THE UNIVERSITY OF MELBOURNE

Academic Report

The future of financial services with operations as a competitive advantage: Fast, efficient and AI-enabled

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Executive summary

With the maturing of digitalisation in financial services, we are finally seeing the potential for transformation of operations in these organisations: from a millstone-like cost centre that mostly delivered bad news to the rest of the organisation, to where it can truly be a competitive advantage. The most successful banks these days are running themselves as data houses, where technology and operations functions are integrated and aligned, even merged in some cases, to deliver service with differentiated speed, quality and superior cost/income ratios.

Built on top of the data, artificial intelligence (AI) is already making a big difference in supporting both customer services and employee productivity, yet we are only at the start of AI's potential. We see AI already in place with chatbots and numerous other customer facing enhancements, also improving personal productivity in ops through generative AI, and the next big wave arriving right now is AI-enabled decision intelligence.

AI is at the cusp of delivering significant productivity gains through intelligent resource allocation and decision effectiveness. Leading financial service companies have already used AI to improve their forecasting, make better decisions in real time about staffing level requirements in service centres, ensure the supply of skills match demand requirements, and on top of the associated productivity and service quality gains, to identify new opportunities for further continuous improvement in service operations.

Financial service executives have an opportunity to take AI capability from past and existing deployment in retail and related support activities, to apply this technology now to decision effectiveness for service and productivity gains, and in the future to make use of AI in increasingly strategic decision contexts.

Introduction: Applying learning from the past to today's dynamic world of tech-driven financial services

The history of business lending has been traced back some 4000 years, and banking and insurance in a formal sense have a 500 year history behind us, which makes it very interesting to note that records were kept and data was transmitted in a purely manual and analogue way until some 50 also years ago, when computers took us into the digital age and changed banking and insurance forever. Now, it literally is "all about the data", as well as the people and the systems that process that data to give great customer service. Since the 1970s, we have experienced step changes in the way banking is conducted including the first call centre (1989), digital credit and debit cards (1970s), ATMs (1980s), through to smartphone banking apps (2011), new digital only players (2013+), APIs, Facebook, Amazon and Apple banking, as well as BNPLs (2019) and a host of Fintechs and attempted startup disruptors. New technologies enabled by digitalization having included those ATMs, tele-banking, net-banking, mobile banking, digital wallets, open banking, and behind the scenes RPA, IoT, blockchain and most

recently artificial intelligence (AI).

Both regulators and market forces have 'sharpened' consumer banking to the point where competitive forces allow customers to switch their banking or insurance supplier relatively easily and cheaply in the present era. Banks and insurance companies compete vigorously with each other for customers and for market share which is facilitated by the lower friction costs associated with changing supplier, and indeed many suppliers offer switching incentives to their competitors' customers. This vigorous competition boils down for most retail and business consumers to a value equation based on benefits and costs, whether it's a mortgage, savings account, auto insurance or any other type of financial service, where consumers judge value, receive offers, then remain loyal or switch supplier, primarily based on service and price.

The implications for bank and insurance executives are that it has never been more important to be efficient and effective in giving good service and having a low-cost structure, which means that the imperatives for banking and insurance are processing speed and responsiveness, cost efficiency, accuracy and reliability, and the bundling of these into branding and relationships.

This bundling of value drivers can only be based on the effectiveness of the core operations within a banking or insurance organisation, and this is where logic dictates that the correct use of technologies to enhance and leverage human effort is key to competitiveness and success.

'Operations Excellence' in financial services

Some years ago, a useful framework for achieving competitive advantage was created[1] that suggested three 'disciplines' of focus towards business success; being operational excellence, product leadership, and service superiority. In financial services, where the intellectual property of product/service design is hard to protect and hence product differentiation is relatively difficult, it has become clear that a dominant business strategy is increasingly 'operational excellence' as a foundation upon which customer service excellence can be built, given the difficulty of pure product differentiation in mass markets. If one firm can achieve consistently superior resource productivity and quality through having the right skills working on the right operations tasks in the right amounts, then simultaneously superior service and productivity is the result, in other words it's a key driver of the (benefits to cost) value equation and the business' competitive advantage.

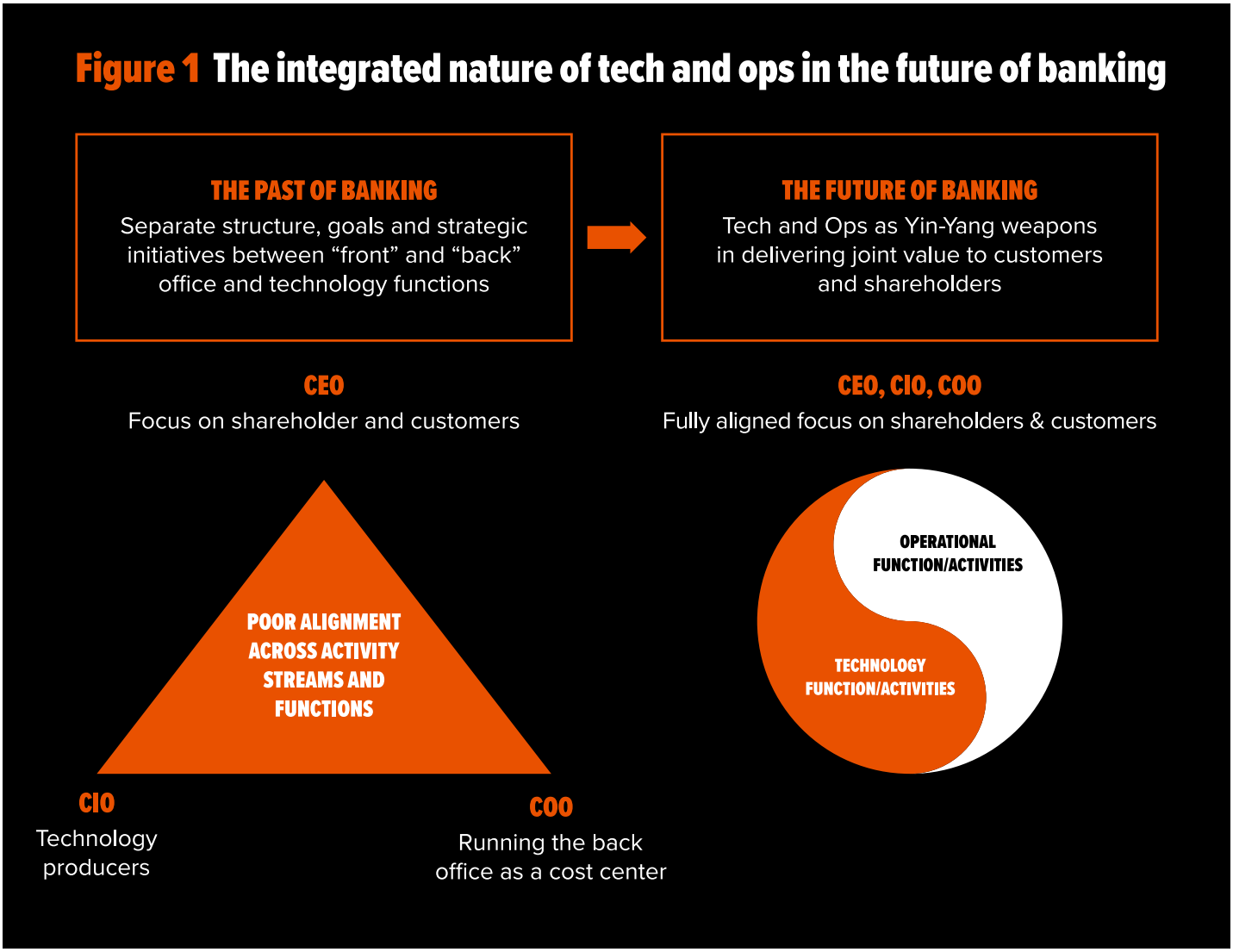
The key questions to consider are:

1. What does 'operations' of the future look like in financial services? We come from a past where the rise of technology in financial services as often in a separate structure from operations, that led to a lack of alignment of technology developments and business/operational requirements, and the future can and must be very different and better than that. We see leading financial institutions increasingly integrating these 'tech' and 'ops' functions, so that technology enablement is beautifully focused on directly delivering superior business value through operations effectiveness.

[1]Treacy, M., & Wiersema, F. (2007). The discipline of market leaders: Choose your customers, narrow your focus, dominate your market. Hachette UK.

2. How will we transition to this future? This strong alignment which we have depicted as a Yin-Yang relationship between operations and technology functions (see Figure 1) has positive implications for the business and will lead to both more useful tech outcomes and more business focused ops. It requires a broader view to be taken by all senior managers, and new job definitions, metrics and skills all the way from the C-suite to Team Leaders. Tech and Operations managers need to think of themselves and be responsibly measured more broadly as 'T-shaped' business leaders, not functional managers only.
3. How will this newly partnered and integrated tech-ops organisation be best able to be both efficient today, and effectively take on new innovations that create business value tomorrow? Technology in this new world is fully connected through operations to the business strategy, both because it is guided by the strategy, and because it enables both operational effectiveness and the strategy frontier to move forward. The most powerful tech now with us is artificial intelligence – AI. We see AI already in place with chatbots and numerous other customer facing enhancements, also improving personal productivity in ops through generative AI, and the next big wave arriving right now is AI-enabled decision intelligence.

Figure 1 The integrated nature of tech and ops in the future of banking



The future role of operations in financial services

Now that banks and insurance companies are approaching maturity in terms of the digital platform configurations being stable and robust, we have entered a new age, where winners and losers in the hyper-competitive market will be determined by who makes the best resource allocation and resource reconfiguration decisions in real time. In this age, the winners will be those with highest resource utilisation rates, with the right (technology augmented) skill levels applied to the right processes, because this is what will produce optimal levels of both service and cost efficiency. Consumers want their banking and insurance services to be increasingly faster, better (which means error free, reliable and user friendly), and at the lowest possible cost, and these parameters, that drive the value equation and value proposition, can only be achieved if the supplying organisation has the most effective processing operations management, which in turn can only occur when the best possible use of advanced technologies such as AI-enabled decision effectiveness and personal effectiveness is in play.

As we show in Figure 1, financial services ops will be a much more powerful weapon going forward, than in the old cost-centre days when it received and was expected to deploy new technology which, put bluntly but realistically, was not always fit for purpose. Operations was often seen in the past as a millstone in banks such that the only time it got C-Suite or board attention was when it delivered bad news to the business. The new world of service ops can be almost the polar opposite of that. For example, Laurent Ferreira, President and CEO of industry leading National Bank of Canada recently stated[2]: "*As a team, we are also prioritizing investments that will simplify our operations to gain efficiencies, while also improving the client experience. Bringing together our information technology and operations under one leadership was a major step in facilitating this work.*" Further, our analysis of the published strategies of 12 leading banks across the EMEIA, APAC and NA regions identified technology (including digitisation and data) as a strategic pillar in 83% of them. In contrast, customer experience (including expertise and being easier to deal with) appeared in 50% and cost efficiency (and/or productivity) in just 25%. The use of data and technology is the dominant strategic theme.

In summary, the future of financial services operations is:

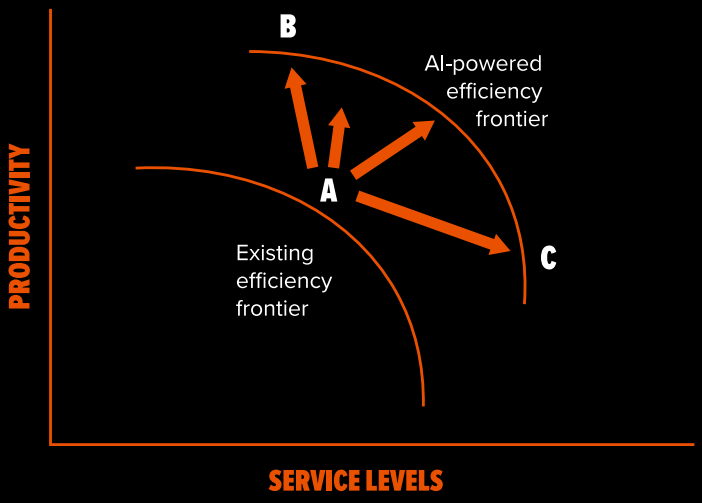
1. Closely integrated and aligned with the technology function, creating value as a seamless, technology-enabled competitive weapon in the business.
2. Structurally merged or almost merged[3] with the technology function working with fully aligned goals, objectives, strategic initiatives and business metrics (to achieve the Yin-Yang of Figure 1).
3. More highly automated and hence needing less people in total, yet with higher skill levels, both in their technology and data management capabilities as well as in business acumen.
4. Less silo-based, requiring more T-shaped cross-skilling, to match the multi-channel requirements of customers in the marketplace. There is no room for organisational silos in the future of banking.
5. Managed through better measurement and reporting, real-time and predictive planning and decision-making, with flexible resource allocation: with AI-enabled smart automation that requires less manual supervision and provides cost savings through needing less middle management.

[2]National Bank of Canada Annual Report, 2023, President and CEO statement, p4
[3]CIO and COO will have strongly overlapping (if not the same) metrics, goals, purpose and incentives, with tech people being ops focused (seeing ops as the internal customer of tech), although some tech specialists will always be required.

The result will be the elimination of crossfunctional 'wars', a stronger value proposition and higher business benefits from what will become more successful technology investments, and a single responsive and efficient 'tech-ops' engine, where human work and technology are effectively combined from the shop floor to the C-Suite. Ultimately, tech projects will have much higher rates of delivering fit for purpose outcomes than in the checkered history of these, and the created value will flow via service ops and market performance all the way to the bottom line.

Figure 2 Efficient frontier of service and productivity: AI impact

For a firm currently operating at point A on an existing efficiency frontier curve, the use of AI to improve resource allocation decisions can be used to lift productivity, or service levels, or a combination, to anywhere on the new AI-powered efficiency curve, between points B and C.



AI specifics in financial services: the new imperative

What are the specifics that executives need to know about AI: where does it fit in this strategic 'Service Ops' picture, and how can it best contribute to operational excellence?

AI is presently able to contribute to efficiency and effectiveness arenas, being:

Operational tactical efficiency at the customer interface

Chatbots, natural language processors and generative AI applications can be used in transactional efficiency circumstances, to replace, support or help service workers in their work with customers and processing works. Generative AI for text is included here. For example, Bank of America uses AI at scale to help customers with prompt helpdesk and services support and is used by some 42 million customers (in over 2 billion interactions in six years), as well as staff who use it to compose and customise communications.

Decision effectiveness

This is where AI augments human decision-making or even replaces it. Such 'decision intelligence' can be further divided into two arenas.

The first concerns decisions made on the work that you do; is a transaction fraudulent or genuine, how much could/should you lend to a customer? In these examples, machine learning algorithms are trained to distinguish between patterns that are normal and those that require closer attention. With access to many more examples than a human will encounter, AI provides a better decision or leads to and supports more accurate human decision-making.

The second 'management effectiveness' area concerns management decisions on how you run service operations, allocate people to teams and tasks, and can have a major impact on competitiveness. This is a key potential for AI-based decision support. AI can improve the managerial matching decisions of quantity and quality of staff resources to match the dynamics of peaks and troughs of hundreds of types of tasks that exist in a bank or insurance service centre (see Figure 2).

Personal effectiveness

With the advancement in Large Language Models (LLMs), applications are in play that support individuals in becoming more efficient and effective. For example, Microsoft's Copilot with its ability to produce presentations to order, summarise minutes and search more easily through documents and emails.

Assessing the potential for AI in decision-making: The opportunity!

Consider as a thought experiment, the fully 'perfect' state that cannot be practically achieved for service operations in financial services. This can be described in terms of the decisions that are made and the consequences of those decisions leading to the best of outcomes in all instances: in this nirvana, all resources would be perfectly and optimally allocated and working at full utilisation. Although that theoretically perfect state will never be fully achieved in practice, we can use it as a thought exercise to understand the nature and magnitude of the opportunity that artificially intelligent decision-making can bring in terms of improved decisions and outcome consequences. The specific decision categories described above currently leave much uncaptured value as a gap, in capacity management, performance management, employee skills quality matching and business continuity/risk management. If these were all working at a state of perfection or very nearly so, how much additional value would be created? We have estimated that for an average financial services company, this amounts to 25% of additional productivity, and in some instances, the opportunity is clearly well above that average. This is the gap between the two curves in Figure 2. When effectively deployed to make decisions more effective, AI can capture at least two thirds of that potential value. **Some of such gains are detailed below:**

Efficiency gains from team members

Effective capacity management systems can increase productivity by 15-20%. AI brings additional gains of a further 5% in transaction environments and 10% or more in case working teams.

Efficiency gains from streamlining operations

We estimate that between 25%-30% of all operational costs are in layers of management from team leaders to Heads of Function. Traditionally, spans of control have followed a model of 10-12 team members to a team leader and then 5-7 leaders to the next level of management with the number of management layers a function of the size of the organisation. The benefits of AI have the potential to both increase spans of control and reduce the layers of management required to provide effective control, direction and motivation.

We are at the beginnings of this journey but as automation of transactional work has reduced the number of people required to perform this activity, the logic of this applying to management activity is inescapable.

Business gains from improved service

AI-enabled capacity management translates to more work being done on time. It also reduces the risk of service operations being placed under significant strain, risking quality as tired staff make mistakes or stressed staff take short-cuts. By improving service, AI will lead to improved business outcomes.

Reduced losses

Operational loss arising from error or non-conformance to a process are reduced. Increased resilience enables business critical processes to be protected during continuity threatening events. In addition, AI provides benefits of stability of resource allocation and optimisation that will give confidence to regulators.

Reduced costs from lower staff turnover

AI will provide a better place to work and enable leaders to identify and respond to the hopes, aspirations and needs of their team more effectively.

The old adage “people don’t leave companies, they leave managers” has an element of truth but extends beyond individual relationships. People also leave the work they do. Whilst some enjoy stability, for others boredom is the enemy and providing variety and the opportunity to try new things is crucial. AI has the potential to enable leaders to lead in a way that reduces turnover. This reduces the associated business costs of lost productivity, recruitment, training and the costs of covering reduced capacity whilst replacement is in progress.

What should executives do about decisional AI, now?

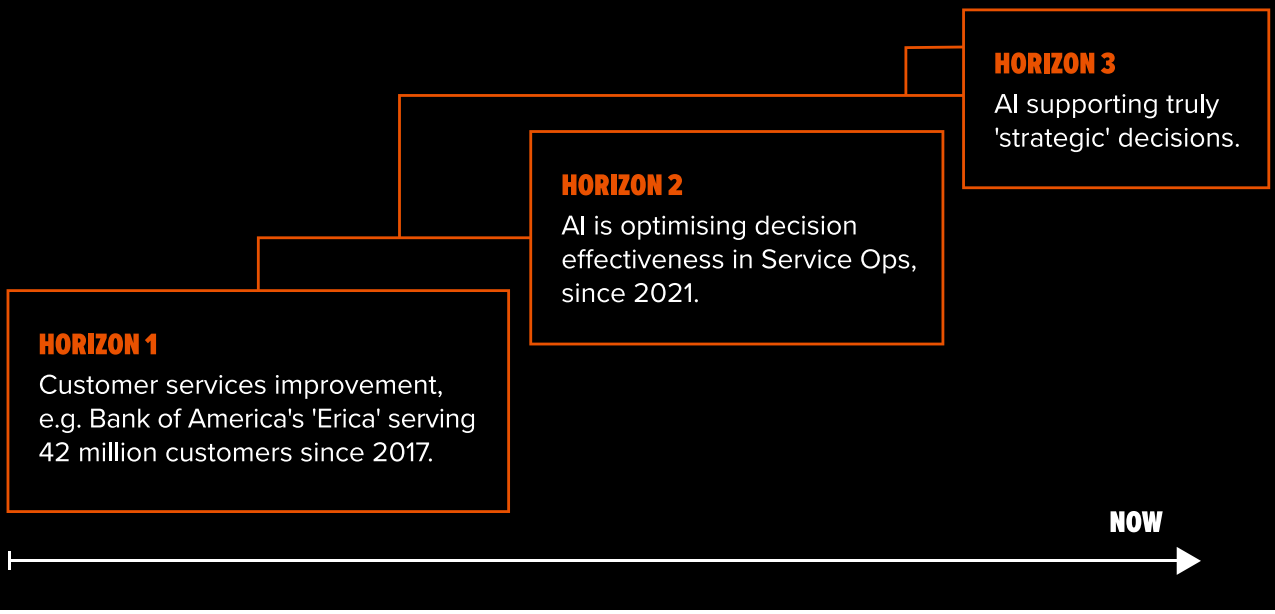
The future trajectory for AI cannot be seen with any sense of precision: our view is that it is hard to overestimate its impact going forward, because going forward, the many and various ways it can impact on decision effectiveness are growing fast and are,

frankly, huge! Yet we can get a sense from noting the past and present, and look into the future in general terms. From low level transactional and service provision efficiency as its original starting point, we have now developed AI decision effectiveness applications, whereby managers who use AI can better allocate resources to achieve advantage in service operations. This has been a move from highly structured contexts to semi-structured decisions that AI can now support and improve, such as in optimising service ops. Herein is the underlying trend: whilst we don't know exactly what the future will deliver in terms of AI capability, we can generally forecast that AI is and will be able to support and ultimately make decisions in increasingly unstructured decision contexts. It began with highly structured situations only, and now it can recognise patterns and learn dynamically such as to support and suggest solutions to problems such as optimal staffing patterns in ways that outperform unaided human decision makers.

Most leading financial service companies already have a number of AI applications either in development or deployed at the transactional/retail/customer service support level. This set of applications, in highly structured applications, is a good start. For those firms, it is time to start applying AI to good effect in the next level of more unstructured decisions, such as staffing allocations in service ops, skills development and role-job matching, and other decision areas that move the organisation up the operational effectiveness scale (see Figure 3). This vital step will also bring the organisational learning that will soon lead to AI supporting strategic and increasingly unstructured decisions. It's tough to say exactly and in detail how AI will be able to support the all-important human judgement of experienced executives in such decisions as acquisitions and new technology choices, yet there is no question that this will happen, and soon. In the meantime, the action and high potential for value creation is in using AI to improve service ops decisions (Horizon 2 in Figure 3)!

Figure 3 The three horizons of AI in financial services

AI progresses over time towards being able to support, augment and make decisions that started with highly structured decisions for call center customers, then has obtained Horizon 2 decision effectiveness value in service ops support and augmentation. Next will be the domain of business strategy, that will be built on the organization's AI competence (developed in Horizons 1 and 2).



To be on or in front of this second wave in Figure 3, our experience, familiarity, confidence and an ongoing investment in the current business opportunity set, of 'operations decision effectiveness' will give organisations the knowledge to then go even further and make the next moves from using AI in operations, which itself is a bankable proposition, to strategic AI support.

For executives, useful advice about AI was recently provided in the Sloan Management Review by Pinski et al[4] (2024), who suggested that executives need to prioritise the development of 'AI literacy', **which we have adapted into a three-phased approach:**

1. Engage in continual learning about AI. Executives need not and indeed should not try to become technical experts but should seek to understand the capabilities and the risks associated with various approaches and applications of AI.
2. Ensure widespread understanding of AI capabilities and opportunities from board level through to team leader levels, of what is possible in this fast-moving field.
3. Be prepared to experiment, and to expect the unexpected.

In summary

The future of financial services involves raising the status and contribution of operations from its historical role as a back-office cost centre to a dynamic competitive advantage, delivering the speed, accuracy and efficiency that matter to customers. The opportunities to do this will increasingly come from closely integrating ops and technology, especially AI applications to achieve decision effectiveness: in competitive markets there will be winners and losers, whereby the winners will increasingly be those that can automate decisions, speed up their process responsiveness and increase productivity: Nobel Prize winning economist Paul Krugman stated very succinctly that **"Productivity isn't everything, but in the long run it is almost everything."**

[4] https://sloanreview.mit.edu/article/why-executives-cant-get-comfortable-with-ai/

About the authors

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Danny Samson has been professor of management specialising in Operations Management for over three decades at the University of Melbourne. He has written over a dozen books and conducted and published dozens of research studies into many aspects of operations management and related fields. These include technology management and innovation, strategic business leadership, managing change and improvement, and business model transformation.

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He designed and directed the University of Melbourne's Master of Supply Chain Management, Master of Technology Management and Master of Enterprise, and is currently editor in chief of the US based journal, Operations Management Research.

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Stuart has over 30 years of experience of leading change in service operations. His career has spanned project and programme management, strategy, consulting, leading operations and developing and implementing technology to enable operations teams to perform better. He has worked in the UK, India and the Middle East where he led operations for Abu Dhabi Commercial Bank.

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