challenging.

Interestingly overlooked, but a real trip wire for going digital is data. Actually, we find 80 percent of organisational data is usually semi-structured or unstructured and not that usable. Usable data for automation technologies may be as little as 15–20 percent. Then you hear about the wonders of big data; it has been nicely said that the dirty secret of big data is that nearly all business data is dirty. For example, it comes preloaded with biases, it's frequently not in a form that is usable, or that you can compare with other data. Given the statistical basis of many algorithms that depend on such things, getting a random sample is much easier stated as a principle than delivered on in practice. All in all, the point is that the data challenge has to be faced before the technological and organisational ones, and the data challenge is far from trivial for most working businesses, let alone something like a major government department like tax or social security, or, in the UK, the NHS (National Health Service).

Even assuming that the organisation has the capabilities to manage the technology into the organisation, you can see that these silos create a very big set of challenges to effective deployment.

Allow us one more. The third misunderstanding relates to the idea that technology is no longer a specialism, needing specialist knowledge and experience. In practice people have been discounting the Information Technology (IT) department since the 1980s. A Sloan Management Review paper in