



salesforce

Navigating the digital frontier:

The role of digital transformation and Artificial Intelligence (AI) for asset intensive organisations



Foreword

Asset intensive organisations are facing significant headwinds in the face of economic uncertainty, the shifting regulation of sustainability measures, productivity challenges and the ability to deliver on long-term growth objectives through effective asset management and operational processes. Conflating these challenges, natural events such as bushfires, storms and floods continue to pose significant challenges to how organisations can deliver on capital and maintenance commitments, and customers' needs, while keeping their employees safe in distributed working environments. Digital transformation, leveraging enterprise data and use of Artificial Intelligence (AI) technologies provide an opportunity to accelerate the response to these challenges.

In the next five to ten years, our energy mix, grid technologies, infrastructure requirements and consumer sentiment will evolve significantly. Organisations responsible for the delivery of services across energy, utilities and resources have a pivotal role in shaping a more sustainable future, as well as facilitating the dynamic needs of societies where greater connectivity, transparency and trust underpins the relationship between how businesses operate and how customers interface with their assets and operations.

KPMG and Salesforce have forged a strategic partnership to help asset intensive organisations navigate contemporary challenges through their digital transformation agenda and navigate the next frontier of AI. This report draws upon our unique strengths in market, reflecting leading industry insights, a suite of cutting-edge AI-enabled technologies and pragmatic implementation expertise, creating a synergy that aims to accelerate how organisations can deliver value as they navigate contemporary challenges.

Data and AI are set to be a driving force in getting to this future state. Currently we are observing the impact generative AI is having on society where it is both challenging organisations on issues such as ethics, trust, privacy and security, and at the same time opening up possibilities for

new ways of working which recently were unconceivable. In the same vein, technologies today, whether they are used to manage customer experience, assets and operations or, back office functions, are providing immense potential for leveraging a range of AI tools, which can transform how work is delivered across various organisational functions and processes to create value for customers and shareholders.

We believe that there is significant merit in assessing your digital transformation agenda, particularly whether there is enough consideration and investment in data and AI, and how it can address these challenges that your organisation is facing. Together, KPMG and Salesforce have developed a point of view which can help you navigate the emerging issues, achieve your strategic goals and create a future with a greater sense of connectivity, transparency and trust.

Connectivity to drive operational value.

Transparency in 'doing what is right'.

Trust as the fundamental requirement for the social license to operate.

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We see the following areas where the digital transformation agenda and AI will play a key role in driving greater connectivity, transparency and trust

01

Transparency in ESG commitments, with social licence at the core

Driven by regulatory changes, organisations will require proficiency in their data management and ESG reporting processes. There is a strategic opportunity to embed ESG in portfolio decision-making to drive transformational outcomes for customers, stakeholders and the environment.

02

Hone in on what your customers really value

Understanding your customers' values and preferences is an ongoing business agenda. Next generation AI enabled customer experience and management technologies provide an opportunity to create a digital relationship between your customers, assets and operations, opening up new possibilities for service delivery.

03

More intelligence in asset management to unlock value

Value creation is inherent to how your assets perform. Convergence of Information Technology (IT) and Operational Technology (OT) data, and applications of AI technologies can enable organisations to harness more value across the asset lifecycle. A more robust digital backbone will enable the customer and growth agenda.

04

Address the debt of low productivity

Low productivity in the workforce incurs a 'hidden debt' that organisations are often unaware of. This is a limiting factor to delivering on asset and customer plans. Next generation AI-enabled planning and scheduling applications will help address this issue and unlock more value from your operational teams.

05

Embrace security as a catalyst for digital transformation

Security must be front and centre of any digital transformation agenda. It is both mandated by regulation, and a key lever to unlock innovation opportunities. Approaching security as a lever to accelerate digital transformation, and embedding it into the process will help reduce hurdles to innovation and growth.

06

Balance regulation, risk and reward in the pursuit of innovation

In pursuit of your transformation agenda, there is a requirement to balance risk and value creation. Security, social and regulatory landscapes pose challenges to data openness and use of AI tooling. Ethics, clear strategy setting and technology choices will navigate the next frontier for AI-enabled innovation.

Transparency in ESG commitments and social licence at the core

- + Sustainability disclosure requirements will be mandated for many organisations from July 2024. This will require alignment on reporting frameworks and standards and approach for data management.
- + Regulatory compliance is a given, however, there is an opportunity to be bold, and integrate ESG into the strategic planning and execution cycle, to enable transformative outcomes.
- + Fundamentally, navigating data complexity and usage of data management technologies which incorporate AI will be key to establishing trust in reporting and insights produced, and sustain the social licence to operate.

In a hyperconnected society, customer and shareholder expectations have shifted significantly, where they are no longer merely interested in the products and services on offer. There is an expectation that organisations take proactive measures to address emerging ESG issues. More than two-thirds of consumers are now seeking suppliers that demonstrate their operational practices have a positive environmental and social impact. In addition, CEOs are increasingly expressing the importance of ESG initiatives on improving financial performance, driving growth via strategic investments, and shoring up their employee value proposition to attract and secure the best talent. The bottom line is that ESG is no longer a nice to have, rather integral to delivering on long-term strategic objectives.

The spotlight on environmental aspects of ESG, particularly around climate change and related disclosures will increase from 2024 for many organisations. International Sustainability Standards Board (ISSB) sustainability disclosure standards (IFRS – S1, S2) will be widely adopted, and this will have implications on how organisations get a handle on their data, reporting frameworks, and standards and processes to meet the compliance requirements. In addition, reforms to the Safeguard Mechanism have brought additional scrutiny on reporting standards and quality for carbon emissions. Organisations may well be on their way to establishing internal processes to meet these requirements; however, we believe there is a strategic opportunity, a pivot point, to step back and ask whether a bolder step change could be made, where ESG is embedded in strategic decision-making to drive transformational outcomes for customers, stakeholders and the environment.

Achieving this requires a new way of thinking where senior executives can drive a strategy in which revenue, margin, and ESG drivers can all coexist simultaneously. This requires an approach where an organisation does not build strategies in silos (one for growth, customer, environment, etc.), rather an integrated strategy which builds in ESG as inherently coupled to value creation for customers, communities and shareholders. Organisations that are becoming more attuned to this idea of embedded ESG believe that there are several benefits to this approach: accessibility of capital financing, attracting talent and driving customer loyalty. The key is in articulating a compelling ESG story, which is based on reliable performance measures and integral data standards.

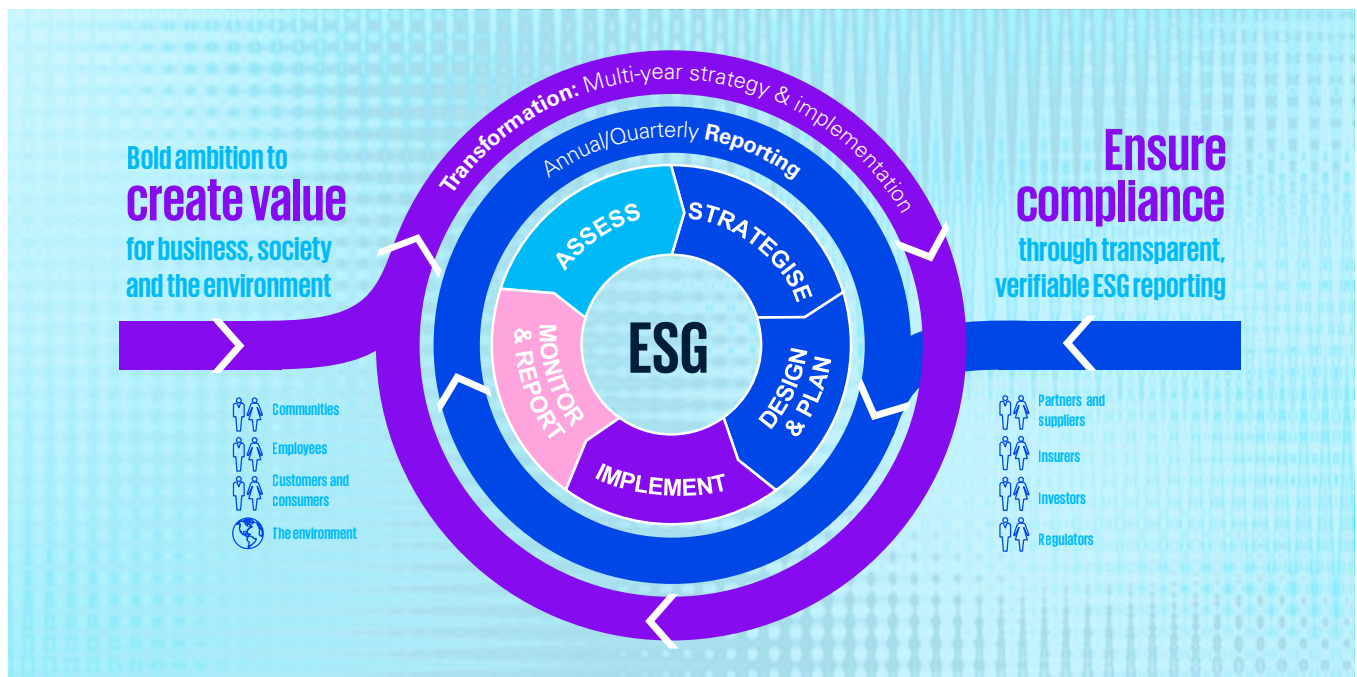
Getting to this state, however, will require complex datasets to be synthesised into actionable insights. Conflating this issue, this data is often unstructured and not standardised for consumption. The upshot, however, is the availability of next generation data management capabilities enabled with AI technologies, which can process these datasets and generate contextualised insights to an extent that has not been possible previously. Imagine for example, that datasets across the organisation's core enterprise systems (Enterprise Resource Planning, finance), operational systems (asset sensors, vehicular systems) and customer/social channels (web, social media, etc.) are synthesised – essentially bringing together volumes of structured and unstructured data.

With the use of AI (including advancements in generative AI technology), organisations can not only produce trusted ESG compliance reports, but also gain access to predictive insights around community sentiment, performance benchmarking, potential risks and opportunities in their operations and supply chain, and scenario analysis (based on varied embedded ESG inputs).

simplifying reporting processes and increasing accuracy and trust, it also opens up possibilities for advanced capabilities in predictive modelling and insights. For example, orchestrating data from multiple systems to provide predictions and scenario analysis on whether the organisation is on track to meet emission reduction targets, and which value levers can be further targeted to address any performance variances. Similarly, embedded ESG models can be scaled for multi-dimensional insights, enabled by data and AI to drive strategy decision making.

Generative AI technologies are enabling step changes on querying data on ESG performance; for example, asking for a summary of the organisation's ESG commitments (via analysing various datasets such as system databases and web published reports), and then a summary of performance against those goals.

These technologies will continue to rapidly gather pace and will require organisations to get a handle on their data management and governance practices. Compliance reporting is the natural place to start and it's worthwhile achieving proficiency in, given the raft of mandated regulatory



For example, consider the measurement of decarbonisation initiatives across an organisations' value chain for emissions reductions, and the complexities involved in orchestrating data and processes across a distributed ecosystem of assets, operations, suppliers, employees, etc. Typically, teams may spend a significant amount of time manually processing reports from across the organisation to prepare a summary of performance against targets, and this process may be repeated on a quarterly basis. Not only is this time consuming, it can pose data management and governance risks, and potentially non-conformance to reporting standards. A data management solution enabled with AI, provides a pathway to not only

changes underway. However, the highest performance organisations that seek a competitive edge will need to shift from a mindset of ESG compliance to value creation, where data and measurement helps strategic decision-making on investment and growth. The capabilities of AI technologies today open up a raft of possibilities, and organisations need to 'right size' a solution which balances cost and opportunity. The key is to start now – understand the business and technology drivers, align the senior executive cohort on a pragmatic pathway to the ESG agenda, and leverage data and insights to tell a compelling story to stakeholders.

Hone in on what your customers really value

- + Customer sentiment and value sets will drive their decision-making and choice to engage with service providers.
- + Understanding your customer needs and preferences and developing a connected customer experience should be a key focus.
- + Next generation customer experience and management technologies are taking a platform-centric approach, incorporating a suite of AI tooling to enhance service experience and optimise service delivery processes.
- + Organisations need to create a strong digital relationship between their customers, assets and operations to drive a true customer-centric approach.

The customer agenda is at the forefront of organisational innovation and change. The 2020 pandemic triggered seismic shifts in how organisations connect and provide services to their customers, and these changes have set new expectations for service delivery. This is particularly significant in the context of the shifting energy landscape, where in the foreseeable future, consumers will have more choice in how they engage with energy providers and their decisions will be more attuned to their value sets. The shift to customer centricity is being driven by new operating models where organisations that traditionally focused on managing assets and infrastructure are now in some cases transacting directly with the end customer. In a society that expects a seamless and contextualised experience from their service providers, AI technologies provide immense opportunities to tap into your customers, and truly understand what they value, and how their emergent needs can be met.

Getting a handle on what customers value is a challenge many organisations are yet to fully solve, and this is driven by legacy issues of not having a connected suite of technologies, data and service delivery models which help facilitate a deep understanding of customers and how organisations should respond in terms of their investment profiles, operating and customer service philosophies. Orchestrating a connected customer experience, which unifies people, technology, data and delivery models should be a key focus. AI technologies today are providing opportunities to make a step change in how organisations can understand their customers, improve service delivery and optimise processes.

We believe that customer experience is underpinned by six key pillars:

integrity built on security and transparency, swift 'painless' **resolution** of requests and issues, delivering on emergent **expectations**, minimising **time and effort** required for interactions, delight through **personalisation**, and humanised experience built on **empathy**.



To be proficient across these pillars, organisations must look beyond traditional silos and hierarchies, across their customer, assets and operational teams, and chart a pathway to creating ecosystems that help build a unified view of the customer through connected datasets, applications and processes. The customer experience strategy (CX strategy) can serve as a 'beacon on the hill' which drives integration between various investment plays (technology, assets and operations) and the customer transformation agenda. Once this alignment is reached, the pathway to incorporating AI technologies is significantly de-risked and organisations can make significant step changes in how they understand customers, tune into their needs, and provide contextualised experiences.

Next generation customer experience and management technologies are taking a platform-centric approach, which brings together various dimensions of the customers' experience across several touchpoints in the organisation; for example, marketing and sales, relationship management, service delivery, configure price quote (CPQ) and others. This means that organisations can now orchestrate processes and provide a more seamless experience, through native integration pathways, unified data management, and the ability to develop low-code applications to bridge any service delivery gaps. Added to this, natively integrated AI capabilities are accelerating how employees can tune into the customer's context quickly, and provide an improved experience, aligned to the six pillars above. Our research indicates that in low-performing organisations for customer experience, service agents cite the lack of customer context as the key reason for not being able to provide a high quality of service. AI can help address this – consider the following examples:

- **AI enhances the ability to improve customer conversations in real time:** Workflows powered by AI, seamlessly integrated into agents' workspaces, offer automatic suggestions to assist in resolving customer issues.

These suggestions may include tasks like automatically verifying a customer's account status or delivering relevant knowledge articles. Particularly, generative AI can harness data from multiple datasets (Customer Relationship Management (CRM), service, sales, etc.) and develop draft responses tailored to the specific situation, for agents to review, and send to customers.

- **Automate services and provide a 'human like' touch:** In touchless channels like chatbots and self-service, AI introduces a personalised and human-like dimension to customer service. When a customer initiates a conversation with your chatbot, AI populates the customer's metadata (name, location, account information, etc.). Natural language processing then helps

action service delivery requests. With advancements in generative AI, the customer's experience can be improved, with a more personalised touch. Service agents can request summaries of these interactions to build a better understanding and context of the customer's situation, to assist the next time the customer phones in.

- **AI drives value beyond the 'human touch':** AI technologies can analyse customer and associated datasets to assess opportunities to improve the customer experience. For example, suggesting next best action for service offerings or billing, predictive service request creation and sentiment analysis to gain essential insights. These insights can be harnessed to create a unified view of the customer and enable organisations to continually improve their service delivery by honing in on what customers actually value.
- **Extending the customer experience to field operations:** Frontline workers will play a key role in delivering large components of the customer experience, particularly if your organisation is considering moving into new services at, or behind the customers' meter. Mobility applications have incorporated a range of AI tooling to improve experience at the point of delivery. For example, automated workflows and information to improve customer interactions (prior history, predictive next best action, work close out summarisation etc.). Generative AI can now help summarise key information related to the customer, and the work they have requested, enabling the field worker to provide a far more personalised service.

We have worked with global organisations on their customer agenda, and over 80 percent of high performing organisations are incorporating AI technology into their processes and Generative AI technology is now providing the next frontier for innovation. Organisations should create a stronger digital relationship and connect their customers, operations and assets and orchestrate datasets which builds a customer centric view. This will enable the pathway to leverage next generation AI technology to improve service delivery, enable your organisation to keep up with emergent market demands and ultimately drive more connectivity and value for your customers.

More intelligence in asset management to unlock value

- + Value creation is inherently tied to performance across the asset management value chain. Digital tooling and AI can help get to this value.
- + Asset data across the organisation needs to converge, and the application of digital tooling and AI technologies can enable automation, insights, and standardisation across the asset management value chain – essentially enabling organisations to do more with the same or less.
- + Digital twinning capability has evolved significantly, and can help organisations view their assets and their interaction with the physical world in real time via simulated environments. This will enable far greater levels of insights, and decision-making capability.

In a capital intensive environment, value creation is inherently linked to how your asset lifecycle value chain performs. Your assets' performance is fundamentally tied to your ability to create value for your customers, communities, shareholders and even employees – from an operability and safety perspective. However, organisations are often challenged delivering on these expectations, as it is an enormous undertaking to create alignment across several organisational functions, processes, stakeholders and technology systems; often operating in silos with misaligned objectives and lack of visibility to overarching strategic objectives. In recent times, these challenges have been conflated in an inflationary environment, and when supply chains haven't yet returned to pre-pandemic levels. There is far greater scrutiny from regulators and shareholders on justifying return on investment, in terms of delivering customer value and driving business growth. When we discussed these issues with CEOs, nearly 70 percent said they are prioritising digital transformation and intend to take a first-mover or first-follower status. But what does this mean for asset intensive organisations?

Across the asset management value chain, we have entered an age where data abundance exists through routine collection of structured and unstructured data and will only accelerate through hyper-connectivity (e.g., 5G, satellite), creation from the edge of operations (OT, IT, sensors, PLCs, smart meters, etc.) and enterprise asset and resource planning systems. Without orchestrating these datasets into actionable insights, business managers cannot get the full picture to optimise decision-making across the asset lifecycle to deliver on customer and growth objectives.

In your digital transformation efforts, supporting the successful convergence of data across operational technologies (OT) and information technology (IT) domains, and synthesising disparate datasets should be a key focus. Contemporary digital tools and AI provides an opportunity to drive step changes in performance. In fact, in our global survey with CIOs, 64 percent of respondents said automation, infrastructure and cloud computing were their key focus areas; their other top areas being customer experience and cyber security. With these technologies, organisations can now automate processes; sift through complex datasets to generate predictive insights; and through standardisation, bring together people, processes and systems across the asset lifecycle value chain.

Organisations can enable the following outcomes:

ACQUISITION TO COMMISSION

- Unified asset data to reduce risk and enhance the capital allocation strategy across the asset investment portfolio.
- Enable standardised plans to ensure consistency through the delivery program.
- Visualise concepts and articulate ideas to stakeholders and communities for better engagement and buy-in.
- Standardise and automate design processes, and reduce repetition. Free up engineers on value adds – performance optimisation and problem solving.
- Enhance project planning methodologies through 6D model and predictive planning and estimation.
- Optimise critical paths through scenario modelling of various construction sequencing options.
- Digital tooling to capture as-constructed information, and automation of change detection and version control (red-lining drawings, for example).
- Increase quality control of as-constructed drawings, and operational handover documentation.

OPERATE, MAINTAIN, DISPOSE

- Optimise maintenance and replacement plans and parts ordering through predictive models and reduce costs.
- Better understand operational characteristics through digital twinning of assets, to improve operating/maintenance strategies.
- Automate workflows (various forms) and document control – single source of truth.
- Identify and mitigate risks through predictive models, particularly availability of materials and labour.
- Digitally enable the workforce with smart tooling and create a better link between operations and asset managers.
- Enable greater collaboration between teams through a single source of truth for information.
- Improve decision-making through common visualisation models.
- Simulate various conditions and situations (for e.g., with digital twins) enables the optimisation of processes and allocation of resources.
- Free up human resources from routine operational work for more complex and strategic tasks.

The convergence of OT and IT data and AI is pushing the envelope for digital twins, which perhaps is a type of technology that organisations are no stranger to. Several asset intensive organisations have deployed digital representations of their assets and processes in some shape or form. However, these representations are often for closed loop systems, where the steady state operating parameters and deviation criteria are known and defined. Next generation twinning capability can enable organisations to visualise their assets in highly immersive virtual environments, and simulate how the asset would perform relative to a change in the physical environment it is operating in. This opens up a raft of possibilities to optimise processes across the asset management value chain and increase the speed and accuracy of decision-making. Some examples of what is possible now:

- **Strategic Decision Making** – AI based prediction and optimisation of TOTEX (Total Expenditure), based on analysing multiple inputs (future demand, environmental factors, asset risk and performance, operational requirements etc.). Enabling improved capital allocations to better balance cost, risk and value to customers and shareholders.

- **Performance Optimisation** – orchestrating real time data across multiple sources to predict deviations from expected operating envelopes. Computer vision technologies will allow for automatic maintenance work order creation by assessing asset condition and classifying any detected issues including evaluating their severity.
- **Real World Simulations** – simulating the effects of adverse events (bushfire, weather, floods etc.) on assets, using physics-enabled three-dimensional environments to understand the impacts of these events and at-risk assets. This helps get to a higher level of organisational planning, preparedness, and disaster recovery capability.

Data, digital transformation and AI has a significant role to play in how organisations can get more from their assets. This will require a shift in mindset across the organisation and evolving traditional operating models, far greater levels of integration, securing new talent and partnerships with external parties. Organisations need to create the digital backbone that enables better decision-making, and in turn helps drive the customer and growth agenda.

Address the debt of low productivity

- + For asset intensive organisations, the operational function and frontline operations is crucial for delivering on customers' expectations and asset plans.
- + With increasing labour costs and talent shortages, organisations may be carrying a 'hidden debt' from low productivity in the workforce.
- + Digital tooling and AI can help make step changes to processes, service delivery models and address productivity issues.
- + Organisations need to leverage these digital capabilities, invest in new skillsets in the frontline and in their leadership to drive a step change in how they deliver value from their operational teams.

Having worked with several organisations with large frontline workforces across the nation, a common theme that emerges is a potential hidden cost borne from suboptimal workforce productivity, often measured through utilisation and workforce effectiveness metrics. The implications of low productivity is often a 'hidden debt' that organisations carry as the impacts are often lagging and highly detrimental to long-term objectives. In the short term, a workforce productivity issue does not materialise on the P&L; however, over a longer time span, organisations find themselves at a shortfall in the amount of work delivered on their assets (capital and maintenance plans), and for their customers. The cost of this 'hidden debt' can be significant where organisations are unable to deliver on their asset plans and meet customers' expectations.

For any asset intensive organisation, the operational frontline workforce and supporting office functions (i.e. planning, scheduling, logistics) are crucial for delivering on large elements of the customer experience and keeping the assets maintained and operating optimally. The operational function is also one of the largest cost areas for the business. In the last few years we have seen the impacts to the labour market, where there is an acute shortage of skilled workers. In a low unemployment environment, getting access to the right skills is a challenge and developing the skilled talent pipeline is a protracted process for many asset heavy organisations. There is a need to bridge these skill gaps in the short term, and ensure that organisations are leveraging the existing workforce as optimally possible, to deliver on asset and customer objectives.

Common causes of productivity issues can stem from the following:

- **Long-term planning and estimation:** Suboptimal integrated or long cycle planning philosophies, processes and systems leading to a suboptimal work program which does not balance the operational demands with the workforce and supply chain capacity. This leads to downstream delivery bottlenecks and productivity loss.
- **Scheduling and route optimisation:** Scheduling inefficiencies and lack of optimisation for bundling, layered job dependencies (multi-crews, third parties, etc.), and inefficient permitting processes directly impact productivity at the frontline. In addition, lack of routing optimisation capabilities lead to increased driving hours, which has a productivity and safety impact.
- **Job handover processes:** Misalignment between planning/scheduling and delivery teams can lead to rework. Typical causes are issues with job scoping and estimation, materials availability and handover of ‘job execution packs’.

- **Information accessibility at the frontline:** Lack of availability of customer and asset information at the point of delivery (right information at the right time) leads to job overruns, and flow-on impact to schedules, decreasing job effectiveness.
- **Operational feedback loops:** Lack of, or inefficient feedback loops from the frontline to back office operations support leads to limited opportunity for continuous improvement and performance analysis.

Fortunately, technologies for field service management available today are quite mature and incorporate a range of AI capabilities that can enable organisations to make step changes in productivity. The key is to create a digital fabric between your frontline workforce, customers and assets, with data at the heart of this inter-relationship. Once this is achieved, there is significant opportunity to leverage smart tooling and AI to drive improved outcomes for your frontline and shift the dial for your customers’ service delivery experience.

VALUE STREAM	WHAT CAN DIGITAL TOOLING AND AI ENABLE?	WHAT ARE THE BENEFITS?
Long Cycle/ Integrated Planning	<ul style="list-style-type: none"> – Automate cyclical maintenance plans to be optimised in the long-term plan. – Predictive capability to balance work demand and workforce availability. – What-if scenario modelling, e.g. adverse weather/ events (bushfires, storms, etc.) 	<ul style="list-style-type: none"> – Improved data and insights to optimise long cycle plans, factoring in constraints – skills, capacity and location. – Build plans with greater confidence of delivery, and eliminate potential root causes for delivery inefficiencies (poor bundling, overestimation of capacity, etc.).
Scheduling and Dispatch	<ul style="list-style-type: none"> – Automate permits, parts and materials ordering based on job scope and plans. – Automate scheduling optimisation, enabled via a learning model. – Optimise job bundling and field worker routing. 	<ul style="list-style-type: none"> – Improve accuracy of job execution readiness, e.g. resources, materials and permits confirmed. – Increase utilisation and effectiveness through optimised scheduling and bundling. – Reduce OPEX through optimising driving hours and risk of safety incidents.
Technician Support	<ul style="list-style-type: none"> – Natural language processing and generative AI capabilities can assist field workers through chatbots. – Field workers can access any information on customers and assets to solve problems at point of delivery. – Augmented and virtual reality (AR/VR) can provide assisted capability to field workers. 	<ul style="list-style-type: none"> – Reduce or even eliminate rework, by giving field workers access to information to resolve issues at the point of delivery. – Improve job effectiveness, response time and first time resolution rates. – Improve collaboration between the office and the field.
Work Execution	<ul style="list-style-type: none"> – Digital pre-job workflows, e.g. safety checks/site assessments. Improve auditability and traceability. – Generative AI capabilities to summarise work order and customer information. – Enhance the customers’ experience via providing contextualised information created by AI for frontline teams. 	<ul style="list-style-type: none"> – Improve productivity and effectiveness through digitising manual workflows. – Quick time to resolution by leveraging smart tooling enabled with AI. – Reduce cost to serve and improve customer experience.
Service Performance Analysis	<ul style="list-style-type: none"> – Predictive analytics to inform leaders on key workforce metrics (customer satisfaction, utilisation, cost to serve). – Ability to run what-if scenario models to improve future delivery capability. 	<ul style="list-style-type: none"> – Data driven decision-making to improve service delivery for customers, and process and cost optimisation in the field.

Nearly 80 percent of the highest performing field service organisations are incorporating smart tooling and AI. A continuation of this trend will see frontline operators evolve their service delivery operating models to get value from next generation digital capabilities. It will require a convergence between new ways of working, digital skillsets at the frontline and a generation of leaders to effectively grapple the opportunity at hand and drive a high-performing operational function.

Embrace security as a catalyst for digital transformation

- + Managing threats to your organisation's assets and data should be a key priority. There is a raft of regulatory changes that have implications on your risk management processes and reporting obligations.
- + Physical and data security risk management is particularly challenging in the context of the IT/OT convergence.
- + The strategic opportunity is to embed security risk management as part of the transformation agenda, rather than treating it as a standalone discipline.
- + Aligning key stakeholders and decision-makers on the strategic objectives, implementing secure by design concepts, and partnering to close capability gaps will enable innovation and progress.

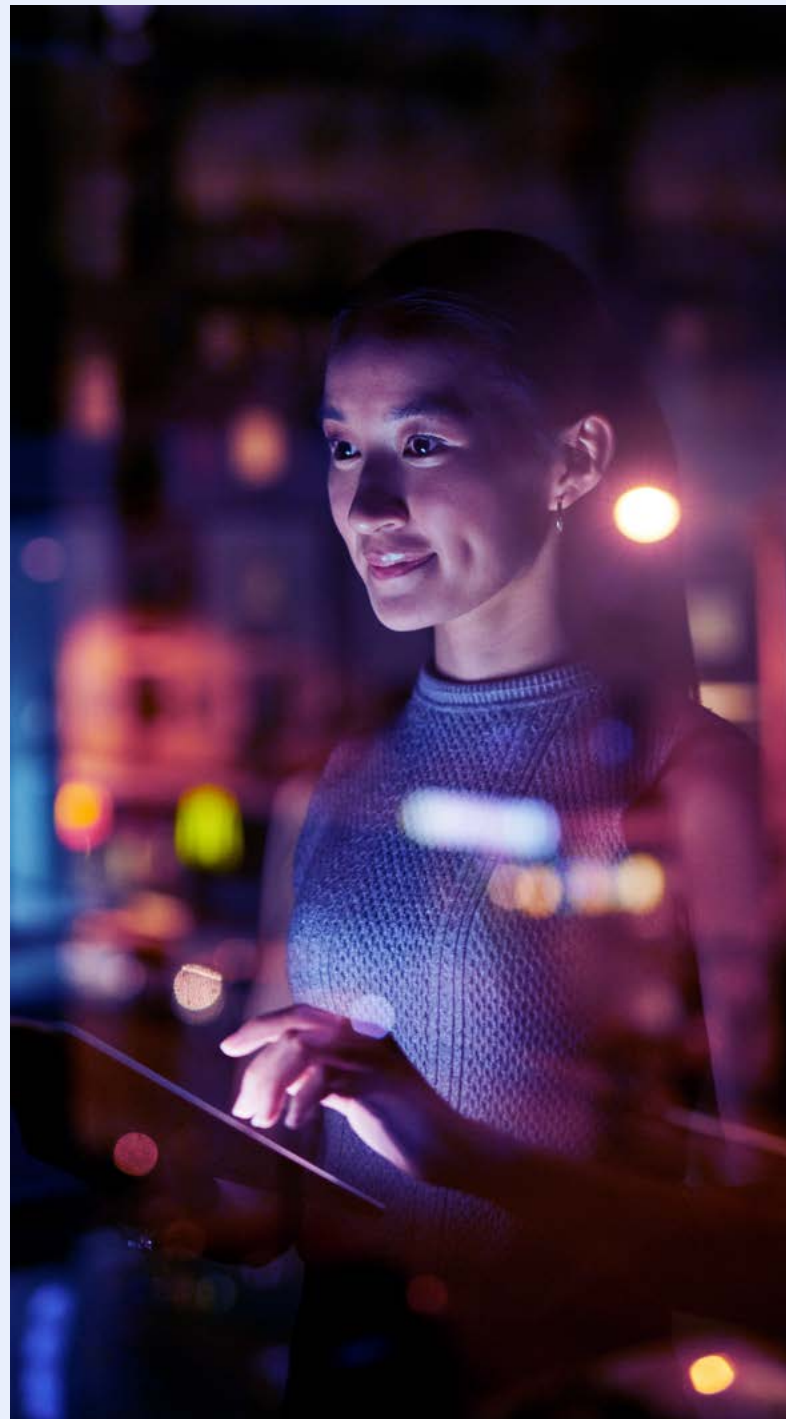
Throughout this report we have touched on the importance of data, integration of datasets across OT and IT domains, and making it more accessible to enable better insights for a range of agendas. Consideration of these topics cannot be made without discussing the critical importance of managing against the threats to your organisation's data, systems and physical infrastructure. Across the globe we have seen examples of where whole power grids have been taken down, and gas pipelines compromised by malicious actors, crippling the delivery of essential services. In Australia, a string of high profile data breaches has put data security in the spotlight for everyone – politicians, media and boards; but perhaps none more important than customers, who fundamentally will not put their trust in an organisation that cannot protect their data, or even worse, fail to provide essential services when it is most needed.

National security and consumer demand is driving regulatory change that organisations must keep up with. For example, amendments to the Security of Critical Infrastructure Act, the Australian Energy Sector Cyber Security Framework (AESCEF) and Consumer Data Rights and Privacy Act are imposing more stringent requirements to how organisations manage cyber and infrastructure risks, and associated reporting obligations. Breach of these regulations will bring significant financial penalties and potential litigation for company directors. This is at the forefront of every C-suite and board agenda, and organisations need to adapt and get better at managing risks, while continuing to deliver value from their business transformation agenda – in particular, incorporating next generation AI technologies which will require far greater levels of data accessibility.

The topic of data accessibility is more accentuated in the context of the OT and IT convergence topic discussed earlier in this report. To get more out of their assets, organisations must consider how datasets across these areas can be synthesised to generate better insights on risks and growth opportunities across their asset base, improve processes and service delivery for customers. There are some real challenges, both across physical assets, and IT systems. Many organisations are carrying a legacy asset base, and these assets fundamentally were not designed with convergence in mind. Newer assets, in contrast, are convergence ready. This is driving changes to process and operating models in aligning how newer 'smarter' assets can be operated alongside an ageing asset base. The IT ecosystem for many organisations is also evolving from legacy on premises to cloud native environments – adding complexity to integration and data handling processes. Considering this from the perspective of an enterprise security risk manager, there is a significant amount of risk when convergence is considered, and this can pose a barrier to innovation and making step changes to how organisations can realise more value from their data and assets.

In response, rather than seeing security and risk management as standalone disciplines, it needs to be integrated at the core of any transformation effort, and seen as an opportunity to enable innovation, rather than curtail it. In discussing these issues, we've found that nearly 50 percent of organisations' cyber security teams are focusing on streamlining and embedding security into the core of their businesses, but are still navigating the complexities and perception of security as a barrier to innovate. Our perspective is that security should start as a strategic agenda, even before the technology pathway is defined. Aligning stakeholders and decision-makers on the transformation objectives, and understanding the risks and security landscape is the place to start. By understanding and designing out security risks and engineering controls early in the process, the technology is secure by design. In fact, we have seen over 60 percent of organisations reported a significant increase in the success rates of their transformation programs when they managed security as an embedded component.

Your digital transformation agenda will require you to handle data, perhaps at a volume, velocity and variety of unprecedented levels. Securing data and assets will be a key focus, given the raft of regulatory changes. A partner ecosystem providing these skills and capabilities, in a talent constrained market, will help accelerate progress. The strategic opportunity is to rethink how security is embedded in your transformation agenda, and how it can enable innovation and progress.



Balance regulation, risk and reward in the pursuit of innovation

- + The regulatory landscape, security risks and public perception and trust of next generation AI technologies is challenging organisations' position on wide scale adoption.
- + There is a need to balance risk and value, as organisations consider adopting next generation AI technologies in the business transformation agenda.
- + The regulatory landscape is evolving, and there will be additional requirements for privacy and security related to specific AI technologies.
- + Looking ahead, organisations need to continue operating as an ethical corporate citizen, while charting a path ahead that considers the regulations, risks and rewards of leveraging AI in their transformation agenda.

Leveraging data across your organisation and embedding the use of AI, along with the new ways of working and cultural shifts it demands, will be the drivers of the next chapter of business change and innovation. To enable such change, organisations need to strike a balance between compliance, risk and the ability to extract value from their technological investments. Aversion to innovation, arising from a lack of a clear digital strategy, conservative compliance driven risk appetites and poorly thought out investment plans, will not be sustainable choices in the long run. Organisations need to navigate this next frontier with intent, and lean into the emergent challenges of balancing risk and value to get the most out of their transformation agenda.

Technology leaders are citing advancement in AI as a key lever for delivering business objectives, however, with any emerging technology, there are risks involved. We have already covered the issues of data and cyber security, which will need to be a key focal point. The other consideration, is one of trust. Our surveys on trusting AI systems indicate that nearly 60 percent of people are wary of AI systems, and around half believe that the benefits outweigh any potential risks. When generative AI technologies are considered, the risks and lack of trust is amplified due to concerns around biased logic, security vulnerabilities, potential to discriminate against individuals or groups, and privacy concerns around use of sensitive data. Given the nature of generative AI technology, their ability to access and process large-scale datasets from the internet, and proprietary algorithms, there is understandably hesitation from the business community, and increasing scrutiny from regulatory watchdogs.

The regulatory environment remains uncertain, being complex, in parts undecided, and in a state of evolutionary transition. Considering the dynamic nature of AI innovations, the uncertain attribution of liability and fault, and the intangible cascade of data use for processing purposes, it is inherently challenging to reconcile our 'traditional' rules and frameworks with the foresight and fluidity required to support AI innovation. Regulatory bodies are responding however; for example, the European Union is making first attempts at what could be the toughest AI privacy regulation (Artificial Intelligence Act), and others could follow. In Australia, eight voluntary AI ethics principles have been published to ensure safe, secure and reliable AI use. We anticipate that the regulatory landscape for AI will evolve at a rapid pace, and organisations will need to stay abreast of the emergent regulation.

A real-world case study reflecting the concerns on security risks, trust, and lack of clear regulatory guidance has been playing out with generative AI technology, where many large-scale organisations that serve the Australian public have placed a blanket ban on the use of such technologies. The anecdotes on the novelty, innovation potential and value from generative AI is becoming more and more apparent, and perhaps beyond what was initially expected. These technologies present an immense opportunity to transform the way organisations work, providing significant productivity gains and allowing increased focus on true human value-add activities. In this report, we have indicated how generative AI technology is being incorporated in customer and operations technology platforms, and this trend will continue to gather pace.

Throughout this report we have advocated the significant role of digital transformation and AI in solving some of the most complex challenges asset intensive organisations will face. Navigating this frontier will require organisations, as a foundational requirement, to uphold their regulatory duties and behave ethically as a corporate citizen. A pursuit of innovation will then require balancing risk and reward, and this requires a clear strategy, incorporating 'secure by design' principles, aligning decision-makers and making the right choices on data and technology to deliver on your digital transformation agenda. Connectivity, transparency, and trust, should serve as the key guiding principles for the road ahead.



KPMG and Salesforce stand ready to enable your transformation agenda

With deep expertise across asset intensive industries KPMG and Salesforce have led the way in solving complex problems across data, technology, AI and wide-scale transformation. Our partnership enables a unique approach, where we can each bring our respective strengths and value proposition to help organisations achieve their digital transformation goals, and help shape a better future for the nation.

As a next step, we welcome a further discussion on any of the topics presented in the report. We also offer an initial workshop to further explore these topics in more depth.

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