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 Middle East
 Published by Deloitte & Touche (M.E.) and distributed to thought leaders across

 the region | Spring 2025

# Point of View

## **Next-generation business**





Spring 2025 Middle East Point of View Published by Deloitte & Touche (M.E.)

www.deloitte.com/middleeast

# A word from the editorial team

Spring is a time of renewal and new beginnings, and in this issue of the *Middle East Point of View*, we explore the forces shaping the future of leadership, innovation, and strategy across the region. As we move forward in a time of undeniable transformation, nextgeneration business strategies are vital for companies to stay competitive, embrace emerging technologies, and drive sustainable growth in a constantly evolving marketplace.

In their article, *Leadership blueprint in fostering sustainable business growth*, Ranjith Chandra and Nandana Kalubowila highlight the pivotal role of leadership in cultivating sustainable business growth. They emphasize how adapting business models to environmental, social, and governance (ESG) factors can create longterm value and ensure sustainability in an ever-changing market.

In *The evolution of software and asset management (SAM) in the era of AI*, Tamer Charife and Fahed Qutteineh explore how artificial intelligence is reshaping the area of software and asset management. They explain how, "Whether it is risk avoidance, return on investment, or enhancing operational efficiency, SAM plays a pivotal role in driving value across the enterprise."

Ali Abdul Aziz provides an in-depth analysis of Saudi Arabia's Vision 2030 and its impact on the banking sector in *Vision 2030 and the KSA banking industry: Key challenges and strategic opportunities*. Abdul Aziz highlights how, "As the Kingdom continues its progress toward Vision 2030 and works to diversify its economy, the banking sector continues to be pivotal in facilitating this transformation." In *Reimagining the DNA of internal audit (IA): The journey to revolutionize the IA function*, Dina Fakih and Fady Sameh touch upon how digital transformation is significantly restructuring the internal audit landscape and how technologies such as AI and data analytics enable IA to deliver timely and comprehensive insights, driving efficiency and effectiveness in risk management.

In Board evaluations: Leveraging technology and best practices for greater impact, Melissa Scully presents insights into modernizing board evaluations. Through the use of technological tools and best practices, organizations can enhance governance structures and make more informed decisions at the highest levels of leadership.

Dania Nourallah, Ujjwal Deep, and Maha Chehab tackle the challenges of managing cultural change in their article *Cultural change management for a multigenerational workforce.* With multiple generations working side by side, businesses must foster inclusivity, adaptability, and continuous learning to maintain a harmonious and productive environment.

In *Customer Centricity: Embracing the outside-in perspective*, Nour Khoury explores how companies can benefit from adopting a customer-first mindset. By shifting their focus from internal operations to external customer needs, organizations can build stronger relationships and achieve sustainable growth.

Alexios Zachariadis and Sally Hafez take us on a journey into the future of selfdriving cars in *The road ahead: Autonomous vehicle manufacturing and adoption in the GCC*. Their article explores both the opportunities and challenges in the automotive sector as the region embraces this transformative technology.

Finally, *Demystifying ethical AI: A guide to modern-day governance* by Eliza Lozan, Sarah Yahia, and Aws AlMasri delves into the connection between ethics, technology, and regulation. In a rapidly advancing AI environment, understanding regulatory frameworks is essential for businesses to ensure responsible innovation and compliance.

From leadership and sustainability to the rise of AI, technology, and evolving workforce dynamics, this issue provides a strategic roadmap for organizations aiming to thrive in the next generation of business. By embracing change and encouraging innovation at every level, companies can ensure long-term success in a world that continues to grow more intricately. We hope you enjoy reading this Spring issue of the *Middle East Point of View*.

#### The ME PoV Editorial Team

## Contents



## 06

Cultural change management for a multigenerational workforce

Dania Nourallah, Ujjwal Deep and Maha Chehab

## 34

Reimagining the DNA of internal audit (IA): The journey to revolutionize the IA function

Dina Fakih and Fady Sameh



## 12

**Board evaluations:** Leveraging technology and best practices for greater impact

16

Demystifying ethical AI: A guide to modern-day governance

## 22

**Customer Centricity:** Embracing the outside-in perspective

Nour Khoury

26

The road ahead: Autonomous vehicle manufacturing and adoption in the GCC

Melissa Scully

Eliza Lozan, Sarah Yahia and Aws AlMasri

Alexios Zachariadis and Sally Hafez

## 40

Kalubowila

Leadership blueprint in fostering sustainable business growth

Ranjith Chandra and Nandana



Ali Abdul Aziz

Vision 2030 and the KSA banking industry: Key challenges and strategic opportunities

## 54

The evolution of software and asset management (SAM) in the era of artificial intelligence

Tamer Charife and Fahed Qutteineh

## Cultural change management for a multigenerational workforce





rganizations are at a critical inflection point, where digital transformation, artificial intelligence (AI), workforce demographics, and shifting cultural expectations converge. Five generations-baby boomers (1946 to 1964), Gen X (1965 to 1980), millennials (1981 to 1996), Gen Z (1997 to 2012), and Generation Alpha (2013-2025)—are now co-existing in the workplace, each bringing distinct values and diverse backgrounds, including differences in religion, ethnicity, education, language, life experience, and varying work preferences and expectations. This generational diversity makes cultural change management a critical success factor for organizations navigating any transformation.

Culture, when strategically managed, helps to align the organizational purpose, values, behaviors, and mindsets, allowing organizations to navigate the complexities of Industry 5.0, also known as the Fifth Industrial Revolution. Organizations are undergoing a transformational mutation, where humans and machines are merging. As multiple generations converge in the workplace, businesses are rethinking the concept of modern work, shifting toward hybrid models, automation, data and information, and increased flexibility in how work is done. This transformation requires organizations to navigate the dynamic intersection of technology and culture while addressing the varied expectations and needs of a multigenerational workforce.

Successfully navigating this reality requires a holistic cultural change strategy at the organizational level that integrates leadership direction, employee behavior, organizational design, diversity and inclusion, and coaching strategies for organizations looking to stay in the game for the long haul.

This article explores how organizational leaders can strategically manage cultural change, foster inclusivity, and evolve organizational design to support long-term success.

## Why cultural change management matters now: The leadership shift

The traditional top-down leadership models no longer serve the needs of a multigenerational workforce. Leaders must adopt their leadership approach for inclusive leadership as the backbone of successful cultural change, recognizing and valuing generational diversity where each generation brings unique skills and perspectives, encouraging crossgenerational collaboration and innovation.

Rather than dictating change, leaders need to adopt a coaching mindset and act as facilitators, enabling employees to take ownership of organizational transformations. Such changes require transparency, open two-way communication, 360-degree feedback, and active involvement of employees in decision-making.

There are several key considerations for each generation in the workplace. Adaptive leadership<sup>1</sup> for cultural transformation between baby boomers and Gen X leaders, for instance, must focus on developing digital fluency to bridge the gap between traditional leadership styles and the emerging digital-first mindset. Millennials and Gen Z should be encouraged to develop emotional intelligence and resilience to effectively manage intergenerational teams, while remaining open to the feedback and the perspectives of team members.

Deloitte's Human Capital Trends 2024 – Middle East Edition<sup>2</sup> delves into the evolving culture integration and leadership landscape in the GCC, focusing on how promoting adaptability, emotional intelligence, and empowerment in a dynamic environment enhances human performance, as well as employee engagement and productivity. Google's Project Aristotle<sup>3</sup> aimed to foster psychological safety among its teams, prompting a significant culture change. By creating an environment where team members feel safe to take risks and express ideas, Google encourages diverse perspectives, experiences, and communication styles to co-exist, thereby driving collaboration, engagement, and innovation across age groups.

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### Driving cultural change management without alienating employees



#### Why a multigenerational workforce reacts differently from a neuroscience lens

Change, by nature, is disruptive, and the human brain is wired to seek stability; resistance to cultural change is not an unfamiliar phenomenon. Neuroscience tells us that the human brain is naturally wired to resist change, particularly when it threatens familiarity and comfort. Change, especially cultural change, activates the amygdala (a small, almond-shaped cluster in the brain's temporal lobe responsible for emotional responses), triggering a stress response. As such, different generations respond to change differently based on their experiences with technology, work structures, and cultural norms.

Baby boomers and Gen X are more likely to perceive digital transformation as a disruption to established ways of working. Their cognitive bias leans toward stability, making change feel like a loss rather than an opportunity. Millennials and Gen Z, on the other hand, are digital natives who see change as an opportunity for innovation. However, they may experience frustration with slow decision-making processes or resistance from older colleagues.

To ensure smooth cultural change, leaders must create psychological safety, where all employees feel secure in adapting to new ways of working and interacting. Deloitte's Human Capital Trends 2024 – Middle East edition highlights the importance of this, revealing that 76% of respondents consider it crucial for their organization's success to ensure every human interaction positively impacts individuals. The move toward human sustainability represents a parallel shift in organizations' approach to people, framing change as an evolution rather than a disruption. Furthermore, leaders should address resistance with empathy by acknowledging the emotional impact of change on different generations. This can be achieved by leveraging and embracing the path of science; that is, discovering what science has to offer. From understanding human physiology to extending their knowledge of human behavior, leaders can cultivate interventions to support these cultural transformational shifts.

Neuroplasticity, also known as brain plasticity, refers to the brain's physiological ability to reorganize itself by forming new neural connections throughout life, particularly through learning. This scientifically supported phenomenon enables leaders to leverage the principles of neuroplasticity in the workplace to help overcome generational resistance to change. By fostering continuous learning, creating safe spaces for experimentation, and reinforcing positive behaviors, leaders can promote adaptability as a skill that grows with practice. This demonstrates that change is not only possible but attainable at any stage, for individuals of different generations, and within organizations as social systems alike.

In multigeneration environments, many employees, particularly from older generations, may struggle with digital adoption. In this context, neuroplasticity allows organizational leadership to intentionally rewire mindsets and avoid unconscious bias such as ageism and experience bias. For baby boomers, leaders can adopt a mentorship-based coaching style, recognizing their expertise while encouraging reverse-mentoring.<sup>4</sup> This involves inviting baby boomers to share institutional knowledge while learning digital skills from younger colleagues. For example, pairing a senior leader with a tech-savvy millennial for cross-learning - digital tools in exchange for strategic insights.

For Gen X, leaders should use a goaloriented coaching approach, offering strategic coaching focused on succession planning or project leadership rather than micromanaging. For millennials, a purpose-driven coaching style works best, incorporating regular check-ins and linking tasks to broader organizational goals. Finally, for Gen Z, leaders should use a flexible, tech-enabled coaching style. This involves using digital platforms for feedback and offering opportunities for innovation challenges, hackathons, and other creative spaces for growth and learning.

To ensure smooth cultural change, leaders must create psychological safety, where all employees feel secure in adapting to new ways of working and interacting



#### Organizational design: Evolving roles and work structures

In the modern workplace, organizational roles are evolving to support agility, collaboration, and generational diversity. Traditional, rigid structures reinforce hierarchies, hindering agility and slowing an organization's ability to respond to market changes and emerging trends. Employees are now expected to take on multiple skillbased roles, moving away from fixed job descriptions and embracing fluid roles. Departmental silos are being easily alienated through the push for crossgenerational and cross-functional networked teams to drive innovation. Bureaucratic walls are dismantling as younger employees expect faster, more democratic decision-making processes, rather than waiting for executive approvals. When it comes to strategy, organizations are redesigning job roles and reporting structures to allow for collaborative, crossfunctional work. The focus is on knowledge transfer between generations, with an emphasis on usability, inclusivity, and adaptability rather than simply rolling out new technologies.



## Digital transformation and generational inclusion that retains multigenerational talent

According to the latest GCC labor statistics report for Q3 2024,<sup>5</sup> more than 24 million workers comprise the workforce in the GCC, representing diverse cultural backgrounds and demographics. This diversity shaped the unique cultural dynamics of the workplace– some rooted in hierarchical structures and tradition, others driven by experimentation, adaptability, and innovation. When combined with digital transformation, this diversity becomes a critical driver of cultural change, with inclusion playing a central role. The success of this change hinges on how well inclusion is integrated and implemented into the workforce without alienating any generation.

Accordingly, cultural change is sustainable only when employees feel included and valued. However, treating employees equally does not guarantee fairness; a 55-year-old employee and a 25-yearold employee have different needs. Organizations undergoing cultural transformation should aim for a purpose-driven work environment and a customized employee experience that promotes harmony, coexistence, and a safe workplace for everyone. This includes encouraging play and experimentation in digital playgrounds to drive human performance, co-creation, and experimentation, while offering benefits tailored to different life stages.

On the other hand, while baby boomers and Gen X may prefer in-person collaboration, and millennials and Gen Z usually thrive in remote and flexible work settings, hybrid work continues to reshape organizational culture. A one-size-fitsall approach to workplace flexibility no longer works; instead, companies should implement personalized work models that cater to both digital and in-person preferences.

## For cultural change success

Cultural change management in a multigenerational workforce is not about choosing between tradition and innovation—it's about harmonizing both and embracing an agile feedback loop that continuously refines cultural strategies based on real-time insights.

Accordingly, for cultural change to be meaningful, organizations must track the impact of transformation initiatives to ensure long-term success. This occurs by identifying key metrics that include:

- Employee sentiment analysis (i.e., pulse surveys, focus groups, interviews, Employee Net Promoter Score)
- Leadership and coaching impact (i.e., 360-degree feedback tools, behavioral change metrics, objectives and key results (OKRs)
- Retention and career growth metrics (i.e., retention by demographics, attrition, mobility promotion, training and development participation rates, and career progression scores)
- Digital adoption rates (i.e., use of Microsoft Power BI, heatmaps, and usage tracking)

These metrics provide valuable workspace insights and allow organizations to monitor, at scale, how different generations engage with new technologies. By analyzing retention and productivity trends, companies can identify whether cultural changes are contributing to a more satisfied workforce.

In multigeneration environments, many employees, particularly from older generations, may struggle with digital adoption. In this context, neuroplasticity allows organizational leadership to intentionally rewire mindsets and avoid unconscious bias such as ageism and experience bias. In conclusion, prioritizing cultural evolution over disruption and continuously refining practices based on real-time feedback, rather than treating it as a one-time initiative, helps businesses align their purpose, values, behaviors, and mindsets. This approach allows businesses to build a resilient, inclusive, and future-ready workforce. A successful cultural change strategy in modern work requires a holistic approach that integrates both business and science. By understanding employee behavior, creating psychological safety, addressing resistance with empathy, optimizing organizational design, and tailoring coaching styles for better diversity and inclusion across generations, businesses can retain multigenerational talent. Offering personalized work models, benefits, and tracking measures tailored to different life stages can ensure smooth cultural transitions and transformation, helping organizations thrive in the evolving world of the Fifth Industrial Revolution.

Dania Nourallah, Partner, Workforce transformation, Ujjwal Deep, Director, and Maha Chehab, Manager, Organizational transformation, Deloitte Middle East

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Cultural change management in a multigenerational workforce is not about choosing between tradition and innovation—it's about harmonizing both and embracing an agile feedback loop that continuously refines cultural strategies based on real-time insights

## Board evaluations: Leveraging technology and best practices for greater impact





cross organizations, there is an ever-changing list of strategic priorities demanding the attention of boards and executives. These priorities are emerging during an era of fast paced technological advancements, shifting market dynamics, and evolving geopolitical conditions. Deloitte research shows that directors seek more robust boardroom discussions on mission-critical topics such as talent,<sup>1</sup> sustainability,<sup>2</sup> and generative AI,<sup>3</sup> to name a few. However, finding more time for these discussions often isn't feasible.

A board evaluation, whether internal or external, provides directors with the opportunity to reflect on the board's performance and identify ways to optimize its time and strengthen decision-making processes. As more boards embark on evaluations, several leading practices are emerging in the region, including the exploration of technology solutions and Generative AI to further unlock value in the process.



#### **Embracing technology**

Deloitte research shows that 66%<sup>4</sup> of board members and executives cite productivity and efficiency enhancement as a primary reason organizations are leveraging AI. It is no surprise that the exploration of AI to support board operations, including board evaluations, is a topic of interest to board members, as well as secretariat and governance teams. Use cases in this space demonstrate how Generative AI can transform the use of existing digital tools and platforms in a number of ways. For example: streamlining workflows and automating routine tasks, the provision of real-time data analysis, deploying aspectbased sentiment analysis to highlight areas of strength, and summarization capabilities to generate concise reports. While there are opportunities to be harnessed, there

are also key risks such as bias, ethics, and confidentiality to be considered and managed carefully in the context of the board evaluation process.



#### **Forward-looking lens**

Leading boards evaluate their performance not only retrospectively but also prospectively. They consider the evolving legal and regulatory landscape, business model, and future strategy of the organization, challenging whether their board and committee practices are not only fit for purpose now but also positioned for the future. While the board may have served the organization well up to this point, does it truly align with the organization's future aspirations? Examining board performance through this lens helps identify necessary changes to ensure effective oversight of the organization in the years to come. For example, shifting the focus on the agenda to increase time on priority matters, seeking more (or less) reporting on certain areas, and refreshing the committee structures to support efficient coverage of topics. Embracing detailed analysis of the board's composition in this context is increasingly common to gauge skillsets for future appointments or identify areas to enhance collective knowledge.



A board evaluation doesn't have to follow a standard annual cycle; the process can include regular touchpoints for continuous improvement. One illustrative practice includes the board, or nomination committee, regularly reviewing evaluation results and action plans to track progress. Another practice involves holding informal discussions on performance at the end of board meetings whereby directors reflect on the quality of the meeting and any potential enhancements. Further, a number of boards, with support from their secretariat and governance teams, are looking at ways to collect and monitor performance data on a regular basis. The use of Generative AI can help enable this with efficient interrogation, analysis, and aggregation of data to produce real-time insights. Opting for these approaches allows for a more innovative and iterative approach to the process.

As more boards embark on evaluations, several leading practices are emerging in the region, including the exploration of technology solutions and Generative Al to further unlock value in the process



#### **Critical success factors**

No matter where a board is in its evaluation journey, three critical factors are essential for achieving a value-adding board evaluation:

#### 1.Context

No two boards are the same, and the evaluation should be tailored to ensure it is proportionate and appropriate. Key factors to consider include the company's lifecycle, organizational structure, industry, regulatory environment, and shareholder relations.

#### 2. Communication

Collective buy-in from all members should be achieved at the outset to encourage engagement and openness. The evaluator should possess excellent communication skills and emotional intelligence to address the more sensitive areas of board effectiveness.

#### 3. Conclusion

Often, the weakest link in the evaluation process is the final stage, when the results of the review need to be considered and the outcomes agreed upon. Without a clear action plan and mechanism to track the results, the board will gain little value from the process. The nomination committee is usually critical in this stage, overseeing the implementation.

As boards navigate the complexities of the current business environment, it is a good time to reflect on their performance and consider how they may need to evolve to effectively oversee the organizations they govern. The board evaluation process provides an opportunity to further strengthen the board's operations, ensuring it is focused on the right areas at the right time, while optimizing both board and executive time. Leading boards evaluate their performance not only retrospectively but also prospectively. They consider the evolving legal and regulatory landscape, business model, and future strategy of the organization, challenging whether their board and committee practices are not only fit for purpose now but also positioned for the future.

Embracing innovation, not only in the board evaluation process but also in other governance practices, opens up new possibilities for enhancing and modernizing decision-making within organizations.

By **Melissa Scully**, Partner, Risk, Regulatory and Forensic, Deloitte Middle East

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## Demystifying ethical AI: A guide to modern-day governance



## "

## Law is order, and good law is good order.

- Aristotle

s artificial intelligence (AI) continues to evolve at an unprecedented pace, global discussions increasingly stress the urgent need for regulatory frameworks to ensure AI serves society responsibly. Policymakers and industry leaders worldwide recognize that without well-structured laws, AI could disrupt economies, infringe on rights, and introduce unforeseen risks. The question is no longer whether AI should be regulated, but how to strike the right balance between innovation and control.

When considering the negative impacts of AI, issues such as biases in automated decisions, invasions of privacy, and job displacement arise. AI now plays a crucial role in decisions that affect individuals, such as hiring, loan eligibility, and even medical treatments. The lack of regulation heightens the potential risks posed by AI bias, making the situation quite concerning. It is crucial to focus on these negative implications to understand the significant ethical challenges organizations face when seeking to harness these technologies.

Digital ethics addresses how to respond to these challenges and ensure that AI systems are designed and used responsibly. This article seeks to explore the landscape of digital ethics by examining the first regulatory framework for these types of technologies, the European (EU) AI Act, and utilizing this advancement in regulation as a benchmark to analyze the ethical guidelines available to organizations wishing to utilize these technologies in the Middle East (ME).

This article kicks off a series exploring the regulatory landscape for organizations aiming to start their journey in a compliant and ethical way. By comparing differences and focusing on a Middle Eastern approach, insights can be gained into how various regions handle the ethical aspects of AI and digital technologies. Additionally, this article aims to help organizations tap into the resources available in the region that emphasize the importance of ethical considerations in AI and digital technologies.



#### Background on the AI Act

The EU AI Act (the AI Act), introduced by the European Commission, represents a significant step toward regulating AI technologies within the European Union (EU). Aimed at ensuring AI systems are safe, trustworthy, and respectful of fundamental rights, the Act is structured around key pillars to promote transparency and accountability throughout the AI lifecycle. It categorizes AI systems based on risk, detailing stringent requirements for highrisk AI applications. The Act mandates transparency, establishes oversight and governance mechanisms, and imposes conformity assessments to ensure proper measures are taken during development and deployment. These key pillars will be explored in more detail below.

The AI Act firstly introduces a risk-based approach to categorizing technologies based on their functionality and impact, prohibiting high-risk practices such as those that manipulate behavior, exploit vulnerabilities, or create and use realtime remote biometric identification systems (Article 5). By prohibiting these high-risk practices, the AI Act sets a clear boundary for AI applications that pose significant dangers. This distinction is crucial, as it addresses both present and potential future challenges, paving the way for responsible AI development and deployment.

The AI Act undertakes the ambitious task of regulating the entire lifecycle of AI technologies, from conception through to deployment. It assigns distinct roles and responsibilities at each stage, ensuring that every player in the AI ecosystem, from developers to end-users, is held accountable. This comprehensive oversight is intended to ensure that AI systems are not only innovative but also ethical and secure. Consumer protection is at the heart of the AI Act. By prohibiting manipulative AI practices and the exploitation of vulnerabilities, the AI Act ensures that consumers are shielded from undue influence and harm. This focus on consumer protection is vital in an era where AI systems can deeply impact personal decisions and everyday life.

Data governance is another critical area addressed by the AI Act. The requirements for accuracy, transparency, and security in high-risk AI systems are particularly stringent when it comes to data management and bias detection. These measures are designed to root out inaccuracies and ensure that AI systems function as intended without unintended harmful consequences.

Privacy remains a top priority under the AI Act, as reflected throughout the legislation. The Act makes multiple references to the General Data Protection Regulation (GDPR), requiring entities to ensure that AI systems protect personal data as per GDPR requirements. It mandates that personal data be processed in strict compliance with existing data protection laws. This is coupled with stringent conditions for handling sensitive data, ensuring that individual privacy rights are respected throughout the AI lifecycle.

The objectives of the AI Act are clear and multifaceted. It aims to ensure safety and uphold fundamental rights by banning certain high-risk AI applications and implementing strict guidelines for high-risk systems. Transparency and accountability are further promoted through mandatory information and logging requirements for deployers of high-risk AI systems. Additionally, the AI Act fosters innovation by including regulatory sandboxes—secure environments where new AI technologies can develop under close scrutiny.

Several core principles underpin the Al Act. Proportionality and non-discrimination are key, ensuring that Al systems do not unfairly affect individuals or groups based on their behavior or characteristics. Transparency is another vital principle, requiring deployers to inform individuals about the operation of AI, especially in high-risk applications like biometric categorization and emotion recognition. Lastly, data protection remains central, with the AI Act aligning closely with existing EU regulations to ensure that AI systems treat personal data with the utmost care and security.

With over 300 Al-related laws, guidelines, and regulations either implemented or under development worldwide, AI systems must meet stringent security standards. The AI Act sets a precedent for a balanced, ethical approach to AI, providing a robust framework that can serve as a benchmark for regions worldwide. By establishing stringent standards and clear guidelines, Al technologies will be able to benefit society while mitigating potential risks and addressing ethical concerns. A key aspect of the AI Act is the requirement for AI systems to handle personal data in ways that protect privacy, in line with GDPR requirements.



### Overview of digital ethics guidelines in the Middle East

Although the Al Act establishes a balanced and ethical framework for AI that can serve as a global benchmark, it's important to recognize that regulators in other regions have also made significant strides. Governments worldwide have recognized the need to shift from voluntary AI ethics frameworks to embedding enforceable regulations in their respective landscape in order to ensure there are no delays in alignment. Efforts to rigorously implement ethical considerations for organizations within their jurisdictions are advancing notably in UAE, Saudi Arabia, Qatar, and Oman. While noteworthy advancements have been made in the region, two specific frameworks from this region will be highlighted to emphasize these advancements.

The United Arab Emirates' Minister of State for Artificial Intelligence, Digital Economy, and Remote Work Applications Office has most recently issued the UAE Charter for the Development and Use of Artificial Intelligence (the Charter).<sup>1</sup> This initiative aims to transform the UAE into a global hub for AI development, reflecting its leadership's vision. It focuses on ethical use, privacy, and compliance with existing legislation, promoting innovation while safeguarding rights.

Governments worldwide have recognized the need to shift from voluntary Al ethics frameworks to embedding enforceable regulations in their respective landscape in order to ensure there are no delays in alignment

A critical aspect of the Charter is its focus on ethical and responsible use of AI, ensuring that all applications are developed and deployed with strict adherence to privacy and data security principles that are already active in the regulatory landscape of the country. By balancing technological advancement with social values, the Charter aims to encourage innovation while protecting individual rights (similar to the Al Act) and promoting economic growth. The UAE seeks to create an environment where AI technologies can thrive safely and securely, building public trust and fostering transparency and accountability in their usage.

One of the key objectives of the Charter is to strengthen human-machine ties, ensuring that AI developments prioritize human well-being and progress. It also emphasizes the irreplaceable value of human judgment and oversight in AI, aligning AI applications with ethical values and social standards to correct any errors or biases that may arise. Governance and accountability are crucial, with the UAE adopting a proactive stance to ensure that AI technologies are used ethically and transparently. Safety of the technology's use is a top priority, with stringent standards required for all AI systems, promoting the modification or removal of systems that pose risks and ensuring that Al technologies do not compromise safety standards. The Charter advocates for the responsible development of inclusive AI technologies that support diversity, respect individual differences, and ensure equal technological benefits for all.

Keeping in mind the purpose of utilizing these AI technologies, the Charter promotes technological excellence as a key consideration, reflecting the UAE's vision for digital, technological, and scientific advancement. The Charter aims for global leadership in AI by driving innovation, enhancing competitiveness, and improving quality of life through effective solutions to complex challenges.

Saudi Arabia is also making significant strides in the ethical adoption of artificial intelligence through its new AI Adoption Framework,<sup>2</sup> setting a benchmark that aligns closely with Europe's comprehensive approach. Along with the release of the framework, the Saudi Data and Al Authority (SDAIA) established 23 AI-dedicated offices across various governmental sectors. These offices aim to incorporate AI into key areas of operations within the government, building on the well-known efforts of the country's Vision of Saudi 2030, which focuses on economic diversification and modernization. By integrating AI with national objectives, Saudi Arabia aims to maximize the technology's societal benefits while ensuring its responsible use.

The AI Adoption Framework acts as a strategic roadmap for organizations navigating the intricate process of AI integration. It addresses the needs of all stakeholders, from top executives to mid-level managers, and lays out a phased approach, starting with the identification of priorities, creation of AI-centric units, and evaluation of organizational preparedness. This phased strategy ensures that AI initiatives are in line with organizational goals and are flexible enough to meet the demands of a rapidly changing technological environment.

A cornerstone of the framework is its strong focus on data as the backbone of Al development. It calls for robust data infrastructure and significant investment in specialist training, recognizing the need for both technical robustness and skilled human resources. This focus leverages existing national regulations and stresses that organizations wishing to adopt Al must have mature data governance and data privacy systems in place before advancing in this field. Organizations need to ensure their data practices are well-structured and compliant to effectively and responsibly harness Al technology.

Saudi Arabia is also making significant strides in the ethical adoption of artificial intelligence through its new Al Adoption Framework, setting a benchmark that aligns closely with Europe's comprehensive approach

Expanding on the AI Ethics Principles<sup>3</sup> introduced by the SDAIA in 2023, the framework reinforces commitments to ethics, transparency, and human-centric AI values. The guidelines cover privacy, security, accountability, and social responsibility, ensuring that AI benefits both individuals and communities. Additionally, a maturity model within the framework classifies AI adoption into four phases—Emerging, Developed, Proficient, and Advanced—providing organizations with a clear path for development.

Additionally, SDAIA has released Generative Al Guidelines for both government employees<sup>4</sup> and the public.<sup>5</sup> These guidelines offer advice on adopting and using Generative Al systems, including examples of common scenarios that organizations might encounter. They also outline the challenges and considerations of using Generative Al, propose principles for responsible use, and suggest best practices.

With the introduction of this framework, Saudi Arabia positions itself as a leader in balancing technological innovation with ethical governance. For businesses and organizations, this provides a supportive environment that fosters innovation, mandates compliance, and delivers tangible benefits across multiple sectors. This initiative not only drives technological progress but also ensures that advancements are made without compromising core values, setting a new standard for Al integration globally.



#### Implementation

Having explored the regulatory landscapes of some Middle Eastern countries in depth, it is also important to consider a holistic view of what organizations must consider before implementation, as several critical steps are essential for successful integration.

First, building a robust data infrastructure is paramount, ensuring that data systems are strong and reliable. Organizations must also align with existing regulations, adhering to established data governance and privacy standards, and ensuring a high level of maturity in their practices to comply with the ethical standards established by the frameworks discussed earlier. This should be complemented by substantial investments in specialist training to develop the skilled human resources needed for managing AI technologies and ensuring AI fluency. Ethical considerations should be a cornerstone of AI strategies, with guidelines on privacy, security, and accountability seamlessly integrated into organizational practices. Developing dedicated Al-centric units within the organization can help focus efforts on AI adoption, while a thorough evaluation of organizational readiness will ensure that the necessary technical and human capacities are in place.



#### Impact on innovation

As with all creative endeavors, the relationship between regulation and AI innovation is intricate and multifaceted. On one hand, government efforts can provide a structured environment that promotes responsible innovation, helping to build public trust in AI technologies. Consumers are reassured that these systems are being developed and used responsibly, fostering a more supportive environment for AI adoption and driving further advancements in the field. Moreover, regulation can address ethical and social challenges associated with AI, such as minimizing bias and discrimination, promoting fairness, and ensuring data privacy. In simpler terms, isn't it better to be safe than sorry?

However, regulation also presents significant challenges. Overly restrictive regulations can stifle creativity and slow down the development of new technologies by creating barriers to entry for startups and smaller companies. This limitation can reduce the diversity of AI solutions and hinder the pace of innovation. Additionally, the rapidly evolving nature of AI makes it challenging for regulators to keep up and even understand the very nature of the systems they are trying to regulate. This can result in regulations becoming outdated and unable to address new challenges and opportunities as AI continues to evolve. Therefore, while regulation is crucial for fostering ethical and responsible AI innovation, it must be adaptable and balanced to avoid hindering technological progress. Emphasizing governing principles such as accountability, transparency, fairness, and safety can provide the pillars upon which agile regulatory frameworks can be built, effectively accommodating the technological advancements they aim to regulate.

The discussion above only begins to unravel the complex regulatory landscape surrounding AI. To fully comprehend the path forward, we must explore the efforts of individual countries within the region to regulate this intricate domain. This deeper understanding is essential for organizations and governments to collaborate effectively in building a shared future. As these developments unfold, comprehensive insights and strategic guidance will be provided to help practitioners navigate the evolving AI regulations effectively.

#### By **Eliza Lozan**, Partner, **Sarah Yahia**, Assistant Manager, and **Aws AlMasri**, Consultant, Digital Privacy & Trust, Deloitte Middle East

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## Customer Centricity: Embracing the outside-in perspective





Arketing and brand management have undergone significant changes in the past decade, mainly driven by rapid advancements in technology and their impact on customers' daily lives. Widespread internet access, the evolution of e-commerce, the availability of information, and more recently, the rise of AI, have shifted the balance of power from brands to customers. This shift allows customers to set the narrative and influence brand perception and behavior.

Looking back 50 years ago, communication was mainly one-way, with brands controlling the storyline, and customers being highly influenced by advertising through traditional channels. Today, with the democratization of the internet, customers can set the narrative, access unbiased sources of information, and influence the rise or fall of a brand. Social media has further accelerated this shift in power, enabling customers to directly shape brand perception and drive conversations.

So, what does this mean, and how has it impacted the way organizations behave and bring their products or offerings to market? Simply put, it has made the concept of *the customer is king* truer than ever - not only for customer brands but also for any brand that wants to lead in its sector and remain profitable. It has opened a direct dialogue between brands and customers, allowing customers to voice their opinions on the good, the bad, and the ugly. Customers now demand that brands listen, take their feedback seriously, and act on it. This shift ensures that customer satisfaction is prioritized over profit-making.

We have seen numerous examples of this shift, such as the case of Volkswagen in 2015, when it was discovered that the company had installed software in diesel engines to mislead emissions tests. This resulted in billions of dollars in fines, a significant drop in sales, and long-term damage to the brand's reputation. On the other hand, LEGO, which faced declining sales and financial difficulties in the early 2000s, engaged with its community, incorporating feedback into product development.<sup>1,2</sup> This led to the successful launch of lines like LEGO Star Wars and LEGO Friends, resulting in a resurgence in popularity and significant business growth for the brand. While the strength of this argument is clear for business-to-customer (B2C) brands, the same applies for business-to-business (B2B) brands as well.

The shift in the relationship between customers and brands supports the importance of putting the customer at the center of any go-to-market strategy, making a customer-centric approach more critical than ever. Understanding the customer's needs, pain points, and decision-making drivers is necessary for any brand to succeed and differentiate itself from competitors. Deeply understanding customers and identifying key insights that encourage an emotional connection is essential for standing out and building customer loyalty. Below is a closer look at the key benefits of making customer wants and needs key drivers of strategy:



#### - Building sticky relationships:

Enabling customers to feel that a brand understands their issues and is committed to providing the appropriate solutions will help build a strong emotional connection, keeping the brand top of mind. This fosters loyalty and trust, encouraging customers to return. Research reveals that 88% of customers who trust a brand will buy again.<sup>3</sup> Sticky relationships are not easy to build; they take work, but once established, the benefits are well worth it. Trusted companies outperform their peers by up to 400% in terms of market value, according to Deloitte research.<sup>4</sup>



 Relevant innovation: Keeping an open dialogue and gathering feedback is a great way to gain relevant insights that can drive innovation. Innovation should address clear customer needs to make it relevant and enable adoption.



- Increased loyalty and trust: When customers are happy and feel understood, they are more likely to return, ensuring a more consistent revenue flow. In line with human nature, people tend to gravitate towards what they know and trust - change is not always easy or comfortable. Therefore, it's very important for companies to prioritize a positive customer experience at the core of their strategy. This approach helps build brand loyalty and affinity, encourages customers to prioritize the company's products or services, and motivates them to refer their friends or leave positive reviews. All of this will help the business retain revenue and attract new customers.<sup>5</sup>



#### - Increased and accelerated growth:

Focusing on customer needs will often lead to upselling and cross-selling opportunities. Knowing a client's challenges allows brands to think strategically about more ways to cater to those needs. This not only makes customers feel more understood but also increases their openness to considering additional services, which will lead to business growth. It's a win-win situation for all. An example to illustrate all of the above is Patagonia.<sup>6</sup> Patagonia has been successful in building trust with customers while positioning itself as environmentally friendly. By being transparent with their customer base, sharing information about their production process, and showing that they put their money where their mouth is, Patagonia has demonstrated its commitment to sustainability. The company is honest about its sourcing; upfront honesty has paid off for them, retaining a loyal customer base and gaining trust. Their openness has also driven innovation, which has led Patagonia to look for more ways to bring sustainability to the core of their business, ultimately leading to significant business growth. Patagonia's brand promise isn't just a slogan-it shapes every element of their business. According to an article on Statista, Patagonia has achieved annual sales of over US\$1 billion for three consecutive years, starting in 2019. It is important to note that profit figures from the company are not publicly available.7

Taking the outside view and bringing it in is not an easy task. It requires time and effort to truly understand audiences and gain the right insights. This process often requires combining various data points and personal information to understand the customer journey, while still keeping market trends in focus. When applied consistently across an organization, this approach offers a competitive edge, driving sustainable revenue growth and success. For organizations to truly succeed, gathering relevant customercentric insights must be a core element of their strategic planning. They need to be intentional about acquiring these insights and allocate the necessary funds and resources to do so. While this investment may seem significant at first, it is one that is bound to produce substantial returns in the long run.

Widespread internet access, the evolution of e-commerce, the availability of information, and more recently, the rise of AI, have shifted the balance of power from brands to customers. This shift allows customers to set the narrative and influence brand perception and behavior.

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## The road ahead: Autonomous vehicle manufacturing and adoption in the GCC





A utonomous vehicles (AVs) are bound to revolutionize the transportation and mobility landscape, integrating advanced technologies to navigate and operate without human intervention. These vehicles rely on a combination of custom high-definition (HD) maps, artificial intelligence (AI), on-board sensors, cameras, and connectivity modules to interpret the external environment and make driving decisions in real time.

Autonomous vehicles rely on a complex mix of sensors, computing power, and Al to navigate their environment. Key components such as light detection and ranging (LiDAR), radar, cameras, and high-performance chips have seen rapid technological advances in recent years, improving both their accuracy and reliability. At the same time, costs have continued to decrease—LiDAR costs, for example, have fallen from US\$75,000/ unit a decade ago to under US\$100 today.1 Similarly, AI computing costs have declined with more efficient chips and better software optimization, supporting an improvement in AV economics.

Regional interest in autonomous mobility systems is clear, with several initiatives being pursued:

- Saudi Arabia aims to have 15% of public vehicles in Riyadh operating autonomously by 2030 as part of Vision 2030's smart mobility initiatives.<sup>2</sup>
- In the UAE, Dubai has committed to making 25% of all transportation trips autonomous by 2030, with Roads and Transport Authority (RTA)-backed initiatives, such as autonomous taxis and delivery bots.<sup>3</sup>
- Ahead of the 2022 FIFA World Cup, Qatar deployed self-driving electric shuttles, highlighting a potential push for broader AV integration. In parallel, the Ministry of Transport has issued an autonomous vehicle strategy with a 5-year roadmap.



The progression of vehicle autonomy is categorized into six levels, according to the Society of Automotive Engineers (SAE). As a vehicle becomes more autonomous, the need for driver input decreases, which can significantly alter interior vehicle designs from what is in existence today.



(Expected) Start of commercial pilots and/or market introductions by established players

Figure 1: Autonomous driving levels - Where are we today?

Source: Deloitte research, SAE International 2014

Today, over 90% of new cars are equipped with some form of advanced driver assistance systems (ADAS), mainly at L1-L2 levels.<sup>4</sup> Since 2021, however, global car making giants, including Mercedes-Benz<sup>5</sup> and BMW,<sup>6</sup> have announced a shift to Level 3. Level 4 and 5 vehicles are still at the experimentation stage and are being launched in extremely controlled environments due to the required regulations, driving code updates, and the multiple sensors required in road infrastructure.

## Autonomous vehicle manufacturing clusters opportunities

AV manufacturing relies on a global, technology-centric supply chain, blending traditional auto suppliers with new technology players. Unlike conventional vehicles, a significant portion of an AV's value comes from its electronics and software content. The manufacturing complexity of AVs also varies by level, with higher autonomy requiring more sophisticated integration between hardware, software, and safety systems. Manufacturing at L4 and L5 (high/full automation) demands custom built platforms, requiring new supply chains and dedicated AV production plants.

Geographically, the AV component supply chain spans multiple continents. Sensors may be designed in the US or Europe, manufactured in East Asia, and then integrated into vehicles in factories scattered worldwide. Key semiconductor components often come from Taiwan or South Korea; LiDAR and camera units might be produced in North America, Europe, or China. Automakers must manage this complexity and ensure guality and reliability of these critical parts. Supply chain resilience (multisourcing, inventory management) has also become a strategic priority, especially after recent global disruptions and trade wars. These challenges have also pushed certain producers and suppliers to look for alternative manufacturing locations with good logistics and global connectivity, aiming to serve local/regional demand while also mitigating global trade challenges.

Recent examples of incentivizing local production of AV components, such as the US CHIPS Act to localize semi-conductor production<sup>7</sup> and Saudi Arabia's investment of US\$6 billion in EV battery metals and a steel plant to support its nascent EV industry,<sup>8</sup> demonstrate the strategic importance of controlling key interfaces in the AV supply chain.



Figure 2: AV manufacturing lifecycle: Stages, hubs, and key players

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#### A GCC perspective: Readiness and opportunities in AV manufacturing

GCC countries are newcomers to automotive manufacturing, but recent investments are building a foundation for a natural progression toward autonomous vehicles. Historically, the region imported all vehicles, with minimal local production. That is now changing, especially in Saudi Arabia. In 2022, the Public Investment Fund (PIF) launched Ceer, the Kingdom's first domestic electric vehicle brand. Ceer, a joint venture with Foxconn and BMW as technology partners, is developing a manufacturing facility in King Abdullah Economic City (KAEC) with a US\$96 million investment. This plant aims to produce a range of electric sedans and SUVs by 2025,9 and being an all-new facility, it is being designed with advanced automation and potential future AV integration in mind.

In parallel, Saudi Arabia has attracted Lucid Motors to build its first international EV factory in the Kingdom. Opened in 2023 at KAEC, Lucid's plant can assemble 5,000 vehicles per year initially, with expansion plans up to 155,000 units annually once fully operational.<sup>10</sup> This makes it the country's first-ever car manufacturing plant, a milestone toward establishing a domestic automotive industry. While Lucid's current models are premium electric cars (not fully autonomous vehicles), the presence of a modern electric vehicle (EV) assembly facility (and associated supplier park) is a strategic asset as it provides a base of trained workers, supply chain logistics, and production know-how that could be leveraged to produce AVs or AV-ready vehicles in the future.

Beyond electric cars, the GCC has also started hosting small-scale assembly of special-purpose vehicles related to autonomy. For example, Dubai and Abu Dhabi have piloted autonomous shuttles and pods (often imported but assembled or tested locally) in controlled environments such as Dubai Expo 2020<sup>11</sup> and Masdar City.<sup>12</sup> While these pilots are limited, they have led to the development of research and development (R&D) and testing infrastructure.

Governments in the Middle East, eyeing economic diversification, are heavily incentivizing advanced industries such as EVs and autonomous technologies. Saudi Arabia's Vision 2030 explicitly targets the automotive sector as a growth industry, with goals to locally produce up to 500,000 vehicles annually by 2030 (raised from an earlier target of 150,000). To achieve this, Saudi authorities are offering attractive incentive packages: access to cheap industrial land, soft loans, and co-investment via the PIF.13 The Kingdom requires high local content and is prepared to be an anchor customer (for instance, committing to having 30% of cars in Riyadh be electric or autonomous by 2030,14 ensuring local demand). Saudi Arabia is also establishing special economic zones focused on advanced manufacturing such as NEOM's Oxagon, which promises streamlined regulations and infrastructure for next-generation mobility systems.

The UAE has created designated test beds - Dubai's RTA and Abu Dhabi's Department of Municipalities have both opened test tracks for self-driving vehicles. Notably, Abu Dhabi's Masdar City is evolving into a hub for AV innovation; it was chosen to host the new Smart and Autonomous Vehicle Industries (SAVI) cluster, which provides dedicated test zones for autonomous air, land, and sea vehicles. The SAVI cluster, expected to contribute US\$24-32 billion to the UAE economy alone,<sup>15</sup> brings together automakers, technology players, and researchers, offering state-of-theart facilities and a sandbox regulatory environment to experiment with AVs with the strong backing of the government.

Through the Abu Dhabi Investment Office (ADIO), the UAE is similarly offering generous incentives: financial grants and tax breaks, R&D support, and an enabling regulatory environment with fast-track licensing for AV testing. The UAE has even granted a preliminary national license to a foreign AV operator (China's WeRide) to start road testing its robo-taxis<sup>16</sup> – a first in the Middle East. This proactive regulatory stance, combined with initiatives like digital mapping of cities (Dubai is mapping its roads in detail for AV readiness<sup>17</sup>), signals to AV companies that the government will be a facilitator, not a barrier, to AV deployment. Additionally, there are infrastructure incentives across GCC countries: large-scale investments in 5G networks<sup>18</sup> (for vehicle connectivity), smart road systems in Saudi Arabia (Saudi Road Code with 'vehicle-to-everything' road-side units being installed) and planned charging networks for EVs (5,000 fast chargers in Saudi Arabia by 2030<sup>19</sup> which support electric AV operations. In short, GCC governments are deploying all elements direct investment to regulatory sandboxes - to jump-start local manufacturing of future vehicles, including autonomous ones. These incentives significantly raise the region's attractiveness as a destination for AV industry investment.

Governments in the Middle East, eyeing economic diversification, are heavily incentivizing advanced industries such as EVs and autonomous technologies

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## Comparative advantage vs. other global hubs

When considering setting up AV manufacturing, companies will compare the GCC with established auto-technology hubs in the US, Europe, and East Asia. However, the Gulf region offers some unique advantages. Capital and financial support is one; few places globally can match the scale of government-backed funding available for strategic projects. A company that might struggle to find subsidies elsewhere could receive substantial support and guaranteed purchase contracts in the GCC (as seen with Lucid<sup>20</sup> and Ceer<sup>21</sup> deals). The GCC also boasts relatively low energy and utility costs – important for energy-intensive manufacturing and for operating fleets of electric AVs (electricity and industrial fuels are subsidized or cheaper due to local oil and gas resources). Additionally, the region's geographic location can be an advantage; manufacturing in the Gulf can serve demand in the Middle East and potentially Africa or South Asia, markets that global Original Equipment Manufacturers (OEMs) sometimes underserve from distant factories. Modern port infrastructure, such as Jebel Ali Port (Dubai, UAE), King Abdulaziz Port (Dammam, Saudi Arabia), and Hamad Port (Umm Al-Houl Free Economic Zone, Qatar), also makes it efficient to export finished vehicles or import components. Additionally, free trade zones (e.g., JAFZA, QFZ, KEZAD) can allow for duty-free importing of parts from Europe or Asia for assembly, and comprehensive economic partnership agreements between GCC and other countries can make exports more competitive.

However, the GCC must be weighed against the deep talent pool and supplier networks present in traditional auto hubs. Regions like Detroit, Germany's auto clusters (e.g. Baden Württemberg, Bavaria), or China's Pearl River Delta, all major manufacturing bases, have tens of thousands of experienced automotive engineers and a dense network of tier-1 and tier-2 suppliers. The Gulf's automotive supplier base is currently small - most parts for assembly would need to be imported until a supplier ecosystem develops. This can increase lead times and costs unless offset by incentives. Labor is another mixed factor; while energy is cheap, skilled manufacturing labor is not abundant locally and typically involves either importing expertise or training new workers. Gulf countries do have extensive expatriate technical labor, but adroit vehicle engineering talent would need to be attracted from abroad. Labor costs for assembly operators in the GCC can be competitive (due to large pools of midskilled workers), but at the engineer and management level, costs may be higher to entice global experts to relocate.

Another factor to consider is domestic market size. The GCC, collectively, is not a large car market compared to the US, EU, or China. An automaker setting up production in the GCC will primarily be targeting export markets (Europe, Asia, etc.), unless the product is ultra-luxury (for which this region has strong demand<sup>22</sup>) or tailored for local use cases (e.g., autonomous shuttles for planned cities, airport robots, etc.). Exporting globally from the GCC is feasible but would face tariff regimes unless trade deals/free trade agreements are in place - for instance, exporting cars to the EU or US might incur duties unless trade agreements are forged or trade tariffs are introduced elsewhere disrupting global trade. In contrast, manufacturing in regions like North America or China allows easier access to large local customer bases and existing trade pacts.

That said, the GCC's aggressive innovation agenda can make it a testbed and early adopter market for AV services, which in turn can attract manufacturing. The GCC benefits from a visionary mandate to establish itself as a mobility technology hub, competing for first-mover advantage in several sectors, including autonomous mobility. For many companies however, the decision to localize manufacturing in the region hinges on whether the generous incentives and strategic partnership opportunities (similar to recent examples with PIF or ADIO) create a competitive advantage that justifies the challenges of building an industrial base from near scratch.

When considering setting up AV manufacturing, companies will compare the GCC with established auto-technology hubs in the US, Europe, and East Asia. However, the Gulf region offers some unique advantages.

### Challenges to AV manufacturing in the GCC

Companies considering the GCC for an AV plant must navigate several challenges unique to the region which include:

- Supply chain gaps: As noted, nearly all components would initially need to be imported. The just-in-time supply chains common in auto manufacturing could be strained by distance and customs processes. Limited local suppliers also mean less flexibility and possibly higher inventory costs to buffer lead times.
- Workforce and skills: Building autonomous vehicles requires highly skilled software, electrical, and systems engineers, alongside trained production workers. The local workforce in GCC countries currently has limited experience in automotive manufacturing or AV systems which could be remedied at a cost.
- Climate and testing: The Gulf's extreme heat, dust, and humidity present engineering and testing challenges.
   AV sensors and batteries would need validation for high temperatures and sand exposure. While this can be an advantage as a testing condition, it may require additional hardening of components (cooling systems, sealed sensor housings) specifically for local climate, potentially adding cost or complexity to Gulfmanufactured units.
- Regulatory fragmentation: Each GCC country has its own regulations and certification processes for vehicles, so standards need to be harmonized.
   Further, long-term policy needs to remain stable across a 10-20-year time period.
- Market uncertainty: The timeline for wide deployment of AVs is still uncertain. The GCC's own adoption of autonomous vehicles – outside of controlled zones – will depend on public acceptance and legal frameworks that are still evolving.
- Competition and technology transfer: Global automakers may also be wary of producing their latest technologies in a new region due to IP protection or quality control concerns. Manufacturers would ensure that critical know-how (e.g.,

self-driving software, chip designs) is safeguarded, even as they partner with local entities. There is also the competitive dynamic, where other countries (China, US) are heavily incentivizing local AV manufacturing too, so any GCC proposition must outmatch those to persuade a company to build there versus expanding at home.



Strategic recommendations for AV manufacturers considering the GCC Despite certain challenges, the GCC can be a compelling proposition with the right strategy. For companies looking to establish AV manufacturing in the region, the following recommendations apply:

- · Leveraging joint ventures and publicprivate partnerships: Enter the market with a strong local ally. Partner with government-backed entities to share investment costs and navigate the local business environment. A joint venture can grant access to incentives and simplify the setup of facilities. For instance, aligning with the SAVI cluster in Abu Dhabi or Saudi's national automotive program will embed your project in the broader government vision, ensuring policy support. These partnerships may also help secure initial orders (e.g., government or ride-hail fleet purchases) to give the factory a baseline demand.
- · Start with Semi-Knocked Down (SKD)/ Completely Knocked down (CKD) assembly and ramp up: A phased approach can mitigate risk. Initially, consider CKD or SKD assembly, where vehicle kits or major modules are imported and merely assembled locally. This requires less complex infrastructure and helps train the workforce. Over time, increase localization - manufacture wiring harnesses, body panels, or eventually even sensor calibration locally as capabilities grow. This stepwise scaling lets the supply chain develop around the plant, aligning investments with proven demand.

• Focus on niche AV products suited to the region: Tailor the manufacturing plan to products that the GCC is especially interested in. For example, autonomous shuttles for smart cities, last-mile delivery robots for large campus complexes, or luxury autonomous vehicles for premium customers (a niche where GCC demand is strong). Producing a niche vehicle in the GCC that will be primarily used in GCC-led projects (like NEOM's city mobility or Dubai's autonomous taxi fleet) makes the local facility strategically important and less dependent on uncertain export markets.

The timeline for wide deployment of AVs is still uncertain. The GCC's own adoption of autonomous vehicles – outside of controlled zones – will depend on public acceptance and legal frameworks that are still evolving.

- Capitalize on infrastructure and energy advantages: Design a facility to exploit the region's modern infrastructure. For example, a plant in a coastal GCC city can be built adjacent to a port for seamless global supply intake and product export. Use abundant solar energy to power manufacturing with clean electricity at low cost, enhancing sustainability attributes (important if exporting to markets with carbon regulations). Also, engage with telecom providers rolling out 5G to ensure AV testing and data upload needs are fully supported.
- · Invest in local talent development: Given the skill gap, it is important to establish training programs from day one. Set up an AV training academy in partnership with local universities or technical institutes. Offer internships and scholarships in automotive engineering, robotics, and AI to create a pipeline of GCC nationals and long-term residents capable to staff the plant and R&D centers. Additionally, bring experienced managers from established auto plants globally on fixed-term assignments to mentor local teams. Governments will likely co-sponsor such initiatives as it aligns with their job creation goals. Over time, a growing talent base will reduce reliance on foreign experts and engrain the company's roots in the region.
- Ensure robust testing and validation in GCC conditions: Turn the harsh climate into a feature by making the manufacturing facility a global center for hot-weather and desert testing. By colocating a proving ground or simulation center, the plant can double as a validation site for all vehicles destined for warm-region deployments. Demonstrating that AVs produced in the GCC have been desert-proven can be a selling point for export markets with similar climates (e.g., India, Southeast Asia).

The global landscape of autonomous vehicle manufacturing is rapidly maturing with costs becoming more competitive and scaling primarily centered in traditional auto regions. The GCC is positioning itself ambitiously to join this advanced manufacturing race, backed by significant capital and political will. Automakers and AV companies that effectively integrate global best practices with localized strategies in the Middle East can access a region eager to become a key hub for autonomous mobility. With strong partnerships and a phased approach, the GCC has the potential to shift from importing the vehicles of the future to manufacturing and even exporting them – establishing itself as a central player in high-tech vehicle production.

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## Reimagining the DNA of internal audit (IA): The journey to revolutionize the IA function



In today's business environment, boards and management continue to grapple with a volatile geo-political backdrop, while organizations navigate risks posed by environmental, social, and governance (ESG) regulations, emerging technologies like Generative AI (GenAI), and the evolving future of work. At the same time, digital transformation is significantly reshaping the internal audit (IA) landscape. Technologies such as AI and data analytics enable IA to deliver timely and comprehensive insights, driving efficiency and effectiveness in risk management. As such, IA must keep pace with the growing speed, volume, and complexity of risks, which raises the need for IA to provide assurance and timely insights.

Resilience and agility have become the key attributes required for organizations to not only survive but also thrive in the current environment. IA has a critical role to play in helping organizations strengthen and maintain these traits by providing objective advice, anticipating risks, and assisting management in accelerating improvements in governance, risk management, and controls.

Insights from recent surveys reveal significant challenges, such as limited empowerment and technological concerns, while also highlighting opportunities for enhanced impact and innovation brought about by IA function digital transformation: 86% of functions said they are not achieving very strong potential, and only 14% feel they have a very strong impact.<sup>1</sup> 55%<sup>1</sup> of auditors are not truly empowered to innovate, needing to ask permission or being confined to innovation in noncore areas that don't challenge the status quo. >50% of surveyed CFOs cite impact to risk and internal controls (57%),1 data infrastructure and technology needs (52%),<sup>1</sup> and investment needs (51%)<sup>1</sup> among their top three concerns regarding GenAl.

42%<sup>1</sup> of surveyed CFOs say their companies are experimenting with GenAl.

### Today's traditional IA function challenges

Navigating the complexities of the current IA landscape requires addressing several pivotal challenges. Considering the fastpaced technological advancements within different industries, the traditional IA function faces many challenges that hinder its ability to deliver proactive insights for its stakeholders. Below are some examples:



**Reactive:** The current practices of IA functions are reactive by nature, as they conduct audit assignments that cover activities which have already taken place, often more than a year ago. This significantly limits their ability to provide real-time insights and make meaningful changes to the outcomes of the entity's operations.



**Transactional**: IA functions conduct testing on samples of operations and activities, building reports based on this information. This approach impacts their ability to capture the big picture.



**Isolated:** The focus of IA functions to maintain independence can sometimes come at the expense of maintaining partnership, which may lead to being isolated from the overall value chain of the entity.



**Impractical:** Some IA functions have been perceived as providing impractical recommendations, which might have a negative effect on the agility of the operations if adopted. This may occur due to the inability of current auditors to understand emerging business practices and risks introduced by the adoption of artificial intelligence (AI), machine learning (ML), and robotic process automation (RPA) tools.



#### Ineffective reporting and

**communication:** Many IA functions have yet to adapt their reporting practices to the trends of audience behavior within the past few years. Reports filled with long text paragraphs fail to deliver key messages effectively to an audience with limited time, particularly in today's fast-paced business world.

### The evolution of internal audit: Staying relevant and ahead of the curve

To stay ahead of the curve, IA must be strategically transformed through continuous adaptation to cope with the ever-changing landscape. Technological advances enable IA teams to perform more efficient and comprehensive audits. By automating routine tasks and seamlessly analyzing vast amounts of data, the IA function can provide deeper insights into potential risks and areas of improvement, all while reducing the time and resources required to do so. This drive for technological advances aligns with the identified focus on digital transformation for 2025,<sup>2</sup> setting the stage to explore the various cutting-edge technologies that are shaping the IA landscape.

## Understanding the technology enablement landscape

<u> </u>	<b>O</b> 1990s to 2000
•••••	The early 2000s marked the rise of Big Data, <sup>3</sup> driven by the proliferation of the internet and digital technologies. Organizations are beginning to recognize and address the challenges associated with large datasets.
0-	
•	RPA evolved, <sup>4</sup> a technology that automates repetitive tasks and uses data analytics to make workflows more intelligent. This development
	led to increased efficiency and accuracy in business processes.

The 2010s saw AI make huge strides, emphasized by the development of deep learning algorithms and large language models (LLMs). In 2020, OpenAI introduced its pioneering language model, GPT-3,<sup>5</sup> making it one of the largest and most sophisticated AI models to date.

The journey from early data analytics to advanced GenAl illustrates the continual expansion of the technology landscape, shaping the business environment and setting the stage for exploring how these technologies can be leveraged in IA.

#### Equipping internal audit with cuttingedge technologies

IA functions should harness the use of emerging technology in their day-to-day operations, and fundamentally integrate these technologies into their DNA. In fact, the following opportunities for the use of emerging technologies in the IA life cycle may help enhance its overall effectiveness:

- Dynamic risk assessment: ML and predictive analytics can be used to analyze historical data and external risks, identifying high-risk departmental areas and providing real-time insights into emerging risks across the overall entity.
- 2. Audit plan development: RPA automates data collection and risk categorization for efficient planning.
- 3. Fieldwork and testing: ML and intelligent automation RPA detects anomalies in transactional data and dynamically adjusts audit testing based on risk, improving efficiency and accuracy.
- Reporting and follow-up: GenAl streamlines audit report drafting, generates executive summaries, and customizes communications to the organization's style.<sup>6</sup>

#### The Al-enabled internal auditor: Enhancing human judgement

Al is not replacing internal auditors; it is empowering them. Al provides auditors with the ability to focus on high-value activities, shifting their role from compliance monitors to strategic advisors.

- Continuous compliance monitoring: Al automates policy adherence, ensuring round-the-clock regulatory oversight.
- Enhanced decision-making: Al supports auditors with predictive models and scenario analysis for deeper risk insights.
- Strategic advisory and governance: Auditors leverage Al-driven intelligence to guide leadership on risk mitigation and business strategy.

Al is not replacing internal auditors; it is empowering them. Al provides auditors with the ability to focus on highvalue activities, shifting their role from compliance monitors to strategic advisors.



Figure 1: Perspectives on the internal audit transformation journey

The IA transformation journey fundamentally starts on the ground. By addressing key checkpoints - strategy and vision, operating model, governance and frameworks, technology and enablement, and human capital - organizations can create a resilient and future-ready IA function.

- Strategy and vision: The process begins with rethinking the strategic vision to ensure alignment with an organization's goals. This involves creating a new IA vision focused on partnership, proactiveness, foresight, and digital initiatives, while fostering a culture of innovation and adaptability.
- 2 . **Operating model:** Defining and implementing an operating model

that seamlessly supports the strategic vision and extends beyond traditional IA boundaries.

- 3. Governance and frameworks: Realigning IA governance and frameworks to establish a robust structure for effective oversight.
- Technology and enablement: Infusing technology into the IA cycle is crucial for enhancing capabilities and improving efficiency.
- 5. **Human capital:** Elevating human capital by investing in skill development and upskilling the team is necessary to ensure they can understand and leverage new insights. This also involves rethinking roles, shifting from traditional functions to anticipating and managing emerging risks.

Infusing technology into the IA cycle is crucial for enhancing capabilities and improving efficiency In conclusion, the IA function should not only strive to deliver its expected value but also aim to exceed those expectations. To achieve this, it must embark on a journey to reassess and redefine its core attributesits very DNA. By taking pragmatic steps to adapt to the changing landscape, IA can ensure it not only meets but also surpasses the evolving needs of the entities it serves. Now is the time to redesign the IA DNA and take decisive action to secure its role and effectiveness in this dynamic environment. This transformation will enhance audit capabilities, and position IA as a crucial partner in any organization's overall strategy and success.

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The IA function should not only strive to deliver its expected value but also aim to exceed those expectations. To achieve this, it must embark on a journey to reassess and redefine its core attributes—its very DNA.

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Leadership blueprint in fostering sustainable business growth n today's evolving business environment, organizations are under increasing pressure to balance profitability with longterm sustainability. Growing awareness of ethical, social, and environmental responsibility has led businesses to commit to long-term strategies that ensure sustainable growth while contributing to society and the planet. However, leaders are facing significant challenges, ranging from complex global markets to the alignment of stakeholder expectations with sustainable goals.

This article explores the current business landscape and the need for sustainable growth. It examines the key leadership challenges leaders face and presents a blueprint designed to guide them toward long-term success. By embracing the driving forces behind transformational leadership strategies, businesses can help build a more sustainable world.

#### **Current business context**

Geopolitical power imbalances, such as the Russia-Ukraine conflict, US-China competitive policies, the Gaza-Israel conflict, and ongoing tensions in the Middle East, have bought shocks to long-term business growth prospects and created a turbulent business economic environment. Social unrest has further impacted business security and cast a negative outlook on today's business growth.

The Global Risks Report highlights extreme weather events, biodiversity loss and ecosystem collapse, and critical change to Earth systems as the top three global concerns anticipated over the next 10 years.<sup>1</sup> These key concerns will lead to the increase in supply chain risks, consumer risks, and credit risks.

Persistently elevated inflation in many countries and high interest rates are still weighing heavily on economic growth. Visible economic downturn with a risk of new economic shocks would be an unmanageable tipping point of sustainability. These factors have created a dilemma for business leaders as they search for sustainable business growth prospects.

#### Sustainable business growth

"Our common future," also known as the Brundtland Report, published by the United Nations in 1987, emphasized sustainability as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.<sup>2</sup> In other words, "you can have your share of wellbeing, but you should leave enough for others as well."

Sustainability should create a blend and balance between economic, social, and environmental goals. It should comprise of financial sustainability (profit), social sustainability (people), and environmental sustainability (planet) which together form the "triple bottom line" (TBL).<sup>3</sup>



Figure 1: Sustainable business model

Source: Triple bottom line (Virakul, 2015)

Visible economic downturn with a risk of new economic shocks would be an unmanageable tipping point of sustainability. These factors have created a dilemma for business leaders as they search for sustainable business growth prospects.

Sustainable business growth emphasizes the process of expanding a business with economic, social, and environmental considerations over the long-term. All aspects - social, economic, and environmental - are equally important in sustainable development. However, in practice, these aspects have been operationalized in an isolated manner from one another over the past few decades. A business should balance profitability with positive impacts on society and the environment. It should focus on developing environmental and social dimensions in addition to traditional measures of profits.

#### Leadership challenges



#### Stakeholders' short-term expectations

Today's market competitiveness has encouraged companies to focus on shortterm profit maximization considering the concept of economic profit. Stakeholders place greater emphasis on the bottom-line economic profit of the business. As a result, the core business is often aligned with profit maximization objectives rather than sustainable business growth.

The current economic environment has also created additional limitations for management in respect of implementing sustainable concepts. Most companies have misapplied TBL's concept, treating it as corporate social responsibility (CSR) and focusing only on economic benefits. Leaders are facing challenges to match these short-term profit objectives along with long-term sustainability standards.



### Traditional and legacy organizational

structures have created significant pressure on leadership to make changes in the process.<sup>4</sup> These structures have established ways of doing things that may not align with today's needs for innovation, technological advancements, and organizational agility. As a result, businesses risk losing their competitive advantage in the long run.

Business sustainability efforts are continuous and evolutionary, requiring companies to remain open-minded and adaptable to change. Strategic, tactical, and long-term operational decisions must address the needs of today without negatively impacting the future.



#### Resource allocation challenge

Business resource allocation is a critical aspect that involves distributing money, time, personnel, and material resources across various projects to achieve business goals effectively. The cost-of-living crisis, disrupted supply chains for food and energy, and cyberattacks have all disrupted resource allocation decisions over sustainable practices.<sup>5</sup>

These factors have created a dilemma for business leaders when making resource allocation decisions. The focus on adequate resource allocation for sustainable initiatives - such as innovative technologies, employee trainings, social and environment projects - may be overlooked due to these conflicting scenarios. A business should balance profitability with positive impacts on society and the environment. It should focus on developing environmental and social dimensions in addition to traditional measures of profits.



The United Nations Sustainable Development Goals (UNSDGs), the Paris Agreement (an international treaty on climate change signed in 2016), ESG regulations, and various governmental and non-governmental organizations have introduced regulations and frameworks to implement sustainable standards and goals. However, authorities have given less priority or made few major initiatives toward the real implementation of sustainability practices. This has also resulted in the failure to fully integrate economic and strategic benefits with social and environmental values, often due to political agendas. As a result, business leaders find themselves in a conundrum when interpreting and applying these requirements.



#### Measuring and reporting challenges

Measuring and reporting sustainability performance is a real challenge, especially when it comes to social and environmental reporting. While profits are measured in dollars, the question remains: how do we measure social and environmental capital? Currently, companies are using various measurement indexes and regulations, such as the Dow Jones Sustainability Index, the Bloomberg SRI Index, and the Morgan Stanley Capital International Index.

However, due to voluntary disclosure requirements, the importance and value of the reported information can be diluted. Further, Al-generated misinformation and disinformation (falsified information) are damaging the accuracy of sustainability measurement and reporting information.

#### **Leadership blueprint**

Leaders should focus on creating a balanced approach where economic success is achieved alongside positive social and environmental impacts, ensuring that the business contributes to a sustainable future. Building a robust solution by focusing on the following factors will help achieve sustainable growth for the business.



Figure 2: Blueprint model for sustainable business growth



### Alignment of company vision and mission with sustainable goals

Positive vision and mission statements should emphasize on the management's commitments to achieving longterm organizational success. Leaders should focus on embedding social and environmental factors along with the economic benefits when establishing these statements.

For example, Patagonia, through its near and long term Science Based Target initiatives (SBTi), has demonstrated leadership in sustainability and a strong commitment to achieving net zero greenhouse emissions by 2040. These goals align with the 2015 Paris Agreement's commitment to limit global warming to 1.5°C.<sup>6</sup> Leaders should focus on creating a balanced approach where economic success is achieved alongside positive social and environmental impacts, ensuring that the business contributes to a sustainable future



## SMART goals and strategies focusing on sustainable growth

"All our dreams can come true, if we have the courage to pursue them" is a famous quote from Walt Disney (n.d.). Specific, measurable, achievable, realistic, and timebound (SMART) goals and strategies are essential in turning a company's vision and mission into reality. Management should move beyond legacy systems and develop a business model that aligns with SMART objectives.

The management strategies of a company, such as operational, sales and marketing, human resources, and financial management, should focus on developing sustainable business concepts. Top management's commitment to sustainability and the involvement of stakeholders should be central when developing these business strategies. These strategies will guide management in focusing on the sustainable future of the business.

## Leadership, culture, training, and technology

Top management commitment, governance structure, strong ethical policies, measurement and rewarding structures, and stakeholder involvement create the foundation for the success of sustainable business growth. Leadership integrity is one of the critical factors in business development. Leaders should be honest, truthful, and straightforward in both their personal and professional lives, as these qualities pave the way to business success.

Today we are operating in multicultural environments, and various cultural factors should be embedded within the organizational structure. Core values aligned with cultural dimensions, such as employee recognition, customer satisfaction, customer relationships, and social responsibility, will help increase shareholder wealth and boost business growth.

Training and development are crucial for integrating these factors into the organizational structure. Positive attitudes relating to the business's future, as well as the behaviors and characteristics of leadership, can be developed through various education and training programs.

Companies must implement innovative sustainable models to survive in future markets. Sustainable business practices, such as Nvidia's AI technologies, BYD's technological innovations, and Tesla's inventions, have led to significant improvements in organizational performance over a short period of time, making these companies some of the fastest-growing brands in the world. Customer demand and recognition of these products have been increasing in recent years, emphasizing the value creation that comes from sustainable business practices. Today we are operating in multicultural environments, and various cultural factors should be embedded within the organizational structure. Core values aligned with cultural dimensions, such as employee recognition, customer satisfaction, customer relationships, and social responsibility, will help increase shareholder wealth and boost business growth.



## Resource, risk, and financial management and reporting

Top management should develop a responsible and accountable organizational structure, along with system controls, to ensure efficient and effective resource management. Human resources, financial resources, materials, and time are most critical to manage for optimal output. Resource management models, software, and Al-generated tools can assist in planning, organizing, monitoring, and controlling these resources. Implementing sustainable resource management strategies offers benefits such as increased profitability, enhanced brand reputation, improved customer loyalty, and better risk management.

Risk management is important to minimize resource wastage, compliance issues, and reputational damage. The processes of risk identification, analysis, evaluation, consultation, and monitoring processes help businesses to be prepared for potential challenges. Tools such as simulation analysis, scenario analysis, heat maps, root cause analysis, matrix, and templates can be used to integrate the risk management process. Businesses that understand the connections are seizing the opportunity to develop capabilities and pilot new operating models that align with a net-zero, nature-positive future.

The effective collection and reporting of sustainability data across all three aspects of the TBL can provide companies with an immense competitive advantage. IFRS S1

Disclosure requirements of sustainabilityrelated financial information has provided a comprehensive framework for disclosing information about significant sustainabilityrelated risks and opportunities faced by a company. Additionally, the IFRS S2 climaterelated disclosures provide a reporting and specific guideline for disclosing information about climate-related risks and opportunities. These will ensure that stakeholders have access to high-quality, transparent, and comparable sustainabilityrelated financial information for decisionmaking purposes.



#### Collaborating with external parties

Business sustainability efforts are continuous and evolutionary, requiring companies to remain open-minded and adaptable to change. Strategic, tactical, and long-term operational decisions must address the needs of today without compromising the future. Businesses can drive significant and impactful sustainability outcomes through strategic partnerships, resource sharing, and joint projects with shared goals.

Investment in renewable energy sources, recycling of waste, reforestation programs, energy conservation, employee well-being programs, and various community impact and social benefit programs demonstrate corporate commitment to sustainability. However, businesses alone cannot resolve the sustainability challenges facing the world, and therefore, it is essential for social partners and stakeholders to be involved at a global level to achieve longterm sustainability for society as a whole.

## "

In today's evolving business environment, leaders must navigate the intricate balance between profitability and sustainability. Embracing transformational leadership strategies is essential for fostering longterm success and contributing to a more sustainable world.



- Daniel Gribbin, Sustainability Growth Lead, Deloitte Middle East

#### **Forward looking**

Encouraging rewards for innovation can lead to a competitive advantage and success in the corporate journey toward sustainability. Recent innovations and differentiations, such as renewable energy technologies, circular economy practices, smart grids, energy management systems, and green buildings, have created significant prospects for sustainable growth in the future.

Sustainability has become the paradigm for organizational success, balancing economic, social, and environmental aspects. Multinational companies (MNCs) play a vital role in this effort, while small and medium enterprises (SMEs) also demonstrate commitment, transparency, accountability, and responsibility toward these tasks. Companies like Amazon, Apple, Microsoft, Google, and PepsiCo have significantly increased their sustainable activities and reporting in recent decades compared to other multinationals. International credit rating agencies also place significant weight on social and environmental factors when making their rating decisions. This can be seen as a turning point for leaders to implement sustainability frameworks. The future growth of businesses will significantly depend on business leaders' commitment to evolving practices and their innovative response to sustainability.

By **Ranjith Chandra**, Partner, and **Nandana Kalubowila**, Senior Manager, External Audit, Deloitte Middle East Investment in renewable energy sources, recycling of waste, reforestation programs, energy conservation, employee well-being programs, and various community impact and social benefit programs demonstrate corporate commitment to sustainability

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## Vision 2030 and the KSA banking industry: Key challenges and strategic opportunities



hen Vision 2030 was first announced nearly a decade ago, it seemed inconceivable to many, given the size and scale of what it sought to achieve. However, His Royal Highness, the Crown Prince Mohammed bin Salman was clear that "All success stories start with a vision, and successful visions are based on strong pillars." What made Vision 2030 especially unique was that it aimed not only to drive an economic transformation but also to reshape the cultural and social fabric of the country. But that's the thing about bold ambitions - they elicit a sense of curiosity and doubt and therefore require detailed plans to guide toward the objectives set out.

The Financial Sector Development Program (FSDP) underpinning Vision 2030 aimed to do exactly that. In fact, the very purpose of the FSDP was to create a thriving financial sector that would serve as a key enabler in achieving the broader objectives of Vision 2030. The program aimed to achieve growth in banking assets, drive innovation and competition, develop the regulatory framework, and drive digitization within the economy.

As the Kingdom continues its progress toward Vision 2030 and works to diversify its economy, the banking sector continues to be pivotal in facilitating this transformation. The development of planned mega projects in Saudi Arabia will play an important role in generating both local and inbound business, as well as lending opportunities for banks. The infrastructure required to host major events such as the Asia Cup in 2027, the Asian Winter Games in 2029, Expo 2030, and the FIFA World Cup™ in 2034 is expected to further support this growth.

Given the ambition, the banking industry in Saudi Arabia, like many other sectors, faces challenges and opportunities that are both unique to the region and reflective of global trends.



## Economic diversification and regulatory changes

One of the primary challenges is the economic diversification itself. Vision 2030 seeks to reduce the Kingdom's reliance on oil revenues by promoting other sectors such as tourism, entertainment, and technology. This shift requires banks to adapt their lending and investment strategies to support new industries that may have different risk profiles compared to the traditional oil and gas sector.

Additionally, the regulatory changes accompanying this economic transformation require banks to continuously update their compliance frameworks, which can be resource intensive. Technology and Generative AI will be key in ensuring that efficiencies are planned when investing in compliance activities. For example, data analytics tools can assist banks in monitoring compliance by automating the tracking of regulatory requirements and ensuring accurate reporting. These tools also aid in ensuring that data privacy laws are met, which is critical in KSA.



## Technological advancements and cybersecurity

The rapid pace of technological advancements presents both opportunities and challenges for Saudi banks. The adoption of digital banking, fintech solutions, and artificial intelligence can significantly enhance customer experience and operational efficiency. However, integrating these technologies requires investment in infrastructure and talent. Moreover, the increasing reliance on digital platforms heightens the risk of cyber threats. Ensuring robust cybersecurity measures to protect sensitive financial data is a critical challenge that banks must address to maintain customer trust and regulatory compliance.

As the Kingdom continues its progress toward Vision 2030 and works to diversify its economy, the banking sector continues to be pivotal in facilitating this transformation



#### Competition from fintech companies

The rise of fintech companies poses a significant challenge to traditional banks in Saudi Arabia. The FSDP launched the Fintech Strategy Implementation Plan in 2022 to accelerate the growth of Saudi Arabia's fintech sector and establish Riyadh as a global fintech hub. The ambitious plan aims to triple the number of fintech companies to 230 by 2025, increase digital transactions to 70 per cent within three years, and contribute US\$1.2 billion to the GDP while creating 6,000 new jobs by 2025. By 2030, Saudi Arabia aims to have 525 fintech companies, generating nearly 18,000 jobs.

Saudi Arabia's fintech regulations provide a clear and structured framework for innovation while maintaining financial stability. With continued updates and support from regulators such as the Saudi Central Bank (SAMA) and the Capital Market Authority (CMA), the Kingdom is becoming a leading fintech hub in the Middle East. Initiatives such as the Fintech Regulatory Sandbox (established by SAMA to allow fintech startups and financial institutions to test innovative products and services in a controlled environment before full market launch) and regulations such as the Open Banking Framework, Payment Services Regulations, and CMA Fintech Regulations have all contributed to a blossoming and robust fintech industry.

The ongoing trends in Saudi Arabia's fintech market include advanced technology infrastructure, rising accessibility to cloud services and 5G networks, and the increasing demand for financial services like asset management, investments, and insurance. The government has introduced various initiatives to build a technologydriven and cashless ecosystem. It has developed organizations such as Fintech Saudi to support initiatives and encourage small and medium-sized enterprises (SMEs) to use fintech solutions. The rise of fintech companies poses a significant challenge to traditional banks in Saudi Arabia. The FSDP launched the Fintech Strategy Implementation Plan in 2022 to accelerate the growth of Saudi Arabia's fintech sector and establish Riyadh as a global fintech hub.

Fintech firms often offer more agile and customer-centric services, which can attract a younger, tech-savvy demographic. To remain competitive, traditional banks must innovate and possibly collaborate with fintech companies to offer similar or superior services. This competitive pressure can strain resources and necessitate a cultural shift within traditional banking institutions to embrace innovation and agility.



## Regulatory compliance and risk management

Saudi banks operate in a highly regulated environment, with detailed requirements set by SAMA. Regulations concerning capital adequacy, risk management, and governance frameworks are continuously updated to ensure the robustness of the KSA banking sector. In the last two years, we have seen the implementation of Basel III, the launch of the Personal Data Protection Law (which regulates the collection, processing, and storage of customer data), and enhanced regulatory reporting requirements in line with international standards. These updates impact reporting obligations, data granularity, and governance.

Compliance with these regulations is essential but can be challenging, especially with the continuous evolution of global banking standards. Banks must invest in robust risk management frameworks to ensure they meet regulatory requirements while managing operational, credit, and market risks effectively. The cost of compliance can be high, and failure to comply can result in severe penalties and reputational damage.

Again, the implementation of technology can turn this challenge into an opportunity by offering significant efficiencies. For example, several AI tools are now available that track and monitor new regulations, while also assessing compliance in relation to governance and policies. Furthermore, traditional fraud detection methods often rely on manual checks and patterns that can be slow to react to emerging threats. However, with predictive analytics, banks can leverage machine learning algorithms to detect unusual patterns and potential fraud in real-time. By analyzing large datasets, these systems can identify anomalies that would otherwise go unnoticed, thereby enhancing the security of banking transactions and reducing the risk of financial losses. >

Given that KSA has one of the youngest populations in the region, with approximately 40% under the age of 25, the banking industry will need to innovate to stay relevant



#### Economic volatility and geopolitical risks

The banking sector in Saudi Arabia is also susceptible to economic volatility and geopolitical risks. Fluctuations in oil prices can have a significant impact on the economy, affecting the banking sector's stability and profitability. Additionally, regional geopolitical tensions can create uncertainty and affect investor confidence. Banks must develop strategies to mitigate these risks, such as diversifying their portfolios and enhancing their risk assessment capabilities. Advanced analytics models can predict future risks, including credit default risks, and enable banks to proactively take action to prevent losses.



#### Customer expectations and experience

Evolving customer expectations pose a challenge for Saudi banks. Customers today demand seamless, personalized, and convenient banking experiences. Meeting these expectations requires banks to invest in customer relationship management systems, data analytics, and innovative service delivery channels. Failure to meet customer expectations can result in loss of business to more customer-centric competitors. Given that KSA has one of the youngest populations in the region, with approximately 40% under the age of 25, the banking industry will need to innovate to stay relevant. According to research by Deloitte, only 44% of the adult population in Saudi Arabia reported having saving habits, which is lower than that of both lowand high-income countries. This suggests an opportunity for more tailored wealth management solutions in the Kingdom.



#### Talent acquisition and retention

The sector requires professionals with expertise in areas such as digital banking, cybersecurity, risk management, and regulatory compliance. However, there is often a shortage of such talent in the local market. To address this, banks must invest in training and development programs to build a skilled workforce and create an attractive work environment to retain top talent. The government is also investing in infrastructure, education, and entertainment to attract top talent to KSA from the region and globally. In addition, through strategic initiatives such as the Nitaqat program, the government is emphasizing the role of the national labor force in supporting the banking industry. The nationalization strategy is particularly focused on developing the next generation of KSA leaders to support the industry in remaining robust and future ready.

The government has been proactive in addressing the need for talent in the financial sector and has announced a range of initiatives aimed at enhancing it through talent development and leadership training. Institutions such as the Financial Academy are critical in this regard, and as of 2024, the academy had trained over 50,000 individuals across the industry, certified nearly 90,000 professionals, and established itself as a central pillar of the Kingdom's financial infrastructure. In conclusion, while the banking industry in Saudi Arabia faces several challenges, these also present opportunities for growth and innovation. By addressing these challenges proactively, Saudi banks can play a crucial role in the Kingdom's economic transformation and continue to thrive in a rapidly changing global landscape. The KSA banking industry is a key driver of economic growth, diversification, and financial inclusion, as targeted by Vision 2030. Increasing SME financing, enhancing digital banking, supporting infrastructure projects, expanding Shariah-compliant banking, and fostering fintech partnerships will be crucial to fuelling the targeted growth. If open banking is further embraced by the industry, it will fuel innovation and enhance customer trust. The scale of strategic investments, the pace of digital transformation, and the ability to easily adapt to evolving regulations will be critical to ensure that the KSA banking industry continues to be a reliable pillar of growth for Vision 2030.

By **Ali Abdul Aziz**, Partner, External Audit, Deloitte Middle East

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Saudi banks operate in a highly regulated environment, with detailed requirements set by SAMA. Regulations concerning capital adequacy, risk management, and governance frameworks are continuously updated to ensure the robustness of the KSA banking sector.

## The evolution of software and asset management (SAM) in the era of artificial intelligence

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## Embracing the growth of transformative SAM

In today's rapidly evolving technological landscape, software asset management (SAM) has become a critical capability within organizations. SAM encompasses a diverse set of practices across multiple different business units, including information technology, finance and accounting, procurement, and risk management. These practices span the entire lifecycle of assets, supporting both short-term and long-term strategic decision-making. Whether it is risk avoidance, return on investment, or enhancing operational efficiency, SAM plays a pivotal role in driving value across the enterprise.

Historically, SAM was primarily a function within IT departments, focused on registering and managing software assets to control costs and mitigate risks. The primary objective was to avoid overlicensing (financial risk) or under-licensing (legal and compliance risks), ensuring compliance while minimizing unnecessary expenses. This approach helped chief information officers (CIOs) avoid paying unnecessary fees to technology vendors during technology vendor audits aimed at verifying the actual usage of the technology.

Over time, the role of SAM has evolved significantly. With the advent of remote working models, organizations have increasingly viewed SAM as a driver for cost savings. Effective allocation and optimization of software assets have become paramount. As enterprises recognize these drivers, it is essential to highlight that the future of SAM looks promising and transformative, particularly with the emergence of machine learning and Generative AI.

## Unlocking the value of SAM through AI

Embracing AI technologies can revolutionize the way organizations manage, optimize, and leverage their software assets. SAM is well-positioned to unlock new levels of efficiency, agility, and value by integrating Al-driven solutions that can aid the SAM lifecycle and bring significant optimization to its legacy mode of operation. Here are some key areas where Al can impact SAM:



#### Intelligent discovery

Al-powered SAM tools can analyze vast amounts of data from various sources. These sources include network scans, user behavior patterns, software installation logs, financial records, vendor contracts, and market trends. By synthesizing this data, GenAI models can generate tactical and strategic insights, recommendations, and even take action for deactivating licenses if there are serious exposures to the organization. This intelligent software discovery process enables organizations to have a comprehensive understanding of their software assets, leading to more informed decision-making. Over time, the role of SAM has evolved significantly. With the advent of remote working models, organizations have increasingly viewed SAM as a driver for cost savings.



#### Software optimization and cost savings

Al can automate the reconciliation process by comparing actual software usage against license entitlements. SAM solutions can now integrate AI to further enhance this process by predicting future software spend and recommending the most costeffective licensing models for each software asset. This optimization not only reduces costs but also ensures that organizations are utilizing their software assets efficiently. These insights empower SAM leaders to make informed decisions aligned with the organization's strategic goals. By leveraging such capabilities, organizations can achieve a higher level of precision and accuracy in their SAM practices.



#### Improved user experience and support

GenAl and advanced machine learning can enhance user experience and support capabilities within SAM through elevating the capabilities of chatbots and intelligent virtual assistants. These technologies can provide personalized support, help users resolve software licensing-related issues, and guide them through software product use rights (PURs) for better optimization. This improved support can lead to increased efficiency and higher user satisfaction.

#### SAM as a strategic value driver



#### Inclusive cybersecurity posture

Emerging AI technologies can provide a competitive edge in the cybersecurity space. By integrating SAM with security tools, organizations can achieve a comprehensive security posture with live data updates on entitlements and licensing details of the organization. This ensures the accuracy of corporate technology parameter for key security capabilities such as security incidents and events management (SIEM), endpoint detection and response (EDR), vulnerability management, identity and access management (IAM), and patch management solutions. SAM teams can prioritize patching efforts and prioritize risk mitigation associated with software vulnerabilities. Al-driven insights can help identify potential threats and vulnerabilities, enabling proactive measures to augment cybersecurity.



#### Extended enterprise risk management

Integrating Al-driven software asset management with third-party risk management provides increased visibility and control over software third party vendors, which ensures compliance with contractual obligations and enhances security throughout the supply chain. This improved visibility allows organizations to effectively manage third-party risks and maintain robust security measures with their software vendors.



#### **Regulatory considerations**

Incorporating environmental, social, and governance (ESG) factors into SAM practices is becoming increasingly important. Al can assist in achieving green IT by tracking assets with the greatest impact on the environment in terms of energy consumption, emissions, and waste generation. For example, it can help measure the environmental benefits achieved from the adoption of environmentally preferable purchasing (EPP). Additionally, it can ensure that vendors comply with social and governance standards, promoting ethical and sustainable practices. By integrating ESG considerations into SAM, organizations can estimate how further environmental reductions can be achieved and aligned with broader sustainability goals through the promotion of circular economy best practices.

GenAl and advanced machine learning can enhance user experience and support capabilities within SAM through elevating the capabilities of chatbots and intelligent virtual assistants



Figure 1. Software Asset Management framework

Source: Deloitte resources

#### Strategic adoption of AI in SAM

While the potential benefits of AI in SAM are considerable, it is crucial to approach the adoption of AI with a strategic mindset. Here are some key considerations for effective framework implementations:

**Strategy and governance:** Robust governance frameworks ensure the ethical and responsible use of AI technologies. This includes defining clear policies and guidelines for AI adoption, data privacy, and security. **Data and technology:** Effective data management practices are essential for harnessing the full potential of AI in SAM. This includes focusing on data quality, integration capacity, and accessibility to enable accurate analysis and insights.

Talent and skills: Investing in developing the right talent and skills allows to reach a higher maturity state. This includes training SAM teams on AI techniques, fostering a culture of continuous learning and innovation. SAM lifecycle: The automation of software asset lifecycle workflows through the utilization of AI represents an advancement in the field of IT asset management in general and in SAM specifically. By leveraging the capabilities of AI, organizations can reduce manual efforts, thereby minimizing human errors throughout the SAM lifecycle. The automatic generation of licensing compliance reports is an example of how to streamline and optimize the "monitor and track" stage within the SAM lifecycle. (See figure above.) SAM has the potential to unlock unprecedented levels of efficiency, agility, and value. By leveraging intelligent discovery, optimization, and data-driven decision-making, SAM can enhance the inclusion of cybersecurity measures, bolster third-party risk management, and incorporate ESG considerations into strategic planning.

Yet, the successful adoption of SAM, especially with AI integration, necessitates a strategic mindset powered by a tactical approach. Organizations must begin with the establishment of robust governance frameworks, the implementation of effective data management practices, and the investment in requisite talent and skills. When approached cohesively, SAM can continue to evolve and provide substantial value in an ever-changing technological landscape.

By **Tamer Charife**, Partner and **Fahed Qutteineh**, Senior Manager, Cyber Strategy & Transformation, Deloitte Middle East Robust governance frameworks ensure the ethical and responsible use of AI technologies. This includes defining clear policies and guidelines for AI adoption, data privacy, and security.

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## 6

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17

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18

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